



Main Catalog

# Pilot Devices the complete offering

## News in this Catalog

- Joysticks
- Compact Mushrooms
- Compact Illuminated Pushbuttons
- Additional Legend Plate Holders
- 50  $\Omega$  Potentiometer
- Mounting Tool for Power Tool



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# When you think Pilot Devices – think ABB

## Part of a comprehensive ABB program

ABB Pilot Devices are a part of the comprehensive ABB range of high quality Low Voltage Products and Systems for industrial control applications. ABB has a wide global network of external channel partners, such as distributors, system integrators and panel builders all around the world. Our products also meet all essential national and international products standards making us your perfect global business partner.

In combination of our wide range of Pilot Devices ABB also offers a broad product portfolio of Low Voltage Products such as Contactors, Softstarters, DOL & Y/D starters, Electronic relays, Breakers, Switches, UMC etc.

## ABB Pilot Devices

ABB offers a complete range of 22 mm Pushbuttons, Emergency Stops, Selector Switches and Signaling Units. These are complemented with Enclosures and a wide range of

Accessories. ABB offers high performing, robust and easy to install products, providing cost efficient solutions for our customers. ABB Pilot Devices are suitable for a wide variety of industrial environments, indoor as well as outdoor.

## Made for Tough Industrial Environments

Our Pilot Device ranges feature a heavy-duty design, suitable for tough environments, and meet all major global industrial standards and approvals. Our entire Compact Range and selected parts of the Modular range features IP69K protection degree demanded in many industries such as cement and food & beverage. Whatever the application, you can feel confident that ABB Pilot Devices will do the job.

## Worldwide Availability

ABB is represented in over 130 countries, giving our products world wide availability.





### Pilot Devices Offering

ABB Pilot Devices offers both a Modular and Compact Range of Pushbuttons. Both feature the same front-of-panel design and appear consistent when combined.

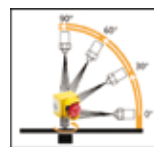
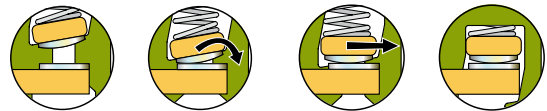
- The Modular Range, features a wide range of operators that can be combined with high flexibility. The unique snap-on design promotes simple and fast assembly.
- The Compact Range features an all-in-one construction and rugged design for added simplicity and ease of installation.

### IP67 - IP69K

ABB's entire Compact Range, and selected devices from the Modular Range, are approved IP67 and IP69K. This means that the products are designed to withstand periodic submersion, as well as high pressure, high temperature spraydown.

### Wiping Action

The Contact Blocks for both compact and modular devices feature self-cleaning contacts per a built-in wiping action. Upon operation, the moving contact rolls over and slides sideways when touching the fixed contact. This feature ensures a good, clean contact even in applications of seldom or periodic use.



**IP69K:** High pressure, high temperature spraydown at multiple angles and rotation.



**IP67:** Submersion to one meter for 30 minutes.



### L-Mark - Makes customer-specific marking easy

A new system for custom marking our Pilot Devices is now available. In addition to engraving Legend Plates, ABB can now laser-engage our entire Pilot Device offering as well.

The customer will receive a reference number for their specified marking from the L-Mark web page, where it also will be saved, making reordering simple and ensuring that our customers receive their preferred marking every time they order.

### It's now possible to create a customer-specific marking online using our five step marking tool:

Visit: <http://bolservices.it.abb.com/pilot-devices>

- Step 1 Find your product by typing the type or Order Code.
- Step 2 Choose between text or symbol marking.
- Step 3 Choose your preferred marking layout.
- Step 4 Type marking or choose any of our 3000 symbols including the ISO 7000 library.
- Step 5 Order the product by the Order Code + ref. code provided on the site. Example:  
Order Code: 1SFA 611 130 L1101  
(Order Code always with a L instead of a R)  
Type code: MPD1-11R-L  
Reference number: MUE979



# Emergency Stops award winning design



## ABB Emergency Stops

Choosing the right Emergency Stop device is vital in order to increase the safety for your personnel and equipment. ABB has a very wide range of Emergency Stops which all fulfill the IEC 60947-5-5 standard for Emergency Stop devices.

### Best product award

Our Emergency Stop series was awarded "Best Product" by the well-known magazine P&A, in the category "Ex-shutz & sicherheit" voted by the magazine's readers.

### Modular Range - see page 18

Includes operators, holders, Contact Blocks, LED Blocks and Accessories that can be combined with high flexibility.

### Compact Range - see page 47

Features an all-in-one design.

### Accessories:

- Emergency Stop Shroud
- Enclosures
- Legend Plates



# Pilot Devices overview

## Modular Range Pilot Devices, 22 mm



Pushbuttons  
see page 11



Double Pushbuttons  
see page 13



Mushroom Pushbuttons  
see page 16



Selector Switches  
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Key operated Selector Switches  
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Pilot Lights  
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Joysticks  
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Machine Stops - see page 19



Emergency Stops - see page 18



## Enclosures and Stations See page 57



## Signal Towers and Signal Beacons See page 76



## Compact Range Pilot Devices, 22 mm



Pushbuttons  
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Illuminated Pushbutton  
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Pilot Lights with integrated LED  
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Pilot Lights with BA 9s socket  
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Selector Switches  
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Machine Stops  
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Emergency Stops  
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Mushrooms  
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## Additional products



Extreme Duty Pushbuttons  
see page 17



Buzzers  
see page 27



Potentiometers  
see page 27



Reset Pushbuttons  
see page 28

## Accessories

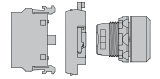
Modular Range – see page 32  
Compact Range – see page 52  
Legend Plates – see page 67



## Pilot Devices, 30 mm

See page 36 (adaptors)





The Modular Range is our widest range of Operators with solutions for almost every need and with market leading electrical ratings.

#### General construction

- Unique snap on Contact Blocks.
- Simple mounting without tools.
- One of the widest range of integrated LED Bulbs
- Same front design as Compact Range
- Up to 6 Contact Blocks (8 joystick)

#### Product features

- Suitable in the toughest environments IP 66, (67 & 69K).
- Wiping action gives high performance with low energies.
- UL/NEMA Type 1,3R,4,4X,12,13
- Unique wide range of integrated LED Bulbs.

#### Operators

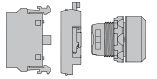
- Pushbuttons (illuminated & non illuminated).
- Emergency Stops (twist, pull & key release).
- Machine Stops (twist, pull & key release).
- Selector Switches (2 & 3 position).
- Key Switches.
- Mushrooms.
- Joysticks.
- Toggle Switches.
- Extreme Duty Pushbuttons.
- Double Pushbuttons.

#### Pilot Lights

- Integrated LED (wide range of voltages).
- BA9s base for Filament Bulb or LED.

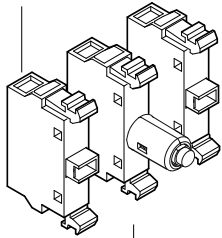
# Modular Range mounting

Modular Range



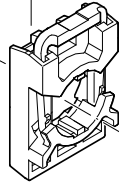
## Contact Block

Single pole with making or breaking contact

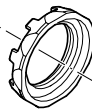


## Holder

Available either for three or five blocks in one single row. Additional blocks can be stacked on holders for three blocks.

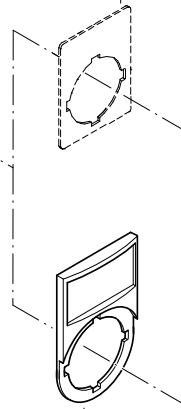


## Nut



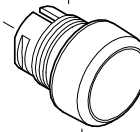
## Legend Plates

Of Aluminum with slots that guide the Legend Plate and the operator into the correct position. Please, see the chapter 'Legend Plates' for more information.



## Operator

Buttons, lenses and handles in several colors. Illuminated or non-illuminated.



## LED/Lamp Block

Illuminated Pushbuttons, illuminated Selector Switches and Pilot Lights have a Lamp Block in the center position of the holder.

## Round or notched holes

Same actuator can be used in notched holes as well as in round holes.

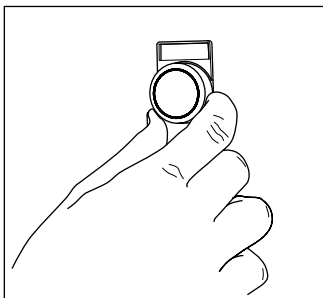
## Legend Plate Holder

Of Black Plastic. Insert of brushed Aluminum. Please, see the chapter 'Legend Plates' for more information.

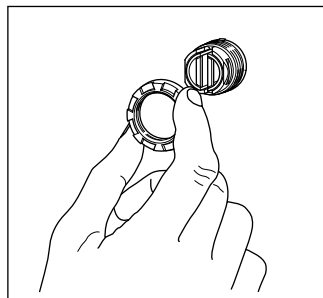
## Bezels

Pushbuttons, Selector Switches and Toggle Switches with bezel in Black Plastic, chrome plastic or Chrome Metal are available.

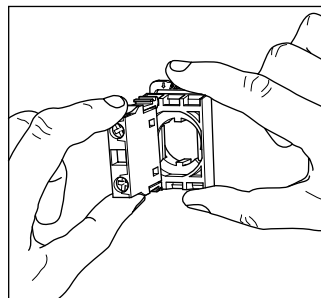
## Easy to install



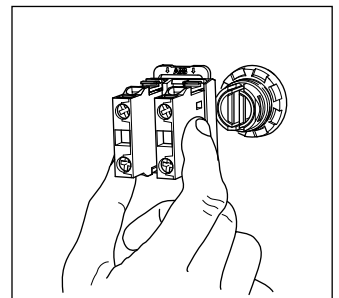
The operator is to be inserted from the front...



...and secured at the back with the nut.

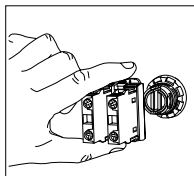
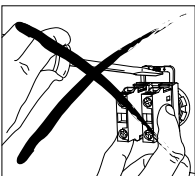


The Contact Blocks/Lamp Block are then snapped on to the holder...



...and the holder snaps on to the operator.

## ...and to remove

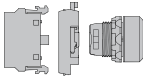


Press down the spring on the holder and pull the holder from the actuator.

# Modular Range

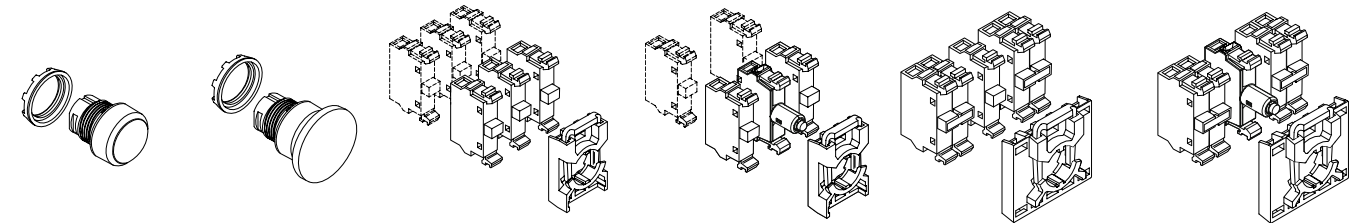
## Contact Block combinations

Modular Range

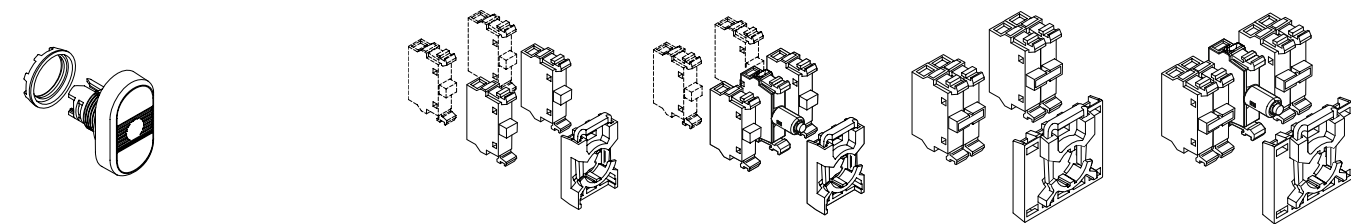


### Pushbuttons

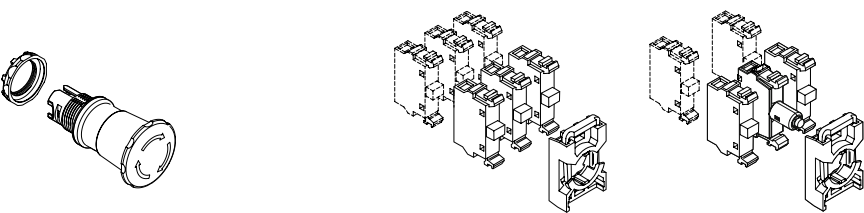
### Mushroom Pushbuttons



### Double Pushbuttons



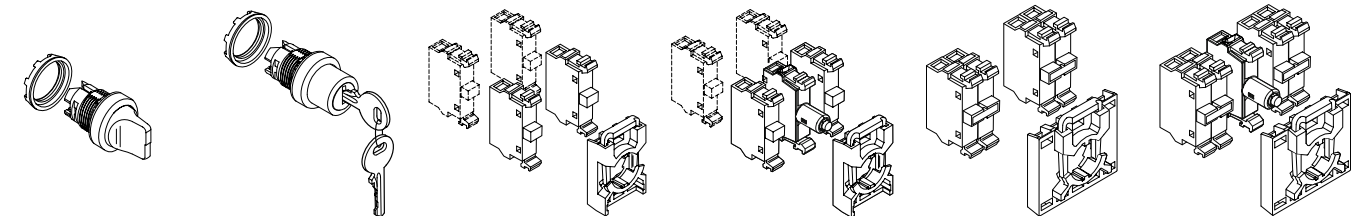
### Emergency Stop Pushbuttons



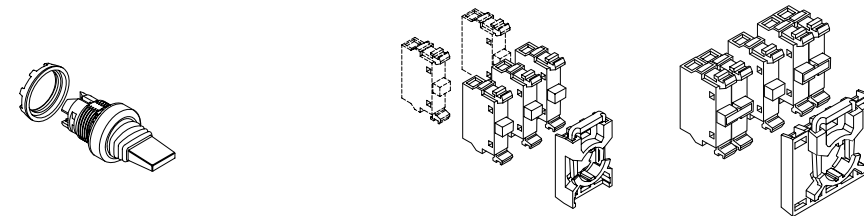
### Selector Switches

### Key-operated Selector Switches

Note: Selector Switches with operation of center position available on page 22



### Toggle Switches

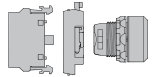


### Pilot Lights



# Flush and Extended Pushbuttons non-illuminated, momentary and maintained

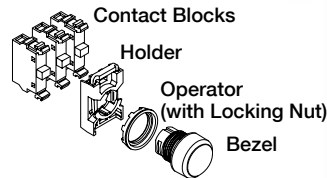
Modular Range



## How to order:

Alt.1 • Operator  
+ Holder  
+ Contact Block(s)

Alt.2 • Operator  
+ Holder with Contact Block(s)



## Bezel - How to order

Black Plastic - Standard  
Chrome plastic - Replace '1' with '2' in Type and Order Codes  
Chrome Metal - Replace '1' with '3' in Type and Order Codes



| Bezel Options  | Type    | Order Code         |
|----------------|---------|--------------------|
| Black Plastic  | MPX-10X | 1SFA 611 10X R1XXX |
| Chrome plastic | MPX-20X | 1SFA 611 10X R2XXX |
| Chrome Metal   | MPX-30X | 1SFA 611 10X R3XXX |



Non-illuminated Flush Pushbutton with Black Plastic Bezel



Non-illuminated Extended Pushbutton with Black Plastic Bezel

## Operator: Pushbutton

| Description                | Type    | Order Code         | Package Quantity | Weight Kg |
|----------------------------|---------|--------------------|------------------|-----------|
| <b>Flush Pushbutton</b>    |         |                    |                  |           |
| <b>Momentary</b>           |         |                    |                  |           |
| ● Red                      | MP1-10R | 1SFA 611 100 R1001 | 1x10             | 0.016     |
| ● Green                    | MP1-10G | 1SFA 611 100 R1002 | 1x10             | 0.016     |
| ● Yellow                   | MP1-10Y | 1SFA 611 100 R1003 | 1x10             | 0.016     |
| ● Blue                     | MP1-10L | 1SFA 611 100 R1004 | 1x10             | 0.016     |
| ○ White                    | MP1-10W | 1SFA 611 100 R1005 | 1x10             | 0.016     |
| ● Black                    | MP1-10B | 1SFA 611 100 R1006 | 1x10             | 0.016     |
| ○ Clear                    | MP1-10C | 1SFA 611 100 R1008 | 1x10             | 0.016     |
| <b>Maintained</b>          |         |                    |                  |           |
| ● Red                      | MP2-10R | 1SFA 611 101 R1001 | 1x10             | 0.016     |
| ● Green                    | MP2-10G | 1SFA 611 101 R1002 | 1x10             | 0.016     |
| ● Yellow                   | MP2-10Y | 1SFA 611 101 R1003 | 1x10             | 0.016     |
| ● Blue                     | MP2-10L | 1SFA 611 101 R1004 | 1x10             | 0.016     |
| ○ White                    | MP2-10W | 1SFA 611 101 R1005 | 1x10             | 0.016     |
| ● Black                    | MP2-10B | 1SFA 611 101 R1006 | 1x10             | 0.016     |
| ○ Clear                    | MP2-10C | 1SFA 611 101 R1008 | 1x10             | 0.016     |
| <b>Extended Pushbutton</b> |         |                    |                  |           |
| <b>Momentary</b>           |         |                    |                  |           |
| ● Red                      | MP3-10R | 1SFA 611 102 R1001 | 1x10             | 0.016     |
| ● Green                    | MP3-10G | 1SFA 611 102 R1002 | 1x10             | 0.016     |
| ● Yellow                   | MP3-10Y | 1SFA 611 102 R1003 | 1x10             | 0.016     |
| ● Blue                     | MP3-10L | 1SFA 611 102 R1004 | 1x10             | 0.016     |
| ○ White                    | MP3-10W | 1SFA 611 102 R1005 | 1x10             | 0.016     |
| ● Black                    | MP3-10B | 1SFA 611 102 R1006 | 1x10             | 0.016     |
| ○ Clear                    | MP3-10C | 1SFA 611 102 R1008 | 1x10             | 0.016     |
| <b>Maintained</b>          |         |                    |                  |           |
| ● Red                      | MP4-10R | 1SFA 611 103 R1001 | 1x10             | 0.016     |
| ● Green                    | MP4-10G | 1SFA 611 103 R1002 | 1x10             | 0.016     |
| ● Yellow                   | MP4-10Y | 1SFA 611 103 R1003 | 1x10             | 0.016     |
| ● Blue                     | MP4-10L | 1SFA 611 103 R1004 | 1x10             | 0.016     |
| ○ White                    | MP4-10W | 1SFA 611 103 R1005 | 1x10             | 0.016     |
| ● Black                    | MP4-10B | 1SFA 611 103 R1006 | 1x10             | 0.016     |
| ○ Clear                    | MP4-10C | 1SFA 611 103 R1008 | 1x10             | 0.016     |



Contact Blocks and Holder see the fold-out page at the end of the catalog

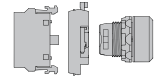


Customer specific marking online. For more information see page 4 or go to:

<http://bolservices.it.abb.com/pilot-devices>

# Flush and Extended Pushbuttons illuminated, momentary and maintained

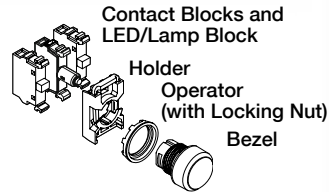
Modular Range



## How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block

**Alt.2** • Operator  
+ Holder with Contact Block(s)  
and Lamp Block



## Bezel - How to order

Black Plastic - Standard  
Chrome plastic - Replace '1' with '2' in Type and Order Codes  
Chrome Metal - Replace '1' with '3' in Type and Order Codes



| Bezel Options  | Type    | Order Code         |
|----------------|---------|--------------------|
| Black Plastic  | MPX-11X | 1SFA 611 10X R1XXX |
| Chrome plastic | MPX-21X | 1SFA 611 10X R2XXX |
| Chrome Metal   | MPX-31X | 1SFA 611 10X R3XXX |



Illuminated Flush Pushbutton  
with Black Plastic Bezel

## Operator: Pushbutton

| Description                                                | Type    | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------------|---------|--------------------|------------------|-----------|
| <b>Flush Pushbutton (Light Bulb max 2 W, not included)</b> |         |                    |                  |           |
| <b>Momentary</b>                                           |         |                    |                  |           |
| ● Red                                                      | MP1-11R | 1SFA 611 100 R1101 | 1x10             | 0.016     |
| ● Green                                                    | MP1-11G | 1SFA 611 100 R1102 | 1x10             | 0.016     |
| ● Yellow                                                   | MP1-11Y | 1SFA 611 100 R1103 | 1x10             | 0.016     |
| ● Blue                                                     | MP1-11L | 1SFA 611 100 R1104 | 1x10             | 0.016     |
| ○ White                                                    | MP1-11W | 1SFA 611 100 R1105 | 1x10             | 0.016     |
| ○ Clear                                                    | MP1-11C | 1SFA 611 100 R1108 | 1x10             | 0.016     |
| <b>Maintained</b>                                          |         |                    |                  |           |
| ● Red                                                      | MP2-11R | 1SFA 611 101 R1101 | 1x10             | 0.016     |
| ● Green                                                    | MP2-11G | 1SFA 611 101 R1102 | 1x10             | 0.016     |
| ● Yellow                                                   | MP2-11Y | 1SFA 611 101 R1103 | 1x10             | 0.016     |
| ● Blue                                                     | MP2-11L | 1SFA 611 101 R1104 | 1x10             | 0.016     |
| ○ White                                                    | MP2-11W | 1SFA 611 101 R1105 | 1x10             | 0.016     |
| ○ Clear                                                    | MP2-11C | 1SFA 611 101 R1108 | 1x10             | 0.016     |



Illuminated Extended Push-  
button with Black Plastic Bezel

|                                                               |         |                    |      |       |
|---------------------------------------------------------------|---------|--------------------|------|-------|
| <b>Extended Pushbutton (Light Bulb max 2 W, not included)</b> |         |                    |      |       |
| <b>Momentary</b>                                              |         |                    |      |       |
| ● Red                                                         | MP3-11R | 1SFA 611 102 R1101 | 1x10 | 0.016 |
| ● Green                                                       | MP3-11G | 1SFA 611 102 R1102 | 1x10 | 0.016 |
| ● Yellow                                                      | MP3-11Y | 1SFA 611 102 R1103 | 1x10 | 0.016 |
| ● Blue                                                        | MP3-11L | 1SFA 611 102 R1104 | 1x10 | 0.016 |
| ○ White                                                       | MP3-11W | 1SFA 611 102 R1105 | 1x10 | 0.016 |
| ○ Clear                                                       | MP3-11C | 1SFA 611 102 R1108 | 1x10 | 0.016 |
| <b>Maintained</b>                                             |         |                    |      |       |
| ● Red                                                         | MP4-11R | 1SFA 611 103 R1101 | 1x10 | 0.016 |
| ● Green                                                       | MP4-11G | 1SFA 611 103 R1102 | 1x10 | 0.016 |
| ● Yellow                                                      | MP4-11Y | 1SFA 611 103 R1103 | 1x10 | 0.016 |
| ● Blue                                                        | MP4-11L | 1SFA 611 103 R1104 | 1x10 | 0.016 |
| ○ White                                                       | MP4-11W | 1SFA 611 103 R1105 | 1x10 | 0.016 |
| ○ Clear                                                       | MP4-11C | 1SFA 611 103 R1108 | 1x10 | 0.016 |



Contact Blocks and Holder see the fold-out page at the end of the catalog

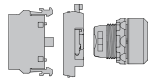


Customer specific marking online. For more information see page 4 or go to:

<http://bolsservices.it.abb.com/pilot-devices>

# Double Pushbuttons non-illuminated

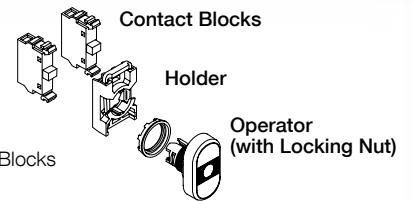
Modular Range



## How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Blocks

**Alt.2** • Operator  
+ Holder with Contact Blocks



Double Pushbutton,  
non-illuminated



Double Pushbutton,  
non-illuminated



Legend Plate Holder

## Operator: Double Pushbutton

| Upper Button                | Lower Button | Type       | Order Code         | Package Quantity | Weight Kg |
|-----------------------------|--------------|------------|--------------------|------------------|-----------|
| <b>Flush Pushbuttons</b>    |              |            |                    |                  |           |
| ● Green                     | ● Red        |            |                    |                  |           |
| No text                     | No text      | MPD1-11B   | 1SFA 611 130 R1106 | 1x10             | 0.025     |
| I                           | O            | MPD2-11B   | 1SFA 611 131 R1106 | 1x10             | 0.025     |
| ON                          | OFF          | MPD3-11B   | 1SFA 611 132 R1106 | 1x10             | 0.025     |
| START                       | STOP         | MPD4-11B   | 1SFA 611 133 R1106 | 1x10             | 0.025     |
| ○ White                     | ● Black      |            |                    |                  |           |
| No text                     | No text      | MPD5-11B   | 1SFA 611 134 R1106 | 1x10             | 0.025     |
| With customer selected text |              | MPD5-11B-L | 1SFA 611 134 L1106 | 1x10             | 0.025     |

## Extended Lower Pushbutton

|                             |         |             |                    |      |       |
|-----------------------------|---------|-------------|--------------------|------|-------|
| ● Green                     | ● Red   |             |                    |      |       |
| No text                     | No text | MPD12-11B   | 1SFA 611 141 R1106 | 1x10 | 0.025 |
| I                           | O       | MPD13-11B   | 1SFA 611 142 R1106 | 1x10 | 0.025 |
| ON                          | OFF     | MPD14-11B   | 1SFA 611 143 R1106 | 1x10 | 0.025 |
| START                       | STOP    | MPD15-11B   | 1SFA 611 144 R1106 | 1x10 | 0.025 |
| ○ White                     | ● Black |             |                    |      |       |
| No text                     | No text | MPD16-11B   | 1SFA 611 145 R1106 | 1x10 | 0.025 |
| With customer selected text |         | MPD16-11B-L | 1SFA 611 145 L1106 | 1x10 | 0.025 |

## Legend Plate Holder

|                     |          |                    |   |       |
|---------------------|----------|--------------------|---|-------|
| Legend Plate Holder | MA1-8139 | 1SFA 611 920 R8139 | 1 | 0.003 |
|---------------------|----------|--------------------|---|-------|



Contact Blocks and Holder see the fold-out page at the end of the catalog

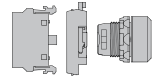


Customer specific marking online. For more information see page 4 or go to:

<http://bol.services.it.abb.com/pilot-devices>

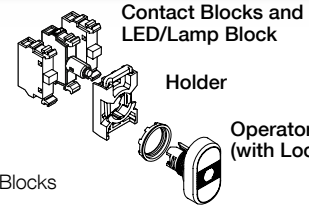
# Double Pushbuttons illuminated

Modular Range



## How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Blocks  
+ LED/Lamp Block



**Alt.2** • Operator  
+ Holder with Contact Blocks  
and Lamp Block

Operator  
(with Locking Nut)



Double Pushbutton,  
illuminated



Double Pushbutton,  
illuminated

## Operator: Double Pushbutton

| Upper Button                  | Lower Button | Type       | Order Code         | Package Quantity | Weight Kg |
|-------------------------------|--------------|------------|--------------------|------------------|-----------|
| <b>Flush Pushbutton</b>       |              |            |                    |                  |           |
| <b>Red Indicator Light</b>    |              |            |                    |                  |           |
| ● Green                       | ● Red        |            |                    |                  |           |
| No text                       | No text      | MPD1-11R   | 1SFA 611 130 R1101 | 1x10             | 0.025     |
| I                             | O            | MPD2-11R   | 1SFA 611 131 R1101 | 1x10             | 0.025     |
| ON                            | OFF          | MPD3-11R   | 1SFA 611 132 R1101 | 1x10             | 0.025     |
| START                         | STOP         | MPD4-11R   | 1SFA 611 133 R1101 | 1x10             | 0.025     |
| ○ White                       | ● Black      |            |                    |                  |           |
| No text                       | No text      | MPD5-11R   | 1SFA 611 134 R1101 | 1x10             | 0.025     |
| With customer selected text   |              | MPD5-11R-L | 1SFA 611 134 L1101 | 1x10             | 0.025     |
| <b>Green Indicator Light</b>  |              |            |                    |                  |           |
| ● Red                         |              |            |                    |                  |           |
| No text                       | No text      | MPD1-11G   | 1SFA 611 130 R1102 | 1x10             | 0.025     |
| I                             | O            | MPD2-11G   | 1SFA 611 131 R1102 | 1x10             | 0.025     |
| ON                            | OFF          | MPD3-11G   | 1SFA 611 132 R1102 | 1x10             | 0.025     |
| START                         | STOP         | MPD4-11G   | 1SFA 611 133 R1102 | 1x10             | 0.025     |
| ○ White                       | ● Black      |            |                    |                  |           |
| No text                       | No text      | MPD5-11G   | 1SFA 611 134 R1102 | 1x10             | 0.025     |
| With customer selected text   |              | MPD5-11G-L | 1SFA 611 134 L1102 | 1x10             | 0.025     |
| <b>Yellow Indicator Light</b> |              |            |                    |                  |           |
| ● Green                       | ● Red        |            |                    |                  |           |
| No text                       | No text      | MPD1-11Y   | 1SFA 611 130 R1103 | 1x10             | 0.025     |
| I                             | O            | MPD2-11Y   | 1SFA 611 131 R1103 | 1x10             | 0.025     |
| ON                            | OFF          | MPD3-11Y   | 1SFA 611 132 R1103 | 1x10             | 0.025     |
| START                         | STOP         | MPD4-11Y   | 1SFA 611 133 R1103 | 1x10             | 0.025     |
| ○ White                       | ● Black      |            |                    |                  |           |
| No text                       | No text      | MPD5-11Y   | 1SFA 611 134 R1103 | 1x10             | 0.025     |
| With customer selected text   |              | MPD5-11Y-L | 1SFA 611 134 L1103 | 1x10             | 0.025     |
| <b>Clear Indicator Light</b>  |              |            |                    |                  |           |
| ● Green                       | ● Red        |            |                    |                  |           |
| No text                       | No text      | MPD1-11C   | 1SFA 611 130 R1108 | 1x10             | 0.025     |
| I                             | O            | MPD2-11C   | 1SFA 611 131 R1108 | 1x10             | 0.025     |
| ON                            | OFF          | MPD3-11C   | 1SFA 611 132 R1108 | 1x10             | 0.025     |
| START                         | STOP         | MPD4-11C   | 1SFA 611 133 R1108 | 1x10             | 0.025     |
| ○ White                       | ● Black      |            |                    |                  |           |
| No text                       | No text      | MPD5-11C   | 1SFA 611 134 R1108 | 1x10             | 0.025     |
| With customer selected text   |              | MPD5-11C-L | 1SFA 611 134 L1108 | 1x10             | 0.025     |



Contact Blocks and Holder see the fold-out page at the end of the catalog

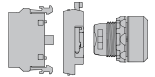


Customer specific marking online. For more information see page 4 or go to:

<http://bol.services.it.abb.com/pilot-devices>

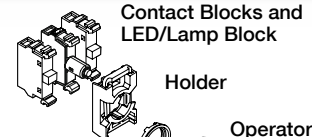
# Double Pushbuttons illuminated

Modular Range

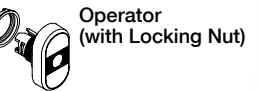


## How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Blocks  
+ LED/Lamp Block



**Alt.2** • Operator  
+ Holder with Contact Blocks  
and Lamp Block



Double Pushbutton with Extended Lower Button, illuminated

## Operator: Double Pushbutton

| Upper Button                  | Lower Button | Type        | Order Code         | Package Quantity | Weight Kg |
|-------------------------------|--------------|-------------|--------------------|------------------|-----------|
| <b>Extended Lower Button</b>  |              |             |                    |                  |           |
| <b>Red Indicator Light</b>    |              |             |                    |                  |           |
| ● Green                       | ● Red        |             |                    |                  |           |
| No text                       | No text      | MPD12-11R   | 1SFA 611 141 R1101 | 1x10             | 0.025     |
| I                             | O            | MPD13-11R   | 1SFA 611 142 R1101 | 1x10             | 0.025     |
| ON                            | OFF          | MPD14-11R   | 1SFA 611 143 R1101 | 1x10             | 0.025     |
| START                         | STOP         | MPD15-11R   | 1SFA 611 144 R1101 | 1x10             | 0.025     |
| ○ White                       | ● Black      |             |                    |                  |           |
| No text                       | No text      | MPD16-11R   | 1SFA 611 145 R1101 | 1x10             | 0.025     |
| With customer selected text   |              | MPD16-11R-L | 1SFA 611 145 L1101 | 1x10             | 0.025     |
| <b>Green Indicator Light</b>  |              |             |                    |                  |           |
| ● Green                       | ● Red        |             |                    |                  |           |
| No text                       | No text      | MPD12-11G   | 1SFA 611 141 R1102 | 1x10             | 0.025     |
| I                             | O            | MPD13-11G   | 1SFA 611 142 R1102 | 1x10             | 0.025     |
| ON                            | OFF          | MPD14-11G   | 1SFA 611 143 R1102 | 1x10             | 0.025     |
| START                         | STOP         | MPD15-11G   | 1SFA 611 144 R1102 | 1x10             | 0.025     |
| ○ White                       | ● Black      |             |                    |                  |           |
| No text                       | No text      | MPD16-11G   | 1SFA 611 145 R1102 | 1x10             | 0.025     |
| With customer selected text   |              | MPD16-11G-L | 1SFA 611 145 L1102 | 1x10             | 0.025     |
| <b>Yellow Indicator Light</b> |              |             |                    |                  |           |
| ● Green                       | ● Red        |             |                    |                  |           |
| No text                       | No text      | MPD12-11Y   | 1SFA 611 141 R1103 | 1x10             | 0.025     |
| I                             | O            | MPD13-11Y   | 1SFA 611 142 R1103 | 1x10             | 0.025     |
| ON                            | OFF          | MPD14-11Y   | 1SFA 611 143 R1103 | 1x10             | 0.025     |
| START                         | STOP         | MPD15-11Y   | 1SFA 611 144 R1103 | 1x10             | 0.025     |
| ○ White                       | ● Black      |             |                    |                  |           |
| No text                       | No text      | MPD16-11Y   | 1SFA 611 145 R1103 | 1x10             | 0.025     |
| With customer selected text   |              | MPD16-11Y-L | 1SFA 611 145 L1103 | 1x10             | 0.025     |
| <b>Clear Indicator Light</b>  |              |             |                    |                  |           |
| ● Green                       | ● Red        |             |                    |                  |           |
| No text                       | No text      | MPD12-11C   | 1SFA 611 141 R1108 | 1x10             | 0.025     |
| I                             | O            | MPD13-11C   | 1SFA 611 142 R1108 | 1x10             | 0.025     |
| ON                            | OFF          | MPD14-11C   | 1SFA 611 143 R1108 | 1x10             | 0.025     |
| START                         | STOP         | MPD15-11C   | 1SFA 611 144 R1108 | 1x10             | 0.025     |
| ○ White                       | ● Black      |             |                    |                  |           |
| No text                       | No text      | MPD16-11C   | 1SFA 611 145 R1108 | 1x10             | 0.025     |
| With customer selected text   |              | MPD16-11C-L | 1SFA 611 145 L1108 | 1x10             | 0.025     |



Contact Blocks and Holder see the fold-out page at the end of the catalog

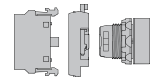


Customer specific marking online. For more information see page 4 or go to:

<http://bolservices.it.abb.com/pilot-devices>

# Mushroom Pushbuttons non-illuminated and illuminated

Modular Range

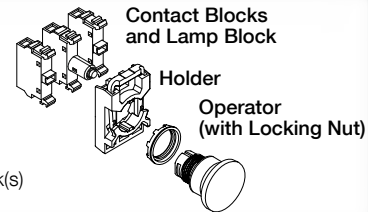


## How to order non-illuminated:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)

## How to order illuminated:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block
- Alt.2** • Operator  
+ Holder with Contact Block(s)  
and Lamp Block



Mushroom Pushbuttons,  
non-illuminated



Mushroom Pushbuttons,  
illuminated

## Operator: Mushroom Pushbutton

| Description                                           | Type     | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------|----------|--------------------|------------------|-----------|
| <b>Non-illuminated</b>                                |          |                    |                  |           |
| <b>Ø 40 mm</b>                                        |          |                    |                  |           |
| ● Red                                                 | MPM1-10R | 1SFA 611 124 R1001 | 1x10             | 0.018     |
| ● Green                                               | MPM1-10G | 1SFA 611 124 R1002 | 1x10             | 0.018     |
| ● Yellow                                              | MPM1-10Y | 1SFA 611 124 R1003 | 1x10             | 0.018     |
| ● Black                                               | MPM1-10B | 1SFA 611 124 R1006 | 1x10             | 0.018     |
| <b>Ø 60 mm</b>                                        |          |                    |                  |           |
| ● Red                                                 | MPM2-10R | 1SFA 611 125 R1001 | 1x10             | 0.020     |
| ● Yellow                                              | MPM2-10Y | 1SFA 611 125 R1003 | 1x10             | 0.020     |
| ● Black                                               | MPM2-10B | 1SFA 611 125 R1006 | 1x10             | 0.020     |
| <b>Illuminated (Light Bulb max 2 W, not included)</b> |          |                    |                  |           |
| <b>Ø 40 mm</b>                                        |          |                    |                  |           |
| ● Red                                                 | MPM1-11R | 1SFA 611 124 R1101 | 1x10             | 0.018     |
| ● Green                                               | MPM1-11G | 1SFA 611 124 R1102 | 1x10             | 0.018     |
| ● Yellow                                              | MPM1-11Y | 1SFA 611 124 R1103 | 1x10             | 0.018     |
| <b>Ø 60 mm</b>                                        |          |                    |                  |           |
| ● Red                                                 | MPM2-11R | 1SFA 611 125 R1101 | 1x10             | 0.020     |
| ● Yellow                                              | MPM2-11Y | 1SFA 611 125 R1103 | 1x10             | 0.020     |



Contact Blocks and Holder see the fold-out page at the end of the catalog

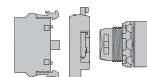


Customer specific marking online. For more information see page 4 or go to:

<http://bolservices.it.abb.com/pilot-devices>

# Extreme Duty Pushbuttons for 30 mm mounting hole

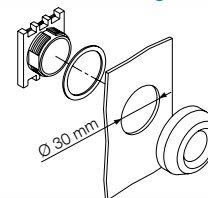
Modular Range



## How to order

- Operator  
+ Contact Block(s)

## Mounting



## Operator: Extreme Duty Pushbutton

The Extreme Duty Pushbutton, for 30 mm hole, is a robust and compact Pushbutton for use in cold, hot, damp, oily and other tough environments. Suitable especially for hydraulic lifts, compact pendant controllers and Pushbutton stations.

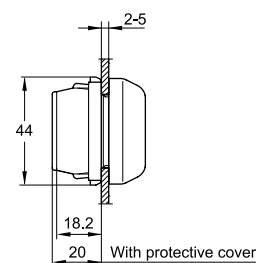
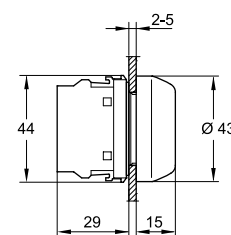
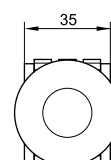
| Description | Included Contact Blocks | Type       | Order Code         | Package Quantity | Weight Kg |
|-------------|-------------------------|------------|--------------------|------------------|-----------|
| ● Red       | -                       | KP6-40R    | 1SFA 616 105 R4001 | 1                | 0.022     |
| ● Green     | -                       | KP6-40G    | 1SFA 616 105 R4002 | 1                | 0.022     |
| ● Black     | -                       | KP6-40B    | 1SFA 616 105 R4006 | 1                | 0.022     |
| ● Black     | 1 NO + 1 NC             | KP6-40B-11 | 1SFA 616 105 R4076 | 1                | 0.048     |
| ● Black     | 1 NO                    | KP6-40B-10 | 1SFA 616 105 R4016 | 1                | 0.035     |
| ● Black     | 1 NC                    | KP6-40B-01 | 1SFA 616 105 R4046 | 1                | 0.035     |
| ● Black     | 2 NO                    | KP6-40B-20 | 1SFA 616 105 R4026 | 1                | 0.048     |
| ● Black     | 2 NC                    | KP6-40B-02 | 1SFA 616 105 R4056 | 1                | 0.048     |

## Contact Blocks

|      |        |                    |    |       |
|------|--------|--------------------|----|-------|
| 1 NO | MCB-10 | 1SFA 611 610 R1001 | 10 | 0.013 |
| 1 NC | MCB-01 | 1SFA 611 610 R1010 | 10 | 0.013 |

## Technical Data

|                      |                              |
|----------------------|------------------------------|
| Degree of protection | IP66<br>UL Type 1, 3R, 4, 4X |
| Ambient temperature  | -30° — +70°                  |



Extreme Duty Pushbuttons

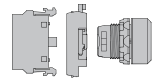


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Emergency Stops

## non-illuminated and illuminated

Modular Range

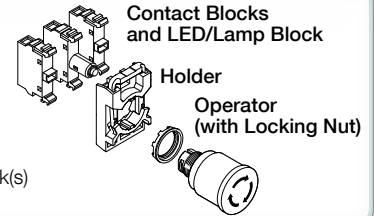


### How to order non-illuminated:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)

### How to order illuminated:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block
- Alt.2** • Operator  
+ Holder with Contact Block(s)  
and LED/Lamp Block



Emergency Stop, pull release,  
non-illuminated, Ø 30 mm



Emergency Stop, key release,  
non-illuminated, Ø 40 mm



Emergency Stop, twist release  
illuminated, Ø 40 mm

### Operator: Emergency Stop

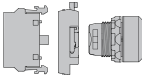
| Description                                      | Type      | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------------------|-----------|--------------------|------------------|-----------|
| <b>Non-illuminated</b>                           |           |                    |                  |           |
| <b>Ø 30 mm</b>                                   |           |                    |                  |           |
| ● Red Twist release                              | MPET3-10R | 1SFA 611 520 R1001 | 1                | 0.036     |
| ● Red Pull release                               | MPEP3-10R | 1SFA 611 521 R1001 | 1                | 0.036     |
| ● Red Key release code 71/Ronis 455              | MPEK3-11R | 1SFA 611 522 R1101 | 1                | 0.065     |
| ● Red Key release code 72/Ronis 421              | MPEK3-12R | 1SFA 611 522 R1201 | 1                | 0.065     |
| ● Red Key release code 73/Ronis 3433-E           | MPEK3-13R | 1SFA 611 522 R1301 | 1                | 0.065     |
| <b>Ø 40 mm</b>                                   |           |                    |                  |           |
| ● Red Twist release                              | MPET4-10R | 1SFA 611 523 R1001 | 1                | 0.036     |
| ● Red Pull release                               | MPEP4-10R | 1SFA 611 524 R1001 | 1                | 0.036     |
| ● Red Key release code 71/Ronis 455              | MPEK4-11R | 1SFA 611 525 R1101 | 1                | 0.065     |
| ● Red Key release code 72/Ronis 421              | MPEK4-12R | 1SFA 611 525 R1201 | 1                | 0.065     |
| ● Red Key release code 73/Ronis 3433-E           | MPEK4-13R | 1SFA 611 525 R1301 | 1                | 0.065     |
| <b>Illuminated (Bulb max 2 W, not included).</b> |           |                    |                  |           |
| <b>Ø 40 mm</b>                                   |           |                    |                  |           |
| ● Red Twist release                              | MPMT3-11R | 1SFA 611 510 R1101 | 1                | 0.041     |
| ● Red Pull release                               | MPMP3-11R | 1SFA 611 511 R1101 | 1                | 0.041     |
| <b>Ø 60 mm</b>                                   |           |                    |                  |           |
| ● Red Twist release                              | MPMT4-11R | 1SFA 611 513 R1101 | 1                | 0.048     |
| ● Red Pull release                               | MPMP4-11R | 1SFA 611 514 R1101 | 1                | 0.048     |



Contact Blocks and  
Holder see the fold-out  
page at the end of the  
catalog

# Machine Stops non-illuminated

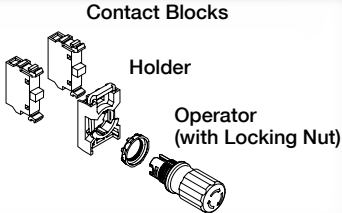
Modular Range



### How to order:

Alt.1 • Operator  
+ Holder  
+ Contact Block(s)

Alt.2 • Operator  
+ Holder with Contact Block(s)



Machine Stop,  
pull release, Ø 30 mm



Machine Stop,  
key release, Ø 30 mm



Machine Stop,  
twist release, Ø 40 mm

### Operator: Machine Stop

| Description                           | Type      | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------|-----------|--------------------|------------------|-----------|
| Non-illuminated                       |           |                    |                  |           |
| Ø 30 mm                               |           |                    |                  |           |
| ● Black Twist release                 | MPET3-10B | 1SFA 611 520 R1006 | 1                | 0.036     |
| ● Black Pull release                  | MPEP3-10B | 1SFA 611 521 R1006 | 1                | 0.036     |
| ● Black Key release code 71/Ronis 455 | MPEK3-10B | 1SFA 611 522 R1106 | 1                | 0.065     |
| Ø 40 mm                               |           |                    |                  |           |
| ● Black Twist release                 | MPET4-10B | 1SFA 611 523 R1006 | 1                | 0.036     |
| ● Black Pull release                  | MPEP4-10B | 1SFA 611 524 R1006 | 1                | 0.036     |
| ● Black Key release code 71/Ronis 455 | MPEK4-10B | 1SFA 611 525 R1106 | 1                | 0.065     |

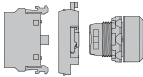


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

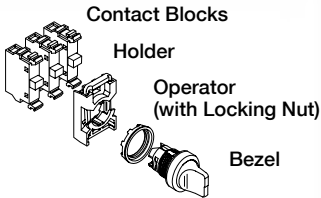
## two-position, non-illuminated

Modular Range



### How to order:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type        | Order Code        |
|---------------|-------------|-------------------|
| Black Plastic | M2SS(X)-10X | 1SFA611 20X R10XX |
| Chrome Metal  | M2SS(X)-30X | 1SFA611 20X R30XX |



Selector Switch, short handle



Selector Switch, long handle

### Operator: Two-position Selector Switch

| Description                          | Type  | Order Code | Package Quantity   | Weight Kg |       |
|--------------------------------------|-------|------------|--------------------|-----------|-------|
| Short handle                         |       |            |                    |           |       |
| Momentary                            |       |            |                    |           |       |
|                                      | Red   | M2SS1-10R  | 1SFA 611 200 R1001 | 1x10      | 0.015 |
|                                      | Black | M2SS1-10B  | 1SFA 611 200 R1006 | 1x10      | 0.015 |
|                                      | Grey  | M2SS1-10U  | 1SFA 611 200 R1007 | 1x10      | 0.015 |
| Maintained                           |       |            |                    |           |       |
|                                      | Red   | M2SS2-10R  | 1SFA 611 201 R1001 | 1x10      | 0.015 |
|                                      | Black | M2SS2-10B  | 1SFA 611 201 R1006 | 1x10      | 0.015 |
|                                      | Grey  | M2SS2-10U  | 1SFA 611 201 R1007 | 1x10      | 0.015 |
| Momentary, spring return from C to B |       |            |                    |           |       |
|                                      | Red   | M2SS3-10R  | 1SFA 611 202 R1001 | 1x10      | 0.015 |
|                                      | Black | M2SS3-10B  | 1SFA 611 202 R1006 | 1x10      | 0.015 |
|                                      | Grey  | M2SS3-10U  | 1SFA 611 202 R1007 | 1x10      | 0.015 |
| Long handle                          |       |            |                    |           |       |
| Maintained                           |       |            |                    |           |       |
|                                      | Red   | M2SS4-10R  | 1SFA 611 203 R1001 | 1x10      | 0.018 |
|                                      | Black | M2SS4-10B  | 1SFA 611 203 R1006 | 1x10      | 0.018 |
|                                      | Grey  | M2SS4-10U  | 1SFA 611 203 R1007 | 1x10      | 0.018 |
| Maintained                           |       |            |                    |           |       |
|                                      | Red   | M2SS5-10R  | 1SFA 611 204 R1001 | 1x10      | 0.018 |
|                                      | Black | M2SS5-10B  | 1SFA 611 204 R1006 | 1x10      | 0.018 |
|                                      | Grey  | M2SS5-10U  | 1SFA 611 204 R1007 | 1x10      | 0.018 |
| Momentary, spring return from C to B |       |            |                    |           |       |
|                                      | Red   | M2SS6-10R  | 1SFA 611 205 R1001 | 1x10      | 0.018 |
|                                      | Black | M2SS6-10B  | 1SFA 611 205 R1006 | 1x10      | 0.018 |
|                                      | Grey  | M2SS6-10U  | 1SFA 611 205 R1007 | 1x10      | 0.018 |

### Contacts actuated

|                                                                                     |       |                                     |                                     |
|-------------------------------------------------------------------------------------|-------|-------------------------------------|-------------------------------------|
|  |       |                                     |                                     |
| Left                                                                                | Right |                                     |                                     |
| <b>Handle position</b>                                                              |       | <b>Left block</b>                   | <b>Right block</b>                  |
|  | B     | <input type="checkbox"/>            | <input type="checkbox"/>            |
|  | A     | <input type="checkbox"/>            | <input type="checkbox"/>            |
|  | C     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Not actuated                                               |       |                                     |                                     |
| <input checked="" type="checkbox"/> Actuated                                        |       |                                     |                                     |

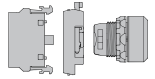


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

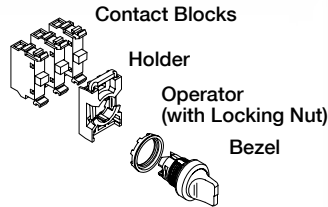
## three-position, non-illuminated

Modular Range



### How to order:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type        | Order Code        |
|---------------|-------------|-------------------|
| Black Plastic | M3SS(X)-10X | 1SFA611 21X R10XX |
| Chrome Metal  | M3SS(X)-30X | 1SFA611 21X R30XX |



Selector Switch, short handle



Selector Switch, long handle

### Contacts actuated

|                 |                                       |                                   |
|-----------------|---------------------------------------|-----------------------------------|
|                 | Right                                 |                                   |
| Left            |                                       |                                   |
|                 | Left block                            | Right block                       |
| Handle position |                                       |                                   |
| A               | <input type="checkbox"/>              | <input type="checkbox"/>          |
| B               | <input type="checkbox"/>              | <input type="checkbox"/>          |
| C               | <input type="checkbox"/>              | <input type="checkbox"/>          |
|                 | <input type="checkbox"/> Not actuated | <input type="checkbox"/> Actuated |

### Operator: Three-position Selector Switch

| Description                                                 | Type      | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------------|-----------|--------------------|------------------|-----------|
| <b>Short handle</b>                                         |           |                    |                  |           |
| <b>Maintained</b>                                           |           |                    |                  |           |
| Red                                                         | M3SS1-10R | 1SFA 611 210 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SS1-10B | 1SFA 611 210 R1006 | 1x10             | 0.015     |
| Grey                                                        | M3SS1-10U | 1SFA 611 210 R1007 | 1x10             | 0.015     |
| <b>Momentary, spring return from A to B and from C to B</b> |           |                    |                  |           |
| Red                                                         | M3SS2-10R | 1SFA 611 211 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SS2-10B | 1SFA 611 211 R1006 | 1x10             | 0.015     |
| Grey                                                        | M3SS2-10U | 1SFA 611 211 R1007 | 1x10             | 0.015     |
| <b>Momentary, spring return from C to B</b>                 |           |                    |                  |           |
| Red                                                         | M3SS3-10R | 1SFA 611 212 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SS3-10B | 1SFA 611 212 R1006 | 1x10             | 0.015     |
| Grey                                                        | M3SS3-10U | 1SFA 611 212 R1007 | 1x10             | 0.015     |
| <b>Momentary, spring return from A to B</b>                 |           |                    |                  |           |
| Red                                                         | M3SS7-10R | 1SFA 611 216 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SS7-10B | 1SFA 611 216 R1006 | 1x10             | 0.015     |
| Grey                                                        | M3SS7-10U | 1SFA 611 216 R1007 | 1x10             | 0.015     |
| <b>Long handle</b>                                          |           |                    |                  |           |
| <b>Maintained</b>                                           |           |                    |                  |           |
| Red                                                         | M3SS4-10R | 1SFA 611 213 R1001 | 1x10             | 0.018     |
| Black                                                       | M3SS4-10B | 1SFA 611 213 R1006 | 1x10             | 0.018     |
| Grey                                                        | M3SS4-10U | 1SFA 611 213 R1007 | 1x10             | 0.018     |
| <b>Momentary, spring return from A to B and from C to B</b> |           |                    |                  |           |
| Red                                                         | M3SS5-10R | 1SFA 611 214 R1001 | 1x10             | 0.018     |
| Black                                                       | M3SS5-10B | 1SFA 611 214 R1006 | 1x10             | 0.018     |
| Grey                                                        | M3SS5-10U | 1SFA 611 214 R1007 | 1x10             | 0.018     |
| <b>Momentary, spring return from C to B</b>                 |           |                    |                  |           |
| Red                                                         | M3SS6-10R | 1SFA 611 215 R1001 | 1x10             | 0.018     |
| Black                                                       | M3SS6-10B | 1SFA 611 215 R1006 | 1x10             | 0.018     |
| Grey                                                        | M3SS6-10U | 1SFA 611 215 R1007 | 1x10             | 0.018     |
| <b>Momentary, spring return from A to B</b>                 |           |                    |                  |           |
| Red                                                         | M3SS8-10R | 1SFA 611 217 R1001 | 1x10             | 0.018     |
| Black                                                       | M3SS8-10B | 1SFA 611 217 R1006 | 1x10             | 0.018     |
| Grey                                                        | M3SS8-10U | 1SFA 611 217 R1007 | 1x10             | 0.018     |

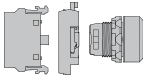


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

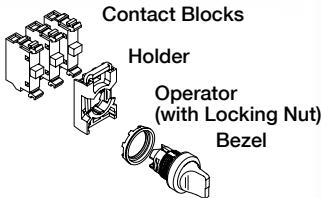
## three-position with operation of center position

Modular Range



### How to order:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type         | Order Code        |
|---------------|--------------|-------------------|
| Black Plastic | M3SSC(X)-10B | 1SFA611 25X R1006 |
| Chrome Metal  | M3SSC(X)-30B | 1SFA611 25X R3006 |



Selector Switch, short handle



Selector Switch, long handle

### Operator: Three-position Selector Switch with operation of center position

| Description                                                                                 | Type       | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------------------------------------------------|------------|--------------------|------------------|-----------|
| <b>Short handle</b>                                                                         |            |                    |                  |           |
|  ● Black   | M3SSC1-10B | 1SFA 611 250 R1006 | 1x10             | 0.015     |
|  ● Black   | M3SSC2-10B | 1SFA 611 251 R1006 | 1x10             | 0.015     |
|  ● Black   | M3SSC3-10B | 1SFA 611 252 R1006 | 1x10             | 0.015     |
|  ● Black  | M3SSC7-10B | 1SFA 611 256 R1006 | 1x10             | 0.015     |
| <b>Long handle</b>                                                                          |            |                    |                  |           |
|  ● Black | M3SSC4-10B | 1SFA 611 253 R1006 | 1x10             | 0.018     |
|  ● Black | M3SSC5-10B | 1SFA 611 254 R1006 | 1x10             | 0.018     |
|  ● Black | M3SSC6-10B | 1SFA 611 255 R1006 | 1x10             | 0.018     |
|  ● Black | M3SSC8-10B | 1SFA 611 258 R1006 | 1x10             | 0.018     |

### Contacts actuated

|                                                                                                 |                                                                                     |            |              |             |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|--------------|-------------|
| Center                                                                                          | Right                                                                               |            |              |             |
| Left                                                                                            |                                                                                     | Left block | Center block | Right block |
| <b>Handle position</b>                                                                          |                                                                                     |            |              |             |
|              |  | A          | ■            | ■           |
|              |  | B          | □            | □           |
|              |  | C          | □            | ■           |
| <div> <div>□</div> <div>■</div> </div> <div> <div>Not actuated</div> <div>Actuated</div> </div> |                                                                                     |            |              |             |

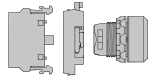


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

## two-position, illuminated

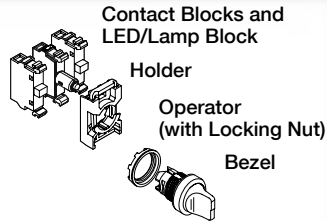
Modular Range



### How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block

**Alt.2** • Operator  
+ Holder with Contact Block(s)  
and LED/Lamp Block



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type        | Order Code        |
|---------------|-------------|-------------------|
| Black Plastic | M2SS(X)-11X | 1SFA611 20X R110X |
| Chrome Metal  | M2SS(X)-31X | 1SFA611 20X R310X |



Selector Switch, short handle

### Operator: Two-position Selector Switch (Light Bulb max 2W, not included)

| Description                                 | Type     | Order Code | Package Quantity   | Weight Kg  |
|---------------------------------------------|----------|------------|--------------------|------------|
| <b>Short handle</b>                         |          |            |                    |            |
| <b>Maintained</b>                           |          |            |                    |            |
|                                             | ● Red    | M2SS1-11R  | 1SFA 611 200 R1101 | 1x10 0.015 |
|                                             | ● Green  | M2SS1-11G  | 1SFA 611 200 R1102 | 1x10 0.015 |
|                                             | ● Yellow | M2SS1-11Y  | 1SFA 611 200 R1103 | 1x10 0.015 |
|                                             | ● Blue   | M2SS1-11L  | 1SFA 611 200 R1104 | 1x10 0.015 |
|                                             | ○ Clear  | M2SS1-11C  | 1SFA 611 200 R1108 | 1x10 0.015 |
| <b>Maintained</b>                           |          |            |                    |            |
|                                             | ● Red    | M2SS2-11R  | 1SFA 611 201 R1101 | 1x10 0.015 |
|                                             | ● Green  | M2SS2-11G  | 1SFA 611 201 R1102 | 1x10 0.015 |
|                                             | ● Yellow | M2SS2-11Y  | 1SFA 611 201 R1103 | 1x10 0.015 |
|                                             | ● Blue   | M2SS2-11L  | 1SFA 611 201 R1104 | 1x10 0.015 |
|                                             | ○ Clear  | M2SS2-11C  | 1SFA 611 201 R1108 | 1x10 0.015 |
| <b>Momentary, spring return from C to B</b> |          |            |                    |            |
|                                             | ● Red    | M2SS3-11R  | 1SFA 611 202 R1101 | 1x10 0.015 |
|                                             | ● Green  | M2SS3-11G  | 1SFA 611 202 R1102 | 1x10 0.015 |
|                                             | ● Yellow | M2SS3-11Y  | 1SFA 611 202 R1103 | 1x10 0.015 |
|                                             | ● Blue   | M2SS3-11L  | 1SFA 611 202 R1104 | 1x10 0.015 |
|                                             | ○ Clear  | M2SS3-11C  | 1SFA 611 202 R1108 | 1x10 0.015 |
| <b>Long handle</b>                          |          |            |                    |            |
| <b>Maintained</b>                           |          |            |                    |            |
|                                             | ● Red    | M2SS4-11R  | 1SFA 611 203 R1101 | 1x10 0.018 |
|                                             | ● Green  | M2SS4-11G  | 1SFA 611 203 R1102 | 1x10 0.018 |
|                                             | ● Yellow | M2SS4-11Y  | 1SFA 611 203 R1103 | 1x10 0.018 |
|                                             | ● Blue   | M2SS4-11L  | 1SFA 611 203 R1104 | 1x10 0.018 |
|                                             | ○ Clear  | M2SS4-11C  | 1SFA 611 203 R1108 | 1x10 0.018 |
| <b>Maintained</b>                           |          |            |                    |            |
|                                             | ● Red    | M2SS5-11R  | 1SFA 611 204 R1101 | 1x10 0.018 |
|                                             | ● Green  | M2SS5-11G  | 1SFA 611 204 R1103 | 1x10 0.018 |
|                                             | ● Yellow | M2SS5-11Y  | 1SFA 611 204 R1103 | 1x10 0.018 |
|                                             | ● Blue   | M2SS5-11L  | 1SFA 611 204 R1104 | 1x10 0.018 |
|                                             | ○ Clear  | M2SS5-11C  | 1SFA 611 204 R1108 | 1x10 0.018 |
| <b>Momentary, spring return from C to B</b> |          |            |                    |            |
|                                             | ● Red    | M2SS6-11R  | 1SFA 611 205 R1101 | 1x10 0.018 |
|                                             | ● Green  | M2SS6-11G  | 1SFA 611 205 R1102 | 1x10 0.018 |
|                                             | ● Yellow | M2SS6-11Y  | 1SFA 611 205 R1103 | 1x10 0.018 |
|                                             | ● Blue   | M2SS6-11L  | 1SFA 611 205 R1104 | 1x10 0.018 |
|                                             | ○ Clear  | M2SS6-11C  | 1SFA 611 205 R1108 | 1x10 0.018 |



Selector Switch, long handle

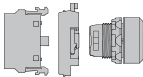


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

## three-position, illuminated, short handle

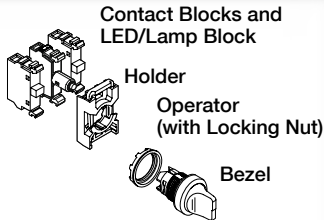
Modular Range



### How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block

**Alt.2** • Operator  
+ Holder with Contact Block(s)  
and LED/Lamp Block



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type        | Order Code        |
|---------------|-------------|-------------------|
| Black Plastic | M3SS(X)-11X | 1SFA611 21X R110X |
| Chrome Metal  | M3SS(X)-31X | 1SFA611 21X R310X |



Selector Switch, short handle

### Operator: Three-position Selector Switches (Light Bulb max 2W, not included)

| Description                                                                         |          | Type      | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------------------------------------|----------|-----------|--------------------|------------------|-----------|
| Short handle                                                                        |          |           |                    |                  |           |
| Maintained                                                                          |          |           |                    |                  |           |
|    | ● Red    | M3SS1-11R | 1SFA 611 210 R1101 | 1x10             | 0.015     |
|                                                                                     | ● Green  | M3SS1-11G | 1SFA 611 210 R1102 | 1x10             | 0.015     |
|                                                                                     | ● Yellow | M3SS1-11Y | 1SFA 611 210 R1103 | 1x10             | 0.015     |
|                                                                                     | ● Blue   | M3SS1-11L | 1SFA 611 210 R1104 | 1x10             | 0.015     |
|                                                                                     | ○ Clear  | M3SS1-11C | 1SFA 611 210 R1108 | 1x10             | 0.015     |
| Momentary, spring return from A to B and from C to B                                |          |           |                    |                  |           |
|  | ● Red    | M3SS2-11R | 1SFA 611 211 R1101 | 1x10             | 0.015     |
|                                                                                     | ● Green  | M3SS2-11G | 1SFA 611 211 R1102 | 1x10             | 0.015     |
|                                                                                     | ● Yellow | M3SS2-11Y | 1SFA 611 211 R1103 | 1x10             | 0.015     |
|                                                                                     | ● Blue   | M3SS2-11L | 1SFA 611 211 R1104 | 1x10             | 0.015     |
|                                                                                     | ○ Clear  | M3SS2-11C | 1SFA 611 211 R1108 | 1x10             | 0.015     |
| Momentary, spring return from C to B                                                |          |           |                    |                  |           |
|  | ● Red    | M3SS3-11R | 1SFA 611 212 R1101 | 1x10             | 0.015     |
|                                                                                     | ● Green  | M3SS3-11G | 1SFA 611 212 R1102 | 1x10             | 0.015     |
|                                                                                     | ● Yellow | M3SS3-11Y | 1SFA 611 212 R1103 | 1x10             | 0.015     |
|                                                                                     | ● Blue   | M3SS3-11L | 1SFA 611 212 R1104 | 1x10             | 0.015     |
|                                                                                     | ○ Clear  | M3SS3-11C | 1SFA 611 212 R1108 | 1x10             | 0.015     |
| Momentary, spring return from A to B                                                |          |           |                    |                  |           |
|  | ● Red    | M3SS7-11R | 1SFA 611 216 R1101 | 1x10             | 0.015     |
|                                                                                     | ● Green  | M3SS7-11G | 1SFA 611 216 R1102 | 1x10             | 0.015     |
|                                                                                     | ● Yellow | M3SS7-11Y | 1SFA 611 216 R1103 | 1x10             | 0.015     |
|                                                                                     | ● Blue   | M3SS7-11L | 1SFA 611 216 R1104 | 1x10             | 0.015     |
|                                                                                     | ○ Clear  | M3SS7-11C | 1SFA 611 216 R1108 | 1x10             | 0.015     |

### Contacts actuated

|                                                                                       |   |                          |                          |
|---------------------------------------------------------------------------------------|---|--------------------------|--------------------------|
|                                                                                       |   |                          |                          |
| <b>Handle position</b>                                                                |   | <b>Left block</b>        | <b>Right block</b>       |
|                                                                                       | A | <input type="checkbox"/> | <input type="checkbox"/> |
|                                                                                       | B | <input type="checkbox"/> | <input type="checkbox"/> |
|                                                                                       | C | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Not actuated<br><input checked="" type="checkbox"/> Actuated |   |                          |                          |

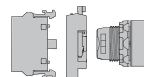


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Selector Switches

## three-position, illuminated, long handle

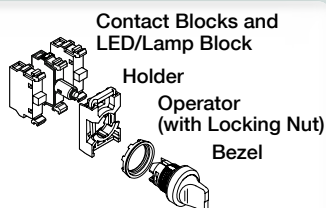
Modular Range



### How to order:

**Alt.1** • Operator  
+ Holder  
+ Contact Block(s)  
+ LED/Lamp Block

**Alt.2** • Operator  
+ Holder with Contact Block(s)  
and LED/Lamp Block



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type        | Order Code        |
|---------------|-------------|-------------------|
| Black Plastic | M3SS(X)-11X | 1SFA611 21X R110X |
| Chrome Metal  | M3SS(X)-31X | 1SFA611 21X R310X |



Selector Switch, long handle

### Operator: Three-position Selector Switches (Light Bulb max 2W, not included)

| Description                                          | Type     | Order Code | Package Quantity   | Weight Kg |       |
|------------------------------------------------------|----------|------------|--------------------|-----------|-------|
| Long handle                                          |          |            |                    |           |       |
| Maintained                                           |          |            |                    |           |       |
|                                                      | ● Red    | M3SS4-11R  | 1SFA 611 213 R1101 | 1x10      | 0.018 |
|                                                      | ● Green  | M3SS4-11G  | 1SFA 611 213 R1102 | 1x10      | 0.018 |
|                                                      | ● Yellow | M3SS4-11Y  | 1SFA 611 213 R1103 | 1x10      | 0.018 |
|                                                      | ● Blue   | M3SS4-11L  | 1SFA 611 213 R1104 | 1x10      | 0.018 |
|                                                      | ○ Clear  | M3SS4-11C  | 1SFA 611 213 R1108 | 1x10      | 0.018 |
| Momentary, spring return from A to B and from C to B |          |            |                    |           |       |
|                                                      | ● Red    | M3SS5-11R  | 1SFA 611 214 R1101 | 1x10      | 0.018 |
|                                                      | ● Green  | M3SS5-11G  | 1SFA 611 214 R1102 | 1x10      | 0.018 |
|                                                      | ● Yellow | M3SS5-11Y  | 1SFA 611 214 R1103 | 1x10      | 0.018 |
|                                                      | ● Blue   | M3SS5-11L  | 1SFA 611 214 R1104 | 1x10      | 0.018 |
|                                                      | ○ Clear  | M3SS5-11C  | 1SFA 611 214 R1108 | 1x10      | 0.018 |
| Momentary, spring return from C to B                 |          |            |                    |           |       |
|                                                      | ● Red    | M3SS6-11R  | 1SFA 611 215 R1101 | 1x10      | 0.018 |
|                                                      | ● Green  | M3SS6-11G  | 1SFA 611 215 R1102 | 1x10      | 0.018 |
|                                                      | ● Yellow | M3SS6-11Y  | 1SFA 611 215 R1103 | 1x10      | 0.018 |
|                                                      | ● Blue   | M3SS6-11L  | 1SFA 611 215 R1104 | 1x10      | 0.018 |
|                                                      | ○ Clear  | M3SS6-11C  | 1SFA 611 215 R1108 | 1x10      | 0.018 |
| Momentary, spring return from A to B                 |          |            |                    |           |       |
|                                                      | ● Red    | M3SS8-11R  | 1SFA 611 217 R1101 | 1x10      | 0.018 |
|                                                      | ● Green  | M3SS8-11G  | 1SFA 611 217 R1102 | 1x10      | 0.018 |
|                                                      | ● Yellow | M3SS8-11Y  | 1SFA 611 217 R1103 | 1x10      | 0.018 |
|                                                      | ● Blue   | M3SS8-11L  | 1SFA 611 217 R1104 | 1x10      | 0.018 |
|                                                      | ○ Clear  | M3SS8-11C  | 1SFA 611 217 R1108 | 1x10      | 0.018 |

### Contacts actuated

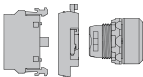
|                        |       |                                       |                                              |
|------------------------|-------|---------------------------------------|----------------------------------------------|
|                        | Right |                                       |                                              |
|                        | Left  |                                       |                                              |
| <b>Handle position</b> |       | <b>Left block</b>                     | <b>Right block</b>                           |
|                        | A     | <input type="checkbox"/>              | <input type="checkbox"/>                     |
|                        | B     | <input type="checkbox"/>              | <input type="checkbox"/>                     |
|                        | C     | <input type="checkbox"/>              | <input type="checkbox"/>                     |
|                        |       | <input type="checkbox"/> Not actuated | <input checked="" type="checkbox"/> Actuated |



Contact Blocks and Holder see the fold-out page at the end of the catalog

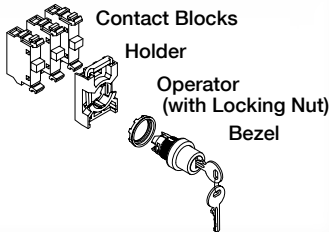
# Key-operated Selector Switches two and three positions

Modular Range



### How to order:

- Alt.1** • Operator  
+ Holder  
+ Contact Block(s)
- Alt.2** • Operator  
+ Holder with Contact Block(s)



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes

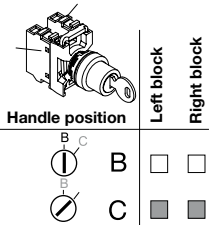


| Bezel Options | Type         | Order Code        |
|---------------|--------------|-------------------|
| Black Plastic | M3SSK(X)-10X | 1SFA611 28X R100X |
| Chrome Metal  | M3SSK(X)-30X | 1SFA611 28X R300X |

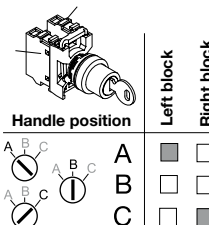


Key-operated Selector Switch

### Contacts actuated



### Contacts actuated



Contact Blocks and Holder see the fold-out page at the end of the catalog

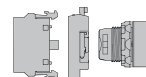
### Operator: Key-operated Selector Switch

| Description                                                                                      | Type                             | Order Code | Package Quantity   | Weight Kg |       |
|--------------------------------------------------------------------------------------------------|----------------------------------|------------|--------------------|-----------|-------|
| Two positions                                                                                    |                                  |            |                    |           |       |
| Maintained (The key can be removed in both positions)                                            |                                  |            |                    |           |       |
|                 | Key release code 71/Ronis 455    | M2SSK1-101 | 1SFA 611 280 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M2SSK1-102 | 1SFA 611 280 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M2SSK1-103 | 1SFA 611 280 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M2SSK1-104 | 1SFA 611 280 R1004 | 1         | 0.045 |
| Maintained (The key can be removed in position B only)                                           |                                  |            |                    |           |       |
|               | Key release code 71/Ronis 455    | M2SSK2-101 | 1SFA 611 281 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M2SSK2-102 | 1SFA 611 281 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M2SSK2-103 | 1SFA 611 281 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M2SSK2-104 | 1SFA 611 281 R1004 | 1         | 0.045 |
| Momentary, spring return from C to B (The key can be removed in position B only)                 |                                  |            |                    |           |       |
|               | Key release code 71/Ronis 455    | M2SSK3-101 | 1SFA 611 282 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M2SSK3-102 | 1SFA 611 282 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M2SSK3-103 | 1SFA 611 282 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M2SSK3-104 | 1SFA 611 282 R1004 | 1         | 0.045 |
| Three positions                                                                                  |                                  |            |                    |           |       |
| Maintained (The key can be removed in all positions)                                             |                                  |            |                    |           |       |
|               | Key release code 71/Ronis 455    | M3SSK1-101 | 1SFA 611 283 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M3SSK1-102 | 1SFA 611 283 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M3SSK1-103 | 1SFA 611 283 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M3SSK1-104 | 1SFA 611 283 R1004 | 1         | 0.045 |
| Maintained (The key can be removed in position B only)                                           |                                  |            |                    |           |       |
|               | Key release code 71/Ronis 455    | M3SSK2-101 | 1SFA 611 284 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M3SSK2-102 | 1SFA 611 284 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M3SSK2-103 | 1SFA 611 284 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M3SSK2-104 | 1SFA 611 284 R1004 | 1         | 0.045 |
| Momentary, spring return from A to B and from C to B (The key can be removed in position B only) |                                  |            |                    |           |       |
|               | Key release code 71/Ronis 455    | M3SSK3-101 | 1SFA 611 285 R1001 | 1         | 0.045 |
|                                                                                                  | Key release code 72/Ronis 421    | M3SSK3-102 | 1SFA 611 285 R1002 | 1         | 0.045 |
|                                                                                                  | Key release code 73/Ronis 3433-E | M3SSK3-103 | 1SFA 611 285 R1003 | 1         | 0.045 |
|                                                                                                  | Random selection *)              | M3SSK3-104 | 1SFA 611 285 R1004 | 1         | 0.045 |

\*) 25 randomly picked unique key codes. (Key codes 71,72 and 73 not included)

# Potentiometers

Modular Range

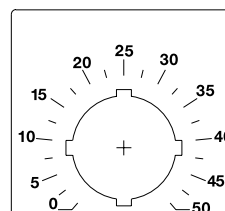
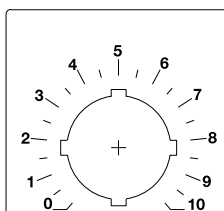
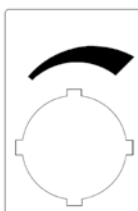


Potentiometer

## Operator: Potentiometer

| Description                                                                                                                        | Type    | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------|------------------|-----------|
| <b>Complete Potentiometers</b>                                                                                                     |         |                    |                  |           |
| Black knob with integrated position indication and marking in white                                                                |         |                    |                  |           |
| <b>With Resistor 5 kohm</b>                                                                                                        |         |                    |                  |           |
| Black Plastic Bezel                                                                                                                | MT-105B | 1SFA 611 410 R1056 | 1                | 0.040     |
| Chrome Metal Bezel                                                                                                                 | MT-305B | 1SFA 611 410 R3056 | 1                | 0.048     |
| <b>With Resistor 10 kohm</b>                                                                                                       |         |                    |                  |           |
| Black Plastic Bezel                                                                                                                | MT-110B | 1SFA 611 410 R1106 | 1                | 0.040     |
| Chrome Metal Bezel                                                                                                                 | MT-310B | 1SFA 611 410 R3106 | 1                | 0.048     |
| <b>With Resistor 50 kohm</b>                                                                                                       |         |                    |                  |           |
| Black Plastic Bezel                                                                                                                | MT-150B | 1SFA 611 410 R1506 | 1                | 0.040     |
| Chrome Metal Bezel                                                                                                                 | MT-350B | 1SFA 611 410 R3506 | 1                | 0.048     |
| <b>Knob without Resistor</b>                                                                                                       |         |                    |                  |           |
| Black knob with integrated position indication and marking in white.<br>For shaft diameter 6 -6.35 mm.<br>Min. shaft length 20 mm. |         |                    |                  |           |
| Black Plastic Bezel                                                                                                                | KT-100B | 1SFA 616 410 R1006 | 10               | 0.034     |
| Chrome Metal Bezel                                                                                                                 | KT-300B | 1SFA 616 410 R3006 | 10               | 0.042     |
| <b>Legend Plates Aluminum</b>                                                                                                      |         |                    |                  |           |
| Symbol: see fig. (29.6 x 44.5 mm)                                                                                                  | -       | SK 615 562-87      | 10               | 0.002     |
| Scale: 0-10 (48.5 x 44.5 mm)                                                                                                       | -       | SK 615 562-88      | 10               | 0.002     |
| Scale: 0-50 (48.5 x 44.5 mm)                                                                                                       | -       | 1SFA 611 930 R1252 | 10               | 0.002     |

Legend Plates



# Buzzers



Buzzer

## Operator: Buzzer

| Description                                                                                                                                                      | Type       | Order Code | Package Quantity   | Weight Kg |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|--------------------|-----------|-------|
| Buzzers                                                                                                                                                          |            |            |                    |           |       |
| Black. Frequency: Approx. 2400 Hz.<br>Loudness: Min 80 dB (A)/10 cm<br>Rated Current: < 8 mA.<br>Service Life:>5000 h<br>Suitable for both 50 and 60 Hz networks |            |            |                    |           |       |
| Supply Voltage                                                                                                                                                   | Tone Type  |            |                    |           |       |
| 24 V AC/DC                                                                                                                                                       | Continuous | KB1-4010   | 1SFA 616 401 R4010 | 1x10      | 0.020 |
| 115 V AC/DC                                                                                                                                                      | Continuous | KB1-4030   | 1SFA 616 401 R4030 | 1x10      | 0.020 |
| 230 V AC                                                                                                                                                         | Continuous | KB1-4040   | 1SFA 616 401 R4040 | 1x10      | 0.020 |
| 24 V AC/DC                                                                                                                                                       | Pulsating  | KB1-4110   | 1SFA 616 401 R4110 | 1x10      | 0.020 |
| 115 V AC/DC                                                                                                                                                      | Pulsating  | KB1-4130   | 1SFA 616 401 R4130 | 1x10      | 0.020 |
| 230 V AC                                                                                                                                                         | Pulsating  | KB1-4140   | 1SFA 616 401 R4140 | 1x10      | 0.020 |

# Reset Pushbuttons

Modular Range



## How to order without shaft:

Alt.1 • Operator

## How to order with shaft:

Alt.1 • Operator  
+ shaft  
+ flexible joint

## Bezel - How to order

Black Plastic - Standard

Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



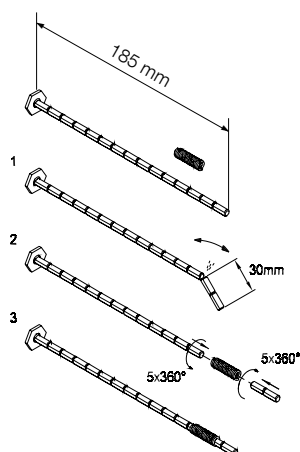
| Bezel Options | Type      | Order Code         |
|---------------|-----------|--------------------|
| Black Plastic | KPRX-10XX | 1SFA 616 16X R100X |
| Chrome Metal  | KPRX-30XX | 1SFA 616 16X R300X |



Reset Pushbutton with shaft  
marked "R"

## Operator: Reset Pushbutton

| Description                          | Text    | Type      | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------|---------|-----------|--------------------|------------------|-----------|
| <b>Without Shaft</b>                 |         |           |                    |                  |           |
| <b>Flush Pushbutton</b>              |         |           |                    |                  |           |
| ● Red                                | No text | KPR1-100R | 1SFA 616 160 R1001 | 1x10             | 0.020     |
| ● Green                              | No text | KPR1-100G | 1SFA 616 160 R1002 | 1x10             | 0.020     |
|                                      | II      | KPR1-103G | 1SFA 616 160 R1032 | 1x10             | 0.020     |
| ● Yellow                             | No text | KPR1-100Y | 1SFA 616 160 R1003 | 1x10             | 0.020     |
| ● Blue                               | No text | KPR1-100L | 1SFA 616 160 R1004 | 1x10             | 0.020     |
|                                      | R       | KPR1-101L | 1SFA 616 160 R1014 | 1x10             | 0.020     |
| ○ white                              | No text | KPR1-100W | 1SFA 616 160 R1005 | 1x10             | 0.020     |
|                                      | R       | KPR1-101W | 1SFA 616 160 R1015 | 1x10             | 0.020     |
|                                      | I       | KPR1-102W | 1SFA 616 160 R1025 | 1x10             | 0.020     |
|                                      | II      | KPR1-103W | 1SFA 616 160 R1035 | 1x10             | 0.020     |
| ● Black                              | No text | KPR1-100B | 1SFA 616 160 R1006 | 1x10             | 0.020     |
|                                      | RESET   | KPR1-104B | 1SFA 616 160 R1046 | 1x10             | 0.020     |
| <b>Extended Pushbutton</b>           |         |           |                    |                  |           |
| ● Red                                | No text | KPR2-100R | 1SFA 616 161 R1001 | 1x10             | 0.021     |
|                                      | O       | KPR2-105R | 1SFA 616 161 R1051 | 1x10             | 0.021     |
| ○ white                              | No text | KPR2-100W | 1SFA 616 161 R1005 | 1x10             | 0.021     |
| ● Black                              | No text | KPR2-100B | 1SFA 616 161 R1006 | 1x10             | 0.021     |
|                                      | O       | KPR2-105B | 1SFA 616 161 R1056 | 1x10             | 0.021     |
| <b>With Shaft</b>                    |         |           |                    |                  |           |
| <b>Flush Pushbutton</b>              |         |           |                    |                  |           |
| ● Red                                | No text | KPR3-100R | 1SFA 616 162 R1001 | 1x10             | 0.027     |
| ● Green                              | No text | KPR3-100G | 1SFA 616 162 R1002 | 1x10             | 0.027     |
|                                      | II      | KPR3-103G | 1SFA 616 162 R1032 | 1x10             | 0.027     |
| ● Yellow                             | No text | KPR3-100Y | 1SFA 616 162 R1003 | 1x10             | 0.027     |
| ● Blue                               | No text | KPR3-100L | 1SFA 616 162 R1004 | 1x10             | 0.027     |
|                                      | R       | KPR3-101L | 1SFA 616 162 R1014 | 1x10             | 0.027     |
| ○ white                              | No text | KPR3-100W | 1SFA 616 162 R1005 | 1x10             | 0.027     |
|                                      | R       | KPR3-101W | 1SFA 616 162 R1015 | 1x10             | 0.027     |
|                                      | I       | KPR3-102W | 1SFA 616 162 R1025 | 1x10             | 0.027     |
|                                      | II      | KPR3-103W | 1SFA 616 162 R1035 | 1x10             | 0.027     |
| ● Black                              | No text | KPR3-100B | 1SFA 616 162 R1006 | 1x10             | 0.027     |
|                                      | RESET   | KPR3-104B | 1SFA 616 162 R1046 | 1x10             | 0.027     |
| <b>Extended Pushbutton</b>           |         |           |                    |                  |           |
| ● Red                                | No text | KPR4-100R | 1SFA 616 163 R1001 | 1x10             | 0.028     |
|                                      | O       | KPR4-105R | 1SFA 616 163 R1051 | 1x10             | 0.028     |
| ○ white                              | No text | KPR4-100W | 1SFA 616 163 R1005 | 1x10             | 0.028     |
| ● Black                              | No text | KPR4-100B | 1SFA 616 163 R1006 | 1x10             | 0.028     |
|                                      | O       | KPR4-105B | 1SFA 616 163 R1056 | 1x10             | 0.028     |
| <b>Shaft: (including fixing nut)</b> |         | KA1-8046  | 1SFA 616 920 R8046 | 1x10             | 0.007     |
| <b>Flexible Joint</b>                |         | KA1-8047  | 1SFA 616 920 R8047 | 1x10             | 0.005     |

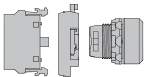


Contact Blocks and Holder see the fold-out page at the end of the catalog



Customer specific marking online. For more information see page 4 or go to:

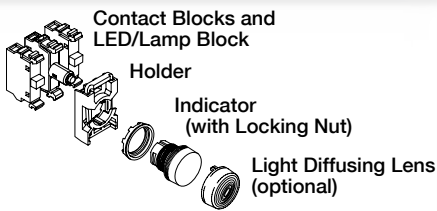
<http://bolservices.it.abb.com/pilot-devices>



How to order:

Alt.1 • indicator  
+ Holder  
+ LED/Lamp Block

Alt.2 • indicator  
+ Holder  
+ LED/Lamp Block  
+ lens: used together with LED to improve light diffusion (Cannot be used together with Text Cap)



Pilot Light

Indicator: Pilot Light

| Description  | Type     | Order Code         | Package Quantity | Weight Kg |
|--------------|----------|--------------------|------------------|-----------|
| Pilot Lights |          |                    |                  |           |
| ● Red        | ML1-100R | 1SFA 611 400 R1001 | 1x10             | 0.018     |
| ● Green      | ML1-100G | 1SFA 611 400 R1002 | 1x10             | 0.018     |
| ● Yellow     | ML1-100Y | 1SFA 611 400 R1003 | 1x10             | 0.018     |
| ● Blue       | ML1-100L | 1SFA 611 400 R1004 | 1x10             | 0.018     |
| ○ White      | ML1-100W | 1SFA 611 400 R1005 | 1x10             | 0.018     |
| ○ Clear      | ML1-100C | 1SFA 611 400 R1008 | 1x10             | 0.016     |

Note: Light source not included. Bulbs and Lamp Blocks or LED Blocks – See Accessories

Accessories

|                      |          |                    |      |       |
|----------------------|----------|--------------------|------|-------|
| Light Diffusing Lens | KA1-8005 | 1SFA 616 920 R8005 | 1x10 | 0.001 |
|----------------------|----------|--------------------|------|-------|

Note: Light Diffusing Lens is used to improve illumination of LED Bulbs. Cannot be used together with text cap.



Contact Blocks and Holder see the fold-out page at the end of the catalog



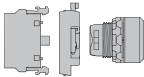
Customer specific marking online. For more information see page 4 or go to:

<http://bolsservices.it.abb.com/pilot-devices>

# Toggle Switches

## two and three positions

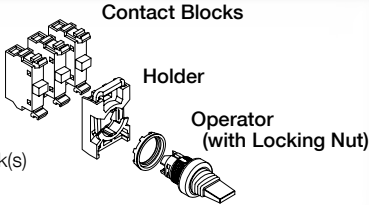
Modular Range



How to order:

Alt.1 • Operator  
+ Holder  
+ Contact Block(s)

Alt.2 • Operator  
+ Holder with Contact Block(s)



Toggle Switch

Contacts actuated

|                 |       |                                     |                                     |                                     |
|-----------------|-------|-------------------------------------|-------------------------------------|-------------------------------------|
| Centre          | Right |                                     |                                     |                                     |
| Left            |       |                                     |                                     |                                     |
| Handle position |       | Left block                          | Center block                        | Right block                         |
|                 | A     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|                 | C     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

☐ Not actuated  
☒ Actuated

Contacts actuated

|                 |       |                                     |                                     |                                     |
|-----------------|-------|-------------------------------------|-------------------------------------|-------------------------------------|
| Centre          | Right |                                     |                                     |                                     |
| Left            |       |                                     |                                     |                                     |
| Handle position |       | Left block                          | Center block                        | Right block                         |
|                 | A     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|                 | B     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
|                 | C     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

☐ Not actuated  
☒ Actuated



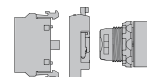
Contact Blocks and Holder see the fold-out page at the end of the catalog

Operator: Toggle Switch

| Description                                          | Bezel          | Type     | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------|----------------|----------|--------------------|------------------|-----------|
| Two positions                                        |                |          |                    |                  |           |
| Maintained                                           |                |          |                    |                  |           |
|                                                      | Black Plastic  | MTS1-10B | 1SFA 611 300 R1006 | 1x10             | 0.021     |
|                                                      | Chrome plastic | MTS1-20B | 1SFA 611 300 R2006 | 1x10             | 0.021     |
|                                                      | Chrome metal   | MTS1-30B | 1SFA 611 300 R3006 | 1x10             | 0.021     |
| Three positions                                      |                |          |                    |                  |           |
| Momentary, spring return from A to B and from C to B |                |          |                    |                  |           |
|                                                      | Black Plastic  | MTS2-10B | 1SFA 611 301 R1006 | 1x10             | 0.021     |
|                                                      | Chrome plastic | MTS2-20B | 1SFA 611 301 R2006 | 1x10             | 0.021     |
|                                                      | Chrome metal   | MTS2-30B | 1SFA 611 301 R3006 | 1x10             | 0.021     |
|                                                      | Black Plastic  | MTS3-10B | 1SFA 611 302 R1006 | 1x10             | 0.021     |
|                                                      | Chrome plastic | MTS3-20B | 1SFA 611 302 R2006 | 1x10             | 0.021     |
|                                                      | Chrome metal   | MTS3-30B | 1SFA 611 302 R3006 | 1x10             | 0.021     |

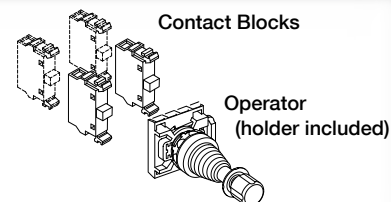
# Joysticks IP67 and IP69K

Modular Range

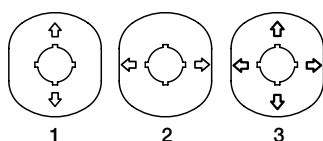


## How to order:

- Operator Holder included  
+ Contact Blocks



Joystick with latching function



Legend Plates



Legend Plate Holders

## Operator: Joystick

| Description           | Type     | Order Code         | Package Quantity | Weight Kg |
|-----------------------|----------|--------------------|------------------|-----------|
| <b>Joystick</b>       |          |                    |                  |           |
| 2-position Maintained | MJS1-60B | 1SFA 611 701 R6006 | 1                | 0.062     |
| 2-position Momentary  | MJS2-60B | 1SFA 611 702 R6006 | 1                | 0.062     |
| 4-position Maintained | MJS5-60B | 1SFA 611 705 R6006 | 1                | 0.088     |
| 4-position Momentary  | MJS6-60B | 1SFA 611 706 R6006 | 1                | 0.088     |

## Joystick with latching function

|                       |           |                    |   |       |
|-----------------------|-----------|--------------------|---|-------|
| 2-position Maintained | MJS7-60B  | 1SFA 611 707 R6006 | 1 | 0.062 |
| 2-position Momentary  | MJS8-60B  | 1SFA 611 708 R6006 | 1 | 0.062 |
| 4-position Maintained | MJS11-60B | 1SFA 611 711 R6006 | 1 | 0.088 |
| 4-position Momentary  | MJS12-60B | 1SFA 611 712 R6006 | 1 | 0.088 |

## Micro Switch Blocks

|      |         |                    |      |       |
|------|---------|--------------------|------|-------|
| 1 NO | MCBL-10 | 1SFA 611 612 R1010 | 1x10 | 0.010 |
| 1 NC | MCBL-01 | 1SFA 611 612 R1001 | 1x10 | 0.010 |

## Legend Plates

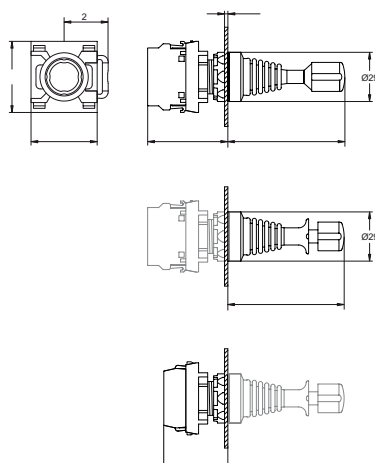
|                               |          |                    |   |       |
|-------------------------------|----------|--------------------|---|-------|
| 2-position (1) (up - down)    | MA6-1240 | 1SFA 611 930 R1240 | 1 | 0.004 |
| 2-position (2) (right - left) | MA6-1241 | 1SFA 611 930 R1241 | 1 | 0.004 |
| 4-position (3)                | MA6-1242 | 1SFA 611 930 R1242 | 1 | 0.004 |

## Legend Plate Holders

|            |          |                    |   |       |
|------------|----------|--------------------|---|-------|
| 4-position | MA1-8137 | 1SFA 611 920 R8137 | 1 | 0.004 |
| 2-position | MA1-8138 | 1SFA 611 920 R8138 | 1 | 0.003 |

## Insert with symbol

|   |          |                    |    |       |
|---|----------|--------------------|----|-------|
| ↑ | MA6-1065 | 1SFA 611 930 R1065 | 10 | 0.001 |
|---|----------|--------------------|----|-------|

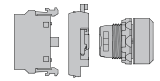


Contact Blocks and Holder see the fold-out page at the end of the catalog

# Accessories for Modular Range

## LED Blocks, front mounting

Modular Range



LED Block with built in leakage current protection

| Description                        | Rated Current<br>mA | Wave-<br>length<br>nm | Lumi-<br>nance<br>mcd | Type     | Order Code         | Package<br>Quantity | Weight<br>Kg |
|------------------------------------|---------------------|-----------------------|-----------------------|----------|--------------------|---------------------|--------------|
| <b>LED-blocks</b>                  |                     |                       |                       |          |                    |                     |              |
| <b>Rated Voltage 12 V, DC</b>      |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 12.0                | 620                   | 320                   | MLBL-00R | 1SFA 611 621 R1001 | 1x10                | 0.012        |
| ● Green                            | 9.3                 | 520                   | 1500                  | MLBL-00G | 1SFA 611 621 R1002 | 1x10                | 0.012        |
| ● Yellow                           | 12.0                | 588                   | 380                   | MLBL-00Y | 1SFA 611 621 R1003 | 1x10                | 0.012        |
| ● Blue                             | 9.5                 | 468                   | 450                   | MLBL-00L | 1SFA 611 621 R1004 | 1x10                | 0.012        |
| ○ White                            | 9.3                 | <sup>2)</sup>         | 600                   | MLBL-00W | 1SFA 611 621 R1005 | 1x10                | 0.012        |
| <b>Rated Voltage 24 V, AC/DC</b>   |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 9.9                 | 620                   | 250                   | MLBL-01R | 1SFA 611 621 R1011 | 1x10                | 0.012        |
| ● Green                            | 9.2                 | 520                   | 1500                  | MLBL-01G | 1SFA 611 621 R1012 | 1x10                | 0.012        |
| ● Yellow                           | 9.9                 | 588                   | 250                   | MLBL-01Y | 1SFA 611 621 R1013 | 1x10                | 0.012        |
| ● Blue                             | 9.3                 | 468                   | 450                   | MLBL-01L | 1SFA 611 621 R1014 | 1x10                | 0.012        |
| ○ White                            | 9.2                 | <sup>2)</sup>         | 600                   | MLBL-01W | 1SFA 611 621 R1015 | 1x10                | 0.012        |
| <b>Rated Voltage 48 V, AC/DC</b>   |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 10.0                | 620                   | 260                   | MLBL-02R | 1SFA 611 621 R1021 | 1x10                | 0.012        |
| ● Green                            | 9.7                 | 520                   | 1500                  | MLBL-02G | 1SFA 611 621 R1022 | 1x10                | 0.012        |
| ● Yellow                           | 10.0                | 588                   | 300                   | MLBL-02Y | 1SFA 611 621 R1023 | 1x10                | 0.012        |
| ● Blue                             | 9.7                 | 468                   | 450                   | MLBL-02L | 1SFA 611 621 R1024 | 1x10                | 0.012        |
| ○ White                            | 9.7                 | <sup>1)</sup>         | 600                   | MLBL-02W | 1SFA 611 621 R1025 | 1x10                | 0.012        |
| <b>Rated Voltage 60 V, AC/DC</b>   |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 13.0                | 620                   | 350                   | MLBL-03R | 1SFA 611 621 R1031 | 1x10                | 0.012        |
| ● Green                            | 12.7                | 520                   | 2000                  | MLBL-03G | 1SFA 611 621 R1032 | 1x10                | 0.012        |
| ● Yellow                           | 13.0                | 588                   | 400                   | MLBL-03Y | 1SFA 611 621 R1033 | 1x10                | 0.012        |
| ● Blue                             | 12.7                | 468                   | 550                   | MLBL-03L | 1SFA 611 621 R1034 | 1x10                | 0.012        |
| ○ White                            | 12.7                | <sup>1)</sup>         | 750                   | MLBL-03W | 1SFA 611 621 R1035 | 1x10                | 0.012        |
| <b>Rated Voltage 110-130 V, AC</b> |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 8.6                 | 620                   | 200                   | MLBL-04R | 1SFA 611 621 R1041 | 1x10                | 0.012        |
| ● Green                            | 8.5                 | 520                   | 1200                  | MLBL-04G | 1SFA 611 621 R1042 | 1x10                | 0.012        |
| ● Yellow                           | 8.6                 | 588                   | 250                   | MLBL-04Y | 1SFA 611 621 R1043 | 1x10                | 0.012        |
| ● Blue                             | 7.0                 | 468                   | 400                   | MLBL-04L | 1SFA 611 621 R1044 | 1x10                | 0.012        |
| ○ White                            | 7.0                 | <sup>1)</sup>         | 500                   | MLBL-04W | 1SFA 611 621 R1045 | 1x10                | 0.012        |
| <b>Rated Voltage 110-130 V, DC</b> |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 9.9                 | 620                   | 250                   | MLBL-05R | 1SFA 611 621 R1051 | 1x10                | 0.012        |
| ● Green                            | 9.8                 | 520                   | 1500                  | MLBL-05G | 1SFA 611 621 R1052 | 1x10                | 0.012        |
| ● Yellow                           | 9.9                 | 588                   | 300                   | MLBL-05Y | 1SFA 611 621 R1053 | 1x10                | 0.012        |
| ● Blue                             | 9.8                 | 468                   | 450                   | MLBL-05L | 1SFA 611 621 R1054 | 1x10                | 0.012        |
| ○ White                            | 9.8                 | <sup>1)</sup>         | 600                   | MLBL-05W | 1SFA 611 621 R1055 | 1x10                | 0.012        |
| <b>Rated Voltage 220 V, DC</b>     |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 8.0                 | 620                   | 180                   | MLBL-06R | 1SFA 611 621 R1061 | 1x10                | 0.012        |
| ● Green                            | 8.0                 | 520                   | 110                   | MLBL-06G | 1SFA 611 621 R1062 | 1x10                | 0.012        |
| ● Yellow                           | 8.0                 | 588                   | 200                   | MLBL-06Y | 1SFA 611 621 R1063 | 1x10                | 0.012        |
| ● Blue                             | 8.0                 | 468                   | 450                   | MLBL-06L | 1SFA 611 621 R1064 | 1x10                | 0.012        |
| ○ White                            | 8.0                 | <sup>1)</sup>         | 600                   | MLBL-06W | 1SFA 611 621 R1065 | 1x10                | 0.012        |
| <b>Rated Voltage 230 V, AC</b>     |                     |                       |                       |          |                    |                     |              |
| ● Red                              | 9.5                 | 620                   | 250                   | MLBL-07R | 1SFA 611 621 R1071 | 1x10                | 0.012        |
| ● Green                            | 9.4                 | 520                   | 1500                  | MLBL-07G | 1SFA 611 621 R1072 | 1x10                | 0.012        |
| ● Yellow                           | 9.5                 | 588                   | 300                   | MLBL-07Y | 1SFA 611 621 R1073 | 1x10                | 0.012        |
| ● Blue                             | 8.2                 | 468                   | 450                   | MLBL-07L | 1SFA 611 621 R1074 | 1x10                | 0.012        |
| ○ White                            | 8.2                 | <sup>1)</sup>         | 600                   | MLBL-07W | 1SFA 611 621 R1075 | 1x10                | 0.012        |

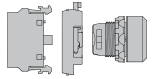
Note: Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

<sup>1)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

# Accessories for Modular Range

## LED Blocks, front mounting

Modular Range



LED Block with built in leakage current protection

| Description                    | Rated Current<br>mA | Wave-length<br>nm | Lumi-nance<br>mcd | Type            | Order Code                | Package Quantity | Weight<br>Kg |
|--------------------------------|---------------------|-------------------|-------------------|-----------------|---------------------------|------------------|--------------|
| <b>LED Blocks continued</b>    |                     |                   |                   |                 |                           |                  |              |
| <b>Rated Voltage 380 V, AC</b> |                     |                   |                   |                 |                           |                  |              |
| ● Red                          | 10.2                | 620               | 250               | <b>MLBL-08R</b> | <b>1SFA 611 621 R1081</b> | 1x10             | 0.012        |
| ● Green                        | 10.2                | 520               | 1500              | <b>MLBL-08G</b> | <b>1SFA 611 621 R1082</b> | 1x10             | 0.012        |
| ● Yellow                       | 10.2                | 582               | 300               | <b>MLBL-08Y</b> | <b>1SFA 611 621 R1083</b> | 1x10             | 0.012        |
| ● Blue                         | 9.1                 | 468               | 450               | <b>MLBL-08L</b> | <b>1SFA 611 621 R1084</b> | 1x10             | 0.012        |
| ○ White                        | 9,1                 | <sup>1)</sup>     | 600               | <b>MLBL-08W</b> | <b>1SFA 611 621 R1085</b> | 1x10             | 0.012        |
| <b>Rated Voltage 415 V, AC</b> |                     |                   |                   |                 |                           |                  |              |
| ● Red                          | 11.2                | 620               | 280               | <b>MLBL-09R</b> | <b>1SFA 611 621 R1091</b> | 1x10             | 0.012        |
| ● Green                        | 11.2                | 520               | 1800              | <b>MLBL-09G</b> | <b>1SFA 611 621 R1092</b> | 1x10             | 0.012        |
| ● Yellow                       | 11.2                | 588               | 350               | <b>MLBL-09Y</b> | <b>1SFA 611 621 R1093</b> | 1x10             | 0.012        |
| ● Blue                         | 9.9                 | 468               | 500               | <b>MLBL-09L</b> | <b>1SFA 611 621 R1094</b> | 1x10             | 0.012        |
| ○ White                        | 9.9                 | <sup>1)</sup>     | 650               | <b>MLBL-09W</b> | <b>1SFA 611 621 R1095</b> | 1x10             | 0.012        |

Note: Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

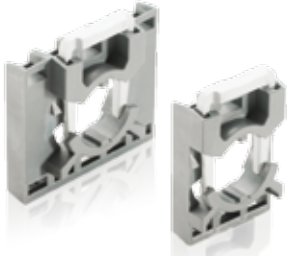
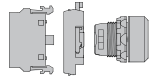
<sup>1)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

Rear mounted LED Blocks can be found on page 62.

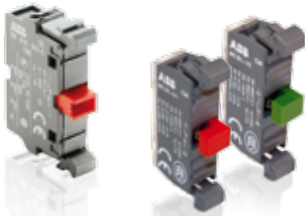
# Accessories for Modular Range

## Contact Blocks and Holders

Modular Range



Holders for Contact Block



Contact Block    Micro Switch Blocks



Double Contact Blocks

| Description                 | Type     | Order Code         | Package Quantity | Weight Kg |
|-----------------------------|----------|--------------------|------------------|-----------|
| <b>Holders</b>              |          |                    |                  |           |
| Holders for three positions | MCBH-00  | 1SFA 611 605 R1100 | 1x10             | 0.006     |
| Holders for five positions* | MCBH5-00 | 1SFA 611 601 R1100 | 1x10             | 0.008     |

\* Note: Double Contact Blocks are required on side positions

|                                                 |         |                    |      |       |
|-------------------------------------------------|---------|--------------------|------|-------|
| <b>Single Contact Blocks for front mounting</b> |         |                    |      |       |
| 1 NO                                            | MCB-10  | 1SFA 611 610 R1001 | 1x10 | 0.013 |
| 1 NO                                            | MCB-10  | 1SFA 611 610 H1001 | 100  | 0.013 |
| 1 NC                                            | MCB-01  | 1SFA 611 610 R1010 | 1x10 | 0.013 |
| 1 NC                                            | MCB-01  | 1SFA 611 610 H1010 | 100  | 0.013 |
| 1 NO with gold plated contacts                  | MCB-10G | 1SFA 611 610 R1101 | 1x10 | 0.013 |
| 1 NC with gold plated contacts                  | MCB-01G | 1SFA 611 610 R1110 | 1x10 | 0.013 |

|                            |         |                    |      |       |
|----------------------------|---------|--------------------|------|-------|
| <b>Micro Switch Blocks</b> |         |                    |      |       |
| 1 NO                       | MCBL-10 | 1SFA 611 612 R1010 | 1x10 | 0.010 |
| 1 NC                       | MCBL-01 | 1SFA 611 612 R1001 | 1x10 | 0.010 |

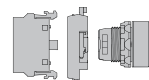
|                                                |        |                    |      |       |
|------------------------------------------------|--------|--------------------|------|-------|
| <b>Double Contact Block for front mounting</b> |        |                    |      |       |
| 2 NO                                           | MCB-20 | 1SFA 611 610 R1002 | 1x10 | 0.026 |
| 2 NC                                           | MCB-02 | 1SFA 611 610 R1020 | 1x10 | 0.026 |
| 1 NO + 1 NC                                    | MCB-11 | 1SFA 611 610 R1011 | 1x10 | 0.026 |

Note: To be used together with MCBH5-00 when Contact Blocks in position 4- and 5- are needed. Also when using MCBH-00 together with Selector Switch and Contact Block in position 3- is needed

|                                                      |         |                    |      |       |
|------------------------------------------------------|---------|--------------------|------|-------|
| <b>Contact Blocks with Holder for front mounting</b> |         |                    |      |       |
| <b>For non-illuminated Operators</b>                 |         |                    |      |       |
| 1 NC                                                 | MCBH-01 | 1SFA 611 605 R1110 | 1x10 | 0.019 |
| 1 NO                                                 | MCBH-10 | 1SFA 611 605 R1101 | 1x10 | 0.019 |
| 2 NC                                                 | MCBH-02 | 1SFA 611 605 R1120 | 1x10 | 0.032 |
| 2 NO                                                 | MCBH-20 | 1SFA 611 605 R1102 | 1x10 | 0.032 |
| 1 NO + 1 NC                                          | MCBH-11 | 1SFA 611 605 R1111 | 1x10 | 0.032 |

# Accessories for Modular Range Transformer and Lamp Blocks

Modular Range



Transformer Block for  
Pilot Lights



Transformer Block for  
illuminated Operators

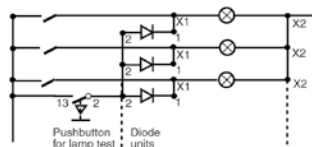


Diagram for lamp test with three  
Diode Blocks (not intended for  
integrated LED Bulbs)



Lamp Block

| Description                                                                                                             | Type                  | Order Code | Package Quantity   | Weight Kg |       |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|--------------------|-----------|-------|
| Transformer Blocks for Pilot Lights                                                                                     |                       |            |                    |           |       |
| For 6 or 24 V Filament Bulb and 24 V LED. Max 1.2 W Filament Bulb<br>Lamp Block included in the transformer, BA 9s base |                       |            |                    |           |       |
| Primary Voltage                                                                                                         | Secondary Voltage     |            |                    |           |       |
| 110-127 V AC                                                                                                            | 6 V AC                | KTR1-1001  | 1SFA 616 950 R1001 | 1         | 0.095 |
| 220-250 V AC                                                                                                            | 6 V AC                | KTR1-1002  | 1SFA 616 950 R1002 | 1         | 0.095 |
| 380-420 V AC                                                                                                            | 6 V AC                | KTR1-1003  | 1SFA 616 950 R1003 | 1         | 0.095 |
| 440-480 V AC                                                                                                            | 6 V AC                | KTR1-1004  | 1SFA 616 950 R1004 | 1         | 0.095 |
| 500-600 V AC                                                                                                            | 6 V AC                | KTR1-1005  | 1SFA 616 950 R1005 | 1         | 0.095 |
| 110-127 V AC                                                                                                            | 24 V AC <sup>1)</sup> | KTR1-1011  | 1SFA 616 950 R1011 | 1         | 0.095 |
| 220-250 V AC                                                                                                            | 24 V AC <sup>1)</sup> | KTR1-1012  | 1SFA 616 950 R1012 | 1         | 0.095 |
| 380-420 V AC                                                                                                            | 24 V AC <sup>1)</sup> | KTR1-1013  | 1SFA 616 950 R1013 | 1         | 0.095 |
| 440-480 V AC                                                                                                            | 24 V AC <sup>1)</sup> | KTR1-1014  | 1SFA 616 950 R1014 | 1         | 0.095 |

|                                                     |                       |           |                    |   |       |
|-----------------------------------------------------|-----------------------|-----------|--------------------|---|-------|
| <b>Transformer Blocks for illuminated Operators</b> |                       |           |                    |   |       |
| 110-127 V AC                                        | 6 V AC                | KTR1-2001 | 1SFA 616 950 R2001 | 1 | 0.095 |
| 220-250 V AC                                        | 6 V AC                | KTR1-2002 | 1SFA 616 950 R2002 | 1 | 0.095 |
| 380-420 V AC                                        | 6 V AC                | KTR1-2003 | 1SFA 616 950 R2003 | 1 | 0.095 |
| 440-480 V AC                                        | 6 V AC                | KTR1-2004 | 1SFA 616 950 R2004 | 1 | 0.095 |
| 500-600 V AC                                        | 6 V AC                | KTR1-2005 | 1SFA 616 950 R2005 | 1 | 0.095 |
| 110-127 V AC                                        | 24 V AC <sup>1)</sup> | KTR1-2011 | 1SFA 616 950 R2011 | 1 | 0.095 |
| 220-250 V AC                                        | 24 V AC <sup>1)</sup> | KTR1-2012 | 1SFA 616 950 R2012 | 1 | 0.095 |
| 380-420 V AC                                        | 24 V AC <sup>1)</sup> | KTR1-2013 | 1SFA 616 950 R2013 | 1 | 0.095 |
| 440-480 V AC                                        | 24 V AC <sup>1)</sup> | KTR1-2014 | 1SFA 616 950 R2014 | 1 | 0.095 |

<sup>1)</sup> Can be used with LED Bulb

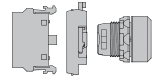
|                    |          |                    |      |       |
|--------------------|----------|--------------------|------|-------|
| <b>Diode Block</b> |          |                    |      |       |
| Diode Block        | MDB-1001 | 1SFA 611 630 R1001 | 1x10 | 0.015 |

Note: To be used if several lamps are to be connected to a common lamp-test Pushbutton. A diode must be connected in series with each lamp. The Diode Block snaps onto the Lamp Block or is placed at the side

|                                                          |                                                             |       |                    |      |       |
|----------------------------------------------------------|-------------------------------------------------------------|-------|--------------------|------|-------|
| <b>Single Lamp Blocks for front mounting, BA 9s base</b> |                                                             |       |                    |      |       |
| 230 V, 2 W<br>X1 X2                                      | For max. 2 W, 230 V AC and DC Filament Bulb or LED          | MLB-1 | 1SFA 611 620 R1001 | 1x10 | 0.015 |
| 115 V<br>X1 X2<br>60 V<br>1.2 W                          | 115 V AC supply voltage. For 60 V Filament Bulb 1.2 W       | MLB-2 | 1SFA 611 620 R1002 | 1x10 | 0.017 |
| 230 V<br>X1 X2<br>130 V<br>2 W                           | 230 V AC supply voltage. For 130 V Filament Bulb 2 W        | MLB-3 | 1SFA 611 620 R1003 | 1x10 | 0.020 |
| 115 V<br>X1 X2<br>24 V<br>LED                            | 115 V AC and DC supply voltage For 24 V LED only            | MLB-4 | 1SFA 611 620 R1004 | 1x10 | 0.017 |
| LED<br>X1 X2<br>24-230V~                                 | LED Block designed to prevent glowing from leakage current. | MLB-8 | 1SFA 611 620 R1008 | 1x10 | 0.015 |

# Accessories for Modular Range

Modular Range



DIN-rail Adaptor



Dummy Block



Adaptor



Lamp Changing Tool

Mounting Tool



Blanking Plugs

Mounting Tool for Power Tool



Square Bezels

| Description                                 | Type     | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------|----------|--------------------|------------------|-----------|
| <b>DIN-rail Adaptor</b>                     |          |                    |                  |           |
| DIN-rail Adaptor                            | MA1-8131 | 1SFA 611 920 R8131 | 1                | 0.020     |
| DIN-rail (adaptor) kit with one Dummy Block | MA1-8001 | 1SFA 611 920 R8001 | 1                | 0.028     |

|                                                                                                                  |       |                    |    |       |
|------------------------------------------------------------------------------------------------------------------|-------|--------------------|----|-------|
| <b>Dummy Block</b>                                                                                               |       |                    |    |       |
| Dummy Block                                                                                                      | MDB-2 | 1SFA 611 630 R1002 | 10 | 0.003 |
| Dummy Blocks are used when only one contact block or a compact device is used together with the DIN-Rail Adaptor |       |                    |    |       |

|                                                            |          |                    |   |       |
|------------------------------------------------------------|----------|--------------------|---|-------|
| <b>30 mm Adaptors for 22 mm Operator (1.5-4 mm panels)</b> |          |                    |   |       |
| <b>For Emergency Stop Pushbutton</b>                       |          |                    |   |       |
| Black Plastic                                              | KA1-8027 | 1SFA 616 920 R8027 | 1 | 0.007 |
| Metal                                                      | KA1-8028 | 1SFA 616 920 R8028 | 1 | 0.021 |

|                                                                                      |          |                    |   |       |
|--------------------------------------------------------------------------------------|----------|--------------------|---|-------|
| <b>For Pushbuttons, Selector Switches, Pilot Lights, Potentiometers and Buzzers:</b> |          |                    |   |       |
| Black Plastic                                                                        | KA1-8029 | 1SFA 616 920 R8029 | 1 | 0.010 |
| Metal                                                                                | KA1-8030 | 1SFA 616 920 R8030 | 1 | 0.035 |

|                                       |          |                    |   |       |
|---------------------------------------|----------|--------------------|---|-------|
| <b>Flush Mounted Adaptors (metal)</b> |          |                    |   |       |
| For Pushbuttons                       | KA1-8073 | 1SFA 616 920 R8073 | 1 | 0.050 |
| For Selector Switches                 | MA1-8074 | 1SFA 611 920 R8074 | 1 | 0.050 |

|                             |          |                    |   |       |
|-----------------------------|----------|--------------------|---|-------|
| <b>Lamp Changing Tool</b>   |          |                    |   |       |
| For LED Bulbs and for bulbs | KA1-8072 | 1SFA 616 920 R8072 | 1 | 0.002 |

|                                              |          |                    |   |       |
|----------------------------------------------|----------|--------------------|---|-------|
| <b>Mounting Tool for operator</b>            |          |                    |   |       |
| Mounting Tool for tightening the Locking Nut | MA1-8015 | 1SFA 611 920 R8015 | 1 | 0.021 |
| Mounting Tool for Power Tool                 | MA1-8149 | 1SFA 611 920 R8149 | 1 | 0.155 |

|                            |   |               |    |       |
|----------------------------|---|---------------|----|-------|
| <b>Extra key</b>           |   |               |    |       |
| Ronis 455 (key code 71)    | - | SK 616 021-71 | 10 | 0.007 |
| Ronis 421 (key code 72)    | - | SK 616 021-72 | 10 | 0.007 |
| Ronis 3433-E (key code 73) | - | SK 616 021-73 | 10 | 0.007 |

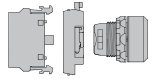
|                                                        |          |                    |    |       |
|--------------------------------------------------------|----------|--------------------|----|-------|
| <b>Locking Nut</b>                                     |          |                    |    |       |
| Locking Nut                                            | MA1-8019 | 1SFA 611 920 R8019 | 10 | 0.001 |
| The Locking nut can also be used with Compact Devices. |          |                    |    |       |

|                      |          |                    |    |       |
|----------------------|----------|--------------------|----|-------|
| <b>Blanking Plug</b> |          |                    |    |       |
| Grey                 | MA1-8129 | 1SFA 611 920 R8129 | 10 | 0.005 |
| Black                | MA1-8130 | 1SFA 611 920 R8130 | 10 | 0.005 |
| Light grey           | MA1-8136 | 1SFA 611 920 R8136 | 10 | 0.005 |

|                     |          |                    |    |       |
|---------------------|----------|--------------------|----|-------|
| <b>Square Bezel</b> |          |                    |    |       |
| Black, plastic      | -        | SK 616 016-2       | 10 | 0.001 |
| Grey, plastic       | MA1-8124 | 1SFA 611 920 R8124 | 10 | 0.001 |

# Accessories for Modular Range

Modular Range



Protective Membrane

| Description                | Type     | Order Code         | Package Quantity | Weight Kg |
|----------------------------|----------|--------------------|------------------|-----------|
| <b>Protective Membrane</b> |          |                    |                  |           |
| For Flush Button           | KA1-8052 | 1SFA 616 920 R8052 | 10               | 0.002     |
| For Extended Button        | KA1-8002 | 1SFA 616 920 R8002 | 10               | 0.002     |
| For Double Pushbutton      | MA1-8126 | 1SFA 611 920 R8126 | 10               | 0.002     |



Protective Ring Protective Cover

|                                                                                                                             |   |              |    |       |
|-----------------------------------------------------------------------------------------------------------------------------|---|--------------|----|-------|
| <b>Protective Ring</b>                                                                                                      |   |              |    |       |
| Operator for Protective Ring                                                                                                | - | SK 615 512-1 | 10 | 0.002 |
| Note: For flush and Extended Pushbuttons. To prevent accidental operation. Cannot be used together with Legend Plate Holder |   |              |    |       |



Bezel

|                                                                                                                |          |                    |    |       |
|----------------------------------------------------------------------------------------------------------------|----------|--------------------|----|-------|
| <b>Protective Cover</b>                                                                                        |          |                    |    |       |
| Protective Cover                                                                                               | KA1-8010 | 1SFA 616 920 R8010 | 10 | 0.008 |
| Note: For Flush Pushbutton. To prevent accidental operation. Cannot be used together with Legend Plate Holder. |          |                    |    |       |

|                            |          |                    |    |       |
|----------------------------|----------|--------------------|----|-------|
| <b>Bezel</b>               |          |                    |    |       |
| <b>For Pushbutton</b>      |          |                    |    |       |
| Gray plastic               | KA1-8079 | 1SFA 616 920 R8079 | 10 | 0.002 |
| Black Plastic              | KA1-8022 | 1SFA 616 920 R8022 | 10 | 0.002 |
| Chrome metal               | KA1-8021 | 1SFA 616 920 R8021 | 10 | 0.015 |
| <b>For Selector Switch</b> |          |                    |    |       |
| Gray plastic               | KA1-8077 | 1SFA 616 920 R8077 | 10 | 0.001 |
| Black Plastic              | KA1-8080 | 1SFA 616 920 R8080 | 10 | 0.001 |
| Chrome metal               | KA1-8024 | 1SFA 616 920 R8024 | 10 | 0.010 |



Shroud for Emergency Stop

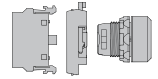
|                                  |          |                    |    |       |
|----------------------------------|----------|--------------------|----|-------|
| <b>Shroud for Emergency Stop</b> |          |                    |    |       |
| ● Yellow                         | MA1-8053 | 1SFA 611 920 R8053 | 10 | 0.020 |
| ● Grey                           | MA1-8128 | 1SFA 611 920 R8128 | 10 | 0.020 |

Note: For 40 mm Emergency Stop Pushbuttons and Machine Stop Pushbuttons. To prevent accidental operation. With anti rotation tabs and slot for pad-lock and with water drainage.

# Accessories for Modular Range

## LED Bulbs

Modular Range



LED Bulbs

| Description                                                                        | Wavelength nm | Luminance mcd | Type     | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------------------------------------|---------------|---------------|----------|--------------------|------------------|-----------|
| <b>LED Bulbs</b>                                                                   |               |               |          |                    |                  |           |
| <b>Rated Voltage 12 V, DC, Rated Current 15 mA, Service Life &gt;50 000 h</b>      |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 250           | KA2-2011 | 1SFA 616 921 R2011 | 20               | 0.005     |
| ● Green                                                                            | 525           | 1000          | KA2-2012 | 1SFA 616 921 R2012 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 250           | KA2-2013 | 1SFA 616 921 R2013 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 450           | KA2-2014 | 1SFA 616 921 R2014 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 600           | KA2-2015 | 1SFA 616 921 R2015 | 20               | 0.005     |
| <b>Rated Voltage 24 V, (AC)/DC, Rated Current 15 mA, Service Life &gt;50 000 h</b> |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 250           | KA2-2021 | 1SFA 616 921 R2021 | 20               | 0.005     |
| ● Green                                                                            | 525           | 800           | KA2-2022 | 1SFA 616 921 R2022 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 250           | KA2-2023 | 1SFA 616 921 R2023 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 400           | KA2-2024 | 1SFA 616 921 R2024 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 500           | KA2-2025 | 1SFA 616 921 R2025 | 20               | 0.005     |
| <b>Rated Voltage 36 V, (AC)/DC, Rated Current 12 mA, Service Life &gt;50 000 h</b> |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 200           | KA2-2031 | 1SFA 616 921 R2031 | 20               | 0.005     |
| ● Green                                                                            | 525           | 2000          | KA2-2032 | 1SFA 616 921 R2032 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 200           | KA2-2033 | 1SFA 616 921 R2033 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 750           | KA2-2034 | 1SFA 616 921 R2034 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 1400          | KA2-2035 | 1SFA 616 921 R2035 | 20               | 0.005     |
| <b>Rated Voltage 48 V, (AC)/DC, Rated Current 12 mA, Service Life &gt;50 000 h</b> |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 200           | KA2-2041 | 1SFA 616 921 R2041 | 20               | 0.005     |
| ● Green                                                                            | 525           | 1700          | KA2-2042 | 1SFA 616 921 R2042 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 240           | KA2-2043 | 1SFA 616 921 R2043 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 720           | KA2-2044 | 1SFA 616 921 R2044 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 1200          | KA2-2045 | 1SFA 616 921 R2045 | 20               | 0.005     |
| <b>Rated Voltage 60 V, (AC)/DC, Rated Current 10 mA, Service Life &gt;50 000 h</b> |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 160           | KA2-2051 | 1SFA 616 921 R2051 | 20               | 0.005     |
| ● Green                                                                            | 525           | 1400          | KA2-2052 | 1SFA 616 921 R2052 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 200           | KA2-2053 | 1SFA 616 921 R2053 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 600           | KA2-2054 | 1SFA 616 921 R2054 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 1000          | KA2-2055 | 1SFA 616 921 R2055 | 20               | 0.005     |
| <b>Rated Voltage 110-130 V, AC, Rated Current 4-6 mA, Service Life 25 000 h</b>    |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 60-100        | KA2-2131 | 1SFA 616 921 R2131 | 20               | 0.005     |
| ● Green                                                                            | 525           | 500-850       | KA2-2132 | 1SFA 616 921 R2132 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 70-120        | KA2-2133 | 1SFA 616 921 R2133 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 220-350       | KA2-2134 | 1SFA 616 921 R2134 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 350-600       | KA2-2135 | 1SFA 616 921 R2135 | 20               | 0.005     |
| <b>Rated Voltage 110-130 V, AC/DC, Rated Current 4-6 mA, Service Life 25 000 h</b> |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 60            | KA2-2141 | 1SFA 616 921 R2141 | 20               | 0.005     |
| ● Green                                                                            | 525           | 500           | KA2-2142 | 1SFA 616 921 R2142 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 70            | KA2-2143 | 1SFA 616 921 R2143 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 220           | KA2-2144 | 1SFA 616 921 R2144 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 350           | KA2-2145 | 1SFA 616 921 R2145 | 20               | 0.005     |
| <b>Rated Voltage 230 V, AC, Rated Current 4 mA, Service Life 25 000 h</b>          |               |               |          |                    |                  |           |
| ● Red                                                                              | 630           | 60            | KA2-2221 | 1SFA 616 921 R2221 | 20               | 0.005     |
| ● Green                                                                            | 525           | 500           | KA2-2222 | 1SFA 616 921 R2222 | 20               | 0.005     |
| ● Yellow                                                                           | 592           | 70            | KA2-2223 | 1SFA 616 921 R2223 | 20               | 0.005     |
| ● Blue                                                                             | 470           | 220           | KA2-2224 | 1SFA 616 921 R2224 | 20               | 0.005     |
| ○ White                                                                            | <sup>1)</sup> | 350           | KA2-2225 | 1SFA 616 921 R2225 | 20               | 0.005     |

**Note:** Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

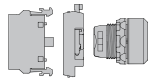
Choose the same color on the LED as on the lamp cap.

<sup>1)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

# Accessories for Modular Range

## LED and Filament Bulbs

Modular Range



LED Bulbs

| Description                                                                  | Wavelength nm | Luminance mcd | Type     | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------------------------------|---------------|---------------|----------|--------------------|------------------|-----------|
| <b>LED Bulbs continued</b>                                                   |               |               |          |                    |                  |           |
| <b>Rated Voltage 230 V, AC/DC, Rated Current 4 mA, Service Life 25 000 h</b> |               |               |          |                    |                  |           |
| Red                                                                          | 630           | 60            | KA2-2231 | 1SFA 616 921 R2231 | 20               | 0.005     |
| Green                                                                        | 525           | 500           | KA2-2232 | 1SFA 616 921 R2232 | 20               | 0.005     |
| Yellow                                                                       | 592           | 70            | KA2-2233 | 1SFA 616 921 R2233 | 20               | 0.005     |
| Blue                                                                         | 470           | 220           | KA2-2234 | 1SFA 616 921 R2234 | 20               | 0.005     |
| White                                                                        | <sup>1)</sup> | 350           | KA2-2235 | 1SFA 616 921 R2235 | 20               | 0.005     |

**Note:** Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

Choose the same color on the LED as on the lamp cap.

<sup>1)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

### Flashing LED Bulbs

**Rated Voltage 24 V, Rated Current 25 mA, DC**

| Description | Wavelength nm | Service Life hours | Type | Order Code | Package Quantity | Weight Kg |
|-------------|---------------|--------------------|------|------------|------------------|-----------|
| Red         | 630           | 50 000             | -    | 4950 512-1 | 20               | 0.005     |
| Green       | 565           | 50 000             | -    | 4950 512-2 | 20               | 0.005     |
| Yellow      | 585           | 50 000             | -    | 4950 512-3 | 20               | 0.005     |

**Note:** Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

Choose the same color on the LED as on the lamp cap.



Filament Bulbs

### Filament Bulbs BA 9s base

| Rated Voltage V m AC/DC | Rated Current A | Rated Output W | Service Life h | Luminance mcd | Type | Order Code  | Package Quantity | Weight Kg |
|-------------------------|-----------------|----------------|----------------|---------------|------|-------------|------------------|-----------|
| 6                       | 200             | 1.2            | 10 000         | 350           | -    | 5911 086-11 | 20               | 0.002     |
| 12                      | 100             | 1.2            | 10 000         | 203           | -    | 5911 086-12 | 20               | 0.002     |
| 24                      | 50              | 1.2            | 10 000         | 280           | -    | 5911 086-13 | 20               | 0.002     |
| 30                      | 40              | 1.2            | 10 000         | 250           | -    | 5911 086-4  | 20               | 0.002     |
| 48                      | 42              | 2              | 6 000          | 500           | -    | 5911 086-5  | 20               | 0.002     |
| 60                      | 20              | 1.2            | 5 000          | 190           | -    | 5911 086-14 | 20               | 0.002     |
| 110                     | 18              | 2              | 7 500          | 250           | -    | 5911 086-7  | 20               | 0.002     |
| 130                     | 15              | 2              | 7 500          | 120           | -    | 5911 086-15 | 20               | 0.002     |

A Lamp Changing Tool is required for changing bulb.



Lamp Changing Tool

### Lamp Changing Tool

|                             |          |                    |   |       |
|-----------------------------|----------|--------------------|---|-------|
| For LED Bulbs and for bulbs | KA1-8072 | 1SFA 616 920 R8072 | 1 | 0.002 |
|-----------------------------|----------|--------------------|---|-------|

A Lamp Changing Tool is required for changing bulb.

# Accessories for Modular Range lenses

Modular Range



Lens for Pilot Light

| Description                    | Type     | Order Code         | Package Quantity | Weight Kg |
|--------------------------------|----------|--------------------|------------------|-----------|
| <b>Lenses for Pilot Lights</b> |          |                    |                  |           |
| ● Red                          | KA1-8031 | 1SFA 616 920 R8031 | 10               | 0.02      |
| ● Green                        | KA1-8032 | 1SFA 616 920 R8032 | 10               | 0.02      |
| ● Yellow                       | KA1-8033 | 1SFA 616 920 R8033 | 10               | 0.02      |
| ● Blue                         | KA1-8034 | 1SFA 616 920 R8034 | 10               | 0.02      |
| ○ White                        | KA1-8035 | 1SFA 616 920 R8035 | 10               | 0.02      |
| ○ Clear                        | KA1-8038 | 1SFA 616 920 R8038 | 10               | 0.02      |



Flush Lens

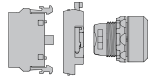
|                                               |          |                    |    |       |
|-----------------------------------------------|----------|--------------------|----|-------|
| <b>Lenses for non-Illuminated Pushbuttons</b> |          |                    |    |       |
| <b>Flush</b>                                  |          |                    |    |       |
| ● Red                                         | KA1-8081 | 1SFA 616 920 R8081 | 10 | 0.015 |
| ● Green                                       | KA1-8082 | 1SFA 616 920 R8082 | 10 | 0.015 |
| ● Yellow                                      | KA1-8083 | 1SFA 616 920 R8083 | 10 | 0.015 |
| ● Blue                                        | KA1-8084 | 1SFA 616 920 R8084 | 10 | 0.015 |
| ○ White                                       | KA1-8085 | 1SFA 616 920 R8085 | 10 | 0.015 |
| ● Black                                       | KA1-8086 | 1SFA 616 920 R8086 | 10 | 0.015 |
| ● Grey                                        | KA1-8087 | 1SFA 616 920 R8087 | 10 | 0.015 |
| ○ Clear                                       | KA1-8088 | 1SFA 616 920 R8088 | 10 | 0.015 |



Extended Lens

|                 |          |                    |    |       |
|-----------------|----------|--------------------|----|-------|
| <b>Extended</b> |          |                    |    |       |
| ● Red           | KA1-8091 | 1SFA 616 920 R8091 | 10 | 0.025 |
| ● Green         | KA1-8092 | 1SFA 616 920 R8092 | 10 | 0.025 |
| ● Yellow        | KA1-8093 | 1SFA 616 920 R8093 | 10 | 0.025 |
| ● Blue          | KA1-8094 | 1SFA 616 920 R8094 | 10 | 0.025 |
| ○ White         | KA1-8095 | 1SFA 616 920 R8095 | 10 | 0.025 |
| ● Black         | KA1-8096 | 1SFA 616 920 R8096 | 10 | 0.025 |
| ● Grey          | KA1-8097 | 1SFA 616 920 R8097 | 10 | 0.025 |
| ○ Clear         | KA1-8098 | 1SFA 616 920 R8098 | 10 | 0.025 |

|                                           |          |                    |    |       |
|-------------------------------------------|----------|--------------------|----|-------|
| <b>Lenses for Illuminated Pushbuttons</b> |          |                    |    |       |
| <b>Flush</b>                              |          |                    |    |       |
| ● Red                                     | KA1-8101 | 1SFA 616 920 R8101 | 10 | 0.015 |
| ● Green                                   | KA1-8102 | 1SFA 616 920 R8102 | 10 | 0.015 |
| ● Yellow                                  | KA1-8103 | 1SFA 616 920 R8103 | 10 | 0.015 |
| ● Blue                                    | KA1-8104 | 1SFA 616 920 R8104 | 10 | 0.015 |
| ○ White                                   | KA1-8105 | 1SFA 616 920 R8105 | 10 | 0.015 |
| ○ Clear                                   | KA1-8108 | 1SFA 616 920 R8108 | 10 | 0.015 |
| <b>Extended</b>                           |          |                    |    |       |
| ● Red                                     | KA1-8111 | 1SFA 616 920 R8111 | 10 | 0.025 |
| ● Green                                   | KA1-8112 | 1SFA 616 920 R8112 | 10 | 0.025 |
| ● Yellow                                  | KA1-8113 | 1SFA 616 920 R8113 | 10 | 0.025 |
| ● Blue                                    | KA1-8114 | 1SFA 616 920 R8114 | 10 | 0.025 |
| ○ White                                   | KA1-8115 | 1SFA 616 920 R8115 | 10 | 0.025 |
| ○ Clear                                   | KA1-8118 | 1SFA 616 920 R8118 | 10 | 0.025 |



| Standards and Approvals |                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1        | Low-Voltage Switchgear and Controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1      | Low-Voltage Switchgear and Controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC / EN 60947-5-5      | Low-Voltage Switchgear and Controlgear - Part 5-5: Control circuit devices and switching elements - Electrical Emergency Stop device with mechanical latching function |
| IEC / EN 60073          | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators                                     |
| IEC / EN 60529          | Degrees of Protection provided by enclosures (IP Code)                                                                                                                 |
| EN 50013                | Low-Voltage Switchgear and Controlgear for industrial use - Terminal marking and distinctive number for particular control switches                                    |
| DIN 40050-9             | Road vehicles; Degrees of Protection (IP-code); protection against foreign objects; water and contact; electrical equipment                                            |
| UL 508                  | Industrial Control Equipment                                                                                                                                           |
| CSA C22.2 No 14         | Industrial Control Equipment                                                                                                                                           |

| Environmental Data                          |               |                             |
|---------------------------------------------|---------------|-----------------------------|
| Degrees of Protection                       |               |                             |
| Operators                                   | IEC/EN DIN    | UL/CSA                      |
| Pushbutton: MP *                            | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Double Pushbutton: MPD *                    | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Mushroom Pushbutton: MPM *                  | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Emergency Stop: MPMT/P *                    | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Selector Switch: M2SS/M3SS *                | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Key-operated Selector Switch: M2SSK/M3SSK * | IP66          | Type 1, 3R, 4, 4X, 12       |
| Toggle Switch: MTS2/MTS3 *                  | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Extreme Duty Pushbutton: KP6                | -             | Type 1, 3R, 4, 4X           |
| Reset Pushbutton: KPR *                     | IP 66         | Type 1, 3R, 4, 4X, 12, 13   |
| Joystick: MJS                               | IP66, 67, 69K | Type 1, 4X (indoor), 12, 13 |
| Pilot Lights: ML                            | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Buzzer: KB                                  | IP65          | Type 4X                     |
| Potentiometer: KT *                         | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Contact Block and Transformer Block         | IP20          | -                           |
| Plastic Enclosures                          | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Metallic Enclosures                         | IP66, 67, 69K | -                           |

| Temperature                          |               |
|--------------------------------------|---------------|
| Ambient temperature during operation | -25 to +70 °C |
| Storage temperature                  | -40 to +85 °C |

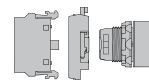
\* With Chrome Plastic Bezel IP66 Type 1, 12, 13

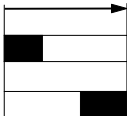
Please note that specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.

| Technical Data                                  |                                                                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------|
| Terminals                                       |                                                                                 |
| Plus-minus Pozidriv No.2 screw with DIN-washer. |                                                                                 |
| Connectable Area                                | min. 1 x 0.5 mm <sup>2</sup> /AWG 20<br>max. 2 x 2.5 mm <sup>2</sup> /2 x AWG14 |
| Tightening Torque                               |                                                                                 |
| Operators Locking Nut                           | Min. 2 Nm / Max. 2.3 Nm                                                         |
| Cable Terminals                                 | 0.9 Nm                                                                          |

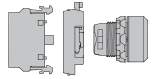
| Material                                                                                                       |                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| No ozone depleting substances in the products. All front of panel plastic components are made of polycarbonate |                                                                                                                                            |
| PC Polycarbonate                                                                                               | High impact strength, good outdoor resistance. Chemical resistance (see table below)                                                       |
| PSU Polysulphone                                                                                               | Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols.                                               |
| PA Polyamide                                                                                                   | Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions. |
| PBT                                                                                                            | Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils                     |
| Zinc                                                                                                           | Good corrosion resistance in inland-, sea and industrial atmosphere.                                                                       |
| Light-alloy                                                                                                    | Good corrosion resistance in inland-, sea and industrial atmosphere.                                                                       |

| Chemical Resistance for Polycarbonate |                                                                                                                                                                              |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Class                        | Effects                                                                                                                                                                      |
| Acids                                 | No significant effect under most typical conditions of concentration and temperature                                                                                         |
| Alcohols and Alkalies                 | Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition. |
| Aliphatic Hydrocarbons                | Generally compatible                                                                                                                                                         |
| Amines                                | Surface crystallization and chemical attack. Avoid.                                                                                                                          |
| Aromatic Hydrocarbons                 | Partial solvents and severe stress cracking agents (i.e., xylene, toluene). Avoid.                                                                                           |
| Detergents and Cleaners               | Mild soap solutions are generally compatible. Strong alkaline materials should be avoided.                                                                                   |
| Esters                                | Cause severe crystallization. Partial solvents. Avoid.                                                                                                                       |
| Greases and Oils                      | Pure petroleum types generally compatible. Many additives used with them are not.                                                                                            |
| Halogenated Hydrocarbons              | Solvents. Avoid.                                                                                                                                                             |
| Ketones                               | Cause severe crystallization and stress cracking. Partial solvents. Avoid.                                                                                                   |
| Silicone Oil and Greases              | Generally compatible up to 85 °C.                                                                                                                                            |



| Electrical Data                                                                                                                                       |                                                  |                                                                                     |                                                  |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------|
| Standard Contact Blocks                                                                                                                               |                                                  |                                                                                     |                                                  |                                      |
| Self cleaning silver contacts, NC contact with positive opening. At voltages and currents below 24 V and 5.6 mA we recommend our Micro Switch Blocks. |                                                  |                                                                                     |                                                  |                                      |
| Ratings as per IEC 60947-5-1                                                                                                                          |                                                  |                                                                                     |                                                  |                                      |
| Rated Insulation Voltage, $U_i$                                                                                                                       |                                                  | 690 V                                                                               |                                                  |                                      |
| Rated Thermal Current, $I_{th}$                                                                                                                       |                                                  | 10 A                                                                                |                                                  |                                      |
| Rated Operational Current, $I_o$<br>Utilization category AC 15,                                                                                       | at: 120 V<br>at: 230 V<br>at: 400 V<br>at: 690 V | 8 A<br>6 A<br>4 A<br>2 A                                                            |                                                  |                                      |
| Rated Operational Current, $I_o$<br>utilisation category DC 13,                                                                                       | at: 24 V<br>at: 125 V<br>at: 250 V               | 5 A<br>1.1 A<br>0.55 A                                                              |                                                  |                                      |
| Ratings as per UL, CSA, NEMA                                                                                                                          |                                                  | A600<br>AC                                                                          | Q600<br>DC                                       |                                      |
| Rated Insulation Voltage                                                                                                                              |                                                  | 600 V                                                                               |                                                  | 600 V                                |
| Rated Thermal Current                                                                                                                                 |                                                  | 10 A                                                                                |                                                  | 2.5 A                                |
| Rated Operational Current                                                                                                                             | at: 120 V<br>at: 240 V<br>at: 480 V<br>at: 600 V | 6 A<br>3 A<br>1.5 A<br>1.2 A                                                        | at: 125 V<br>at: 250 V<br>at: 480 V<br>at: 600 V | 0.55 A<br>0.27 A<br>0.10 A<br>0.10 A |
| Contact Resistance                                                                                                                                    | < 25 mΩ                                          |                                                                                     |                                                  |                                      |
| Compulsory Function Test                                                                                                                              | at: 5V, 16 mA                                    |                                                                                     |                                                  |                                      |
| Max. number of Contact Blocks per Operator                                                                                                            |                                                  |                                                                                     |                                                  |                                      |
| The Contact Blocks can be stacked in max two levels on the 3- block holder. Only one level is accepted on the 5-block holder.                         |                                                  |                                                                                     |                                                  |                                      |
| Pushbutton, Toggle Switch, Mushroom Pushbutton,<br>Double Pushbutton, Selector Switch, Key-operated<br>Selector Switch and Emergency Stop Operator    |                                                  |                                                                                     | 6                                                |                                      |
| Joystick                                                                                                                                              |                                                  |                                                                                     | 8                                                |                                      |
| Short Circuit Protection                                                                                                                              |                                                  |                                                                                     |                                                  |                                      |
| Max. fuse at 1 kA                                                                                                                                     | gG 16A                                           |                                                                                     |                                                  |                                      |
| Diagram for Make-and-Break Contact                                                                                                                    |                                                  |                                                                                     |                                                  |                                      |
| NC - 1 - 2                                                                                                                                            |                                                  |  |                                                  |                                      |
| NO - - - -                                                                                                                                            |                                                  |                                                                                     |                                                  |                                      |
| ■ = Closed contact                                                                                                                                    |                                                  |                                                                                     |                                                  |                                      |
| Micro Switch Block / Ratings as per IEC 60947-5-1                                                                                                     |                                                  |                                                                                     |                                                  |                                      |
| Rated Insulation Voltage, $U_i$                                                                                                                       |                                                  | 125 V                                                                               |                                                  |                                      |
| Rated Thermal Current, $I_{th}$                                                                                                                       |                                                  | 3 A                                                                                 |                                                  |                                      |
| Rated Operational Current, $I_o$<br>utilisation category AC 14,                                                                                       | at: 125 V                                        | 0.5 A                                                                               |                                                  |                                      |
| Rated Operational Current, $I_o$<br>utilization category DC 13,                                                                                       | at: 24 V                                         | 0.3 A                                                                               |                                                  |                                      |
| Rated Operational Current, $I_o$<br>utilization category DC 12,                                                                                       | at: 24 V                                         | 0.1 A                                                                               |                                                  |                                      |
| Minimum Switching Capacity                                                                                                                            |                                                  |                                                                                     |                                                  |                                      |
| Standard Contact Blocks                                                                                                                               | 24 V DC                                          | 5.6 mA                                                                              |                                                  |                                      |
| Gold plated Contact Blocks                                                                                                                            | 5 V DC                                           | 12 mA                                                                               |                                                  |                                      |
|                                                                                                                                                       | 12 V DC                                          | 1 mA                                                                                |                                                  |                                      |
| Micro Switch Blocks                                                                                                                                   | 3 V DC                                           | 1 mA                                                                                |                                                  |                                      |
| Ratings as per UL 508                                                                                                                                 |                                                  |                                                                                     |                                                  |                                      |
|                                                                                                                                                       | 125 V AC                                         | 3 A                                                                                 |                                                  |                                      |
|                                                                                                                                                       | 60 V DC                                          | 0.2 A                                                                               |                                                  |                                      |
|                                                                                                                                                       | 48 V DC                                          | 0.1 A                                                                               |                                                  |                                      |

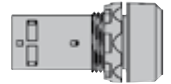
| Mechanical Data                                                                    |  |                       |
|------------------------------------------------------------------------------------|--|-----------------------|
| Mechanical Life                                                                    |  |                       |
| Standard Contact Blocks                                                            |  | 10 million operations |
| Pushbuttons, Momentary Mushroom Pushbutton                                         |  | 2 million operations  |
| Selector Switches                                                                  |  | 500 000 operations    |
| Present standard<br>(no operation of center contact)                               |  |                       |
| With operation of center contact                                                   |  | 250 000 operations    |
|                                                                                    |  | 150 000 operations    |
| Maintained Mushroom Pushbutton, Key-operated Selector Switch and Double Pushbutton |  | 500 000 operations    |
| Emergency Stop                                                                     |  | 100 000 operations    |
| Toggle Switch                                                                      |  | 1 million operations  |
| Joystick                                                                           |  | 500 000 operations    |
|                                                                                    |  | 400 000 operations    |
|                                                                                    |  | 300 000 operations    |



| Lamp Block ratings as per IEC 60 947-5-1 |       |
|------------------------------------------|-------|
| Rated Insulation Voltage                 | 230 V |
| Base                                     | BA 9s |
| Permissible power, up to                 | 2 W   |

| Transformer Block                                            |         |
|--------------------------------------------------------------|---------|
| Suitable for Filament Bulb 6 or 24 V AC, 1.2 W and LED 24 V. |         |
| Rated Power                                                  | 1.5 W   |
| Rated Insulation Voltage acc. to IEC 70 °C (DT)              | Class E |

| LED Bulbs                                                                                                                       |                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Service Life for LED Bulbs means number of service hours until the brightness has been reduced down 50 %. Service Life 50 000 h |                                                                            |
| Color of white LED                                                                                                              | x=0.31 Y=0.32 means the position of color in the ICI Chromaticity Diagram  |
| Voltage Tolerance on LED Bulbs                                                                                                  | -30 to +10 % voltage is acceptable without affecting the Service Life      |
| Voltage Peaks on LED Bulbs                                                                                                      | Voltage Peaks up to 1000 V Current Peaks up to 500 mA during a few msec    |
| Glowing Light                                                                                                                   | All integrated LED Bulbs have a function built in to cut leakage currents. |



The Compact Range is designed to be our most efficient solution when it comes to assembly and cost, suitable for the most demanding environments. It can also be combined with the Modular Range to cover the needs of additional flexibility.

#### General Construction

- "All-in-one design"
- Same front as modular
- 42 mm built in depth
- Up to 2 electrical separated contacts.
- Metal or Black Plastic look.

#### Product Features

- Suitable in the toughest environments IP 66, 67 & 69K.
- Wiping Action gives high performance with low energies.
- UL/NEMA Type 1,3R,4,4X,12,13.

#### Operators

- Pushbuttons (illuminated & non illuminated).
- Emergency Stops (twist, pull & key release).
- Machine Stops (twist, pull & key release).
- Selector Switches (2 & 3 position).
- Mushrooms.

#### Pilot Lights

- Integrated LED (wide range of voltages).
- BA9s base for Filament Bulb or LED.

# Pushbuttons

## flush and extended, non-illuminated

Compact Range



### Color codes for Pushbuttons

|   | Red ● | Green ● | Yellow ● | Blue ● | White ○ | Black ● | Grey ● |
|---|-------|---------|----------|--------|---------|---------|--------|
| ■ | R     | G       | Y        | L      | W       | B       | U      |
| □ | 1     | 2       | 3        | 4      | 5       | 6       | 7      |

### Bezel - How to order

Black Plastic - Standard  
 Chrome Metal - Replace '1' with '3' in  
 Type and Order Codes



| Bezel Options | Type         | Order Code        |
|---------------|--------------|-------------------|
| Black Plastic | CP(X)-10X-XX | 1SFA619 10X R10XX |
| Chrome Metal  | CP(X)-30X-XX | 1SFA619 10X R30XX |



Flush Pushbutton



Extended Pushbutton



Flush Pushbutton  
with marking

### Operator: Flush and Extended Pushbutton

| Description                                  | Type        | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------|-------------|--------------------|------------------|-----------|
| <b>Flush Pushbutton</b>                      |             |                    |                  |           |
| <b>Momentary</b>                             |             |                    |                  |           |
| 1 NO                                         | CP1-10■-10  | 1SFA 619 100 R101□ | 1x10             | 0.018     |
| 2 NO                                         | CP1-10■-20  | 1SFA 619 100 R102□ | 1x10             | 0.022     |
| 1 NC                                         | CP1-10■-01  | 1SFA 619 100 R104□ | 1x10             | 0.018     |
| 2 NC                                         | CP1-10■-02  | 1SFA 619 100 R105□ | 1x10             | 0.022     |
| 1 NO +1 NC                                   | CP1-10■-11  | 1SFA 619 100 R107□ | 1x10             | 0.022     |
| <b>Maintained</b>                            |             |                    |                  |           |
| 1 NO                                         | CP2-10■-10  | 1SFA 619 101 R101□ | 1x10             | 0.018     |
| 2 NO                                         | CP2-10■-20  | 1SFA 619 101 R102□ | 1x10             | 0.022     |
| 1 NC                                         | CP2-10■-01  | 1SFA 619 101 R104□ | 1x10             | 0.018     |
| 2 NC                                         | CP2-10■-02  | 1SFA 619 101 R105□ | 1x10             | 0.022     |
| 1 NO +1 NC                                   | CP2-10■-11  | 1SFA 619 101 R107□ | 1x10             | 0.022     |
| <b>Extended Pushbutton</b>                   |             |                    |                  |           |
| <b>Momentary</b>                             |             |                    |                  |           |
| 1 NO                                         | CP3-10■-10  | 1SFA 619 102 R101□ | 1x10             | 0.019     |
| 2 NO                                         | CP3-10■-20  | 1SFA 619 102 R102□ | 1x10             | 0.022     |
| 1 NC                                         | CP3-10■-01  | 1SFA 619 102 R104□ | 1x10             | 0.019     |
| 2 NC                                         | CP3-10■-02  | 1SFA 619 102 R105□ | 1x10             | 0.022     |
| 1 NO +1 NC                                   | CP3-10■-11  | 1SFA 619 102 R107□ | 1x10             | 0.022     |
| <b>Maintained</b>                            |             |                    |                  |           |
| 1 NO                                         | CP4-10■-10  | 1SFA 619 103 R101□ | 1x10             | 0.019     |
| 2 NO                                         | CP4-10■-20  | 1SFA 619 103 R102□ | 1x10             | 0.022     |
| 1 NC                                         | CP4-10■-01  | 1SFA 619 103 R104□ | 1x10             | 0.019     |
| 2 NC                                         | CP4-10■-02  | 1SFA 619 103 R105□ | 1x10             | 0.022     |
| 1 NO +1 NC                                   | CP4-10■-11  | 1SFA 619 103 R107□ | 1x10             | 0.022     |
| <b>Flush Pushbutton</b>                      |             |                    |                  |           |
| <b>Momentary, white button with black I</b>  |             |                    |                  |           |
| 1 NO                                         | CP11-10W-10 | 1SFA 619 110 R1015 | 1x10             | 0.018     |
| <b>Momentary, white button with black II</b> |             |                    |                  |           |
| 1 NO                                         | CP12-10W-10 | 1SFA 619 120 R1015 | 1x10             | 0.018     |
| <b>Extended Pushbutton</b>                   |             |                    |                  |           |
| <b>Momentary, black button with white O</b>  |             |                    |                  |           |
| 1 NC                                         | CP33-10B-01 | 1SFA 619 132 R1046 | 1x10             | 0.018     |



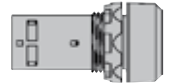
L-Mark Customer specific marking online. For more information see page 4 or go to:

<http://bolsservices.it.abb.com/pilot-devices>

# Selector Switches

## two- and three-position, non-illuminated

Compact Range



### Color Codes for Switches

|   | Red ● | Black ● | Grey ● |
|---|-------|---------|--------|
| ■ | R     | B       | U      |
| □ | 1     | 6       | 7      |

### Bezel - How to order

Black Plastic - Standard

Chrome Metal - Replace '1' with '3' in Type and Order Codes



| Bezel Options | Type             | Order Code        |
|---------------|------------------|-------------------|
| Black Plastic | C(X)SS(X)-10X-XX | 1SFA619 XXX R10XX |
| Chrome Metal  | C(X)SS(X)-30X-XX | 1SFA619 XXX R30XX |



Selector Switch

### Operator: Selector Switches

| Description           | Type       | Order Code   | Package Quantity   | Weight Kg  |
|-----------------------|------------|--------------|--------------------|------------|
| <b>Two-position</b>   |            |              |                    |            |
| <b>Maintained</b>     |            |              |                    |            |
|                       | 1 NO       | C2SS1-10■-10 | 1SFA 619 200 R101□ | 1x10 0.020 |
|                       | 2 NO       | C2SS1-10■-20 | 1SFA 619 200 R102□ | 1x10 0.024 |
|                       | 1 NC       | C2SS1-10■-01 | 1SFA 619 200 R104□ | 1x10 0.020 |
|                       | 2 NC       | C2SS1-10■-02 | 1SFA 619 200 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C2SS1-10■-11 | 1SFA 619 200 R107□ | 1x10 0.024 |
| <b>Maintained</b>     |            |              |                    |            |
|                       | 1 NO       | C2SS2-10■-10 | 1SFA 619 201 R101□ | 1x10 0.020 |
|                       | 2 NO       | C2SS2-10■-20 | 1SFA 619 201 R102□ | 1x10 0.024 |
|                       | 1 NC       | C2SS2-10■-01 | 1SFA 619 201 R104□ | 1x10 0.020 |
|                       | 2 NC       | C2SS2-10■-02 | 1SFA 619 201 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C2SS2-10■-11 | 1SFA 619 201 R107□ | 1x10 0.024 |
| <b>Momentary</b>      |            |              |                    |            |
|                       | 1 NO       | C2SS3-10■-10 | 1SFA 619 202 R101□ | 1x10 0.020 |
|                       | 2 NO       | C2SS3-10■-20 | 1SFA 619 202 R102□ | 1x10 0.024 |
|                       | 1 NC       | C2SS3-10■-01 | 1SFA 619 202 R104□ | 1x10 0.020 |
|                       | 2 NC       | C2SS3-10■-02 | 1SFA 619 202 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C2SS3-10■-11 | 1SFA 619 202 R107□ | 1x10 0.024 |
| <b>Three-position</b> |            |              |                    |            |
| <b>Maintained</b>     |            |              |                    |            |
|                       | 2 NO       | C3SS1-10■-20 | 1SFA 619 210 R102□ | 1x10 0.024 |
|                       | 2 NC       | C3SS1-10■-02 | 1SFA 619 210 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C3SS1-10■-11 | 1SFA 619 210 R107□ | 1x10 0.024 |
| <b>Momentary</b>      |            |              |                    |            |
|                       | 2 NO       | C3SS2-10■-20 | 1SFA 619 211 R102□ | 1x10 0.024 |
|                       | 2 NC       | C3SS2-10■-02 | 1SFA 619 211 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C3SS2-10■-11 | 1SFA 619 211 R107□ | 1x10 0.024 |
| <b>Momentary</b>      |            |              |                    |            |
|                       | 2 NO       | C3SS3-10■-20 | 1SFA 619 212 R102□ | 1x10 0.024 |
|                       | 2 NC       | C3SS3-10■-02 | 1SFA 619 212 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C3SS3-10■-11 | 1SFA 619 212 R107□ | 1x10 0.024 |
| <b>Momentary</b>      |            |              |                    |            |
|                       | 2 NO       | C3SS7-10■-20 | 1SFA 619 216 R102□ | 1x10 0.024 |
|                       | 2 NC       | C3SS7-10■-02 | 1SFA 619 216 R105□ | 1x10 0.024 |
|                       | 1 NO +1 NC | C3SS7-10■-11 | 1SFA 619 216 R107□ | 1x10 0.024 |

### Contacts actuated

#### Two position Selector Switch

Contacts included,

actuated in position C

|           | NC | NO | NC | NO |
|-----------|----|----|----|----|
|           | 11 | 13 | 21 | 23 |
|           | 12 | 14 | 22 | 24 |
| 1NO       | -  | 1  | -  | -  |
| 2NO       | -  | 1  | -  | 1  |
| 1NC       | 1  | -  | -  | -  |
| 2NC       | 1  | -  | 1  | -  |
| 1NO + 1NC | -  | 1  | 1  | -  |

#### Three position Selector Switch

Contacts included,

actuated in position:

|           | NC | NO | NC | NO |
|-----------|----|----|----|----|
|           | 21 | 23 | 11 | 13 |
|           | 22 | 24 | 12 | 14 |
| 2NO       | -  | 1  | -  | 1  |
| 2NC       | 1  | -  | 1  | -  |
| 1NO + 1NC | 1  | -  | -  | 1  |

# Emergency Stop non-illuminated

Compact Range



Emergency Stop Pushbutton  
twist release, 30 mm



Emergency Stop Pushbutton  
pull release, 40 mm

## Operator: Emergency Stop Pushbutton

| Description                                         | Type         | Order Code         | Package Quantity | Weight Kg |
|-----------------------------------------------------|--------------|--------------------|------------------|-----------|
| <b>Emergency Stop Pushbutton</b>                    |              |                    |                  |           |
| <b>Twist release, Ø 30 mm</b>                       |              |                    |                  |           |
| 1 NC                                                | CE3T-10R-01  | 1SFA 619 500 R1041 | 1                | 0.032     |
| 2 NC                                                | CE3T-10R-02  | 1SFA 619 500 R1051 | 1                | 0.032     |
| 1 NO + 1 NC                                         | CE3T-10R-11  | 1SFA 619 500 R1071 | 1                | 0.032     |
| <b>Pull release Ø 30 mm</b>                         |              |                    |                  |           |
| 2 NC                                                | CE3P-10R-02  | 1SFA 619 501 R1051 | 1                | 0.032     |
| 1 NO + 1 NC                                         | CE3P-10R-11  | 1SFA 619 501 R1071 | 1                | 0.032     |
| <b>Key release Ø 30 mm: Ronis 455, Key code 71</b>  |              |                    |                  |           |
| 2 NC                                                | CE3K1-10R-02 | 1SFA 619 502 R1051 | 1                | 0.060     |
| 1 NO + 1 NC                                         | CE3K1-10R-11 | 1SFA 619 502 R1071 | 1                | 0.060     |
| <b>Twist release Ø 40 mm</b>                        |              |                    |                  |           |
| 1 NC                                                | CE4T-10R-01  | 1SFA 619 550 R1041 | 1                | 0.036     |
| 2 NC                                                | CE4T-10R-02  | 1SFA 619 550 R1051 | 1                | 0.036     |
| 1 NO + 1 NC                                         | CE4T-10R-11  | 1SFA 619 550 R1071 | 1                | 0.036     |
| <b>Pull release Ø 40 mm</b>                         |              |                    |                  |           |
| 2 NC                                                | CE4P-10R-02  | 1SFA 619 551 R1051 | 1                | 0.036     |
| 1 NO + 1 NC                                         | CE4P-10R-11  | 1SFA 619 551 R1071 | 1                | 0.036     |
| <b>Key release Ø 40 mm: Key code 71 = Ronis 455</b> |              |                    |                  |           |
| 2 NC                                                | CE4K1-10R-02 | 1SFA 619 552 R1051 | 1                | 0.064     |
| 1 NO + 1 NC                                         | CE4K1-10R-11 | 1SFA 619 552 R1071 | 1                | 0.064     |

# Machine Stop non-illuminated



Machine Stop Pushbutton  
twist release 30 mm

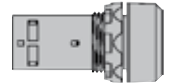
## Operator: Machine Stop Pushbutton

| Description                                         | Type         | Order Code         | Package Quantity | Weight Kg |
|-----------------------------------------------------|--------------|--------------------|------------------|-----------|
| <b>Machine Stop Pushbutton</b>                      |              |                    |                  |           |
| <b>Twist release Ø 30 mm</b>                        |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE3T-10B-11  | 1SFA 619 500 R1076 | 1                | 0.032     |
| <b>Pull release Ø 30 mm</b>                         |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE3P-10B-11  | 1SFA 619 501 R1076 | 1                | 0.032     |
| <b>Key release Ø 30 mm: Key code 71 = Ronis 455</b> |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE3K1-10B-11 | 1SFA 619 502 R1076 | 1                | 0.060     |
| <b>Twist release Ø 40 mm</b>                        |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE4T-10B-11  | 1SFA 619 550 R1076 | 1                | 0.032     |
| <b>Pull release Ø 40 mm</b>                         |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE4P-10B-11  | 1SFA 619 551 R1076 | 1                | 0.032     |
| <b>Key release Ø 40 mm: Key code 71 = Ronis 455</b> |              |                    |                  |           |
| 1 NO + 1 NC                                         | CE4K1-10B-11 | 1SFA 619 552 R1076 | 1                | 0.064     |



# Illuminated Pushbutton

Compact Range



## Bezel - How to order

Black Plastic - Standard

Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type         | Order Code        |
|---------------|--------------|-------------------|
| Black Plastic | CP(X)-1XX-XX | 1SFA619 X0X R1XXX |
| Chrome Metal  | CP(X)-3XX-XX | 1SFA619 X0X R3XXX |



Illuminated Pushbutton



Illuminated Pushbutton  
Extended

## Operator: Illuminated Pushbutton

| Description                               | Type | Order Code | Package Quantity   | Weight Kg  |
|-------------------------------------------|------|------------|--------------------|------------|
| <b>Flush Pushbutton 24V AC/DC</b>         |      |            |                    |            |
| <b>Momentary</b>                          |      |            |                    |            |
| Red                                       | 1 NC | CP1-11R-01 | 1SFA 619 100 R1141 | 1x10 0.025 |
| Red                                       | 1 NO | CP1-11R-10 | 1SFA 619 100 R1111 | 1x10 0.025 |
| Green                                     | 1 NO | CP1-11G-10 | 1SFA 619 100 R1112 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP1-11Y-10 | 1SFA 619 100 R1113 | 1x10 0.025 |
| <b>Maintained</b>                         |      |            |                    |            |
| Red                                       | 1 NC | CP2-11R-01 | 1SFA 619 101 R1141 | 1x10 0.025 |
| Red                                       | 1 NO | CP2-11R-10 | 1SFA 619 101 R1111 | 1x10 0.025 |
| Green                                     | 1 NO | CP2-11G-10 | 1SFA 619 101 R1112 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP2-11Y-10 | 1SFA 619 101 R1113 | 1x10 0.025 |
| <b>Extended Pushbutton 24V AC/DC</b>      |      |            |                    |            |
| <b>Momentary</b>                          |      |            |                    |            |
| Red                                       | 1 NC | CP3-11R-01 | 1SFA 619 102 R1141 | 1x10 0.025 |
| Red                                       | 1 NO | CP3-11R-10 | 1SFA 619 102 R1111 | 1x10 0.025 |
| Green                                     | 1 NO | CP3-11G-10 | 1SFA 619 102 R1112 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP3-11Y-10 | 1SFA 619 102 R1113 | 1x10 0.025 |
| <b>Maintained</b>                         |      |            |                    |            |
| Red                                       | 1 NC | CP4-11R-01 | 1SFA 619 103 R1141 | 1x10 0.025 |
| Red                                       | 1 NO | CP4-11R-10 | 1SFA 619 103 R1111 | 1x10 0.025 |
| Green                                     | 1 NO | CP4-11G-10 | 1SFA 619 103 R1112 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP4-11Y-10 | 1SFA 619 103 R1113 | 1x10 0.025 |
| <b>Flush Pushbutton 110-130V AC/DC</b>    |      |            |                    |            |
| <b>Momentary</b>                          |      |            |                    |            |
| Red                                       | 1 NC | CP1-12R-01 | 1SFA 619 100 R1241 | 1x10 0.025 |
| Red                                       | 1 NO | CP1-12R-10 | 1SFA 619 100 R1211 | 1x10 0.025 |
| Green                                     | 1 NO | CP1-12G-10 | 1SFA 619 100 R1212 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP1-12Y-10 | 1SFA 619 100 R1213 | 1x10 0.025 |
| <b>Maintained</b>                         |      |            |                    |            |
| Red                                       | 1 NC | CP2-12R-01 | 1SFA 619 101 R1241 | 1x10 0.025 |
| Red                                       | 1 NO | CP2-12R-10 | 1SFA 619 101 R1211 | 1x10 0.025 |
| Green                                     | 1 NO | CP2-12G-10 | 1SFA 619 101 R1212 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP2-12Y-10 | 1SFA 619 101 R1213 | 1x10 0.025 |
| <b>Extended Pushbutton 110-130V AC/DC</b> |      |            |                    |            |
| <b>Momentary</b>                          |      |            |                    |            |
| Red                                       | 1 NC | CP3-12R-01 | 1SFA 619 102 R1241 | 1x10 0.025 |
| Red                                       | 1 NO | CP3-12R-10 | 1SFA 619 102 R1211 | 1x10 0.025 |
| Green                                     | 1 NO | CP3-12G-10 | 1SFA 619 102 R1212 | 1x10 0.025 |
| Yellow                                    | 1 NO | CP3-12Y-10 | 1SFA 619 102 R1213 | 1x10 0.025 |



# Illuminated Pushbutton and Compact Mushroom

Compact Range



Illuminated Pushbutton



Illuminated Pushbutton  
Extended

## Operator: Illuminated Pushbutton

| Description                               |      | Type       | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------|------|------------|--------------------|------------------|-----------|
| <b>Extended Pushbutton 110-130V AC/DC</b> |      |            |                    |                  |           |
| <b>Maintained</b>                         |      |            |                    |                  |           |
| Red                                       | 1 NC | CP4-12R-01 | 1SFA 619 103 R1241 | 1x10             | 0.025     |
| Red                                       | 1 NO | CP4-12R-10 | 1SFA 619 103 R1211 | 1x10             | 0.025     |
| Green                                     | 1 NO | CP4-12G-10 | 1SFA 619 103 R1212 | 1x10             | 0.025     |
| Yellow                                    | 1 NO | CP4-12Y-10 | 1SFA 619 103 R1213 | 1x10             | 0.025     |
| <b>Flush Pushbutton 220V AC/DC</b>        |      |            |                    |                  |           |
| <b>Momentary</b>                          |      |            |                    |                  |           |
| Red                                       | 1 NC | CP1-13R-01 | 1SFA 619 100 R1341 | 1x10             | 0.025     |
| Red                                       | 1 NO | CP1-13R-10 | 1SFA 619 100 R1311 | 1x10             | 0.025     |
| Green                                     | 1 NO | CP1-13G-10 | 1SFA 619 100 R1312 | 1x10             | 0.025     |
| Yellow                                    | 1 NO | CP1-13Y-10 | 1SFA 619 100 R1313 | 1x10             | 0.025     |
| <b>Maintained</b>                         |      |            |                    |                  |           |
| Red                                       | 1 NC | CP2-13R-01 | 1SFA 619 101 R1341 | 1x10             | 0.025     |
| Red                                       | 1 NO | CP2-13R-10 | 1SFA 619 101 R1311 | 1x10             | 0.025     |
| Green                                     | 1 NO | CP2-13G-10 | 1SFA 619 101 R1312 | 1x10             | 0.025     |
| Yellow                                    | 1 NO | CP2-13Y-10 | 1SFA 619 101 R1313 | 1x10             | 0.025     |
| <b>Extended Pushbutton 220V AC/DC</b>     |      |            |                    |                  |           |
| <b>Momentary</b>                          |      |            |                    |                  |           |
| Red                                       | 1 NC | CP3-13R-01 | 1SFA 619 102 R1341 | 1x10             | 0.025     |
| Red                                       | 1 NO | CP3-13R-10 | 1SFA 619 102 R1311 | 1x10             | 0.025     |
| Green                                     | 1 NO | CP3-13G-10 | 1SFA 619 102 R1312 | 1x10             | 0.025     |
| Yellow                                    | 1 NO | CP3-13Y-10 | 1SFA 619 102 R1313 | 1x10             | 0.025     |
| <b>Maintained</b>                         |      |            |                    |                  |           |
| Red                                       | 1 NC | CP4-13R-01 | 1SFA 619 103 R1341 | 1x10             | 0.025     |
| Red                                       | 1 NO | CP4-13R-10 | 1SFA 619 103 R1311 | 1x10             | 0.025     |
| Green                                     | 1 NO | CP4-13G-10 | 1SFA 619 103 R1312 | 1x10             | 0.025     |
| Yellow                                    | 1 NO | CP4-13Y-10 | 1SFA 619 103 R1313 | 1x10             | 0.025     |

## Compact Mushroom



Compact Mushroom

## Operator: Compact Mushroom

| Description |             | Type        | Order Code         | Package Quantity | Weight Kg |
|-------------|-------------|-------------|--------------------|------------------|-----------|
| Red         | 1 NO + 1 NC | CPM3-10R-11 | 1SFA 619 126 R1071 | 1                | 0.036     |
| Green       | 1 NO + 1 NC | CPM3-10G-11 | 1SFA 619 126 R1072 | 1                | 0.036     |
| Yellow      | 1 NO + 1 NC | CPM3-10Y-11 | 1SFA 619 126 R1073 | 1                | 0.036     |
| Black       | 1 NO + 1 NC | CPM3-10B-11 | 1SFA 619 126 R1076 | 1                | 0.036     |
| Blue        | 1 NO + 1 NC | CPM3-10L-11 | 1SFA 619 126 R1074 | 1                | 0.036     |



# Pilot Lights with integrated LED

Compact Range



Pilot Light with integrated LED, with leakage current protection

## Operator: Pilot Light with integrated LED

| Description                                                          | Rated Current mA | Wave-length nm | Luminance mcd | Type    | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------------------------------|------------------|----------------|---------------|---------|--------------------|------------------|-----------|
| <b>Pilot Light with integrated LED Service Life &gt;50 000 hours</b> |                  |                |               |         |                    |                  |           |
| <b>Rated Voltage 12 V, DC <sup>1)</sup></b>                          |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 30               | 625            | 60            | CL-501R | 1SFA 619 402 R5011 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-501G | 1SFA 619 402 R5012 | 1x10             | 0.023     |
| ● Yellow                                                             | 30               | 590            | 60            | CL-501Y | 1SFA 619 402 R5013 | 1x10             | 0.023     |
| ● Blue                                                               | 30               | 470            | 22            | CL-501L | 1SFA 619 402 R5014 | 1x10             | 0.023     |
| ○ White                                                              | 30               | <sup>2)</sup>  | 88            | CL-501W | 1SFA 619 402 R5015 | 1x10             | 0.023     |
| <b>Rated Voltage 24 V, AC/DC</b>                                     |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-502R | 1SFA 619 402 R5021 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-502G | 1SFA 619 402 R5022 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-502Y | 1SFA 619 402 R5023 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-502L | 1SFA 619 402 R5024 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-502W | 1SFA 619 402 R5025 | 1x10             | 0.023     |
| <b>Rated Voltage 48 V, AC/DC</b>                                     |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-504R | 1SFA 619 402 R5041 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-504G | 1SFA 619 402 R5042 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-504Y | 1SFA 619 402 R5043 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-504L | 1SFA 619 402 R5044 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-504W | 1SFA 619 402 R5045 | 1x10             | 0.023     |
| <b>Rated Voltage 60 V, AC/DC</b>                                     |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-505R | 1SFA 619 402 R5051 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-505G | 1SFA 619 402 R5052 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-505Y | 1SFA 619 402 R5053 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-505L | 1SFA 619 402 R5054 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-505W | 1SFA 619 402 R5055 | 1x10             | 0.023     |
| <b>Rated Voltage 110-130 V, AC</b>                                   |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-513R | 1SFA 619 402 R5131 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-513G | 1SFA 619 402 R5132 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-513Y | 1SFA 619 402 R5133 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-513L | 1SFA 619 402 R5134 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-513W | 1SFA 619 402 R5135 | 1x10             | 0.023     |
| <b>Rated Voltage 110-130 V, DC <sup>1)</sup></b>                     |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-515R | 1SFA 619 402 R5151 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-515G | 1SFA 619 402 R5152 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-515Y | 1SFA 619 402 R5153 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-515L | 1SFA 619 402 R5154 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-515W | 1SFA 619 402 R5155 | 1x10             | 0.023     |
| <b>Rated Voltage 220 V, DC <sup>1)</sup></b>                         |                  |                |               |         |                    |                  |           |
| ● Red                                                                | 15               | 625            | 60            | CL-520R | 1SFA 619 402 R5201 | 1x10             | 0.023     |
| ● Green                                                              | 15               | 520            | 126           | CL-520G | 1SFA 619 402 R5202 | 1x10             | 0.023     |
| ● Yellow                                                             | 15               | 590            | 60            | CL-520Y | 1SFA 619 402 R5203 | 1x10             | 0.023     |
| ● Blue                                                               | 15               | 470            | 22            | CL-520L | 1SFA 619 402 R5204 | 1x10             | 0.023     |
| ○ White                                                              | 15               | <sup>2)</sup>  | 88            | CL-520W | 1SFA 619 402 R5205 | 1x10             | 0.023     |

**Note:** <sup>1)</sup> Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

<sup>2)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.



Customer specific marking online. For more information see page 4 or go to:

<http://bolsservices.it.abb.com/pilot-devices>



Pilot Light with integrated LED,  
with leakage current protection

### Operator: Pilot Light with integrated LED

| Description                    | Rated Current<br>mA | Wave-length<br>nm | Luminance<br>mcd | Type    | Order Code         | Package Quantity | Weight<br>Kg |
|--------------------------------|---------------------|-------------------|------------------|---------|--------------------|------------------|--------------|
| <b>Rated Voltage 230 V, AC</b> |                     |                   |                  |         |                    |                  |              |
| ● Red                          | 15                  | 625               | 60               | CL-523R | 1SFA 619 402 R5231 | 1x10             | 0.023        |
| ● Green                        | 15                  | 520               | 126              | CL-523G | 1SFA 619 402 R5232 | 1x10             | 0.023        |
| ● Yellow                       | 15                  | 590               | 60               | CL-523Y | 1SFA 619 402 R5233 | 1x10             | 0.023        |
| ● Blue                         | 15                  | 470               | 22               | CL-523L | 1SFA 619 402 R5234 | 1x10             | 0.023        |
| ○ White                        | 15                  | <sup>2)</sup>     | 88               | CL-523W | 1SFA 619 402 R5235 | 1x10             | 0.023        |
| <b>Rated Voltage 380 V, AC</b> |                     |                   |                  |         |                    |                  |              |
| ● Red                          | 15                  | 625               | 60               | CL-530R | 1SFA 619 402 R5301 | 1x10             | 0.023        |
| ● Green                        | 15                  | 520               | 126              | CL-530G | 1SFA 619 402 R5302 | 1x10             | 0.023        |
| ● Yellow                       | 15                  | 590               | 60               | CL-530Y | 1SFA 619 402 R5303 | 1x10             | 0.023        |
| ● Blue                         | 15                  | 470               | 22               | CL-530L | 1SFA 619 402 R5304 | 1x10             | 0.023        |
| ○ White                        | 15                  | <sup>2)</sup>     | 88               | CL-530W | 1SFA 619 402 R5305 | 1x10             | 0.023        |
| <b>Rated Voltage 415 V, AC</b> |                     |                   |                  |         |                    |                  |              |
| ● Red                          | 15                  | 625               | 60               | CL-541R | 1SFA 619 402 R5411 | 1x10             | 0.023        |
| ● Green                        | 15                  | 520               | 126              | CL-541G | 1SFA 619 402 R5412 | 1x10             | 0.023        |
| ● Yellow                       | 15                  | 590               | 60               | CL-541Y | 1SFA 619 402 R5413 | 1x10             | 0.023        |
| ● Blue                         | 15                  | 470               | 22               | CL-541L | 1SFA 619 402 R5414 | 1x10             | 0.023        |
| ○ White                        | 15                  | <sup>2)</sup>     | 88               | CL-541W | 1SFA 619 402 R5415 | 1x10             | 0.023        |

**Note:** <sup>2)</sup>X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

## Pilot Lights



Pilot Light

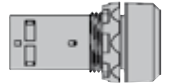
### Operator: Pilot Light

| Description                                      | Type    | Order Code         | Package Quantity | Weight<br>Kg |
|--------------------------------------------------|---------|--------------------|------------------|--------------|
| <b>Pilot Light BA 9s base, Bulb not included</b> |         |                    |                  |              |
| ● Red                                            | CL-100R | 1SFA 619 402 R1001 | 1x10             | 0.018        |
| ● Green                                          | CL-100G | 1SFA 619 402 R1002 | 1x10             | 0.018        |
| ● Yellow                                         | CL-100Y | 1SFA 619 402 R1003 | 1x10             | 0.018        |
| ● Blue                                           | CL-100L | 1SFA 619 402 R1004 | 1x10             | 0.018        |
| ○ White                                          | CL-100W | 1SFA 619 402 R1005 | 1x10             | 0.018        |
| ○ Clear                                          | CL-100C | 1SFA 619 402 R1008 | 1x10             | 0.018        |



# Accessories for Compact Range LED Bulbs

Compact Range



LED Bulbs

| Description                                                  | Rated Current mA | Wave-length nm | Lumi-nance mcd | Type     | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------------------------------|------------------|----------------|----------------|----------|--------------------|------------------|-----------|
| <b>LED Bulbs</b>                                             |                  |                |                |          |                    |                  |           |
| <b>Rated Voltage 12 V, AC Service Life &gt;50 000 h</b>      |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 15               | 630            | 250            | KA2-2011 | 1SFA 616 921 R2011 | 20               | 0.005     |
| ● Green                                                      | 15               | 525            | 1000           | KA2-2012 | 1SFA 616 921 R2012 | 20               | 0.005     |
| ● Yellow                                                     | 15               | 592            | 250            | KA2-2013 | 1SFA 616 921 R2013 | 20               | 0.005     |
| ● Blue                                                       | 15               | 470            | 450            | KA2-2014 | 1SFA 616 921 R2014 | 20               | 0.005     |
| ○ White                                                      | 15               | <sup>1)</sup>  | 600            | KA2-2015 | 1SFA 616 921 R2015 | 20               | 0.005     |
| <b>Rated Voltage 24 V, (AC)/DC Service Life &gt;50 000 h</b> |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 15               | 630            | 250            | KA2-2021 | 1SFA 616 921 R2021 | 20               | 0.005     |
| ● Green                                                      | 15               | 525            | 800            | KA2-2022 | 1SFA 616 921 R2022 | 20               | 0.005     |
| ● Yellow                                                     | 15               | 592            | 250            | KA2-2023 | 1SFA 616 921 R2023 | 20               | 0.005     |
| ● Blue                                                       | 15               | 470            | 400            | KA2-2024 | 1SFA 616 921 R2024 | 20               | 0.005     |
| ○ White                                                      | 15               | <sup>1)</sup>  | 500            | KA2-2025 | 1SFA 616 921 R2025 | 20               | 0.005     |
| <b>Rated Voltage 36 V, (AC)/DC Service Life &gt;50 000 h</b> |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 12               | 630            | 200            | KA2-2031 | 1SFA 616 921 R2031 | 20               | 0.005     |
| ● Green                                                      | 12               | 525            | 2000           | KA2-2032 | 1SFA 616 921 R2032 | 20               | 0.005     |
| ● Yellow                                                     | 12               | 592            | 200            | KA2-2033 | 1SFA 616 921 R2033 | 20               | 0.005     |
| ● Blue                                                       | 12               | 470            | 750            | KA2-2034 | 1SFA 616 921 R2034 | 20               | 0.005     |
| ○ White                                                      | 12               | <sup>1)</sup>  | 1400           | KA2-2035 | 1SFA 616 921 R2035 | 20               | 0.005     |
| <b>Rated Voltage 48 V, (AC)/DC Service Life &gt;50 000 h</b> |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 12               | 630            | 200            | KA2-2041 | 1SFA 616 921 R2041 | 20               | 0.005     |
| ● Green                                                      | 12               | 525            | 1700           | KA2-2042 | 1SFA 616 921 R2042 | 20               | 0.005     |
| ● Yellow                                                     | 12               | 592            | 240            | KA2-2043 | 1SFA 616 921 R2043 | 20               | 0.005     |
| ● Blue                                                       | 12               | 470            | 720            | KA2-2044 | 1SFA 616 921 R2044 | 20               | 0.005     |
| ○ White                                                      | 12               | <sup>1)</sup>  | 1200           | KA2-2045 | 1SFA 616 921 R2045 | 20               | 0.005     |
| <b>Rated Voltage 60 V, (AC)/DC Service Life &gt;50 000 h</b> |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 10               | 630            | 160            | KA2-2051 | 1SFA 616 921 R2051 | 20               | 0.005     |
| ● Green                                                      | 10               | 525            | 1400           | KA2-2052 | 1SFA 616 921 R2052 | 20               | 0.005     |
| ● Yellow                                                     | 10               | 592            | 200            | KA2-2053 | 1SFA 616 921 R2053 | 20               | 0.005     |
| ● Blue                                                       | 10               | 470            | 600            | KA2-2054 | 1SFA 616 921 R2054 | 20               | 0.005     |
| ○ White                                                      | 10               | <sup>1)</sup>  | 1000           | KA2-2055 | 1SFA 616 921 R2055 | 20               | 0.005     |
| <b>Rated Voltage 110-130 V, AC Service Life 25 000 h</b>     |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 4-6              | 630            | 60-100         | KA2-2131 | 1SFA 616 921 R2131 | 20               | 0.005     |
| ● Green                                                      | 4-6              | 525            | 500-850        | KA2-2132 | 1SFA 616 921 R2132 | 20               | 0.005     |
| ● Yellow                                                     | 4-6              | 592            | 70-120         | KA2-2133 | 1SFA 616 921 R2133 | 20               | 0.005     |
| ● Blue                                                       | 4-6              | 470            | 220-350        | KA2-2134 | 1SFA 616 921 R2134 | 20               | 0.005     |
| ○ White                                                      | 4-6              | <sup>1)</sup>  | 350-600        | KA2-2135 | 1SFA 616 921 R2135 | 20               | 0.005     |
| <b>Rated Voltage 110-130 V, AC/DC Service Life 25 000 h</b>  |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 4-6              | 630            | 60             | KA2-2141 | 1SFA 616 921 R2141 | 20               | 0.005     |
| ● Green                                                      | 4-6              | 525            | 500            | KA2-2142 | 1SFA 616 921 R2142 | 20               | 0.005     |
| ● Yellow                                                     | 4-6              | 592            | 70             | KA2-2143 | 1SFA 616 921 R2143 | 20               | 0.005     |
| ● Blue                                                       | 4-6              | 470            | 220            | KA2-2144 | 1SFA 616 921 R2144 | 20               | 0.005     |
| ○ White                                                      | 4-6              | <sup>1)</sup>  | 350            | KA2-2145 | 1SFA 616 921 R2145 | 20               | 0.005     |
| <b>Rated Voltage 230 V, AC Service Life 25 000 h</b>         |                  |                |                |          |                    |                  |           |
| ● Red                                                        | 4                | 630            | 60             | KA2-2221 | 1SFA 616 921 R2221 | 20               | 0.005     |
| ● Green                                                      | 4                | 525            | 500            | KA2-2222 | 1SFA 616 921 R2222 | 20               | 0.005     |
| ● Yellow                                                     | 4                | 592            | 70             | KA2-2223 | 1SFA 616 921 R2223 | 20               | 0.005     |
| ● Blue                                                       | 4                | 470            | 220            | KA2-2224 | 1SFA 616 921 R2224 | 20               | 0.005     |
| ○ White                                                      | 4                | <sup>1)</sup>  | 350            | KA2-2225 | 1SFA 616 921 R2225 | 20               | 0.005     |

**Note:** Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product. Choose the same color on the LED as on the lamp cap.

<sup>1)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

# Accessories for Compact Range LED and Filament Bulbs

Compact Range



LED Bulbs

| Description                                             | Rated Current mA | Wave-length nm | Lumi-nance mcd | Type     | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------------|------------------|----------------|----------------|----------|--------------------|------------------|-----------|
| <b>LED Bulbs continued</b>                              |                  |                |                |          |                    |                  |           |
| <b>Rated Voltage 230 V, AC/DC Service Life 25 000 h</b> |                  |                |                |          |                    |                  |           |
| ● Red                                                   | 4                | 630            | 60             | KA2-2231 | 1SFA 616 921 R2231 | 20               | 0.005     |
| ● Green                                                 | 4                | 525            | 500            | KA2-2232 | 1SFA 616 921 R2232 | 20               | 0.005     |
| ● Yellow                                                | 4                | 592            | 70             | KA2-2233 | 1SFA 616 921 R2233 | 20               | 0.005     |
| ● Blue                                                  | 4                | 470            | 220            | KA2-2234 | 1SFA 616 921 R2234 | 20               | 0.005     |
| ○ White                                                 | 4                | <sup>1)</sup>  | 350            | KA2-2235 | 1SFA 616 921 R2235 | 20               | 0.005     |

**Note:** Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product. Choose the same color on the LED as on the lamp cap.

<sup>1)</sup>X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.



Filament Bulb

| Rated Voltage V                  | Rated Current mA | Rated Output W | Service Life h | Lumi-nance mcd | Type | Order Code  | Package Quantity | Weight Kg |
|----------------------------------|------------------|----------------|----------------|----------------|------|-------------|------------------|-----------|
| <b>Filament Bulbs BA 9s base</b> |                  |                |                |                |      |             |                  |           |
| 6                                | 200              | 1.2            | 10 000         | 350            | -    | 5911 086-11 | 20               | 0.002     |
| 12                               | 100              | 1.2            | 10 000         | 230            | -    | 5911 086-12 | 20               | 0.002     |
| 24                               | 50               | 1.2            | 10 000         | 280            | -    | 5911 086-13 | 20               | 0.002     |
| 30                               | 40               | 1.2            | 10 000         | 250            | -    | 5911 086-4  | 20               | 0.002     |
| 48                               | 42               | 2              | 6 000          | 500            | -    | 5911 086-5  | 20               | 0.002     |
| 60                               | 20               | 1.2            | 5 000          | 190            | -    | 5911 086-14 | 20               | 0.002     |
| 110                              | 18               | 2              | 7 500          | 250            | -    | 5911 086-7  | 20               | 0.002     |
| 130                              | 15               | 2              | 7 500          | 120            | -    | 5911 086-15 | 20               | 0.002     |

**Note:** Type of current: AC/DC. A Lamp Changing Tool is required for changing Bulb.

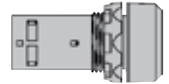


Lamp Changing Tool

| Lamp Changing Tool         |          |                    |   |       |
|----------------------------|----------|--------------------|---|-------|
| For LED and Filament Bulbs | KA1-8072 | 1SFA 616 920 R8072 | 1 | 0.002 |

# Accessories for Compact Range

Compact Range



DIN-rail Adaptor with Pushbutton



Lamp Changing Tool



Mounting Tool

Mounting Tool for Power Tool



Protective Cover

Bezels



Square Bezels



Blanking Plugs



Adaptor

| Description                                                                                                                                                                                     | Type          | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|------------------|-----------|
| <b>DIN-rail Adaptor</b>                                                                                                                                                                         |               |                    |                  |           |
| DIN-rail Adaptor                                                                                                                                                                                | CA1-8080      | 1SFA 619 920 R8080 | 1x10             | 0.028     |
| Dummy Block                                                                                                                                                                                     | MDB-2         | 1SFA 611 630 R1002 | 10               | 0.003     |
| <b>Note:</b> Two Dummy blocks are included with the DIN-rail Adaptor to make it possible to mount any Compact Device                                                                            |               |                    |                  |           |
| <b>Lamp Changing Tool</b>                                                                                                                                                                       |               |                    |                  |           |
| For LED Bulbs and for bulbs                                                                                                                                                                     | KA1-8072      | 1SFA 616 920 R8072 | 1                | 0.002     |
| <b>Mounting Tool</b>                                                                                                                                                                            |               |                    |                  |           |
| Used for tightening the Locking Nut                                                                                                                                                             | MA1-8015      | 1SFA 611 920 R8015 | 1                | 0.021     |
| Mounting Tool for Power Tool                                                                                                                                                                    | MA1-8149      | 1SFA 611 620 R8149 | 1                | 0.155     |
| <b>Membrane</b>                                                                                                                                                                                 |               |                    |                  |           |
| Flush Button                                                                                                                                                                                    | KA1-8052      | 1SFA 616 920 R8052 | 10               | 0.002     |
| Extended Button                                                                                                                                                                                 | KA1-8002      | 1SFA 616 920 R8002 | 10               | 0.002     |
| <b>Note:</b> Made of transparent, heat and cold resistant silicon rubber. Does not harden at low temperature. Remove the gasket when using membrane.                                            |               |                    |                  |           |
| <b>Protective Ring</b>                                                                                                                                                                          |               |                    |                  |           |
| Protective Ring                                                                                                                                                                                 | -             | SK 615 512-1       | 10               | 0.002     |
| <b>Note:</b> For flush and Extended Pushbutton to prevent inadvertent operation. Cannot be used together with Legend Plate Holder.                                                              |               |                    |                  |           |
| <b>Protective Cover</b>                                                                                                                                                                         |               |                    |                  |           |
| Protective cover                                                                                                                                                                                | KA1-8010      | 1SFA 616 920 R8010 | 10               | 0.008     |
| <b>Note:</b> For Flush Pushbutton. To prevent accidental operation. Cannot be used together with Legend Plate Holder.                                                                           |               |                    |                  |           |
| <b>Button</b>                                                                                                                                                                                   |               |                    |                  |           |
| Grey, flush                                                                                                                                                                                     | KA1-8087      | 1SFA 616 920 R8087 | 10               | 0.001     |
| Grey, extended                                                                                                                                                                                  | KA1-8097      | 1SFA 616 920 R8097 | 10               | 0.001     |
| <b>Bezel</b>                                                                                                                                                                                    |               |                    |                  |           |
| <b>For Pushbutton</b>                                                                                                                                                                           |               |                    |                  |           |
| Black                                                                                                                                                                                           | KA1-8022      | 1SFA 616 920 R8022 | 10               | 0.002     |
| Metal                                                                                                                                                                                           | KA1-8021      | 1SFA 616 920 R8021 | 10               | 0.015     |
| <b>For Selector Switch</b>                                                                                                                                                                      |               |                    |                  |           |
| Black                                                                                                                                                                                           | CA1-8077      | 1SFA 619 920 R8077 | 10               | 0.001     |
| Metal                                                                                                                                                                                           | CA1-8078      | 1SFA 619 920 R8078 | 10               | 0.010     |
| <b>Square Bezel</b>                                                                                                                                                                             |               |                    |                  |           |
| Black, plastic                                                                                                                                                                                  | -             | SK 616 016-2       | 10               | 0.001     |
| Grey, plastic                                                                                                                                                                                   | MA1-8124      | 1SFA 611 920 R8124 | 10               | 0.001     |
| <b>Light Diffusing Lens</b>                                                                                                                                                                     |               |                    |                  |           |
| Light Diffusing Lens                                                                                                                                                                            | KA1-8005      | 1SFA 616 920 R8005 | 10               | 0.001     |
| <b>Note:</b> To improve illumination. Cannot be used with text cap. The lens is used instead of text cap                                                                                        |               |                    |                  |           |
| <b>Blanking Plug</b>                                                                                                                                                                            |               |                    |                  |           |
| Light Grey                                                                                                                                                                                      | MA1-8136      | 1SFA 611 920 R8136 | 10               | 0.005     |
| Grey                                                                                                                                                                                            | MA1-8129      | 1SFA 611 920 R8129 | 10               | 0.005     |
| Black                                                                                                                                                                                           | MA1-8130      | 1SFA 611 920 R8130 | 10               | 0.005     |
| <b>Adaptors 30 mm</b>                                                                                                                                                                           |               |                    |                  |           |
| Black Plastic                                                                                                                                                                                   | KA1-8029      | 1SFA 616 920 R8029 | 1                | 0.010     |
| Metal                                                                                                                                                                                           | KA1-8030      | 1SFA 616 920 R8030 | 1                | 0.035     |
| <b>Note:</b> For use when fitting the 22 mm Pilot Devices in 30 mm mounting holes (1.5 - 4 mm panels). For use with Pushbuttons, Selector Switches, Emergency Stop Pushbutton and Pilot Lights. |               |                    |                  |           |
| <b>Adaptors</b>                                                                                                                                                                                 |               |                    |                  |           |
| For flush mounted Pushbutton                                                                                                                                                                    | KA1-8073      | 1SFA 616 920 R8073 | 1                | 0.050     |
| For flush mounted Selector Switches                                                                                                                                                             | CA1-8075      | 1SFA 616 920 R8075 | 1                | 0.046     |
| <b>Extra key</b>                                                                                                                                                                                |               |                    |                  |           |
| Key code 71=Ronis 455                                                                                                                                                                           | SK 616 021-71 | -                  | 10               | 0.007     |



| Standards and Approvals |                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1        | Low-Voltage Switchgear and Controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1      | Low-Voltage Switchgear and Controlgear - Part 5-1: Control circuit devices and switching elements - Electro-mechanical control circuit devices                         |
| IEC / EN 60947-5-5      | Low-Voltage Switchgear and Controlgear - Part 5-5: Control circuit devices and switching elements - Electrical Emergency Stop device with mechanical latching function |
| IEC / EN 60073          | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators                                     |
| IEC / EN 60529          | Degrees of Protection provided by enclosures (IP Code)                                                                                                                 |
| EN 50013                | Low-Voltage Switchgear and Controlgear for industrial use - Terminal Marking and distinctive number for particular control switches                                    |
| DIN 40050-9             | Road vehicles; Degrees of Protection (IP-code); protection against foreign objects; water and contact; electrical equipment                                            |
| UL 508                  | Industrial Control Equipment                                                                                                                                           |
| CSA C22.2 No 14         | Industrial Control Equipment                                                                                                                                           |

| Environmental Data                   |                      |                           |
|--------------------------------------|----------------------|---------------------------|
| Degrees of Protection                |                      |                           |
| Pilot device:                        | IEC/EN DIN           | UL/CSA                    |
| Pushbuttons                          | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Selector Switches                    | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Pilot Lights                         | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Emergency Stops                      | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Terminals                            | IP20                 |                           |
| Temperature                          |                      |                           |
| Ambient temperature during operation | -25 to +70 °C        |                           |
| Storage temperature                  | -40 to +85 °C        |                           |

| Technical Data                                  |                                                                                                                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Cable Connections                               |                                                                                                                                        |
| Operator                                        | Cable Terminal                                                                                                                         |
| Pushbutton<br>Selector Switch<br>Emergency Stop | Plus-minus Pozidriv No. 2<br>Connectable area:<br>min. 1 x 0.5 mm <sup>2</sup> / 1 x AWG22<br>max. 2 x 1.5 mm <sup>2</sup> / 2 x AWG14 |
| Pilot Light                                     | Connectable area:<br>min. 1 x 0.5 mm <sup>2</sup> / 1 x AWG20<br>max. 2 x 2.5 mm <sup>2</sup> / 2 x AWG14                              |

| Tightening Torque     |                         |
|-----------------------|-------------------------|
| Operators Locking Nut | Min. 2 Nm / Max. 2.3 Nm |
| Cable Terminals M3    | 0.8 Nm                  |
| Cable Terminals M3.5  | 0.9 Nm                  |

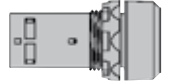
| Short Circuit Protection |        |
|--------------------------|--------|
| Max. fuse at 1 kA        | gG 10A |

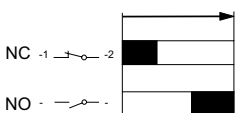
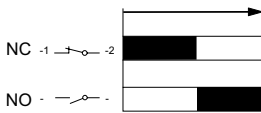
| Mechanical Life                |                    |
|--------------------------------|--------------------|
| Pushbuttons, Selector Switches | 500 000 operations |
| Emergency Stop Pushbutton      | 50 000 operations  |

| Material                                                                                                          |                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| No ozone depleting substances in the products.<br>All front of panel plastic components are made of polycarbonate |                                                                                                                                            |
| PC Polycarbonate                                                                                                  | High impact strength, good outdoor resistance. Chemical resistance (see table below)                                                       |
| PSU Polysulphone                                                                                                  | Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols.                                               |
| PA Polyamide                                                                                                      | Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions. |
| PBT                                                                                                               | Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils                     |
| Zinc                                                                                                              | Good corrosion resistance in inland-, sea and industrial atmosphere.                                                                       |
| Light-alloy                                                                                                       | Good corrosion resistance in inland-, sea and industrial atmosphere.                                                                       |

| Chemical Resistance for Polycarbonate |                                                                                                                                                                              |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Class                        | Effects                                                                                                                                                                      |
| Acids                                 | No significant effect under most typical conditions of concentration and temperature                                                                                         |
| Alcohols and Alkalies                 | Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition. |
| Aliphatic Hydrocarbons                | Generally compatible                                                                                                                                                         |
| Amines                                | Surface crystallization and chemical attack. Avoid.                                                                                                                          |
| Aromatic Hydrocarbons                 | Partial solvents and severe stress cracking agents (i.e., xylene, toluene). Avoid.                                                                                           |
| Detergents and Cleaners               | Mild soap solutions are generally compatible. Strong alkaline materials should be avoided.                                                                                   |
| Esters                                | Cause severe crystallization. Partial solvents. Avoid.                                                                                                                       |
| Greases and Oils                      | Pure petroleum types generally compatible. Many additives used with them are not.                                                                                            |
| Halogenated Hydrocarbons              | Solvents. Avoid.                                                                                                                                                             |
| Ketones                               | Cause severe crystallization and stress cracking. Partial solvents. Avoid.                                                                                                   |
| Silicone Oil and Greases              | Generally compatible up to 85 °C.                                                                                                                                            |

Please note that specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.



| Electrical Data                                                                   |                                                  |                                                                                    |                  |
|-----------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------|------------------|
| Contacts                                                                          |                                                  |                                                                                    |                  |
| Ratings as per IEC 60947-5-1                                                      |                                                  |                                                                                    |                  |
| Rated Insulation Voltage, $U_i$                                                   |                                                  | 300 V                                                                              |                  |
| Rated Thermal Current, $I_{th}$                                                   |                                                  | 5 A                                                                                |                  |
| Rated Operational Current, $I_o$<br>Utilization category AC-15                    | at: 240 V                                        | 1 A                                                                                |                  |
| Rated Operational Current, $I_o$<br>Utilization category DC-13,                   | at: 24 V<br>at: 125 V                            | 0.3 A<br>0.2 A                                                                     |                  |
| Ratings as per UL, CSA, NEMA                                                      |                                                  | C300<br>AC                                                                         | R300<br>DC       |
| Rated Insulation Voltage                                                          |                                                  | 250 V                                                                              | 250 V            |
| Rated Thermal Current                                                             |                                                  | 2.5 A                                                                              | 1 A              |
| Rated Operational Current                                                         | at: 120 V<br>at: 125 V<br>at: 240 V<br>at: 250 V | 1.5 A<br>0.75 A                                                                    | 0.22 A<br>0.11 A |
| Short Circuit Protection                                                          |                                                  |                                                                                    |                  |
| Max. fuse at 1 kA                                                                 | gG 10A                                           |                                                                                    |                  |
| Minimum Switching Capacity                                                        |                                                  |                                                                                    |                  |
| 5 V DC                                                                            | 1 mA                                             |                                                                                    |                  |
| Make-and-break Contacts                                                           |                                                  |                                                                                    |                  |
| Pushbutton                                                                        |                                                  | Emergency Stop Pushbutton                                                          |                  |
|  |                                                  |  |                  |
| ■ = Closed contact                                                                |                                                  | ■ = Closed contact                                                                 |                  |

## LED Bulbs

Service Life for LED Bulbs means number of service hours until the brightness has been reduced down 50 %. Service Life 50 000 h

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Color of white LED             | x=0.31 Y=0.32 means the position of color in the ICI Chromaticity Diagram |
| Voltage Tolerance on LED Bulbs | -30 to +10 % Voltage is acceptable without affecting the Service Life     |
| Voltage Peaks on LED Bulbs     | Voltage peaks up to 1000 V Current peaks up to 500 mA during a few msec   |
| Glowing Light                  | All integrated LED Bulbs have a function built in to cut leakage currents |

# Enclosures and Assembled Stations



## Large Plastic Enclosure (Modular & Compact)

This enclosure can fit both Modular and Compact Operators with the unique possibility to mount up to 5 Contact Blocks assigned to one Operator.

Protection Degree:

IP 66

UL/NEMA Type 1, 3R, 4, 4X, 12, 13

## Compact Plastic Enclosure

The Compact enclosure is one of the smallest on the market intended for compact operators.

Protection Degree:

IP 66, 67, 69K

UL/NEMA Type 1, 3R, 4, 4X, 12, 13

## Metallic Enclosure

Our Metallic line is made in addition to our plastic lines when plastic is not accepted. Featuring a high Protection Degree and large installation space.

Protection Degree:

IP 66, 67, 69K

## Assembled Stations

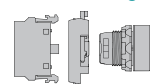
We can also offer some of the most common Assembled Stations as a standard with combination from both Modular and Compact Range.

# Plastic Enclosures for Modular & Compact Range

Compact Range



Modular Range

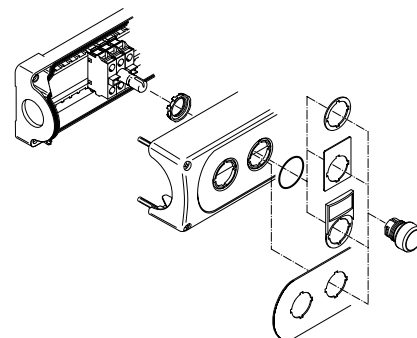


Empty enclosures  
1-seat - 6-seat

| Description                                                 | Type    | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------------|---------|--------------------|------------------|-----------|
| <b>Empty plastic enclosures with stainless steel screws</b> |         |                    |                  |           |
| 1-seat                                                      | MEP1-0  | 1SFA 611 811 R1000 | 10               | 0.15      |
| 1-seat                                                      | MEPY1-0 | 1SFA 611 821 R1000 | 10               | 0.15      |
| 2-seat                                                      | MEP2-0  | 1SFA 611 812 R1000 | 10               | 0.17      |
| 3-seat                                                      | MEP3-0  | 1SFA 611 813 R1000 | 10               | 0.20      |
| 4-seat                                                      | MEP4-0  | 1SFA 611 814 R1000 | 10               | 0.23      |
| 6-seat                                                      | MEP6-0  | 1SFA 611 816 R1000 | 10               | 0.30      |

## When ordering

- Select Operators
- Note: Select Contact Blocks and Lamp Blocks for rear mounting
- Accessories  
N.B. One spacer per operator has to be ordered if Legend Plate is not used.  
(for rear mounted Pilot Devices)
- Holes for Cable Glands  
1-seat to 3-seat enclosures: M20 and Pg 13.5/Pg16 and (M20)  
4-seat and 6-seat enclosures: M25/Pg 16 and (M20)



**UL-listed Applications:** For end of line use only.

## Enclosures for Compact Range



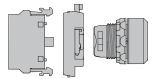
1-seat Plastic Enclosure for Emer-  
gency Stop Pushbutton (yellow)  
and Machine Stops (Grey)

| Description                                    | Type     | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------|----------|--------------------|------------------|-----------|
| <b>Enclosure for emergency stop pushbutton</b> |          |                    |                  |           |
|                                                | CEPY1-0  | 1SFA 619 821 R1000 | 1                | 0.072     |
| <b>Shroud</b>                                  |          |                    |                  |           |
|                                                | CA1-8053 | 1SFA 619 920 R8053 | 1                | 0.016     |
| <b>Enclosure for machine stop pushbutton</b>   |          |                    |                  |           |
|                                                | CEP1-0   | 1SFA 619 811 R1000 | 1                | 0.072     |
| <b>Shroud</b>                                  |          |                    |                  |           |
|                                                | CA1-8054 | 1SFA 619 920 R8054 | 1                | 0.016     |

Assembled Stations - see page 65.

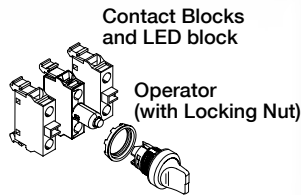
# Two Position Selector Switches for Vertically Mounted Enclosures

Modular Range



## How to order:

- Alt.1** • Operator  
+ Contact Blocks for rear mounting
- Alt.2** • Operator  
+ Contact Blocks and Lamp Block for rear mounting



## Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in  
Type and Order Codes



| Bezel Options | Type       | Order Code       |
|---------------|------------|------------------|
| Black Plastic | M2SSVX-1XX | 1SFA61122X R1X0X |
| Chrome Metal  | M2SSVX-3XX | 1SFA61122X R3X0X |



Two-position Selector Switch  
non-illuminated

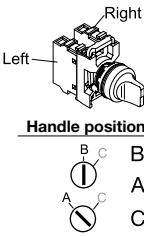


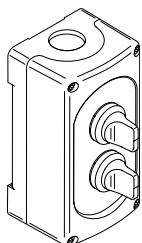
Two-position Selector Switch  
illuminated

## Operator: Two-position Selector Switch

| Description                                                                                | Type       | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------------------------------------------------------------|------------|--------------------|------------------|-----------|
| <b>Short Handle, non-illuminated</b>                                                       |            |                    |                  |           |
| <b>Maintained</b>                                                                          |            |                    |                  |           |
|  Red      | M2SSV1-10R | 1SFA 611 220 R1001 | 1x10             | 0.015     |
|  Black    | M2SSV1-10B | 1SFA 611 220 R1006 | 1x10             | 0.015     |
| <b>Maintained</b>                                                                          |            |                    |                  |           |
|  Red      | M2SSV2-10R | 1SFA 611 221 R1001 | 1x10             | 0.015     |
|  Black    | M2SSV2-10B | 1SFA 611 221 R1006 | 1x10             | 0.015     |
| <b>Momentary, spring return from C to B</b>                                                |            |                    |                  |           |
|  Red    | M2SSV3-10R | 1SFA 611 222 R1001 | 1x10             | 0.015     |
|  Black  | M2SSV3-10B | 1SFA 611 222 R1006 | 1x10             | 0.015     |
| <b>Short Handle, illuminated</b>                                                           |            |                    |                  |           |
| <b>Maintained</b>                                                                          |            |                    |                  |           |
|  Red    | M2SSV1-11R | 1SFA 611 220 R1101 | 1x10             | 0.015     |
|  Green  | M2SSV1-11G | 1SFA 611 220 R1102 | 1x10             | 0.015     |
|  Yellow | M2SSV1-11Y | 1SFA 611 220 R1103 | 1x10             | 0.015     |
| <b>Maintained</b>                                                                          |            |                    |                  |           |
|  Red    | M2SSV2-11R | 1SFA 611 221 R1101 | 1x10             | 0.015     |
|  Green  | M2SSV2-11G | 1SFA 611 221 R1102 | 1x10             | 0.015     |
|  Yellow | M2SSV2-11Y | 1SFA 611 221 R1103 | 1x10             | 0.015     |
| <b>Momentary, spring return from C to B</b>                                                |            |                    |                  |           |
|  Red    | M2SSV3-11R | 1SFA 611 222 R1101 | 1x10             | 0.015     |
|  Green  | M2SSV3-11G | 1SFA 611 222 R1102 | 1x10             | 0.015     |
|  Yellow | M2SSV3-11Y | 1SFA 611 222 R1103 | 1x10             | 0.015     |

## Contacts actuated

|                                                                                     |  |                                     |                                     |
|-------------------------------------------------------------------------------------|--|-------------------------------------|-------------------------------------|
|  |  | Left block                          | Right block                         |
| B                                                                                   |  | <input type="checkbox"/>            | <input type="checkbox"/>            |
| A                                                                                   |  | <input type="checkbox"/>            | <input type="checkbox"/>            |
| C                                                                                   |  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Not actuated                                               |  |                                     |                                     |
| <input checked="" type="checkbox"/> Actuated                                        |  |                                     |                                     |



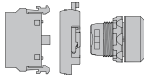
Enclosure with Selector Switches



Contact Blocks and  
Holder see the fold-out  
page at the end of the  
catalog

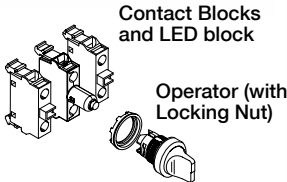
# Three Position Selector Switches for Vertically Mounted Enclosures

Modular Range



### How to order:

- Alt.1** • Operator  
+ Contact Blocks for rear mounting
- Alt.2** • Operator  
+ Contact Blocks and Lamp Block for rear mounting



### Bezel - How to order

Black Plastic - Standard  
Chrome Metal - Replace '1' with '3' in Type and Order Codes



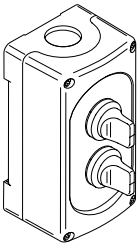
| Bezel Options | Type       | Order Code       |
|---------------|------------|------------------|
| Black Plastic | M3SSVX-1XX | 1SFA61123X R1X0X |
| Chrome Metal  | M3SSVX-3XX | 1SFA61123X R3X0X |



Three-position Selector Switch non-illuminated



Three-position Selector Switch illuminated



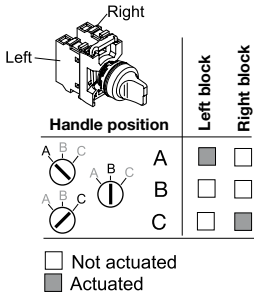
Enclosure with Selector Switches

### Operator: Three-position Selector Switch

| Description                                                 | Type       | Order Code         | Package Quantity | Weight Kg |
|-------------------------------------------------------------|------------|--------------------|------------------|-----------|
| <b>Short Handle, non-illuminated</b>                        |            |                    |                  |           |
| <b>Maintained</b>                                           |            |                    |                  |           |
| Red                                                         | M3SSV1-10R | 1SFA 611 230 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SSV1-10B | 1SFA 611 230 R1006 | 1x10             | 0.015     |
| <b>Momentary, spring return from A to B and from C to B</b> |            |                    |                  |           |
| Red                                                         | M3SSV2-10R | 1SFA 611 231 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SSV2-10B | 1SFA 611 231 R1006 | 1x10             | 0.015     |
| <b>Momentary, spring return from C to B</b>                 |            |                    |                  |           |
| Red                                                         | M3SSV3-10R | 1SFA 611 232 R1001 | 1x10             | 0.015     |
| Black                                                       | M3SSV3-10B | 1SFA 611 232 R1006 | 1x10             | 0.015     |
| <b>Short Handle, illuminated</b>                            |            |                    |                  |           |
| <b>Maintained</b>                                           |            |                    |                  |           |
| Red                                                         | M3SSV1-11R | 1SFA 611 230 R1101 | 1x10             | 0.015     |
| Green                                                       | M3SSV1-11G | 1SFA 611 230 R1102 | 1x10             | 0.015     |
| Yellow                                                      | M3SSV1-11Y | 1SFA 611 230 R1103 | 1x10             | 0.015     |
| <b>Momentary, spring return from A to B and from C to B</b> |            |                    |                  |           |
| Red                                                         | M3SSV2-11R | 1SFA 611 231 R1101 | 1x10             | 0.015     |
| Green                                                       | M3SSV2-11G | 1SFA 611 231 R1102 | 1x10             | 0.015     |
| Yellow                                                      | M3SSV2-11Y | 1SFA 611 231 R1103 | 1x10             | 0.015     |
| <b>Momentary, spring return from C to B</b>                 |            |                    |                  |           |
| Red                                                         | M3SSV3-11R | 1SFA 611 232 R1101 | 1x10             | 0.015     |
| Green                                                       | M3SSV3-11G | 1SFA 611 232 R1102 | 1x10             | 0.015     |
| Yellow                                                      | M3SSV3-11Y | 1SFA 611 232 R1103 | 1x10             | 0.015     |

**Note:** No contact in centre position. Lamp Block for max 230 V AC/DC. Bulb not included. Other Lamp Block see accessories

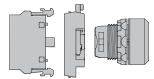
### Contacts actuated



Contact Blocks and Holder see the fold-out page at the end of the catalog

# LED Blocks for rear mounting

Modular Range



LED Block with built in leakage current protection

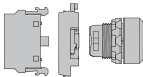
| Description                                      | Rated Current<br>mA | Wave-length<br>nm | Lumi-nance<br>mcd | Type      | Order Code         | Package Quantity | Weight<br>Kg |
|--------------------------------------------------|---------------------|-------------------|-------------------|-----------|--------------------|------------------|--------------|
| <b>LED Blocks</b>                                |                     |                   |                   |           |                    |                  |              |
| <b>Rated Voltage 12 V, DC <sup>1)</sup></b>      |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 12.0                | 620               | 320               | MLBL-00BR | 1SFA 611 621 R2001 | 10               | 0.012        |
| ● Green                                          | 9.3                 | 520               | 1500              | MLBL-00BG | 1SFA 611 621 R2002 | 10               | 0.012        |
| ● Yellow                                         | 12.0                | 588               | 380               | MLBL-00BY | 1SFA 611 621 R2003 | 10               | 0.012        |
| ● Blue                                           | 9.5                 | 468               | 450               | MLBL-00BL | 1SFA 611 621 R2004 | 10               | 0.012        |
| ○ White                                          | 9.3                 | <sup>2)</sup>     | 600               | MLBL-00BW | 1SFA 611 621 R2005 | 10               | 0.012        |
| <b>Rated Voltage 24 V, AC/DC <sup>1)</sup></b>   |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 9.9                 | 620               | 250               | MLBL-01BR | 1SFA 611 621 R2011 | 10               | 0.012        |
| ● Green                                          | 9.2                 | 520               | 1500              | MLBL-01BG | 1SFA 611 621 R2012 | 10               | 0.012        |
| ● Yellow                                         | 9.9                 | 588               | 250               | MLBL-01BY | 1SFA 611 621 R2013 | 10               | 0.012        |
| ● Blue                                           | 9.3                 | 468               | 450               | MLBL-01BL | 1SFA 611 621 R2014 | 10               | 0.012        |
| ○ White                                          | 9.2                 | <sup>2)</sup>     | 600               | MLBL-01BW | 1SFA 611 621 R2015 | 10               | 0.012        |
| <b>Rated Voltage 48 V, AC/DC <sup>1)</sup></b>   |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 10.0                | 620               | 260               | MLBL-02BR | 1SFA 611 621 R2021 | 10               | 0.012        |
| ● Green                                          | 9.7                 | 520               | 1500              | MLBL-02BG | 1SFA 611 621 R2022 | 10               | 0.012        |
| ● Yellow                                         | 10.0                | 588               | 300               | MLBL-02BY | 1SFA 611 621 R2023 | 10               | 0.012        |
| ● Blue                                           | 9.7                 | 468               | 450               | MLBL-02BL | 1SFA 611 621 R2024 | 10               | 0.012        |
| ○ White                                          | 9.7                 | <sup>2)</sup>     | 600               | MLBL-02BW | 1SFA 611 621 R2025 | 10               | 0.012        |
| <b>Rated Voltage 60 V, AC/DC <sup>1)</sup></b>   |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 13.0                | 620               | 350               | MLBL-03BR | 1SFA 611 621 R2031 | 10               | 0.012        |
| ● Green                                          | 12.7                | 520               | 2000              | MLBL-03BG | 1SFA 611 621 R2032 | 10               | 0.012        |
| ● Yellow                                         | 13.0                | 588               | 400               | MLBL-03BY | 1SFA 611 621 R2033 | 10               | 0.012        |
| ● Blue                                           | 12.7                | 468               | 550               | MLBL-03BL | 1SFA 611 621 R2034 | 10               | 0.012        |
| ○ White                                          | 12.7                | <sup>2)</sup>     | 750               | MLBL-03BW | 1SFA 611 621 R2035 | 10               | 0.012        |
| <b>Rated Voltage 110-130 V, AC</b>               |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 8.6                 | 620               | 200               | MLBL-04BR | 1SFA 611 621 R2041 | 10               | 0.012        |
| ● Green                                          | 8.5                 | 520               | 1200              | MLBL-04BG | 1SFA 611 621 R2042 | 10               | 0.012        |
| ● Yellow                                         | 8.6                 | 588               | 250               | MLBL-04BY | 1SFA 611 621 R2043 | 10               | 0.012        |
| ● Blue                                           | 7.0                 | 468               | 400               | MLBL-04BL | 1SFA 611 621 R2044 | 10               | 0.012        |
| ○ White                                          | 7.0                 | <sup>2)</sup>     | 500               | MLBL-04BW | 1SFA 611 621 R2045 | 10               | 0.012        |
| <b>Rated Voltage 110-130 V, DC <sup>1)</sup></b> |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 9.9                 | 620               | 250               | MLBL-05BR | 1SFA 611 621 R2051 | 10               | 0.012        |
| ● Green                                          | 9.8                 | 520               | 1500              | MLBL-05BG | 1SFA 611 621 R2052 | 10               | 0.012        |
| ● Yellow                                         | 9.9                 | 588               | 300               | MLBL-05BY | 1SFA 611 621 R2053 | 10               | 0.012        |
| ● Blue                                           | 9.8                 | 468               | 450               | MLBL-05BL | 1SFA 611 621 R2054 | 10               | 0.012        |
| ○ White                                          | 9.8                 | <sup>2)</sup>     | 600               | MLBL-05BW | 1SFA 611 621 R2055 | 10               | 0.012        |
| <b>Rated Voltage 220 V, DC <sup>1)</sup></b>     |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 8.0                 | 620               | 180               | MLBL-06BR | 1SFA 611 621 R2061 | 10               | 0.012        |
| ● Green                                          | 8.0                 | 520               | 110               | MLBL-06BG | 1SFA 611 621 R2062 | 10               | 0.012        |
| ● Yellow                                         | 8.0                 | 588               | 200               | MLBL-06BY | 1SFA 611 621 R2063 | 10               | 0.012        |
| ● Blue                                           | 8.0                 | 468               | 450               | MLBL-06BL | 1SFA 611 621 R2064 | 10               | 0.012        |
| ○ White                                          | 8.0                 | <sup>2)</sup>     | 600               | MLBL-06BW | 1SFA 611 621 R2065 | 10               | 0.012        |
| <b>Rated Voltage 230 V, AC</b>                   |                     |                   |                   |           |                    |                  |              |
| ● Red                                            | 9.5                 | 620               | 250               | MLBL-07BR | 1SFA 611 621 R2071 | 10               | 0.012        |
| ● Green                                          | 9.4                 | 520               | 1500              | MLBL-07BG | 1SFA 611 621 R2072 | 10               | 0.012        |
| ● Yellow                                         | 9.5                 | 588               | 300               | MLBL-07BY | 1SFA 611 621 R2073 | 10               | 0.012        |
| ● Blue                                           | 8.2                 | 468               | 450               | MLBL-07BL | 1SFA 611 621 R2074 | 10               | 0.012        |
| ○ White                                          | 8.2                 | <sup>2)</sup>     | 600               | MLBL-07BW | 1SFA 611 621 R2075 | 10               | 0.012        |

**Note:** <sup>1)</sup> Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

<sup>2)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

# LED Blocks for rear mounting

Modular Range



LED Block with built in leakage current protection

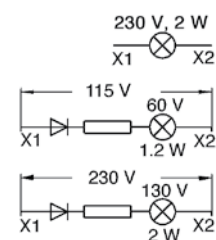
| Description             | Rated Current<br>mA | Wave-length<br>nm | Lumi-nance<br>mcd | Type      | Order Code         | Package Quantity | Weight Kg |
|-------------------------|---------------------|-------------------|-------------------|-----------|--------------------|------------------|-----------|
| Cont. LED Blocks        |                     |                   |                   |           |                    |                  |           |
| Rated Voltage 380 V, AC |                     |                   |                   |           |                    |                  |           |
| ● Red                   | 10.2                | 620               | 250               | MLBL-08BR | 1SFA 611 621 R2081 | 10               | 0.012     |
| ● Green                 | 10.2                | 520               | 1500              | MLBL-08BG | 1SFA 611 621 R2082 | 10               | 0.012     |
| ● Yellow                | 10.2                | 582               | 300               | MLBL-08BY | 1SFA 611 621 R2083 | 10               | 0.012     |
| ● Blue                  | 9.1                 | 468               | 450               | MLBL-08BL | 1SFA 611 621 R2084 | 10               | 0.012     |
| ○ White                 | 9.1                 | <sup>2)</sup>     | 600               | MLBL-08BW | 1SFA 611 621 R2085 | 10               | 0.012     |
| Rated Voltage 415 V, AC |                     |                   |                   |           |                    |                  |           |
| ● Red                   | 11.2                | 620               | 280               | MLBL-09BR | 1SFA 611 621 R2091 | 10               | 0.012     |
| ● Green                 | 11.2                | 520               | 1800              | MLBL-09BG | 1SFA 611 621 R2092 | 10               | 0.012     |
| ● Yellow                | 11.2                | 588               | 350               | MLBL-09BY | 1SFA 611 621 R2093 | 10               | 0.012     |
| ● Blue                  | 9.9                 | 468               | 500               | MLBL-09BL | 1SFA 611 621 R2094 | 10               | 0.012     |
| ○ White                 | 9.9                 | <sup>2)</sup>     | 650               | MLBL-09BW | 1SFA 611 621 R2095 | 10               | 0.012     |

<sup>2)</sup> X=0.31, Y=0.32 according to the ICI Chromaticity Diagram.

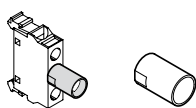
# Accessories For Plastic Enclosures



Contact Block Double Contact Block



Lamp Blocks



Protective Sleeve



Cable Gland



Sealing Ring



Blanking Plugs

| Description                                                                                                           | Type     | Order Code          | Package Quantity | Weight Kg |
|-----------------------------------------------------------------------------------------------------------------------|----------|---------------------|------------------|-----------|
| <b>Contact Block for rear mounting</b>                                                                                |          |                     |                  |           |
| 1NO                                                                                                                   | MCB-10B  | 1SFA 611 610 R2001  | 10               | 0.013     |
| 1NC                                                                                                                   | MCB-01B  | 1SFA 611 610 R2010  | 10               | 0.013     |
| <b>Double Contact Block</b>                                                                                           |          |                     |                  |           |
| 2NO                                                                                                                   | MCB-20B  | 1SFA 611 610 R2002  | 10               | 0.026     |
| 2NC                                                                                                                   | MCB-02B  | 1SFA 611 610 R2020  | 10               | 0.026     |
| 1NO+1NC                                                                                                               | MCB-11B  | 1SFA 611 610 R2011  | 10               | 0.026     |
| <b>Contact Block with gold plated contacts</b>                                                                        |          |                     |                  |           |
| 1NO                                                                                                                   | MCB-10BG | 1SFA 611 610 R2101  | 10               | 0.013     |
| 1NC                                                                                                                   | MCB-01BG | 1SFA 611 610 R2110  | 10               | 0.013     |
| <b>Lamp Block for rear mounting</b>                                                                                   |          |                     |                  |           |
| For max. 2 W, 230 V AC and DC Filament Bulb or LED                                                                    | MLB-1B   | 1SFA 611 620 R2001  | 10               | 0.015     |
| 115 V AC supply voltage. For 60 V Filament Bulb 1.2 W                                                                 | MLB-2B   | 1SFA 611 620 R2002  | 10               | 0.017     |
| 230 V AC supply voltage. For 130 V Filament Bulb 2 W                                                                  | MLB-3B   | 1SFA 611 620 R2003  | 10               | 0.020     |
| <b>Protective Sleeve</b>                                                                                              |          |                     |                  |           |
| Protective Sleeve                                                                                                     | -        | 5396 0543-1         | 10               | 0.002     |
| <b>Note:</b> To make a rear mounted Lamp Block screen protected. IP20 (Not together with illuminated Selector Switch) |          |                     |                  |           |
| <b>Cable Gland</b>                                                                                                    |          |                     |                  |           |
| Grey plastic. threaded outer sleeve Sealing Ring included.                                                            |          |                     |                  |           |
| M25                                                                                                                   | MA5-3001 | 1SFA 611 925 R3001  | 10               | 0.015     |
| M20                                                                                                                   | MA5-3002 | 1SFA 611 925 R3002  | 10               | 0.015     |
| PG 13.5                                                                                                               | MA5-3006 | 1SFA 611 925 R3006  | 10               | 0.010     |
| PG 16                                                                                                                 | MA5-3007 | 1SFA 611 925 R3007  | 10               | 0.015     |
| <b>Nut</b>                                                                                                            |          |                     |                  |           |
| Grey plastic. For Cable Gland above.                                                                                  |          |                     |                  |           |
| M25                                                                                                                   | MA5-3003 | 1SFA 611 925 R3003  | 10               | 0.005     |
| M20                                                                                                                   | MA5-3004 | 1SFA 611 925 R3004  | 10               | 0.005     |
| PG 13.5                                                                                                               | MA5-3008 | 1SFA 611 925 R3008  | 10               | 0.001     |
| PG 16                                                                                                                 | MA5-3009 | 1SFA 611 925 R3009  | 10               | 0.001     |
| <b>Earthing Terminal</b>                                                                                              |          |                     |                  |           |
| For Plastic Enclosure.                                                                                                | MA5-3005 | 1SFA 611 925 R3005  | 10               | 0.005     |
| <b>Sealing Ring</b>                                                                                                   |          |                     |                  |           |
| For Plastic Enclosure.                                                                                                | MA1-8150 | 1SFA 611 620 H8150  | 100              | 0.001     |
| <b>Spacer</b>                                                                                                         |          |                     |                  |           |
| 1 mm thick. Needed when Legend Plates are not used in Plastic Enclosures.                                             |          |                     |                  |           |
| Spacer                                                                                                                | -        | SK 615 516-1        | 10               | 0.002     |
| Spacer for Modular Emergency Stop Pushbutton                                                                          | KA1-8045 | 1SFA 616 920 R 8045 | 10               | 0.004     |
| <b>Blanking Plug</b>                                                                                                  |          |                     |                  |           |
| Grey                                                                                                                  | MA1-8129 | 1SFA 611 920 R8129  | 10               | 0.005     |
| Black                                                                                                                 | MA1-8130 | 1SFA 611 920 R8130  | 10               | 0.005     |
| Light Grey                                                                                                            | MA1-8136 | 1SFA 611 920 R8136  | 10               | 0.005     |
| <b>Adaptor</b>                                                                                                        |          |                     |                  |           |
| PG 16/M20                                                                                                             | MA5-3010 | 1SFA 611 925 R3010  | 10               | 0.010     |

# Metallic Enclosures and Accessories

## degree of protection IP66, IP67 and IP69K



Empty Metallic Enclosures



Cable Gland



Hexagon Nut



Sealing Ring



Blanking Plate



Blanking Plugs

| Description                                                      | Type   | Order Code    | Package Quantity | Weight Kg |
|------------------------------------------------------------------|--------|---------------|------------------|-----------|
| <b>Empty Metallic Enclosures for front mounted Pilot Devices</b> |        |               |                  |           |
| 1-seat <input type="checkbox"/> Grey                             | KEM1-0 | SK 616 701-AA | 1                | 0.40      |
| 2-seat <input type="checkbox"/> Grey                             | KEM2-0 | SK 616 702-AA | 1                | 0.70      |
| 3-seat <input type="checkbox"/> Grey                             | KEM3-0 | SK 616 703-AA | 1                | 0.80      |
| 4-seat <input type="checkbox"/> Grey                             | KEM4-0 | SK 616 704-AA | 1                | 1.20      |
| 6-seat <input type="checkbox"/> Grey                             | KEM6-0 | SK 616 706-AA | 1                | 1.40      |

Blanking plates not included

### Accessories for Metallic Enclosures

**Cable Gland.** Metal. Threaded outer sleeve.

| Pr   | Pg | diameter, mm |   |             |         |
|------|----|--------------|---|-------------|---------|
| 22.5 | 16 | 8.5 - 11.5   | - | SK 170 7685 | 1 0.040 |
| 22.5 | 16 | 10.5 - 13.5  | - | SK 170 7686 | 1 0.045 |
| 22.5 | 16 | 12.5 - 15.0  | - | SK 170 7687 | 1 0.050 |

### Hexagon Nut

|                       |   |             |   |       |
|-----------------------|---|-------------|---|-------|
| Metal, Pr 22.5, Pg 16 | - | SK 175 0152 | 1 | 0.010 |
|-----------------------|---|-------------|---|-------|

### Sealing Ring

|                        |   |             |   |       |
|------------------------|---|-------------|---|-------|
| Rubber, Pr 22.5, Pg 16 | - | SK 170 0182 | 1 | 0.010 |
|------------------------|---|-------------|---|-------|

**Blanking Plates without holes.** Metal. Black For 4- and 6-seat enclosures. Note: Gasket not included

| For flange opening | Suitable flange gasket | Order Code |               |   |       |
|--------------------|------------------------|------------|---------------|---|-------|
| FL 13              | SK 170 4536            | -          | SK 172 105-AA | 1 | 0.010 |

**Blanking Plates with holes.** Metal. Black for 4- and 6-seat enclosures. Note: Gasket not included

| For flange opening                                        | Suitable flange gasket          |   |               |   |       |
|-----------------------------------------------------------|---------------------------------|---|---------------|---|-------|
| <b>Two holes</b><br>Hole centre distance 50 mm<br>FL 13   | Pr 22.5 (Pg 16).<br>SK 170 4536 | - | SK 172 105-AD | 1 | 0.110 |
| <b>Three holes</b><br>Hole centre distance 38 mm<br>FL 13 | Pr 22.5 (Pg 16).<br>SK 170 4536 | - | SK 172 105-AE | 1 | 0.110 |
| <b>Four holes</b><br>Hole centre distance 30 mm<br>FL 13  | Pr 22.5 (Pg 16).<br>SK 170 4536 | - | SK 172 105-AF | 1 | 0.110 |

### Flange Gasket

|       |   |             |   |       |
|-------|---|-------------|---|-------|
| FL 13 | - | SK 170 4536 | 1 | 0.005 |
|-------|---|-------------|---|-------|

**Blanking Plug.** Applicable to cover a 22 mm-hole in an enclosure instead of an operator. Gasket and nut included

|            |          |                    |    |       |
|------------|----------|--------------------|----|-------|
| Grey       | MA1-8129 | 1SFA 611 920 R8129 | 10 | 0.005 |
| Black      | MA1-8130 | 1SFA 611 920 R8130 | 10 | 0.005 |
| Light grey | MA1-8136 | 1SFA 611 920 R8136 | 10 | 0.005 |

### Sealing Plug Black Plastic

|               |   |              |    |       |
|---------------|---|--------------|----|-------|
| Pr 22.5 Pg 16 | - | SK 175 919-3 | 10 | 0.010 |
|---------------|---|--------------|----|-------|

# Assembled Stations



Emergency Stop Enclosure



Emergency Stop Enclosure with Shroud



2-seat Plastic Enclosure

| Description                                                                                                  |                                         | Type       | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------|--------------------|------------------|-----------|
| <b>1-seat Plastic Enclosures</b>                                                                             |                                         |            |                    |                  |           |
| Emergency Stop Pushbutton, 40 mm. Twist release. No Legend Plate. Yellow top / light grey bottom             |                                         |            |                    |                  |           |
| ● Red                                                                                                        | 2 NC                                    | MEPY1-1005 | 1SFA 611 821 R1005 | 1                | 0.234     |
| ● Red                                                                                                        | 1 NO + 2 NC                             | MEPY1-1024 | 1SFA 611 821 R1024 | 1                | 0.250     |
| <b>1-seat Plastic Enclosures</b>                                                                             |                                         |            |                    |                  |           |
| Emergency Stop Pushbutton, 40 mm. Twist release. Legend Plate: "Emergency Stop" Yellow top/light grey bottom |                                         |            |                    |                  |           |
| ● Red                                                                                                        | 2 NC                                    | MEPY1-1026 | 1SFA 611 821 R1026 | 1                | -         |
| <b>1-seat Plastic Enclosure</b>                                                                              |                                         |            |                    |                  |           |
| ■ □ Yellow/Light grey                                                                                        | Twist release. Red button 2 NC          | CEPY1-1001 | 1SFA 619 821 R1001 | 1                | 0.108     |
| ■ □ Yellow/Light grey                                                                                        | Pull release. Red button 2 NC           | CEPY1-1002 | 1SFA 619 821 R1002 | 1                | 0.108     |
| ■ □ Yellow/Light grey                                                                                        | Key release. Red button 2 NC            | CEPY1-1006 | 1SFA 619 821 R1006 | 1                | 0.105     |
| <b>1-seat Plastic Enclosure with Shroud</b>                                                                  |                                         |            |                    |                  |           |
| ■ □ Yellow/Light grey                                                                                        | Twist release. Red button 2 NC          | CEPY1-2002 | 1SFA 619 821 R2002 | 1                | 0.124     |
| ■ □ Yellow/Light grey                                                                                        | Pull release. Red button 2 NC           | CEPY1-2001 | 1SFA 619 821 R2001 | 1                | 0.124     |
| <b>1-seat Plastic Enclosure with Black Mushroom Pushbutton</b>                                               |                                         |            |                    |                  |           |
| ■ □ Dark grey/Light grey                                                                                     | Twist release. Black button 1 NO + 1 NC | CEP1-1001  | 1SFA 619 811 R1001 | 1                | 0.108     |
| ■ □ Dark grey/Light grey                                                                                     | Pull release. Black button 1 NO + 1 NC  | CEP1-1002  | 1SFA 619 811 R1002 | 1                | 0.108     |
| <b>1-seat Plastic Enclosure with Black Mushroom Pushbutton and Shroud</b>                                    |                                         |            |                    |                  |           |
| ■ □ Dark grey/Light grey                                                                                     | Twist release. Black button 1 NO + 1 NC | CEP1-2001  | 1SFA 619 811 R2001 | 1                | 0.124     |
| ■ □ Dark grey/Light grey                                                                                     | Pull release. Black button 1 NO + 1 NC  | CEP1-2002  | 1SFA 619 811 R2002 | 1                | 0.124     |
| <b>2-seat Plastic Enclosure</b>                                                                              |                                         |            |                    |                  |           |
| Dark grey top / light grey bottom<br>Two Flush Pushbuttons. Momentary.<br>Left Right                         |                                         |            |                    |                  |           |
| ● Red                                                                                                        | ● Green                                 | MEP2-1001  | 1SFA 611 812 R1001 | 1                | 0.220     |
| 1 NC                                                                                                         | 1 NO                                    |            |                    |                  |           |
| O                                                                                                            | I                                       |            |                    |                  |           |

# Legend Plates



ABB offers a wide range of alternatives to label our products. It's also possible in a large number of markets to get these engraved from factory with our L-Mark system - <http://bolsservices.it.abb.com/pilot-devices>.

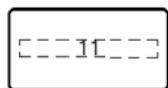
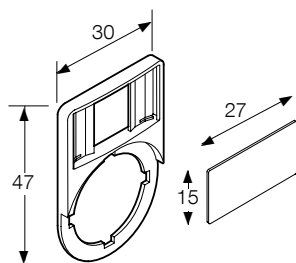
## Products:

- Legend Plates for Emergency Stops.
- Inserts and Holders.
- Fixed Legend Plates in aluminum.
- Text Caps.
- Legend Plates for Enclosures.

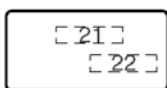
# Legend Plate Holder with Inserts



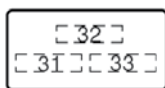
Legend Plate Holders



Insert



Insert for two-pos.  
Selector Switch



Insert for three-pos.  
Selector Switch

| Description | Type | Order Code | Package Quantity | Weight Kg |
|-------------|------|------------|------------------|-----------|
|-------------|------|------------|------------------|-----------|

## Legend Plate Holders with Inserts

- Holder of Black Plastic
- Insert of brushed Aluminum look on Black Plastic.

### Legend Plate Holder

|       |          |                    |    |       |
|-------|----------|--------------------|----|-------|
| Black | KA1-8120 | 1SFA 616 920 R8120 | 10 | 0.002 |
|-------|----------|--------------------|----|-------|

### Inserts

|                        |          |                    |    |       |
|------------------------|----------|--------------------|----|-------|
| Without text or symbol | KA1-8121 | 1SFA 616 920 R8121 | 10 | 0.001 |
|------------------------|----------|--------------------|----|-------|

### Inserts with text/symbol engraved with L-Mark

|       |          |                    |    |       |
|-------|----------|--------------------|----|-------|
| O     | MA6-1032 | 1SFA 611 930 R1032 | 10 | 0.001 |
| I     | MA6-1033 | 1SFA 611 930 R1033 | 10 | 0.001 |
| →     | MA6-1034 | 1SFA 611 930 R1034 | 10 | 0.001 |
| →→    | MA6-1035 | 1SFA 611 930 R1035 | 10 | 0.001 |
| Close | MA6-1036 | 1SFA 611 930 R1036 | 10 | 0.001 |
| Open  | MA6-1037 | 1SFA 611 930 R1037 | 10 | 0.001 |
| On    | MA6-1038 | 1SFA 611 930 R1038 | 10 | 0.001 |
| Off   | MA6-1039 | 1SFA 611 930 R1039 | 10 | 0.001 |
| Fast  | MA6-1040 | 1SFA 611 930 R1040 | 10 | 0.001 |
| Slow  | MA6-1041 | 1SFA 611 930 R1041 | 10 | 0.001 |
| Down  | MA6-1042 | 1SFA 611 930 R1042 | 10 | 0.001 |
| Up    | MA6-1043 | 1SFA 611 930 R1043 | 10 | 0.001 |
| Start | MA6-1044 | 1SFA 611 930 R1044 | 10 | 0.001 |
| Stop  | MA6-1045 | 1SFA 611 930 R1045 | 10 | 0.001 |

### Inserts for two-position Selector Switches

With text or symbol:

Pos. 21 Pos. 22

|       |       |          |                    |    |       |
|-------|-------|----------|--------------------|----|-------|
| O     | I     | MA6-1070 | 1SFA 611 930 R1070 | 10 | 0.001 |
| I     | II    | MA6-1071 | 1SFA 611 930 R1071 | 10 | 0.001 |
| →     | →→    | MA6-1072 | 1SFA 611 930 R1072 | 10 | 0.001 |
| Off   | On    | MA6-1073 | 1SFA 611 930 R1073 | 10 | 0.001 |
| Stop  | Start | MA6-1074 | 1SFA 611 930 R1074 | 10 | 0.001 |
| Low   | High  | MA6-1075 | 1SFA 611 930 R1075 | 10 | 0.001 |
| Slow  | Fast  | MA6-1076 | 1SFA 611 930 R1076 | 10 | 0.001 |
| Close | Open  | MA6-1077 | 1SFA 611 930 R1077 | 10 | 0.001 |
| Jog   | Run   | MA6-1078 | 1SFA 611 930 R1078 | 10 | 0.001 |
| Hand  | Auto  | MA6-1079 | 1SFA 611 930 R1079 | 10 | 0.001 |

### Inserts for three-position Selector Switches

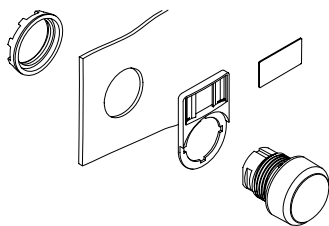
With text or symbol

Pos. 31 Pos. 32 Pos. 33

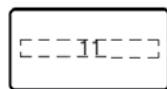
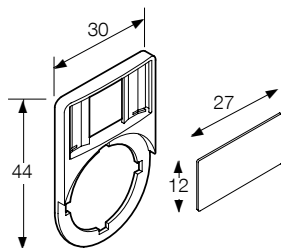
|      |     |      |          |                    |    |       |
|------|-----|------|----------|--------------------|----|-------|
| ←    | O   | →    | MA6-1080 | 1SFA 611 930 R1080 | 10 | 0.001 |
| →    | O   | →→   | MA6-1081 | 1SFA 611 930 R1081 | 10 | 0.001 |
| I    | O   | II   | MA6-1082 | 1SFA 611 930 R1082 | 10 | 0.001 |
| Hand | O   | Auto | MA6-1083 | 1SFA 611 930 R1083 | 10 | 0.001 |
| Slow | Off | Fast | MA6-1084 | 1SFA 611 930 R1084 | 10 | 0.001 |



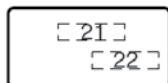
# Legend Plate Holder with Inserts for Plastic Enclosures



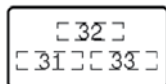
Legend Plate Holders



Insert



Insert for two-pos.  
Selector Switch



Insert for three-pos.  
Selector Switch

| Description                                       | Type     | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------|----------|--------------------|------------------|-----------|
| <b>Legend Plate Holder For Plastic Enclosures</b> |          |                    |                  |           |
| Grey                                              | MA6-1060 | 1SFA 611 930 R1060 | 10               | 0.002     |

|                                                      |          |                    |    |       |
|------------------------------------------------------|----------|--------------------|----|-------|
| <b>Inserts: Packing</b>                              |          |                    |    |       |
| Without text or symbol                               | MA6-1061 | 1SFA 611 930 R1061 | 10 | 0.001 |
| <b>Inserts with text/symbol engraved with L-Mark</b> |          |                    |    |       |
| O                                                    | MA6-1062 | 1SFA 611 930 R1062 | 10 | 0.001 |
| I                                                    | MA6-1063 | 1SFA 611 930 R1063 | 10 | 0.001 |
| II                                                   | MA6-1064 | 1SFA 611 930 R1064 | 10 | 0.001 |
| →                                                    | MA6-1130 | 1SFA 611 930 R1130 | 10 | 0.001 |
| →→                                                   | MA6-1131 | 1SFA 611 930 R1131 | 10 | 0.001 |
| Close                                                | MA6-1132 | 1SFA 611 930 R1132 | 10 | 0.001 |
| Open                                                 | MA6-1133 | 1SFA 611 930 R1133 | 10 | 0.001 |
| On                                                   | MA6-1134 | 1SFA 611 930 R1134 | 10 | 0.001 |
| Off                                                  | MA6-1135 | 1SFA 611 930 R1135 | 10 | 0.001 |
| Fast                                                 | MA6-1136 | 1SFA 611 930 R1136 | 10 | 0.001 |
| Slow                                                 | MA6-1137 | 1SFA 611 930 R1137 | 10 | 0.001 |
| Down                                                 | MA6-1138 | 1SFA 611 930 R1138 | 10 | 0.001 |
| Up                                                   | MA6-1139 | 1SFA 611 930 R1139 | 10 | 0.001 |
| Start                                                | MA6-1140 | 1SFA 611 930 R1140 | 10 | 0.001 |
| Stop                                                 | MA6-1141 | 1SFA 611 930 R1141 | 10 | 0.001 |

|                                                   |          |                    |    |       |
|---------------------------------------------------|----------|--------------------|----|-------|
| <b>Inserts for two-position Selector Switches</b> |          |                    |    |       |
| With text or symbol:<br>Pos. 21 Pos. 22           |          |                    |    |       |
| O I                                               | MA6-1170 | 1SFA 611 930 R1170 | 10 | 0.001 |
| I II                                              | MA6-1171 | 1SFA 611 930 R1171 | 10 | 0.001 |
| → →→                                              | MA6-1172 | 1SFA 611 930 R1172 | 10 | 0.001 |
| Off On                                            | MA6-1173 | 1SFA 611 930 R1173 | 10 | 0.001 |
| Stop Start                                        | MA6-1174 | 1SFA 611 930 R1174 | 10 | 0.001 |
| Low High                                          | MA6-1175 | 1SFA 611 930 R1175 | 10 | 0.001 |
| Slow Fast                                         | MA6-1176 | 1SFA 611 930 R1176 | 10 | 0.001 |
| Close Open                                        | MA6-1177 | 1SFA 611 930 R1177 | 10 | 0.001 |
| Jog Run                                           | MA6-1178 | 1SFA 611 930 R1178 | 10 | 0.001 |
| Hand Auto                                         | MA6-1179 | 1SFA 611 930 R1179 | 10 | 0.001 |

|                                                     |          |                     |    |       |
|-----------------------------------------------------|----------|---------------------|----|-------|
| <b>Inserts for three-position Selector Switches</b> |          |                     |    |       |
| With text or symbol:<br>Pos. 31 Pos. 32 Pos. 33     |          |                     |    |       |
| ← O →                                               | MA6-1190 | 1SFA 611 930 R 1190 | 10 | 0.001 |
| → O →→                                              | MA6-1191 | 1SFA 611 930 R 1191 | 10 | 0.001 |
| I O II                                              | MA6-1192 | 1SFA 611 930 R 1192 | 10 | 0.001 |
| Hand O Auto                                         | MA6-1193 | 1SFA 611 930 R 1193 | 10 | 0.001 |
| Slow Off Fast                                       | MA6-1194 | 1SFA 611 930 R 1194 | 10 | 0.001 |



# Legend Plates for Emergency Stop

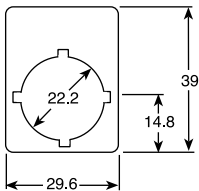


| Description                                                            | Type | Order Code         | Package Quantity | Weight Kg |
|------------------------------------------------------------------------|------|--------------------|------------------|-----------|
| <b>Emergency Stop Legend Plates</b>                                    |      |                    |                  |           |
| Black text on a yellow plastic plate. Can be used as yellow background |      |                    |                  |           |
| Emergency Stop                                                         | -    | 1SFA 616 915 R1005 | 10               | 0.003     |
| Not Aus                                                                | -    | 1SFA 616 915 R6005 | 10               | 0.003     |
| Without text                                                           | -    | 1SFA 616 915 R1038 | 10               | 0.003     |
| With customer-selected marking                                         | -    | 1SFA 616 915 L1038 | 10               | 0.003     |
| <b>Black text on a Yellow Aluminum Plate</b>                           |      |                    |                  |           |
| Nöd Stopp                                                              | -    | SK 615 546-1       | 10               | 0.010     |
| Emergency Stop                                                         | -    | SK 615 546-2       | 10               | 0.010     |
| Not Aus                                                                | -    | SK 615 546-3       | 10               | 0.010     |
| ARRET D'URGENCE                                                        | -    | SK 615 546-4       | 10               | 0.010     |
| HÄTÅSEIS                                                               | -    | SK 615 546-5       | 10               | 0.010     |
| PARADA DE EMERGENCIA                                                   | -    | SK 615 546-6       | 10               | 0.010     |
| Emergency Stop NOT AUS<br>ARRET D'URGENCE                              | -    | SK 615 546-13      | 10               | 0.010     |
| Without text                                                           | -    | SK 615 546-8       | 10               | 0.010     |

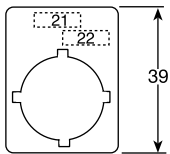
# Legend Plates for Pushbuttons



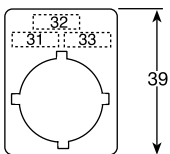
Legend Plates



For two-position Selector Switch



For three-position Selector Switch



| Text / symbol                                                                                                                     | Type      | Order Code         | Package Quantity | Weight Kg |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|------------------|-----------|
| <b>Fixed Legend Plates without text<br/>(for Pushbuttons, Mushroom Pushbuttons and Pilot Lights) Made of Silver-grey Aluminum</b> |           |                    |                  |           |
| H = 39 mm                                                                                                                         | MA16-1000 | 1SFA 611 940 R1000 | 10               | 0.002     |
| H = 44 mm                                                                                                                         | MA16-1001 | 1SFA 611 940 R1001 | 10               | 0.002     |

## Engraved Fixed Legend Plates. Text height 3 mm For Pushbuttons – with symbols

|    |   |               |    |       |
|----|---|---------------|----|-------|
| O  | - | SK 615 550-61 | 10 | 0.002 |
| I  | - | SK 615 550-62 | 10 | 0.002 |
| II | - | SK 615 550-63 | 10 | 0.002 |
| ←  | - | SK 615 562-12 | 10 | 0.002 |
| →  | - | SK 615 562-18 | 10 | 0.002 |
| →→ | - | SK 615 562-27 | 10 | 0.002 |

## For Pushbuttons – with text in English

|                |   |               |    |       |
|----------------|---|---------------|----|-------|
| Close          | - | SK 615 552-13 | 10 | 0.002 |
| Down           | - | SK 615 552-14 | 10 | 0.002 |
| Emergency Stop | - | SK 615 552-15 | 10 | 0.002 |
| Fast           | - | SK 615 552-16 | 10 | 0.002 |
| Forward        | - | SK 615 552-17 | 10 | 0.002 |
| In             | - | SK 615 550-29 | 10 | 0.002 |
| Inching        | - | SK 615 552-18 | 10 | 0.002 |
| Left           | - | SK 615 552-39 | 10 | 0.002 |
| Lower          | - | SK 615 552-20 | 10 | 0.002 |
| Off            | - | SK 615 552-21 | 10 | 0.002 |
| On             | - | SK 615 552-22 | 10 | 0.002 |
| Open           | - | SK 615 552-23 | 10 | 0.002 |
| Out            | - | SK 615 552-24 | 10 | 0.002 |
| Raise          | - | SK 615 552-25 | 10 | 0.002 |
| Reset          | - | SK 615 552-27 | 10 | 0.002 |
| Reverse        | - | SK 615 552-28 | 10 | 0.002 |
| Right          | - | SK 615 552-40 | 10 | 0.002 |
| Run            | - | SK 615 552-29 | 10 | 0.002 |
| Slow           | - | SK 615 552-30 | 10 | 0.002 |
| Start          | - | SK 615 550-44 | 10 | 0.002 |
| Stop           | - | SK 615 552-31 | 10 | 0.002 |
| Up             | - | SK 615 552-32 | 10 | 0.002 |

## For two-position Selector Switches – with symbols (Description/Symbol/Text Pos 21 Pos 22)

|   |   |    |   |               |    |       |
|---|---|----|---|---------------|----|-------|
| I | O | II | - | SK 615 550-81 | 10 | 0.002 |
| ← | O | →  | - | SK 615 562-82 | 10 | 0.002 |
| → | O | →→ | - | SK 615 562-83 | 10 | 0.002 |

## For two-position Selector Switches – with text in English

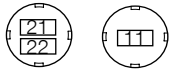
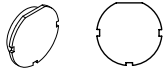
|      |     |      |   |               |    |       |
|------|-----|------|---|---------------|----|-------|
| Hand | O   | Auto | - | SK 615 550-80 | 10 | 0.002 |
| Slow | Off | Fast | - | SK 615 552-60 | 10 | 0.002 |

## Legend Plate – with customer specific marking

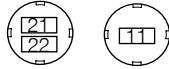
|           |             |                    |    |       |
|-----------|-------------|--------------------|----|-------|
| H = 39 mm | MA16-1000-L | 1SFA 611 940 L1000 | 10 | 0.002 |
| H = 44 mm | MA16-1001-L | 1SFA 611 940 L1001 | 10 | 0.002 |



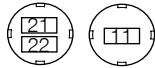
# Text Caps for Illuminated Pushbuttons and Pilot Lights



**Flush Button**  
(Can be turned 90° or 180°)



**Extended Button**  
(Can be turned 90° or 180°)



**Pilot Light**

| Text / symbol                                                 | Cap color <sup>1)</sup> | Type        | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------------------|-------------------------|-------------|--------------------|------------------|-----------|
| <b>Text Caps for Illuminated Pushbuttons and Pilot Lights</b> |                         |             |                    |                  |           |
| <b>Flush Button</b>                                           |                         |             |                    |                  |           |
| START                                                         | White                   | KTC6-1042   | 1SFA 616 906 R1042 | 10               | 0.001     |
| R                                                             | White                   | KTC1-9009   | 1SFA 616 901 R9009 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9009   | 1SFA 616 908 R9009 | 10               | 0.001     |
| On                                                            | White                   | KTC1-1020   | 1SFA 616 901 R1020 | 10               | 0.001     |
| ON                                                            | White                   | KTC1-1039   | 1SFA 616 901 R1039 | 10               | 0.001     |
|                                                               | Green                   | KTC6-1039   | 1SFA 616 906 R1039 | 10               | 0.001     |
|                                                               | Black                   | KTC8-1039   | 1SFA 616 908 R1039 | 10               | 0.001     |
| Off                                                           | White                   | KTC1-1019   | 1SFA 616 901 R1019 | 10               | 0.001     |
| Stop                                                          | White                   | KTC1-1031   | 1SFA 616 901 R1031 | 10               | 0.001     |
| STOP                                                          | Red                     | KTC4-1047   | 1SFA 616 904 R1047 | 10               | 0.001     |
| Reset                                                         | White                   | KTC1-1025   | 1SFA 616 901 R1025 | 10               | 0.001     |
| (Without text)                                                | White                   | KTC1-9000   | 1SFA 616 901 R9000 | 10               | 0.001     |
| (Customer specific marking)                                   | White                   | KTC1-9000-L | 1SFA 616 901 L9000 | 10               | 0.001     |
| <b>Extended Button</b>                                        |                         |             |                    |                  |           |
| R                                                             | White                   | KTC2-9009   | 1SFA 616 902 R9009 | 10               | 0.001     |
|                                                               | Black                   | KTC9-9009   | 1SFA 616 909 R9009 | 10               | 0.001     |
| On                                                            | White                   | KTC2-1020   | 1SFA 616 902 R1020 | 10               | 0.001     |
| Off                                                           | White                   | KTC2-1019   | 1SFA 616 902 R1019 | 10               | 0.001     |
| OFF                                                           | White                   | KTC2-1040   | 1SFA 616 902 R1040 | 10               | 0.001     |
|                                                               | Red                     | KTC5-1040   | 1SFA 616 905 R1040 | 10               | 0.001     |
|                                                               | Black                   | KTC9-1040   | 1SFA 616 909 R1040 | 10               | 0.001     |
| Stop                                                          | White                   | KTC2-1031   | 1SFA 616 902 R1031 | 10               | 0.001     |
| STOP                                                          | Red                     | KTC5-1047   | 1SFA 616 905 R1047 | 10               | 0.001     |
| Reset                                                         | White                   | KTC2-1025   | 1SFA 616 902 R1025 | 10               | 0.001     |
| (Without text)                                                | White                   | KTC2-9000   | 1SFA 616 902 R9000 | 10               | 0.001     |
| (Customer specific marking)                                   | White                   | KTC2-9000-L | 1SFA 616 902 L9000 | 10               | 0.001     |
| <b>Pilot Light</b>                                            |                         |             |                    |                  |           |
| R                                                             | White                   | KTC3-9009   | 1SFA 616 903 R9009 | 10               | 0.001     |
| On                                                            | White                   | KTC3-1020   | 1SFA 616 903 R1020 | 10               | 0.001     |
| ON                                                            | White                   | KTC3-1039   | 1SFA 616 903 R1039 | 10               | 0.001     |
| Off                                                           | White                   | KTC3-1019   | 1SFA 616 903 R1019 | 10               | 0.001     |
| Stop                                                          | White                   | KTC3-1031   | 1SFA 616 903 R1031 | 10               | 0.001     |
| Reset                                                         | White                   | KTC3-1025   | 1SFA 616 903 R1025 | 10               | 0.001     |
| (Without text)                                                | White                   | KTC3-9000   | 1SFA 616 903 R9000 | 10               | 0.001     |
| (Customer specific marking)                                   | White                   | KTC3-9000-L | 1SFA 616 903 L9000 | 10               | 0.001     |

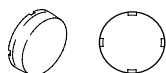
<sup>1)</sup> Use only white caps for illuminated Pushbutton and Pilot Lights.



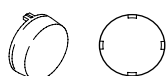
# Text Caps for Illuminated Pushbuttons and Pilot Lights



Flush Button  
(Can be turned 90° or 180°)



Extended Button  
(Can be turned 90° or 180°)

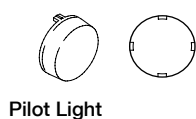
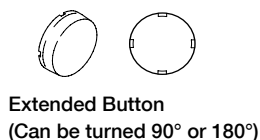
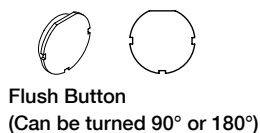


Pilot Light

| Text / symbol                                                 | Cap Color <sup>1)</sup> | Type      | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------------------|-------------------------|-----------|--------------------|------------------|-----------|
| <b>Text Caps for Illuminated Pushbuttons and Pilot Lights</b> |                         |           |                    |                  |           |
| <b>Flush Button</b>                                           |                         |           |                    |                  |           |
| ○                                                             | White                   | KTC1-9004 | 1SFA 616 901 R9004 | 10               | 0.001     |
|                                                               | Red                     | KTC4-9004 | 1SFA 616 904 R9004 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9004 | 1SFA 616 908 R9004 | 10               | 0.001     |
| I                                                             | White                   | KTC1-9002 | 1SFA 616 901 R9002 | 10               | 0.001     |
|                                                               | Green                   | KTC6-9002 | 1SFA 616 906 R9002 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9002 | 1SFA 616 908 R9002 | 10               | 0.001     |
| II                                                            | White                   | KTC1-9003 | 1SFA 616 901 R9003 | 10               | 0.001     |
|                                                               | Green                   | KTC6-9003 | 1SFA 616 906 R9003 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9003 | 1SFA 616 908 R9003 | 10               | 0.001     |
| III                                                           | White                   | KTC1-9028 | 1SFA 616 901 R9028 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9028 | 1SFA 616 908 R9028 | 10               | 0.001     |
| +                                                             | White                   | KTC1-9011 | 1SFA 616 901 R9011 | 10               | 0.001     |
|                                                               | Green                   | KTC6-9011 | 1SFA 616 906 R9011 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9011 | 1SFA 616 908 R9011 | 10               | 0.001     |
| -                                                             | White                   | KTC1-9012 | 1SFA 616 901 R9012 | 10               | 0.001     |
|                                                               | Red                     | KTC4-9012 | 1SFA 616 904 R9012 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9012 | 1SFA 616 908 R9012 | 10               | 0.001     |
| ↑                                                             | White                   | KTC1-9005 | 1SFA 616 901 R9005 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9005 | 1SFA 616 908 R9005 | 10               | 0.001     |
| ↗                                                             | White                   | KTC1-9014 | 1SFA 616 901 R9014 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9014 | 1SFA 616 908 R9014 | 10               | 0.001     |
| ↔                                                             | White                   | KTC1-9015 | 1SFA 616 901 R9015 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9015 | 1SFA 616 908 R9016 | 10               | 0.001     |
| ↔                                                             | White                   | KTC1-9016 | 1SFA 616 901 R9016 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9016 | 1SFA 616 908 R9016 | 10               | 0.001     |
| →                                                             | White                   | KTC1-9017 | 1SFA 616 901 R9017 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9017 | 1SFA 616 908 R9017 | 10               | 0.001     |
| <b>Extended Button</b>                                        |                         |           |                    |                  |           |
| ○                                                             | White                   | KTC2-9004 | 1SFA 616 902 R9004 | 10               | 0.001     |
|                                                               | Red                     | KTC5-9004 | 1SFA 616 905 R9004 | 10               | 0.001     |
| I                                                             | White                   | KTC2-9002 | 1SFA 616 902 R9002 | 10               | 0.001     |
| II                                                            | White                   | KTC2-9003 | 1SFA 616 902 R9003 | 10               | 0.001     |
| III                                                           | White                   | KTC2-9028 | 1SFA 616 902 R9011 | 10               | 0.001     |
| +                                                             | White                   | KTC2-9011 | 1SFA 616 902 R9011 | 10               | 0.001     |
| ↑                                                             | White                   | KTC2-9005 | 1SFA 616 902 R9005 | 10               | 0.001     |
| ↗                                                             | White                   | KTC2-9014 | 1SFA 616 902 R9014 | 10               | 0.001     |
| ↔                                                             | White                   | KTC2-9015 | 1SFA 616 902 R9015 | 10               | 0.001     |
| ↔                                                             | White                   | KTC2-9016 | 1SFA 616 902 R9016 | 10               | 0.001     |
| →                                                             | White                   | KTC2-9017 | 1SFA 616 902 R9017 | 10               | 0.001     |
| <b>Pilot Light</b>                                            |                         |           |                    |                  |           |
| ○                                                             | White                   | KTC3-9004 | 1SFA 616 903 R9004 | 10               | 0.001     |
| I                                                             | White                   | KTC3-9002 | 1SFA 616 903 R9002 | 10               | 0.001     |
| II                                                            | White                   | KTC3-9003 | 1SFA 616 903 R9003 | 10               | 0.001     |
| ↑                                                             | White                   | KTC3-9005 | 1SFA 616 903 R9005 | 10               | 0.001     |

<sup>1)</sup> Use only white caps for illuminated Pushbutton and Pilot Lights. Cont. next page



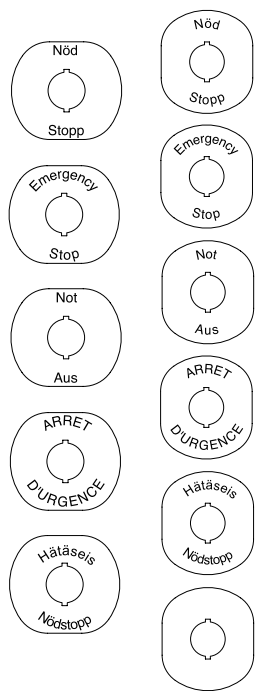


| Text / symbol                                                 | Cap Color <sup>1)</sup> | Type      | Order Code         | Package Quantity | Weight Kg |
|---------------------------------------------------------------|-------------------------|-----------|--------------------|------------------|-----------|
| <b>Text Caps for Illuminated Pushbuttons and Pilot Lights</b> |                         |           |                    |                  |           |
| <b>Flush Button</b>                                           |                         |           |                    |                  |           |
| →→                                                            | White                   | KTC1-9006 | 1SFA 616 901 R9006 | 10               | 0.001     |
| ⊕                                                             | White                   | KTC1-9018 | 1SFA 616 901 R9018 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9018 | 1SFA 616 908 R9018 | 10               | 0.001     |
| ●                                                             | White                   | KTC1-9019 | 1SFA 616 901 R9019 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9019 | 1SFA 616 908 R9019 | 10               | 0.001     |
| ⊙                                                             | White                   | KTC1-9020 | 1SFA 616 901 R9020 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9020 | 1SFA 616 908 R9020 | 10               | 0.001     |
| ☞                                                             | White                   | KTC1-9021 | 1SFA 616 901 R9021 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9021 | 1SFA 616 908 R9021 | 10               | 0.001     |
| ~                                                             | White                   | KTC1-9022 | 1SFA 616 901 R9022 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9022 | 1SFA 616 908 R9022 | 10               | 0.001     |
| W                                                             | White                   | KTC1-9023 | 1SFA 616 901 R9023 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9023 | 1SFA 616 908 R9023 | 10               | 0.001     |
| ⌋                                                             | White                   | KTC1-9024 | 1SFA 616 901 R9024 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9024 | 1SFA 616 908 R9024 | 10               | 0.001     |
| ↑                                                             | White                   | KTC1-9025 | 1SFA 616 901 R9025 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9025 | 1SFA 616 908 R9025 | 10               | 0.001     |
| ↓                                                             | White                   | KTC1-9026 | 1SFA 616 901 R9026 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9026 | 1SFA 616 908 R9026 | 10               | 0.001     |
| ☐                                                             | White                   | KTC1-9027 | 1SFA 616 901 R9027 | 10               | 0.001     |
|                                                               | Black                   | KTC8-9027 | 1SFA 616 908 R9027 | 10               | 0.001     |
| <b>Extended Button</b>                                        |                         |           |                    |                  |           |
| →→                                                            | White                   | KTC2-9006 | 1SFA 616 902 R9006 | 10               | 0.001     |
| ⊕                                                             | White                   | KTC2-9018 | 1SFA 616 902 R9018 | 10               | 0.001     |
| ●                                                             | White                   | KTC2-9019 | 1SFA 616 902 R9019 | 10               | 0.001     |
| ⊙                                                             | White                   | KTC2-9020 | 1SFA 616 902 R9020 | 10               | 0.001     |
| ☞                                                             | White                   | KTC2-9021 | 1SFA 616 902 R9021 | 10               | 0.001     |
| ~                                                             | White                   | KTC2-9022 | 1SFA 616 902 R9022 | 10               | 0.001     |
| W                                                             | White                   | KTC2-9023 | 1SFA 616 902 R9023 | 10               | 0.001     |
| ⌋                                                             | White                   | KTC2-9024 | 1SFA 616 902 R9024 | 10               | 0.001     |
| ↑                                                             | White                   | KTC2-9025 | 1SFA 616 902 R9025 | 10               | 0.001     |
| ↓                                                             | White                   | KTC2-9026 | 1SFA 616 902 R9026 | 10               | 0.001     |
| ☐                                                             | White                   | KTC2-9027 | 1SFA 616 902 R9027 | 10               | 0.001     |
| <b>Pilot Light</b>                                            |                         |           |                    |                  |           |
| →→                                                            | White                   | KTC3-9006 | 1SFA 616 903 R9006 | 10               | 0.001     |

<sup>1)</sup> Use only white caps for illuminated Pushbutton and Pilot Lights.



# Special Legend Plates for Plastic Enclosures

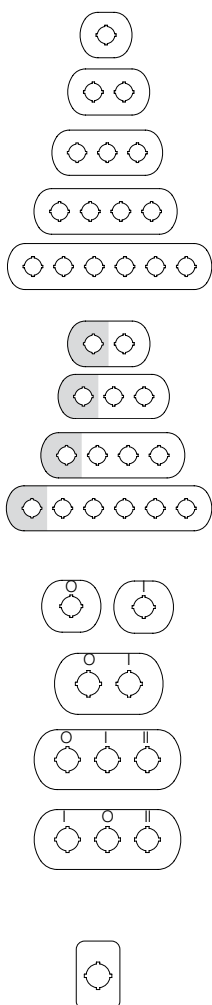


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Emergency Stop Legend Plate

| Description                                                          | Type       | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------------------------------|------------|--------------------|------------------|-----------|
| Emergency Stop Legend Plates For Plastic Enclosures                  |            |                    |                  |           |
| For Horizontally Mounted Enclosures. Yellow Plastic with black text: |            |                    |                  |           |
| Nöd Stopp                                                            | MA6-1025   | 1SFA 611 930 R1025 | 1                | 0.004     |
| Emergency Stop                                                       | MA6-1026   | 1SFA 611 930 R1026 | 1                | 0.004     |
| Not Aus                                                              | MA6-1027   | 1SFA 611 930 R1027 | 1                | 0.004     |
| ARRET DURGENCE                                                       | MA6-1028   | 1SFA 611 930 R1028 | 1                | 0.004     |
| Hätäseis                                                             | MA6-1029   | 1SFA 611 930 R1029 | 1                | 0.004     |
| For Vertically Mounted Enclosures. Yellow Plastic with black text    |            |                    |                  |           |
| Nöd Stopp                                                            | MA6-1100   | 1SFA 611 930 R1100 | 1                | 0.004     |
| Emergency Stop                                                       | MA6-1101   | 1SFA 611 930 R1101 | 1                | 0.004     |
| Not Aus                                                              | MA6-1102   | 1SFA 611 930 R1102 | 1                | 0.004     |
| ARRET DURGENCE                                                       | MA6-1103   | 1SFA 611 930 R1103 | 1                | 0.004     |
| Hätäseis                                                             | MA6-1104   | 1SFA 611 930 R1104 | 1                | 0.004     |
| Yellow Plastic                                                       |            |                    |                  |           |
| Without text                                                         | MA6-1024   | 1SFA 611 930 R1024 | 1                | 0.004     |
| With customer-selected marking                                       | MA6-1024-L | 1SFA 611 930 L1024 | 10               | 0.004     |
| Emergency Stop Legend Plates for compact enclosure                   |            |                    |                  |           |
| Black text on yellow Aluminum plate                                  |            |                    |                  |           |
| Emergency Stop                                                       | CA6-1026   | 1SFA 619 930 R1026 | 10               | 0.004     |
| Not Aus                                                              | CA6-1027   | 1SFA 619 930 R1027 | 10               | 0.004     |



| Description                                            | Type     | Order Code         | Package Quantity | Weight Kg |
|--------------------------------------------------------|----------|--------------------|------------------|-----------|
| <b>Legend Plates For Plastic Enclosures</b>            |          |                    |                  |           |
| <b>Silver-grey Aluminum on plastic</b>                 |          |                    |                  |           |
| 1-seat without text                                    | MA6-1000 | 1SFA 611 930 R1000 | 1                | 0.004     |
| 2-seat without text                                    | MA6-1002 | 1SFA 611 930 R1002 | 1                | 0.006     |
| 3-seat without text                                    | MA6-1003 | 1SFA 611 930 R1003 | 1                | 0.008     |
| 4-seat without text                                    | MA6-1004 | 1SFA 611 930 R1004 | 1                | 0.010     |
| 6-seat without text                                    | MA6-1005 | 1SFA 611 930 R1005 | 1                | 0.012     |
| <b>Silver-grey Aluminum on plastic (Pos. 1 Yellow)</b> |          |                    |                  |           |
| 2-seat without text                                    | MA6-1006 | 1SFA 611 930 R1006 | 1                | 0.006     |
| 3-seat without text                                    | MA6-1007 | 1SFA 611 930 R1007 | 1                | 0.008     |
| 4-seat without text                                    | MA6-1008 | 1SFA 611 930 R1008 | 1                | 0.010     |
| 6-seat without text                                    | MA6-1009 | 1SFA 611 930 R1009 | 1                | 0.012     |
| <b>Silver-grey Aluminum on plastic</b>                 |          |                    |                  |           |
| Symbol/Text Pos                                        |          |                    |                  |           |
| 1-seat O                                               | MA6-1012 | 1SFA 611 930 R1012 | 1                | 0.004     |
| 1-seat I                                               | MA6-1013 | 1SFA 611 930 R1013 | 1                | 0.004     |
| 2-seat O I                                             | MA6-1014 | 1SFA 611 930 R1014 | 1                | 0.006     |
| 3-seat O I I                                           | MA6-1015 | 1SFA 611 930 R1015 | 1                | 0.008     |
| 3-seat I O II                                          | MA6-1016 | 1SFA 611 930 R1016 | 1                | 0.008     |
| <b>Emergency Stop Legend Plate</b>                     |          |                    |                  |           |
| <b>Black text on an Yellow Aluminum Plate</b>          |          |                    |                  |           |
| Without text                                           | MA6-1010 | 1SFA 611 930 R1010 | 1                | 0.005     |
| Nöd stopp                                              | MA6-1017 | 1SFA 611 930 R1017 | 1                | 0.005     |
| Not Aus                                                | MA6-1018 | 1SFA 611 930 R1018 | 1                | 0.005     |
| Emergency Stop                                         | MA6-1019 | 1SFA 611 930 R1019 | 1                | 0.005     |
| ARRET D'URGENCE                                        | MA6-1020 | 1SFA 611 930 R1020 | 1                | 0.005     |
| Hätäseis                                               | MA6-1021 | 1SFA 611 930 R1021 | 1                | 0.005     |
| PARADA DE EMERGENCIA                                   | MA6-1022 | 1SFA 611 930 R1022 | 1                | 0.005     |
| <b>Black text on an Yellow Plastic Plate</b>           |          |                    |                  |           |
| Without text                                           | MA6-1011 | 1SFA 611 930 R1011 | 1                | 0.002     |
| Emergency Stop                                         | MA6-1023 | 1SFA 611 930 R1023 | 1                | 0.002     |

# Signal Towers K70 and Signal Beacons KSB



Signal Towers K70 and Signal Beacons KSB offers the customer a wide range of signal elements in all voltages and a solution for every signalling field.

## Signal Towers K70

- Fast mounting of signal elements using bayonet fixing
- Easy changing of bulbs for each module without tools
- Flexibility of signal element combination
- Up to 5 elements possible/up to 10 elements with bracket for 2-sided mounting
- High protection rating optical and audible signal elements with IP 54
- LED elements for long life

## Signal Beacons KSB

- Vandal-proof design withstands every mechanical and natural challenge both indoors and outdoors.
- High protection rating IP 65
- Cap consists of high impact polycarbonate (up to 20 J)
- Bulb change via inside of control box

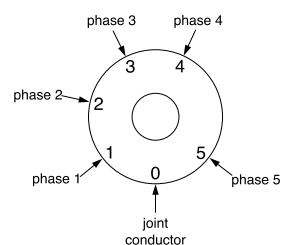
## Signal Towers and Beacons

- Permanent Light
- Blinking Light
- Flashing Light
- Audible
- LED Permanent Light
- LED Blinking Light
- LED Rotating Light

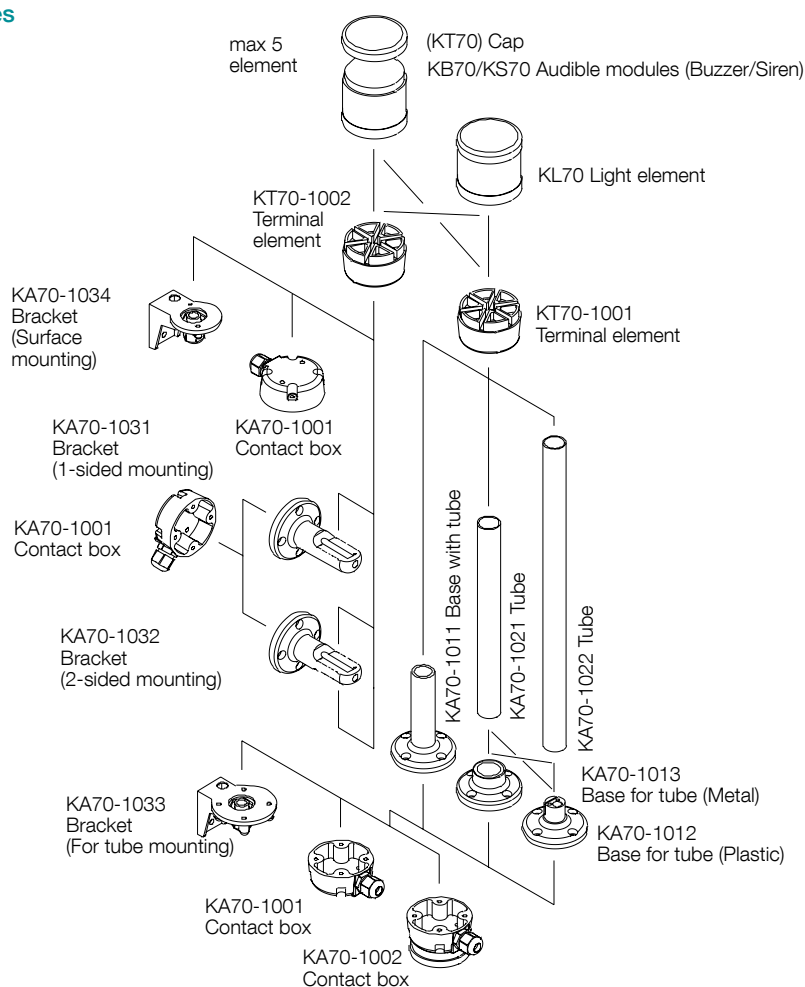
### Simple fitting with quick fix system

Each K 70 module is equipped with a bayonet fixing with integral contact system. The modules are fastened together by aligning the corresponding white marks then with a gentle twist they are locked into place (see the figures).

### Connection Plans



### Combination Possibilities



# Optical Modules for Signal Towers K70



Light Elements



| Description                                                                | Type      | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------------------------------------|-----------|--------------------|------------------|-----------|
| <b>Light Element</b>                                                       |           |                    |                  |           |
| <b>Permanent Light, 12-240 V AC/DC. For bulb BA 15d. Bulb not included</b> |           |                    |                  |           |
| ● Red                                                                      | KL70-401R | 1SFA 616 070 R4011 | 1                | 0.09      |
| ● Green                                                                    | KL70-401G | 1SFA 616 070 R4012 | 1                | 0.09      |
| ● Yellow                                                                   | KL70-401Y | 1SFA 616 070 R4013 | 1                | 0.09      |
| ● Blue                                                                     | KL70-401L | 1SFA 616 070 R4014 | 1                | 0.09      |
| ○ Clear                                                                    | KL40-401C | 1SFA 616 070 R4018 | 1                | 0.09      |
| <b>Blinking Light, 24 V AC/DC. With Integrated LED</b>                     |           |                    |                  |           |
| ● Red                                                                      | KL70-306R | 1SFA 616 070 R3061 | 1                | 0.10      |
| ● Green                                                                    | KL70-306G | 1SFA 616 070 R3062 | 1                | 0.10      |
| ● Yellow                                                                   | KL70-306Y | 1SFA 616 070 R3063 | 1                | 0.10      |
| ● Blue                                                                     | KL70-306L | 1SFA 616 070 R3064 | 1                | 0.10      |
| ○ Clear                                                                    | KL70-306C | 1SFA 616 070 R3068 | 1                | 0.10      |
| <b>Flashing Light, 24 V AC/DC. With Integrated Xenon Tube</b>              |           |                    |                  |           |
| ● Red                                                                      | KL70-203R | 1SFA 616 070 R2031 | 1                | 0.12      |
| ● Green                                                                    | KL70-203G | 1SFA 616 070 R2032 | 1                | 0.12      |
| ● Yellow                                                                   | KL70-203Y | 1SFA 616 070 R2033 | 1                | 0.12      |
| ● Blue                                                                     | KL70-203L | 1SFA 616 070 R2034 | 1                | 0.12      |
| ○ Clear                                                                    | KL70-203C | 1SFA 616 070 R2038 | 1                | 0.12      |
| <b>Blinking Light, 115 V AC. With Integrated LED</b>                       |           |                    |                  |           |
| ● Red                                                                      | KL70-342R | 1SFA 616 070 R3421 | 1                | 0.10      |
| ● Green                                                                    | KL70-342G | 1SFA 616 070 R3422 | 1                | 0.10      |
| ● Yellow                                                                   | KL70-342Y | 1SFA 616 070 R3423 | 1                | 0.10      |
| ● Blue                                                                     | KL70-342L | 1SFA 616 070 R3424 | 1                | 0.10      |
| ○ Clear                                                                    | KL70-342C | 1SFA 616 070 R3428 | 1                | 0.10      |
| <b>Flashing Light, 115 V AC. With Integrated Xenon Tube</b>                |           |                    |                  |           |
| ● Red                                                                      | KL70-113R | 1SFA 616 070 R1131 | 1                | 0.11      |
| ● Green                                                                    | KL70-113G | 1SFA 616 070 R1132 | 1                | 0.11      |
| ● Yellow                                                                   | KL70-113Y | 1SFA 616 070 R1133 | 1                | 0.11      |
| ● Blue                                                                     | KL70-113L | 1SFA 616 070 R1134 | 1                | 0.11      |
| ○ Clear                                                                    | KL70-113C | 1SFA 616 070 R1138 | 1                | 0.11      |
| <b>Blinking Light, 230 V AC. With Integrated LED</b>                       |           |                    |                  |           |
| ● Red                                                                      | KL70-352R | 1SFA 616 070 R3521 | 1                | 0.10      |
| ● Green                                                                    | KL70-352G | 1SFA 616 070 R3522 | 1                | 0.10      |
| ● Yellow                                                                   | KL70-352Y | 1SFA 616 070 R3523 | 1                | 0.10      |
| ● Blue                                                                     | KL70-352L | 1SFA 616 070 R3524 | 1                | 0.10      |
| ○ Clear                                                                    | KL70-352C | 1SFA 616 070 R3528 | 1                | 0.10      |
| <b>Flashing Light, 230 V AC. With Integrated Xenon Tube</b>                |           |                    |                  |           |
| ● Red                                                                      | KL70-123R | 1SFA 616 070 R1231 | 1                | 0.11      |
| ● Green                                                                    | KL70-123G | 1SFA 616 070 R1232 | 1                | 0.11      |
| ● Yellow                                                                   | KL70-123Y | 1SFA 616 070 R1233 | 1                | 0.11      |
| ● Blue                                                                     | KL70-123L | 1SFA 616 070 R1234 | 1                | 0.11      |
| ○ Clear                                                                    | KL70-123C | 1SFA 616 070 R1238 | 1                | 0.11      |
| <b>LED Permanent Light, 24 V AC/DC. With Integrated LED</b>                |           |                    |                  |           |
| ● Red                                                                      | KL70-305R | 1SFA 616 070 R3051 | 1                | 0.10      |
| ● Green                                                                    | KL70-305G | 1SFA 616 070 R3052 | 1                | 0.10      |
| ● Yellow                                                                   | KL70-305Y | 1SFA 616 070 R3053 | 1                | 0.10      |
| ● Blue                                                                     | KL70-305L | 1SFA 616 070 R3054 | 1                | 0.10      |
| ○ Clear                                                                    | KL70-305C | 1SFA 616 070 R3058 | 1                | 0.10      |
| <b>LED Rotating Light, 24 V AC/DC. With Integrated LED</b>                 |           |                    |                  |           |
| ● Red                                                                      | KL70-307R | 1SFA 616 070 R3071 | 1                | 0.10      |
| ● Green                                                                    | KL70-307G | 1SFA 616 070 R3072 | 1                | 0.10      |
| ● Yellow                                                                   | KL70-307Y | 1SFA 616 070 R3073 | 1                | 0.10      |
| ● Blue                                                                     | KL70-307L | 1SFA 616 070 R3074 | 1                | 0.10      |
| ○ Clear                                                                    | KL70-307C | 1SFA 616 070 R3078 | 1                | 0.10      |

# Signal Towers K70



LED Bulb



Terminal Element



Contact Box



Bracket

| Description                                                                                  | Type      | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------------------------------------------------------|-----------|--------------------|------------------|-----------|
| <b>Bulbs for Signal Tower K70 Bulb Ba 15d, 42mm, Max 7 W For permanent or blinking light</b> |           |                    |                  |           |
| 24 V, 5 W, AC/DC                                                                             | KA4-1021  | 1SFA 616 923 R1028 | 10               | 0.009     |
| 115 V, 5 W, AC/DC                                                                            | KA4-1118  | 1SFA 616 923 R1118 | 10               | 0.009     |
| 230 V, 5 W, AC/DC                                                                            | KA4-1148  | 1SFA 616 923 R1148 | 10               | 0.009     |
| <b>LED Bulbs for Signal Tower K70 Ba 15d. For 24 V AC/DC, 40mA</b>                           |           |                    |                  |           |
| ● Red                                                                                        | KA4-1021  | 1SFA 616 924 R1021 | 1                | 0.009     |
| ● Green                                                                                      | KA4-1022  | 1SFA 616 924 R1022 | 1                | 0.009     |
| ● Yellow                                                                                     | KA4-1023  | 1SFA 616 924 R1023 | 1                | 0.009     |
| ● Blue                                                                                       | KA4-1024  | 1SFA 616 924 R1024 | 1                | 0.009     |
| ○ White                                                                                      | KA4-1025  | 1SFA 616 924 R1025 | 1                | 0.009     |
| <b>Audible Modules. Buzzer Element. 85 dB, continuous or pulsating tone, adjustable</b>      |           |                    |                  |           |
| 24 V AC/DC                                                                                   | KB70-3001 | 1SFA 616 071 R3001 | 1                | 0.11      |
| 115 V AC                                                                                     | KB70-3101 | 1SFA 616 071 R3101 | 1                | 0.11      |
| 230 V AC/DC                                                                                  | KB70-1201 | 1SFA 616 071 R1201 | 1                | 0.12      |
| <b>Siren Element</b>                                                                         |           |                    |                  |           |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 115 V AC                 | KS70-1104 | 1SFA 616 073 R1104 | 1                | 0.13      |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 230 V AC                 | KS70-1204 | 1SFA 616 073 R1204 | 1                | 0.12      |
| Multi function, 7 diff. Tones adjustable, volume adjustable, remote control, 100 dB, 24 V DC | KS70-2004 | 1SFA 616 073 R2004 | 1                | 0.12      |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 24 V AC/DC               | KS70-3004 | 1SFA 616 073 R3004 | 1                | 0.12      |
| Continuous tone alternating 108 dB, 24 V DC                                                  | KS70-2002 | 1SFA 616 073 R2002 | 1                | 0.15      |
| <b>Terminal Elements</b>                                                                     |           |                    |                  |           |
| For tube mounting, including cap                                                             | KT70-1001 | 1SFA 616 075 R1001 | 1                | 0.15      |
| For bracket or base, including cap                                                           | KT70-1002 | 1SFA 616 075 R1002 | 1                | 0.15      |
| <b>Special Parts</b>                                                                         |           |                    |                  |           |
| <b>Contact Box</b>                                                                           |           |                    |                  |           |
| Cable exit at side                                                                           | KA70-1001 | 1SFA 616 077 R1001 | 1                | 0.07      |
| Magnetic base                                                                                | KA70-1002 | 1SFA 616 077 R1002 | 1                | 0.07      |
| <b>Base with tube</b>                                                                        |           |                    |                  |           |
| D=25 mm L=110 mm                                                                             | KA70-1011 | 1SFA 616 077 R1011 | 1                | 0.06      |
| <b>Base for tube</b>                                                                         |           |                    |                  |           |
| D=25 mm, Plastic                                                                             | KA70-1012 | 1SFA 616 077 R1012 | 1                | 0.03      |
| D=25 mm, Metal                                                                               | KA70-1013 | 1SFA 616 077 R1013 | 1                | 0.32      |
| <b>Tube, anodized Aluminum</b>                                                               |           |                    |                  |           |
| D=25 mm L=250 mm                                                                             | KA70-1021 | 1SFA 616 077 R1021 | 1                | 0.08      |
| D=25 mm L=400 mm                                                                             | KA70-1022 | 1SFA 616 077 R1022 | 1                | 0.12      |
| D=25 mm L=800 mm                                                                             | KA70-1023 | 1SFA 616 077 R1023 | 1                | 0.24      |
| <b>Bracket</b>                                                                               |           |                    |                  |           |
| 1-sided mounting                                                                             | KA70-1031 | 1SFA 616 077 R1031 | 1                | 0.07      |
| 2-sided mounting                                                                             | KA70-1032 | 1SFA 616 077 R1032 | 1                | 0.07      |
| For tube mounting                                                                            | KA70-1033 | 1SFA 616 077 R1033 | 1                | 0.07      |
| For surface mounting                                                                         | KA70-1034 | 1SFA 616 077 R1034 | 1                | 0.07      |

# Signal Beacons KSB



Light element

| Description                                                                | Type     | Order Code         | Package Quantity | Weight Kg |
|----------------------------------------------------------------------------|----------|--------------------|------------------|-----------|
| <b>Light Element</b>                                                       |          |                    |                  |           |
| <b>Permanent Light, 12-240 V AC/DC. For Bulb BA 15d. Bulb not included</b> |          |                    |                  |           |
| ● Red                                                                      | KSB-401R | 1SFA 616 080 R4011 | 1                | 0.13      |
| ● Green                                                                    | KSB-401G | 1SFA 616 080 R4012 | 1                | 0.13      |
| ● Yellow                                                                   | KSB-401Y | 1SFA 616 080 R4013 | 1                | 0.13      |
| ● Blue                                                                     | KSB-401L | 1SFA 616 080 R4014 | 1                | 0.13      |
| ○ Clear                                                                    | KSB-401C | 1SFA 616 080 R4018 | 1                | 0.13      |
| <b>Flashing Light, 24 V DC. With Integrated Xenon Tube</b>                 |          |                    |                  |           |
| ● Red                                                                      | KSB-203R | 1SFA 616 080 R2031 | 1                | 0.14      |
| ● Green                                                                    | KSB-203G | 1SFA 616 080 R2032 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-203Y | 1SFA 616 080 R2033 | 1                | 0.14      |
| ● Blue                                                                     | KSB-203L | 1SFA 616 080 R2034 | 1                | 0.14      |
| ○ Clear                                                                    | KSB-203C | 1SFA 616 080 R2038 | 1                | 0.14      |
| <b>Flashing Light, 115 V AC. With Integrated Xenon Tube</b>                |          |                    |                  |           |
| ● Red                                                                      | KSB-113R | 1SFA 616 080 R1131 | 1                | 0.14      |
| ● Green                                                                    | KSB-113G | 1SFA 616 080 R1132 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-113Y | 1SFA 616 080 R1133 | 1                | 0.14      |
| ● Blue                                                                     | KSB-113L | 1SFA 616 080 R1134 | 1                | 0.14      |
| ○ Clear                                                                    | KSB-113C | 1SFA 616 080 R1138 | 1                | 0.14      |
| <b>Flashing Light, 230 V AC. With Integrated Xenon Tube</b>                |          |                    |                  |           |
| ● Red                                                                      | KSB-123R | 1SFA 616 080 R1231 | 1                | 0.14      |
| ● Green                                                                    | KSB-123G | 1SFA 616 080 R1232 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-123Y | 1SFA 616 080 R1233 | 1                | 0.14      |
| ● Blue                                                                     | KSB-123L | 1SFA 616 080 R1234 | 1                | 0.14      |
| ○ Clear                                                                    | KSB-123C | 1SFA 616 080 R1238 | 1                | 0.14      |
| <b>LED Permanent Light, 24 V AC/DC. With Integrated LED</b>                |          |                    |                  |           |
| ● Red                                                                      | KSB-305R | 1SFA 616 080 R3051 | 1                | 0.14      |
| ● Green                                                                    | KSB-305G | 1SFA 616 080 R3052 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-305Y | 1SFA 616 080 R3053 | 1                | 0.14      |
| <b>LED Blinking Light, 24 V AC/DC. With Integrated LED</b>                 |          |                    |                  |           |
| ● Red                                                                      | KSB-306R | 1SFA 616 080 R3061 | 1                | 0.14      |
| ● Green                                                                    | KSB-306G | 1SFA 616 080 R3062 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-306Y | 1SFA 616 080 R3063 | 1                | 0.14      |
| <b>LED Rotation Light, 24 V AC/DC. With Integrated LED</b>                 |          |                    |                  |           |
| ● Red                                                                      | KSB-307R | 1SFA 616 080 R3071 | 1                | 0.14      |
| ● Green                                                                    | KSB-307G | 1SFA 616 080 R3072 | 1                | 0.14      |
| ● Yellow                                                                   | KSB-307Y | 1SFA 616 080 R3073 | 1                | 0.14      |
| <b>Special Parts</b>                                                       |          |                    |                  |           |
| Anti-twist Device                                                          | KASB-100 | 1SFA 616 087 R1000 | 1                | 0.005     |



Anti-twist Device

|                                                                                   |          |                    |    |       |
|-----------------------------------------------------------------------------------|----------|--------------------|----|-------|
| <b>Bulbs for Signal Beacons Max 10 W. For Permanent Light. Bulb Ba 15d, 52mm.</b> |          |                    |    |       |
| 12 V, 7 W, AC/DC                                                                  | KA3-1018 | 1SFA 616 922 R1018 | 10 | 0.011 |
| 24 V, 7 W, AC/DC                                                                  | KA3-1028 | 1SFA 616 922 R1028 | 10 | 0.011 |
| 115 V, 7 W, AC/DC                                                                 | KA3-1118 | 1SFA 616 922 R1118 | 10 | 0.011 |
| 220-260 V, 7-10 W, AC/DC                                                          | KA3-1148 | 1SFA 616 922 R1148 | 10 | 0.011 |

# Technical Data

## Signal Towers K70 and Signal Beacons KSB

| Signal Towers K70                                                                 |                                              |                                                                                                |          |
|-----------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------|----------|
| Approvals                                                                         |                                              |                                                                                                |          |
|  |                                              | E 175 441<br> |          |
| Technical Specifications                                                          |                                              |                                                                                                |          |
| Housing and Accessories                                                           | Polyamide, high impact, black                |                                                                                                |          |
| Dome                                                                              | Polycarbonate, transparent                   |                                                                                                |          |
| Fixing                                                                            | Base mounting, tube Ø 25mm, bracket mounting |                                                                                                |          |
| Socket                                                                            | B 15 d, for bulb max. 7W                     |                                                                                                |          |
| Connection                                                                        | Screw connection up to 2.5 mm²               |                                                                                                |          |
| Number of modules possible -2-sided bracket                                       | max. 5<br>max. 10 elements                   |                                                                                                |          |
| Degrees of Protection                                                             |                                              |                                                                                                |          |
| Light Elements                                                                    | IP 54                                        | UL Type 5                                                                                      |          |
| Audible Elements                                                                  | IP 54                                        | UL Type 5                                                                                      |          |
| Electrical Data                                                                   |                                              |                                                                                                |          |
| Permanent Light Element                                                           | 12-240 V AC/DC                               |                                                                                                |          |
| Bulb Socket B 15 d, max 7 W                                                       | Bulb not included                            |                                                                                                |          |
| Flashing Light Element                                                            |                                              |                                                                                                |          |
|                                                                                   | 24 V DC                                      | 115 V AC                                                                                       | 230 V AC |
| Flash Frequency                                                                   | 1 Hz                                         | 1 Hz                                                                                           | 1 Hz     |
| Flash Energy                                                                      | 2 Ws                                         | 2 Ws                                                                                           | 2 Ws     |
| Life Duration                                                                     | 4 x 10 <sup>6</sup> flashes                  |                                                                                                |          |
| Current Consumption reduced for AS-Interface                                      | 125 mA<br>80 mA                              | 20mA                                                                                           | 35 mA    |
| Starting Current                                                                  | < 0.5 A at 24 V                              |                                                                                                |          |
| LED Permanent Light Element                                                       |                                              |                                                                                                |          |
|                                                                                   | 24 V AC/DC                                   | 115 V AC                                                                                       | 230 V AC |
| Life Duration                                                                     | 100 000 hours                                |                                                                                                |          |
| Current Consumption                                                               | 45 mA                                        | 25mA                                                                                           | 25mA     |
| Starting Current                                                                  | < 0.5 A at 24 V                              |                                                                                                |          |
| LED Blinking Light Element                                                        |                                              |                                                                                                |          |
|                                                                                   | 24 V AC/DC                                   | 115 V AC                                                                                       | 230 V AC |
| Life Duration                                                                     | 100 000 hours                                |                                                                                                |          |
| Current Consumption                                                               | 25 mA                                        | 25mA                                                                                           | 25mA     |
| Starting Current                                                                  | < 0.5 A at 24 V                              |                                                                                                |          |
| Blink Frequency                                                                   | c. 1 Hz                                      | c. 1 Hz                                                                                        | c. 1 Hz  |
| LED Rotation Light Element                                                        |                                              |                                                                                                |          |
|                                                                                   | 24 V, AC/DC                                  |                                                                                                |          |
| Life Duration                                                                     | 100 000 hours                                |                                                                                                |          |
| Current Consumption                                                               | 70 mA                                        |                                                                                                |          |
| Starting Current                                                                  | < 0.5 A at 24 V                              |                                                                                                |          |
| Rotation Frequency                                                                | c. 120 r.p.m.                                |                                                                                                |          |
| Temperature                                                                       |                                              |                                                                                                |          |
| Ambient Temperature during operations                                             | -20 to +50 °C                                |                                                                                                |          |

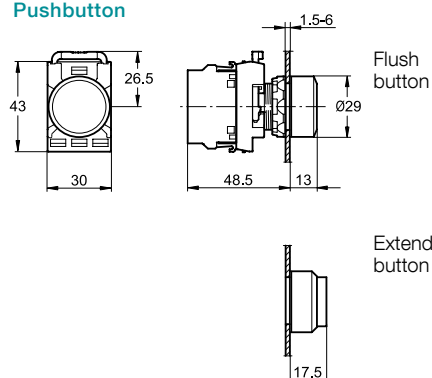
| Signal Beacons KSB                                                                 |                                                            |                                                                                                  |          |
|------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------|
| Approvals                                                                          |                                                            |                                                                                                  |          |
|  |                                                            | E 175 441<br> |          |
| Technical Specifications                                                           |                                                            |                                                                                                  |          |
| Housing and Accessories                                                            | PC/ABS-Blend, high impact, black                           |                                                                                                  |          |
| Dome                                                                               | Polycarbonate, transparent                                 |                                                                                                  |          |
| Fixing                                                                             | Installation mounting for Ø 37mm, (PG 29)                  |                                                                                                  |          |
| Bulb Socket                                                                        | B 15 d, for bulb max. 10W                                  |                                                                                                  |          |
| Bulb Change                                                                        | Via rear access with bayonet mechanism (Bulb not included) |                                                                                                  |          |
| Connection                                                                         | Screw connection max 2.5 mm <sup>2</sup>                   |                                                                                                  |          |
| Degrees of Protection                                                              | IP 65, UL Type 5                                           |                                                                                                  |          |
| Electrical Data                                                                    |                                                            |                                                                                                  |          |
| Permanent Light Element                                                            | max. 250 V                                                 |                                                                                                  |          |
| Life Duration                                                                      | 100 000 hours                                              |                                                                                                  |          |
| Bulb socket B 15 d, max 10 W                                                       | Bulb not included                                          |                                                                                                  |          |
| LED version: permanent light                                                       | 24 V, AC/DC                                                |                                                                                                  |          |
| Life Duration                                                                      | 100 000 hours                                              |                                                                                                  |          |
| Current Consumption                                                                | 45 mA                                                      |                                                                                                  |          |
| Blinking Light Element                                                             | 24 V, AC/DC                                                |                                                                                                  |          |
| Life Duration                                                                      | 100 000 hours                                              |                                                                                                  |          |
| Current Consumption                                                                | 25 mA                                                      |                                                                                                  |          |
| Rotation Light Element                                                             | 24 V, AC/DC                                                |                                                                                                  |          |
| Life Duration                                                                      | 100 000 hours                                              |                                                                                                  |          |
| Current Consumption                                                                | 70 mA                                                      |                                                                                                  |          |
| Starting Current                                                                   | < 0.5 A                                                    |                                                                                                  |          |
| Flashing Light Element                                                             |                                                            |                                                                                                  |          |
| Operating Voltage                                                                  | 24 V AC/DC                                                 | 115 V AC                                                                                         | 230 V AC |
| Flash Frequency                                                                    | 1 Hz                                                       | 1 Hz                                                                                             | 1 Hz     |
| Flash Energy                                                                       | 2 Ws                                                       | 2 Ws                                                                                             | 2 Ws     |
| Life Duration                                                                      | 4 x 10 <sup>6</sup> flashes                                |                                                                                                  |          |
| Current Consumption                                                                | 125 mA                                                     | 20mA                                                                                             | 35 mA    |
| Starting Current                                                                   | < 0.5 A                                                    | < 0.5 A                                                                                          | < 0.5 A  |
| Temperature                                                                        |                                                            |                                                                                                  |          |
| Ambient Temperature during operations                                              | -20 to +50 °C                                              |                                                                                                  |          |

# Dimensions

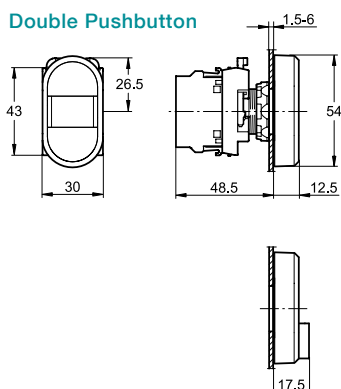
## Modular Range

3D drawings can be found in ABB Library.

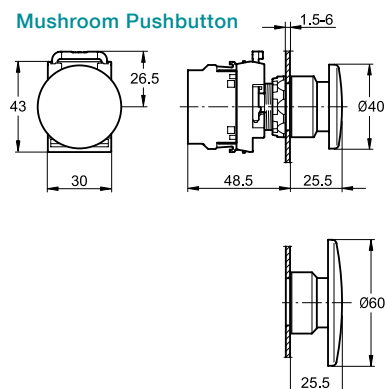
### Pushbutton



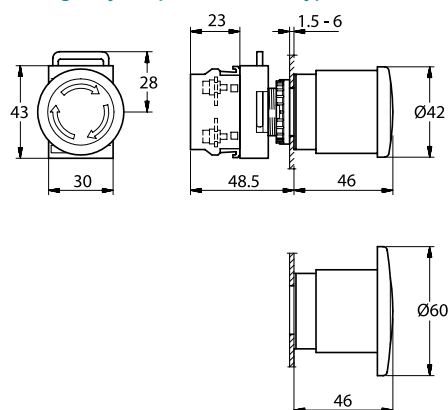
### Double Pushbutton



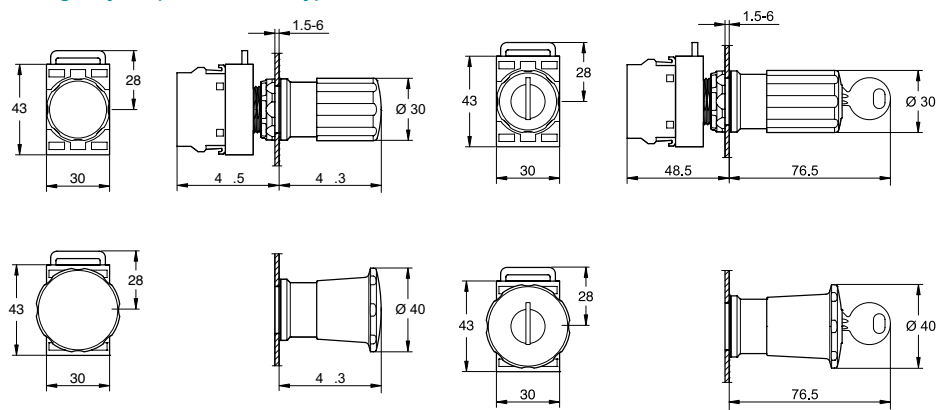
### Mushroom Pushbutton



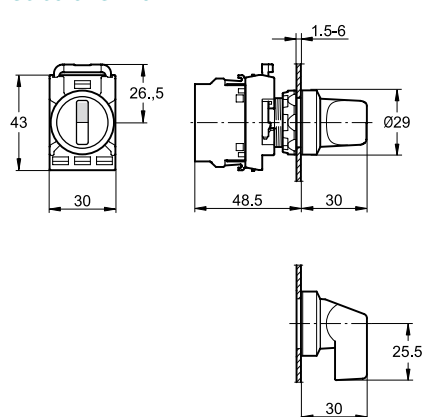
### Emergency Stop Pushbutton type MPM



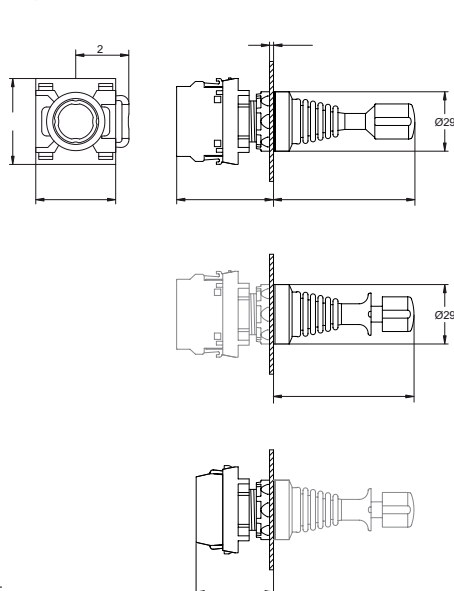
### Emergency Stop Pushbutton type MPE



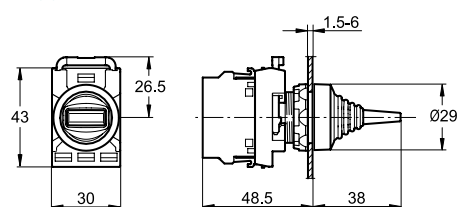
### Selector Switch



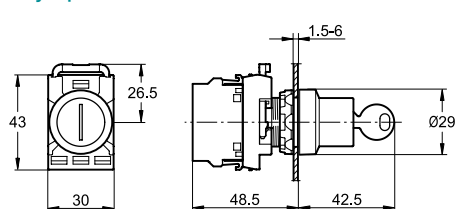
### Joystick



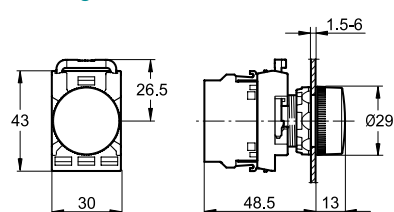
### Toggle Switch



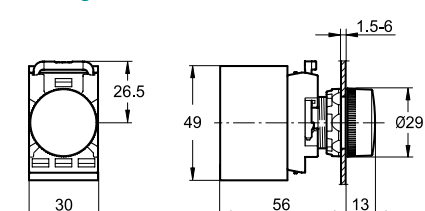
### Key-operated Selector Switch



### Pilot Light

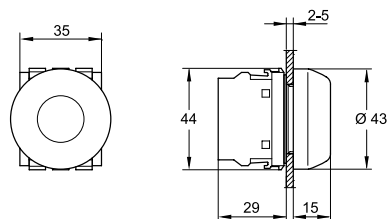


### Pilot Light with transformer

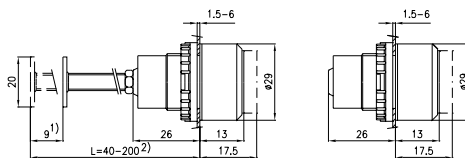


# Dimensions and drilling plans miscellaneous

## Heavy Duty Pushbutton

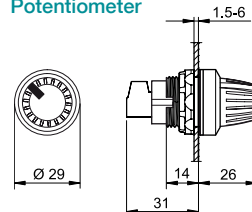


## Reset Pushbutton

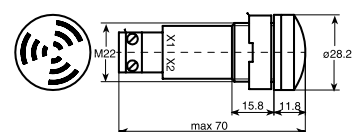


- 1) Length of stroke.
- 2) Can be cut to desired length.

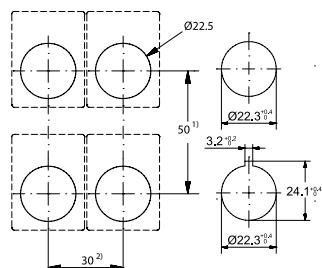
## Potentiometer



## Buzzer

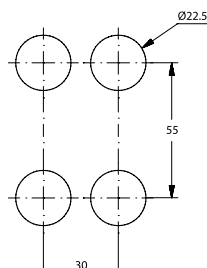


## Drilling Plans for Pushbuttons, Switches and Pilot Lights

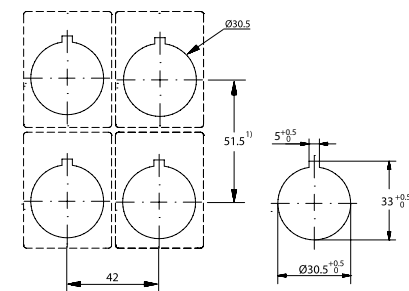


- 1) 55 mm when Legend Plate H= 44.5 mm is used.  
61 mm for mushroom Pushbutton with D=60 mm
- 2) 37 mm when Legend Plate with insert is used,

## Drilling Plan for Double Pushbutton

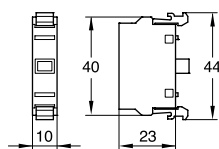


## Drilling Plan for 30 mm Adaptor



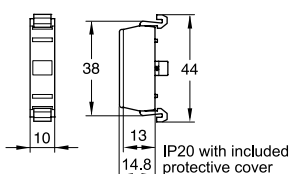
## Contact Block

(for front mounting)



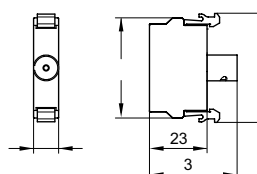
## Micro Contact Block

(for front mounting)

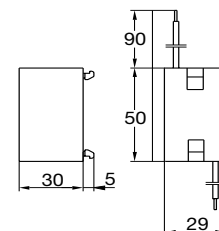


## Lamp Block

(for front mounting)

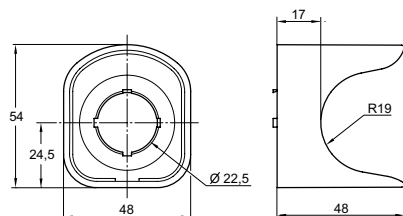


## Transformer Block



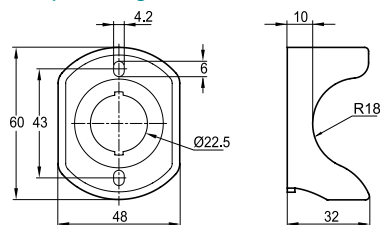
## Emergency Stop Shroud

Modular Range



## Emergency Stop Shroud

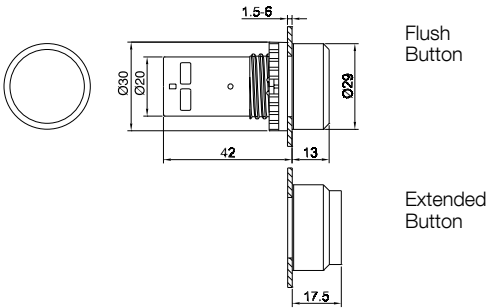
Compact Range



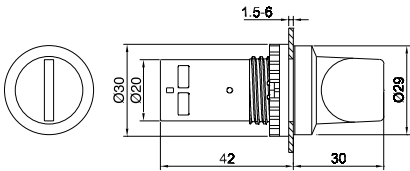
# Dimensions

## Compact Range

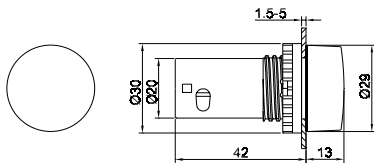
### Pushbutton



### Selector Switch

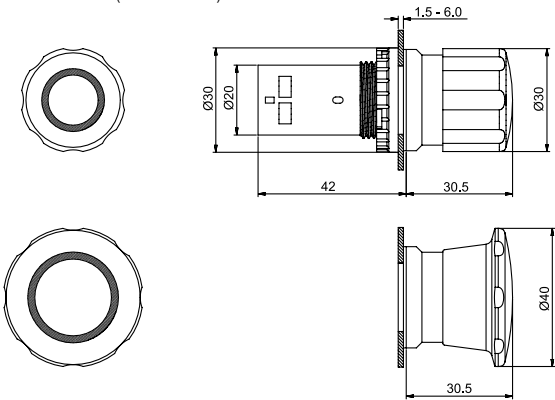


### Pilot Light

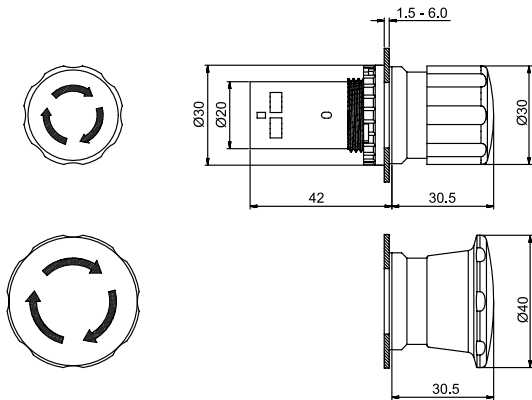


### Emergency Stop Pushbuttons

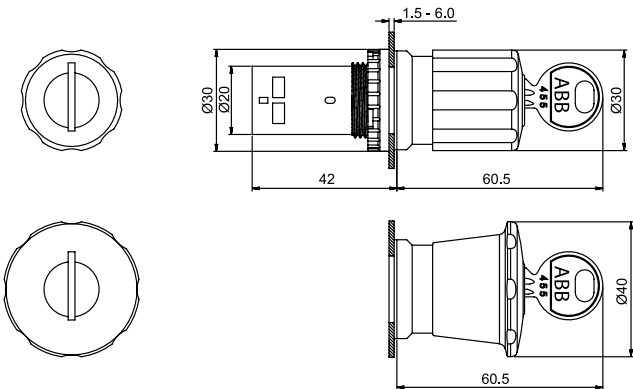
CE3P/CE4P (Pull release)



### CE3T/CE4T (Twist release)



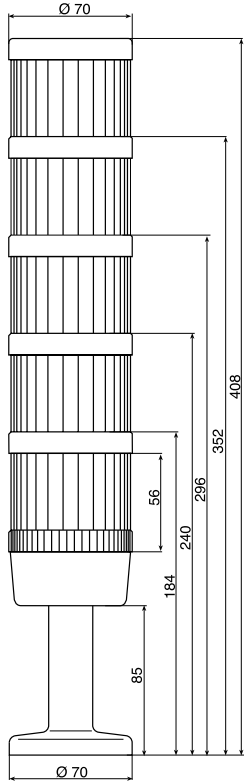
### CE3K1/CE4K1



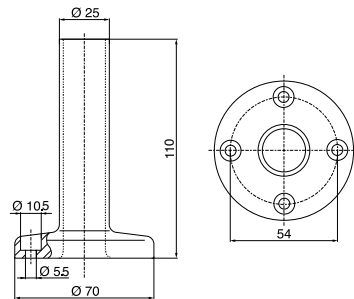
# Dimensions and drilling plans

## Signal Towers

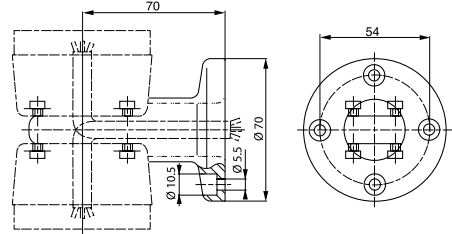
Signal Towers K 70



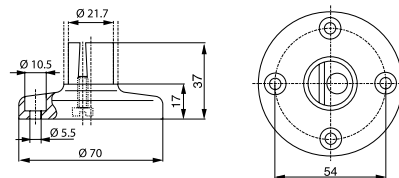
Base with Integrated Tube



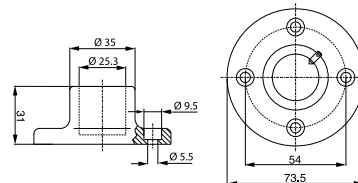
Bracket 2-sided mounting



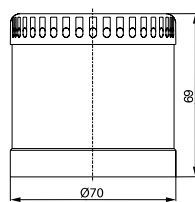
Base for Tube, Plastic



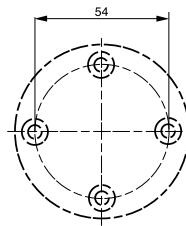
Base for Tube, Metal



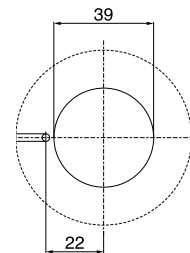
Audible Module



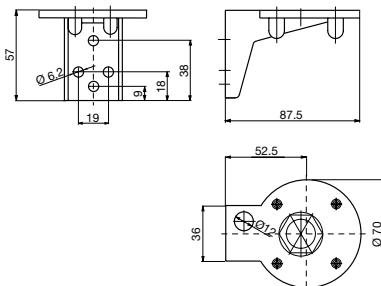
Drilling Plan for Signal Towers K 70



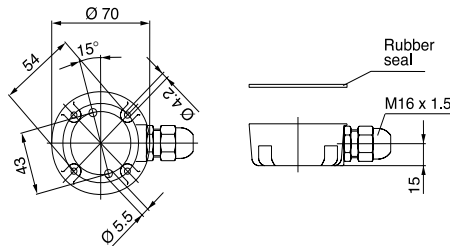
Drilling Plan for Signal Beacons KSB



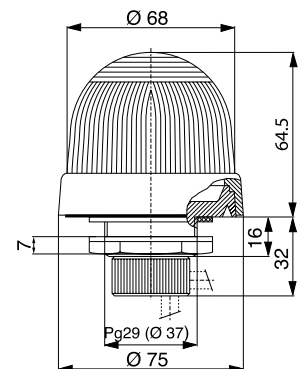
Bracket for tube mounting



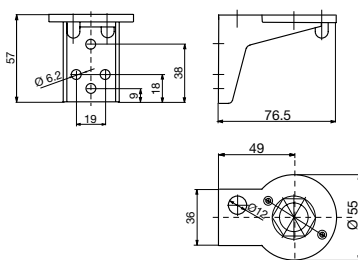
Contact Box for cable exit at side



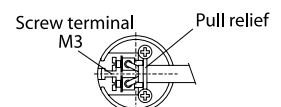
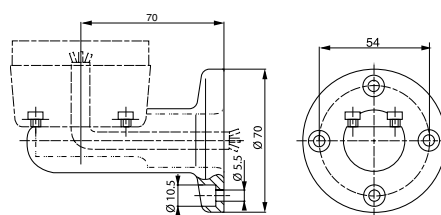
Signal Beacons K SB



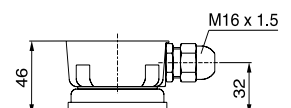
Bracket for surface mounting



Bracket 1-sided mounting



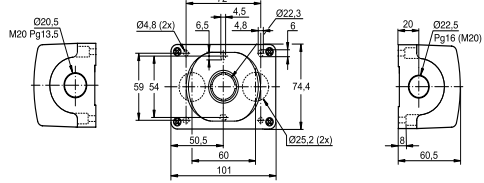
Contact box with magnetic base



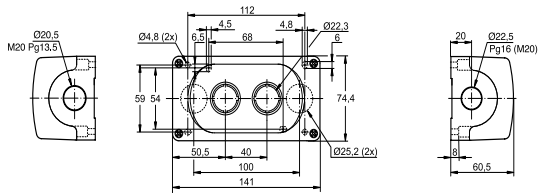
## Dimensions Enclosures

## Plastic Enclosures

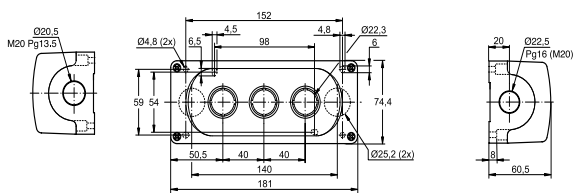
1 seat



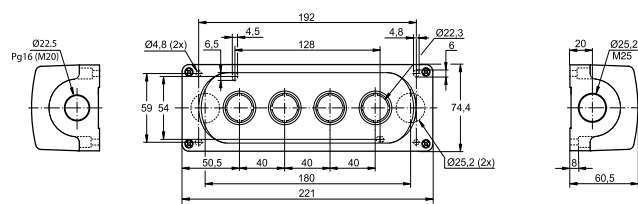
2 seats



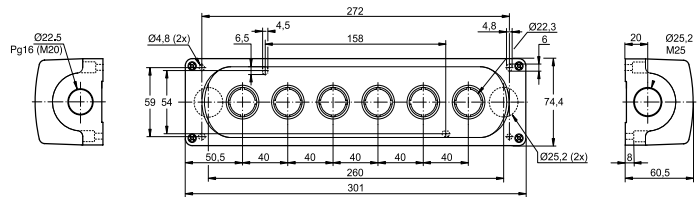
3 seats



4 seats

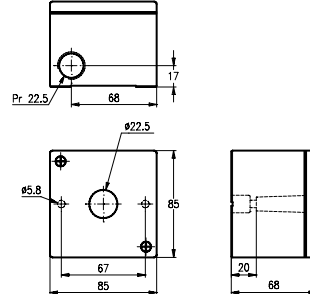


6 seats

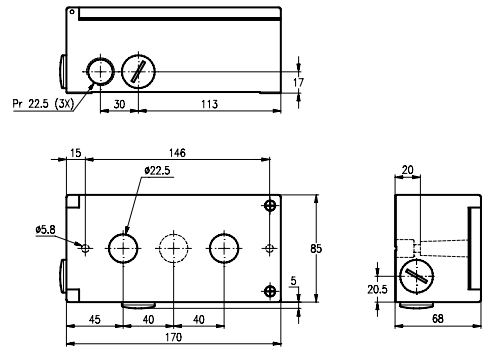


## Metallic Enclosures

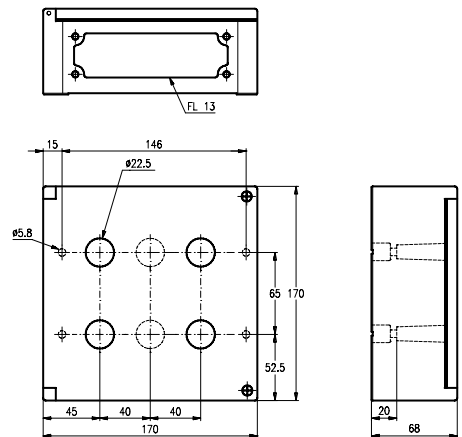
1 seat



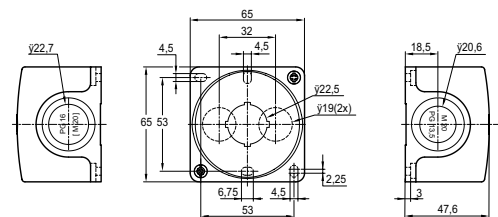
2 or 3 seats



4 or 6 seats



### Plastic Enclosure for Compact Range



# Color selection

## Color selection according to IEC 60 073

IEC 60 073 specifies coding principles for indicators and actuators and gives recommendation regarding the use of colors. An excerpt from the standard is given below. For detailed information, see the standard.

### Meaning of colors – General principles

| Meaning                |                                  |                      |                    |
|------------------------|----------------------------------|----------------------|--------------------|
| Color                  | Safety of persons or environment | Condition of process | State of equipment |
| ● Red                  | Danger                           | Emergency            | Faulty             |
| ● Yellow               | Warning/caution                  | Abnormal             | Abnormal           |
| ● Green                | Safe                             | Normal               | Normal             |
| ● Blue                 | Mandatory significance           |                      |                    |
| ○ ● White, grey, black | No specific meaning assigned     |                      |                    |

### Non-illuminated Actuators

Emergency Actuators

EMERGENCY-STOP / OFF actuators shall be identified by the color RED

### STOP / OFF Actuators

WHITE, GREY and BLACK are the preferred colors for STOP / OFF actuators, with the main preference being for BLACK. RED is also permitted. GREEN shall not be used.

### START / ON Actuators

WHITE, GREY and BLACK are the preferred colors for START / ON actuators, which cause the closing of switching devices and the equipment to start, with the main preference being for WHITE. GREEN is also permitted. RED shall not be used.

### Use of WHITE and BLACK for specific meanings

Where the colors WHITE and BLACK are used to distinguish between START / ON and STOP / OFF actuators, then the color WHITE shall be used for START / ON actuators and the color BLACK shall be used for STOP / OFF actuators.

### The same Actuators serving for START / STOP or ON / OFF

WHITE, GREY and BLACK are the preferred colors for actuators which, when actuated several times, act alternately as a START / ON and STOP / OFF actuator.

The colors YELLOW and GREEN shall not be used. The color RED shall be used only in cases where the same actuator, other than a push-button, is used for both EMERGENCYSTOP / OFF and normal operation.

WHITE, GREY and BLACK are preferred colors for actuators which cause a movement while they are actuated and stop the movement when they are released (such as inching or jogging actuators). GREEN is also permitted. RED shall not be used.

### RESET Actuators

RESET Actuators (used, for example, with protective relays) shall be BLUE, WHITE, GREY or BLACK, except RESET actuators which also act as STOP / OFF actuators. The color of such STOP / OFF actuators shall be in accordance with STOP / OFF actuators above.

# Degrees of Protection

## General

In an installation, the degree of protection required for electrical equipment depends on the environmental characteristics. The degree of protection, ensured by the enclosure of equipment or by the cubicle containing the equipment is expressed by the IP code which gives the level of protection against access to hazardous parts, the ingress of foreign bodies and/or the ingress of water, in compliance with IEC 60529, IEC 60947-1.

Besides the IP symbol, the complete code has two figures followed (optionally) by two additional letters. A short description of the elements used in IP coding is given below.

| IP... code           | Figures or Letters | Specifications for installation protection               | Protection of Persons                          |
|----------------------|--------------------|----------------------------------------------------------|------------------------------------------------|
| <b>First Figure</b>  |                    | <b>Against ingress of foreign bodies</b>                 | <b>Against access to hazardous parts with:</b> |
|                      | 0                  | No protection                                            | No protection                                  |
|                      | 1                  | Diameter > 50 mm                                         | Back of hand                                   |
|                      | 2                  | Diameter > 12.5 mm                                       | Finger                                         |
|                      | 3                  | Diameter > 2.5 mm                                        | Tool                                           |
|                      | 4                  | Diameter > 1 mm                                          | Wire                                           |
|                      | 5                  | Limited protection against dust                          | Wire                                           |
|                      | 6                  | Total protection against dust                            | Wire                                           |
| <b>Second Figure</b> |                    | <b>Against entrance of water having a harmful effect</b> |                                                |
|                      | 0                  | No protection                                            |                                                |
|                      | 1                  | Vertical dripping                                        |                                                |
|                      | 2                  | Dripping at a vertical angle of < 15°                    |                                                |
|                      | 3                  | Rain at a vertical angle of < 60°                        |                                                |
|                      | 4                  | Splashing                                                |                                                |
|                      | 5                  | Low pressure water jet                                   |                                                |
|                      | 6                  | Powerful water jets                                      |                                                |
|                      | 7                  | Temporary immersion                                      |                                                |
|                      | 8                  | Permanent immersion                                      |                                                |
|                      | 9K*                | High Pressure, High Temperature washdown                 |                                                |

**Note:** The type of enclosure or cubicle in which the equipment must be installed prevails with respect to the degree of protection.

\*According to DIN 400 50-9

# Explanation of Type Codes

## Modular Pilot Devices

### Pilot Light

Example 1: Type ML1-100R

L

Pilot Light Head

Lens color:

R = Red W = White  
G = Green C = Clear  
Y = Yellow  
L = Blue

### Operators

Example 2: Type MP1-10Y

P Pushbutton  
PD Pushbutton, Double  
PET Pushbutton, Emergency Stop, Twist release  
PEP Pushbutton, Emergency Stop, Pull release  
PEK Pushbutton, Emergency Stop, Key release  
PK Pushbutton, Key-lockable  
PM Pushbutton, Mushroom  
PMT Pushbutton, Mushroom, Twist release  
PMP Pushbutton, Mushroom, Pull release  
2SS 2-pos. Selector Switch  
3SS 3-pos. Selector Switch  
2SSC 2-pos. Selector Switch, operation of Center position  
3SSC 3-pos. Selector Switch, operation of Center position

Button color/

Lens color for double Pushbuttons:

R = Red W = White  
G = Green B = Black (non-illuminated only)  
Y = Yellow C = Clear  
L = Blue U = Grey (non-illuminated only)

Example 3: Type M2SSK1-101

2SSK 2-pos. Selector Switch, Key-lockable  
3SSK 3-pos. Selector Switch, Key-lockable  
PK Pushbutton, Key-lockable

Key code :

1 = 71  
2 = 72  
3 = 73

### Buzzer, Contact Blocks, Lamp Block

Example 4: Type MCBH-10

B Buzzer  
CB Contact Block  
CBH Contact Block with Holder  
LB Lamp Block

Contact Blocks:

10 1 NO  
01 1 NC  
11 1 NO +1 NC  
02 2 NC  
20 2 NO

M = "Generation" M, Modular Range

## Compact Pilot Devices

Example 5: Type CL-100R

Example 6: Type C2SS1-10R -10

E Emergency Stop  
L Pilot Light  
P Pushbutton  
2SS 2-pos. Selector Switch  
3SS 3-pos. Selector Switch

Button color/

Lens color for compact Pilot Light and Push-

buttons  
R = Red W = White  
G = Green B = Black  
Y = Yellow C = Clear (Pilot Light only)  
L = Blue U = Grey

Button color for compact  
Selector Switch

R = Red  
B = Black  
U = Grey

C = Compact Range

# Index

## Type - Order Code

| Type         | Order Code         | Page | Type        | Order Code         | Page | Type        | Order Code         | Page |
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| C2SS1-10■-02 | 1SFA 619 200 R105■ | 46   | CL-501W     | 1SFA 619 402 R5015 | 50   | CP2-10■-20  | 1SFA 619 101 R102■ | 45   |
| C2SS1-10■-10 | 1SFA 619 200 R101■ | 46   | CL-501Y     | 1SFA 619 402 R5013 | 50   | CP2-11G-10  | 1SFA 619 101 R1112 | 48   |
| C2SS1-10■-11 | 1SFA 619 200 R107■ | 46   | CL-502G     | 1SFA 619 402 R5022 | 50   | CP2-11R-01  | 1SFA 619 101 R1141 | 48   |
| C2SS1-10■-20 | 1SFA 619 200 R102■ | 46   | CL-502L     | 1SFA 619 402 R5024 | 50   | CP2-11R-10  | 1SFA 619 101 R1111 | 48   |
| C2SS2-10■-01 | 1SFA 619 201 R104■ | 46   | CL-502R     | 1SFA 619 402 R5021 | 50   | CP2-11Y-10  | 1SFA 619 101 R1113 | 48   |
| C2SS2-10■-02 | 1SFA 619 201 R105■ | 46   | CL-502W     | 1SFA 619 402 R5025 | 50   | CP2-12G-10  | 1SFA 619 101 R1212 | 48   |
| C2SS2-10■-10 | 1SFA 619 201 R101■ | 46   | CL-502Y     | 1SFA 619 402 R5023 | 50   | CP2-12R-01  | 1SFA 619 101 R1241 | 48   |
| C2SS2-10■-11 | 1SFA 619 201 R107■ | 46   | CL-504G     | 1SFA 619 402 R5042 | 50   | CP2-12R-10  | 1SFA 619 101 R1211 | 48   |
| C2SS2-10■-20 | 1SFA 619 201 R102■ | 46   | CL-504L     | 1SFA 619 402 R5044 | 50   | CP2-12Y-10  | 1SFA 619 101 R1213 | 48   |
| C2SS3-10■-01 | 1SFA 619 202 R104■ | 46   | CL-504R     | 1SFA 619 402 R5041 | 50   | CP2-13G-10  | 1SFA 619 101 R1312 | 49   |
| C2SS3-10■-02 | 1SFA 619 202 R105■ | 46   | CL-504W     | 1SFA 619 402 R5045 | 50   | CP2-13R-01  | 1SFA 619 101 R1341 | 49   |
| C2SS3-10■-10 | 1SFA 619 202 R101■ | 46   | CL-504Y     | 1SFA 619 402 R5043 | 50   | CP2-13R-10  | 1SFA 619 101 R1311 | 49   |
| C2SS3-10■-11 | 1SFA 619 202 R107■ | 46   | CL-505G     | 1SFA 619 402 R5052 | 50   | CP2-13Y-10  | 1SFA 619 101 R1313 | 49   |
| C2SS3-10■-20 | 1SFA 619 202 R102■ | 46   | CL-505L     | 1SFA 619 402 R5054 | 50   | CP3-10■-01  | 1SFA 619 102 R104■ | 45   |
| C3SS1-10■-02 | 1SFA 619 210 R105■ | 46   | CL-505R     | 1SFA 619 402 R5051 | 50   | CP3-10■-02  | 1SFA 619 102 R105■ | 45   |
| C3SS1-10■-11 | 1SFA 619 210 R107■ | 46   | CL-505W     | 1SFA 619 402 R5055 | 50   | CP3-10■-10  | 1SFA 619 102 R101■ | 45   |
| C3SS1-10■-20 | 1SFA 619 210 R102■ | 46   | CL-505Y     | 1SFA 619 402 R5053 | 50   | CP3-10■-11  | 1SFA 619 102 R107■ | 45   |
| C3SS2-10■-02 | 1SFA 619 211 R105■ | 46   | CL-513G     | 1SFA 619 402 R5132 | 50   | CP3-10■-20  | 1SFA 619 102 R102■ | 45   |
| C3SS2-10■-11 | 1SFA 619 211 R107■ | 46   | CL-513L     | 1SFA 619 402 R5134 | 50   | CP3-11G-10  | 1SFA 619 102 R1112 | 48   |
| C3SS2-10■-20 | 1SFA 619 211 R102■ | 46   | CL-513R     | 1SFA 619 402 R5131 | 50   | CP3-11R-01  | 1SFA 619 102 R1141 | 48   |
| C3SS3-10■-02 | 1SFA 619 212 R105■ | 46   | CL-513W     | 1SFA 619 402 R5135 | 50   | CP3-11R-10  | 1SFA 619 102 R1111 | 48   |
| C3SS3-10■-11 | 1SFA 619 212 R107■ | 46   | CL-513Y     | 1SFA 619 402 R5133 | 50   | CP3-11Y-10  | 1SFA 619 102 R1113 | 48   |
| C3SS3-10■-20 | 1SFA 619 212 R102■ | 46   | CL-515G     | 1SFA 619 402 R5152 | 50   | CP3-12G-10  | 1SFA 619 102 R1212 | 48   |
| C3SS7-10■-02 | 1SFA 619 216 R105■ | 46   | CL-515L     | 1SFA 619 402 R5154 | 50   | CP3-12R-01  | 1SFA 619 102 R1241 | 48   |
| C3SS7-10■-11 | 1SFA 619 216 R107■ | 46   | CL-515R     | 1SFA 619 402 R5151 | 50   | CP3-12R-10  | 1SFA 619 102 R1211 | 48   |
| C3SS7-10■-20 | 1SFA 619 216 R102■ | 46   | CL-515W     | 1SFA 619 402 R5155 | 50   | CP3-12Y-10  | 1SFA 619 102 R1213 | 48   |
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| CA1-8077     | 1SFA 619 920 R8077 | 54   | CL-520G     | 1SFA 619 402 R5202 | 50   | CP3-13R-01  | 1SFA 619 102 R1341 | 49   |
| CA1-8078     | 1SFA 619 920 R8078 | 54   | CL-520L     | 1SFA 619 402 R5204 | 50   | CP3-13R-10  | 1SFA 619 102 R1311 | 49   |
| CA1-8080     | 1SFA 619 920 R8080 | 54   | CL-520R     | 1SFA 619 402 R5201 | 50   | CP3-13Y-10  | 1SFA 619 102 R1313 | 49   |
| CA6-1026     | 1SFA 619 930 R102  | 74   | CL-520W     | 1SFA 619 402 R5205 | 50   | CP33-10B-01 | 1SFA 619 132 R1046 | 45   |
| CA6-1027     | 1SFA 619 930 R1027 | 74   | CL-520Y     | 1SFA 619 402 R5203 | 50   | CP4-10■-01  | 1SFA 619 103 R104■ | 45   |
| CE3K1-10B-11 | 1SFA 619 502 R1076 | 47   | CL-523G     | 1SFA 619 402 R5232 | 51   | CP4-10■-02  | 1SFA 619 103 R105■ | 45   |
| CE3K1-10R-02 | 1SFA 619 502 R1051 | 47   | CL-523L     | 1SFA 619 402 R5234 | 51   | CP4-10■-10  | 1SFA 619 103 R101■ | 45   |
| CE3K1-10R-11 | 1SFA 619 502 R1071 | 47   | CL-523R     | 1SFA 619 402 R5231 | 51   | CP4-10■-11  | 1SFA 619 103 R107■ | 45   |
| CE3P-10B-11  | 1SFA 619 501 R1076 | 47   | CL-523W     | 1SFA 619 402 R5235 | 51   | CP4-10■-20  | 1SFA 619 103 R102■ | 45   |
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| CE3P-10R-11  | 1SFA 619 501 R1071 | 47   | CL-530G     | 1SFA 619 402 R5302 | 51   | CP4-11R-01  | 1SFA 619 103 R1141 | 48   |
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| CE4P-10R-02  | 1SFA 619 551 R1051 | 47   | CL-541Y     | 1SFA 619 402 R5413 | 51   | CP4-13R-10  | 1SFA 619 103 R1311 | 49   |
| CE4P-10R-11  | 1SFA 619 551 R1071 | 47   | CP1-10■-01  | 1SFA 619 100 R104■ | 45   | CP4-13Y-10  | 1SFA 619 103 R1313 | 49   |
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| CE4T-10R-01  | 1SFA 619 550 R1041 | 47   | CP1-10■-10  | 1SFA 619 100 R101■ | 45   | CPM3-10G-11 | 1SFA 619 126 R1072 | 49   |
| CE4T-10R-02  | 1SFA 619 550 R1051 | 47   | CP1-10■-11  | 1SFA 619 100 R107■ | 45   | CPM3-10L-11 | 1SFA 619 126 R1074 | 49   |
| CE4T-10R-11  | 1SFA 619 550 R1071 | 47   | CP1-10■-20  | 1SFA 619 100 R102■ | 45   | CPM3-10R-11 | 1SFA 619 126 R1071 | 49   |
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| 1SFA 616 950 R1013 | KTR1-1013  | 35   | 1SFA 619 103 R1141 | CP4-11R-01   | 48   | 1SFA 619 402 R5131 | CL-513R      | 50   |
| 1SFA 616 950 R1014 | KTR1-1014  | 35   | 1SFA 619 103 R1211 | CP4-12R-10   | 49   | 1SFA 619 402 R5132 | CL-513G      | 50   |
| 1SFA 616 950 R2001 | KTR1-2001  | 35   | 1SFA 619 103 R1212 | CP4-12G-10   | 49   | 1SFA 619 402 R5133 | CL-513Y      | 50   |
| 1SFA 616 950 R2002 | KTR1-2002  | 35   | 1SFA 619 103 R1213 | CP4-12Y-10   | 49   | 1SFA 619 402 R5134 | CL-513L      | 50   |
| 1SFA 616 950 R2003 | KTR1-2003  | 35   | 1SFA 619 103 R1241 | CP4-12R-01   | 49   | 1SFA 619 402 R5135 | CL-513W      | 50   |
| 1SFA 616 950 R2004 | KTR1-2004  | 35   | 1SFA 619 103 R1311 | CP4-13R-10   | 49   | 1SFA 619 402 R5151 | CL-515R      | 50   |
| 1SFA 616 950 R2005 | KTR1-2005  | 35   | 1SFA 619 103 R1312 | CP4-13G-10   | 49   | 1SFA 619 402 R5152 | CL-515G      | 50   |
| 1SFA 616 950 R2011 | KTR1-2011  | 35   | 1SFA 619 103 R1313 | CP4-13Y-10   | 49   | 1SFA 619 402 R5153 | CL-515Y      | 50   |
| 1SFA 616 950 R2012 | KTR1-2012  | 35   | 1SFA 619 103 R1341 | CP4-13R-01   | 49   | 1SFA 619 402 R5154 | CL-515L      | 50   |
| 1SFA 616 950 R2013 | KTR1-2013  | 35   | 1SFA 619 110 R1015 | CP11-10W-10  | 45   | 1SFA 619 402 R5155 | CL-515W      | 50   |
| 1SFA 616 950 R2014 | KTR1-2014  | 35   | 1SFA 619 120 R1015 | CP12-10W-10  | 45   | 1SFA 619 402 R5201 | CL-520R      | 50   |
| 1SFA 619 100 R101■ | CP1-10■-10 | 45   | 1SFA 619 126 R1071 | CPM3-10R-11  | 49   | 1SFA 619 402 R5202 | CL-520G      | 50   |
| 1SFA 619 100 R102■ | CP1-10■-20 | 45   | 1SFA 619 126 R1072 | CPM3-10G-11  | 49   | 1SFA 619 402 R5203 | CL-520Y      | 50   |
| 1SFA 619 100 R104■ | CP1-10■-01 | 45   | 1SFA 619 126 R1073 | CPM3-10Y-11  | 49   | 1SFA 619 402 R5204 | CL-520L      | 50   |
| 1SFA 619 100 R105■ | CP1-10■-02 | 45   | 1SFA 619 126 R1074 | CPM3-10L-11  | 49   | 1SFA 619 402 R5205 | CL-520W      | 50   |
| 1SFA 619 100 R107■ | CP1-10■-11 | 45   | 1SFA 619 126 R1076 | CPM3-10B-11  | 49   | 1SFA 619 402 R5231 | CL-523R      | 51   |
| 1SFA 619 100 R1111 | CP1-11R-10 | 48   | 1SFA 619 132 R1046 | CP33-10B-01  | 45   | 1SFA 619 402 R5232 | CL-523G      | 51   |
| 1SFA 619 100 R1112 | CP1-11G-10 | 48   | 1SFA 619 200 R101■ | C2SS1-10■-10 | 46   | 1SFA 619 402 R5233 | CL-523Y      | 51   |
| 1SFA 619 100 R1113 | CP1-11Y-10 | 48   | 1SFA 619 200 R102■ | C2SS1-10■-20 | 46   | 1SFA 619 402 R5234 | CL-523L      | 51   |
| 1SFA 619 100 R1141 | CP1-11R-01 | 48   | 1SFA 619 200 R104■ | C2SS1-10■-01 | 46   | 1SFA 619 402 R5235 | CL-523W      | 51   |
| 1SFA 619 100 R1211 | CP1-12R-10 | 48   | 1SFA 619 200 R105■ | C2SS1-10■-02 | 46   | 1SFA 619 402 R5301 | CL-530R      | 51   |
| 1SFA 619 100 R1212 | CP1-12G-10 | 48   | 1SFA 619 200 R107■ | C2SS1-10■-11 | 46   | 1SFA 619 402 R5302 | CL-530G      | 51   |
| 1SFA 619 100 R1213 | CP1-12Y-10 | 48   | 1SFA 619 201 R101■ | C2SS2-10■-10 | 46   | 1SFA 619 402 R5303 | CL-530Y      | 51   |
| 1SFA 619 100 R1241 | CP1-12R-01 | 48   | 1SFA 619 201 R102■ | C2SS2-10■-20 | 46   | 1SFA 619 402 R5304 | CL-530L      | 51   |
| 1SFA 619 100 R1311 | CP1-13R-10 | 49   | 1SFA 619 201 R104■ | C2SS2-10■-01 | 46   | 1SFA 619 402 R5305 | CL-530W      | 51   |
| 1SFA 619 100 R1312 | CP1-13G-10 | 49   | 1SFA 619 201 R105■ | C2SS2-10■-02 | 46   | 1SFA 619 402 R5411 | CL-541R      | 51   |
| 1SFA 619 100 R1313 | CP1-13Y-10 | 49   | 1SFA 619 201 R107■ | C2SS2-10■-11 | 46   | 1SFA 619 402 R5412 | CL-541G      | 51   |
| 1SFA 619 100 R1341 | CP1-13R-01 | 49   | 1SFA 619 202 R101■ | C2SS3-10■-10 | 46   | 1SFA 619 402 R5413 | CL-541Y      | 51   |
| 1SFA 619 101 R101■ | CP2-10■-10 | 45   | 1SFA 619 202 R102■ | C2SS3-10■-20 | 46   | 1SFA 619 402 R5414 | CL-541L      | 51   |
| 1SFA 619 101 R102■ | CP2-10■-20 | 45   | 1SFA 619 202 R104■ | C2SS3-10■-01 | 46   | 1SFA 619 402 R5415 | CL-541W      | 51   |
| 1SFA 619 101 R104■ | CP2-10■-01 | 45   | 1SFA 619 202 R105■ | C2SS3-10■-02 | 46   | 1SFA 619 500 R1041 | CE3T-10R-01  | 47   |
| 1SFA 619 101 R105■ | CP2-10■-02 | 45   | 1SFA 619 202 R107■ | C2SS3-10■-11 | 46   | 1SFA 619 500 R1051 | CE3T-10R-02  | 47   |
| 1SFA 619 101 R107■ | CP2-10■-11 | 45   | 1SFA 619 210 R102■ | C3SS1-10■-20 | 46   | 1SFA 619 500 R1071 | CE3T-10R-11  | 47   |
| 1SFA 619 101 R1111 | CP2-11R-10 | 48   | 1SFA 619 210 R105■ | C3SS1-10■-02 | 46   | 1SFA 619 500 R1076 | CE3T-10B-11  | 47   |
| 1SFA 619 101 R1112 | CP2-11G-10 | 48   | 1SFA 619 210 R107■ | C3SS1-10■-11 | 46   | 1SFA 619 501 R1051 | CE3P-10R-02  | 47   |

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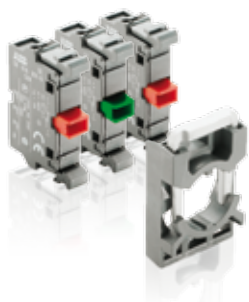
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| Order Code         | Type         | Page | Order Code    | Type   | Page |
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| 1SFA 619 501 R1071 | CE3P-10R-11  | 47   | SK 615 546-8  | -      | 69   |
| 1SFA 619 501 R1076 | CE3P-10B-11  | 47   | SK 615 550-29 | -      | 70   |
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| 1SFA 619 550 R1041 | CE4T-10R-01  | 47   | SK 615 550-63 | -      | 70   |
| 1SFA 619 550 R1051 | CE4T-10R-02  | 47   | SK 615 550-80 | -      | 70   |
| 1SFA 619 550 R1071 | CE4T-10R-11  | 47   | SK 615 550-81 | -      | 70   |
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| 1SFA 619 811 R2001 | CEP1-2001    | 65   | SK 615 552-23 | -      | 70   |
| 1SFA 619 811 R2002 | CEP1-2002    | 65   | SK 615 552-24 | -      | 70   |
| 1SFA 619 821 R1001 | CEPY1-1001   | 65   | SK 615 552-25 | -      | 70   |
| 1SFA 619 821 R1002 | CEPY1-1002   | 65   | SK 615 552-27 | -      | 70   |
| 1SFA 619 821 R1006 | CEPY1-1006   | 65   | SK 615 552-28 | -      | 70   |
| 1SFA 619 821 R2001 | CEPY1-2001   | 65   | SK 615 552-29 | -      | 70   |
| 1SFA 619 821 R2002 | CEPY1-2002   | 65   | SK 615 552-30 | -      | 70   |
| 1SFA 619 920 R8077 | CA1-8077     | 54   | SK 615 552-31 | -      | 70   |
| 1SFA 619 920 R8078 | CA1-8078     | 54   | SK 615 552-32 | -      | 70   |
| 1SFA 619 920 R8080 | CA1-8080     | 54   | SK 615 552-39 | -      | 70   |
| 1SFA 619 930 R1026 | CA6-1026     | 74   | SK 615 552-40 | -      | 70   |
| 1SFA 619 930 R1027 | CA6-1027     | 74   | SK 615 552-60 | -      | 70   |
| 4950 512-1         | -            | 39   | SK 615 562-12 | -      | 70   |
| 4950 512-2         | -            | 39   | SK 615 562-18 | -      | 70   |
| 4950 512-3         | -            | 39   | SK 615 562-27 | -      | 70   |
| 5396 0543-1        | -            | 63   | SK 615 562-82 | -      | 70   |
| 5911 086-11        | -            | 39   | SK 615 562-83 | -      | 70   |
| 5911 086-11        | -            | 53   | SK 615 562-87 | -      | 27   |
| 5911 086-12        | -            | 39   | SK 615 562-88 | -      | 27   |
| 5911 086-12        | -            | 53   | SK 616 016-2  | -      | 36   |
| 5911 086-13        | -            | 39   | SK 616 016-2  | -      | 54   |
| 5911 086-13        | -            | 53   | SK 616 021-71 | -      | 36   |
| 5911 086-14        | -            | 39   | SK 616 021-72 | -      | 36   |
| 5911 086-14        | -            | 53   | SK 616 021-73 | -      | 36   |
| 5911 086-15        | -            | 39   | SK 616 701-AA | KEM1-0 | 64   |
| 5911 086-15        | -            | 53   | SK 616 702-AA | KEM2-0 | 64   |
| 5911 086-4         | -            | 39   | SK 616 703-AA | KEM3-0 | 64   |
| 5911 086-4         | -            | 53   | SK 616 704-AA | KEM4-0 | 64   |
| 5911 086-5         | -            | 39   | SK 616 706-AA | KEM6-0 | 64   |
| 5911 086-5         | -            | 53   |               |        |      |
| 5911 086-7         | -            | 39   |               |        |      |
| 5911 086-7         | -            | 53   |               |        |      |
| SK 170 0182        | -            | 64   |               |        |      |
| SK 170 4536        | -            | 64   |               |        |      |
| SK 170 7685        | -            | 64   |               |        |      |
| SK 170 7686        | -            | 64   |               |        |      |
| SK 170 7687        | -            | 64   |               |        |      |
| SK 172 105-AA      | -            | 64   |               |        |      |
| SK 172 105-AD      | -            | 64   |               |        |      |
| SK 172 105-AE      | -            | 64   |               |        |      |
| SK 172 105-AF      | -            | 64   |               |        |      |
| SK 175 0152        | -            | 64   |               |        |      |
| SK 175 919-3       | -            | 64   |               |        |      |
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| SK 615 546-4       | -            | 69   |               |        |      |
| SK 615 546-5       | -            | 69   |               |        |      |
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Handwriting practice lines consisting of 25 horizontal dotted lines.



# Accessories



Contact Blocks and Holder



Micro Switch Blocks



LED Block with built in leakage current protection



Legend Plate Holders for Joystick



Legend Plate Holders



Legend Plate Holder for Double Pushbutton



Protective Cover



Mounting Tool



Mounting Tool for Power Tool

| Description                                                                        | Type     | Order Code      | Package Qty |
|------------------------------------------------------------------------------------|----------|-----------------|-------------|
| <b>Separate Holder</b>                                                             |          |                 |             |
| Holders for three blocks                                                           | MCBH-00  | 1SFA611605R1100 | 10          |
| <b>Contact Blocks (see page 34)</b>                                                |          |                 |             |
| 1 NO                                                                               | MCB-10   | 1SFA611610R1001 | 10          |
| 1 NC                                                                               | MCB-01   | 1SFA611610R1010 | 10          |
| <b>Micro Switch Blocks</b>                                                         |          |                 |             |
| 1 NO                                                                               | MCBL-10  | 1SFA611612R1010 | 10          |
| 1 NC                                                                               | MCBL-01  | 1SFA611612R1001 | 10          |
| <b>Contact Blocks with 3-Blocks Holder included (Contact Blocks - see page 34)</b> |          |                 |             |
| 1 NO                                                                               | MCBH-10  | 1SFA611605R1101 | 1           |
| 1 NC                                                                               | MCBH-01  | 1SFA611605R1110 | 1           |
| 2 NC                                                                               | MCBH-02  | 1SFA611605R1120 | 1           |
| 2 NO                                                                               | MCBH-20  | 1SFA611605R1102 | 1           |
| 1 NO + 1 NC                                                                        | MCBH-11  | 1SFA611605R1111 | 1           |
| 2 NO + 1 NC                                                                        | MCBH-21  | 1SFA611605R1112 | 1           |
| <b>LED Blocks (see page 32, 61)</b>                                                |          |                 |             |
| Colors ■ : ● =R ■ =G ● =Y ● =L ○ =W □ : ● =1 ● =2 ● =3 ● =4 ○ =5                   |          |                 |             |
| Rated Voltage 24 V, AC/DC                                                          | MLBL-01■ | 1SFA611621R101□ | 10          |
| Rated Voltage 110-130 V, AC                                                        | MLBL-04■ | 1SFA611621R104□ | 10          |
| Rated Voltage 110-130 V, DC                                                        | MLBL-05■ | 1SFA611621R105□ | 10          |
| Rated Voltage 220 V, DC                                                            | MLBL-06■ | 1SFA611621R106□ | 10          |
| Rated Voltage 230 V, AC                                                            | MLBL-07■ | 1SFA611621R107□ | 10          |
| <b>Legend Plate Holders</b>                                                        |          |                 |             |
| Legend Plate Holder (4-pos. Joystick)                                              | MA1-8137 | 1SFA611920R8137 | 1           |
| Legend Plate Holder (2-pos. Joystick)                                              | MA1-8138 | 1SFA611920R8138 | 1           |
| Legend Plate Holder (2-pos. Double)                                                | MA1-8039 | 1SFA611920R8039 | 1           |
| Legend Plate Holder (black)                                                        | KA1-8120 | 1SFA616920R8120 | 10          |
| Inserts without text                                                               | KA1-8121 | 1SFA616920R8121 | 10          |
| Legend Plate Holder for Plastic Enclosure                                          | MA6-1060 | 1SFA611930R1060 | 10          |
| Inserts without text for Plastic Enclosure                                         | MA6-1061 | 1SFA611930R1061 | 10          |
| <b>Accessories (see page 34, 52, 63)</b>                                           |          |                 |             |
| Mounting Tool                                                                      | MA1-8015 | 1SFA611920R8015 | 1           |
| Mounting Tool for Power Tool                                                       | MA1-8149 | 1SFA611920R8149 | 1           |
| Silicone Membrane for Flush Pushbutton                                             | KA1-8052 | 1SFA611920R8052 | 1           |
| Silicone Membrane for Extended Pushbutton                                          | KA1-8002 | 1SFA611920R8002 | 1           |
| Silicone Membrane for Double Pushbutton                                            | MA1-8126 | 1SFA611920R8126 | 1           |
| Locking Nut                                                                        | MA1-8019 | 1SFA611920R8019 | 10          |
| Light Diffusing Lens                                                               | KA1-8005 | 1SFA611920R8005 | 1           |
| Protective Cover                                                                   | KA1-8010 | 1SFA611920R8010 | 1           |
| Spacer*                                                                            | -        | SK615516-1      | 1           |
| Spacer for Modular Emergency Stop*                                                 | KA1-8045 | 1SFA616920R8045 | 1           |

\*Spacer is needed when Legend Plates are not used in Plastic Enclosures

# Enclosures



Empty Enclosures



DIN-rail Adaptor

| Description                                                   | Type     | Order Code      | Package Qty |
|---------------------------------------------------------------|----------|-----------------|-------------|
| <b>Empty Plastic Enclosures for Modular and Compact Range</b> |          |                 |             |
| ■ □ 1-seat                                                    | MEPY1-0  | 1SFA611821R1000 | 1           |
| ■ □ 1-seat                                                    | MEP1-0   | 1SFA611811R1000 | 1           |
| ■ □ 2-seat                                                    | MEP2-0   | 1SFA611812R1000 | 1           |
| ■ □ 3-seat                                                    | MEP3-0   | 1SFA611813R1000 | 1           |
| ■ □ 4-seat                                                    | MEP4-0   | 1SFA611814R1000 | 1           |
| ■ □ 6-seat                                                    | MEP6-0   | 1SFA611816R1000 | 1           |
| <b>Shroud</b>                                                 |          |                 |             |
| ■ Yellow                                                      | MA1-8053 | 1SFA611920R8053 | 1           |
| ■ Grey                                                        | MA1-8128 | 1SFA611920R8128 | 1           |
| <b>Empty Plastic Enclosures for Compact Range</b>             |          |                 |             |
| ■ □ Yellow/Light grey                                         | CEPY1-0  | 1SFA619821R1000 | 1           |
| ■ □ Dark grey/Light grey                                      | CEP1-0   | 1SFA619811R1000 | 1           |
| <b>Shroud</b>                                                 |          |                 |             |
| ■ Yellow                                                      | CA1-8053 | 1SFA619920R8053 | 1           |
| ■ Grey                                                        | CA1-8054 | 1SFA619920R8054 | 1           |
| <b>DIN-rail Adaptor</b>                                       |          |                 |             |
| DIN-rail Adaptor                                              | MA1-8131 | 1SFA611920R8131 | 1           |

Enclosures - see page 57



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