







### Modular range..... 8.1 - 8.30



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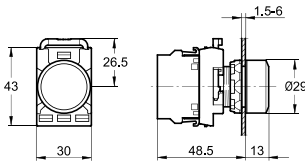
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# ABB – A sure hit in Pilot Devices

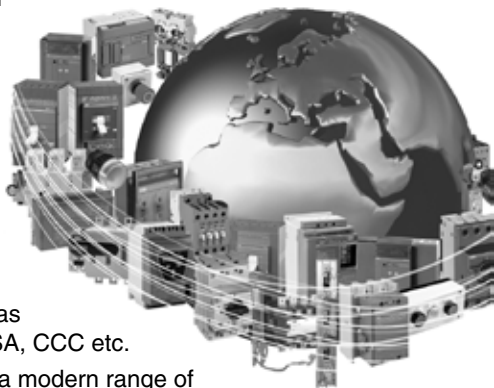


## Part of comprehensive ABB program

The ABB Pilot Devices are part of the comprehensive ABB program of high quality Low Voltage Products and Systems for buildings, industries and OEM's. Much of this is sold through external channel

partners such as distributors, system integrators and panel builders. Our products meet all essential national and international standards such as IEC, EN, UL, CSA, CCC etc.

ABB also offers a modern range of Control products such as contactors, soft starters, across the line, combination, many different reduced voltage starters and a wide range of electronic relays, switches and sensors.



## Pilot Devices

ABB offers a complete range of 22mm pushbuttons, emergency stop pushbuttons, selector switches and signalling units.

These are complemented with enclosures and a wide range of accessories. The main advantage is the durability that is provided for all types of industrial environments, indoor as well as outdoor. Other key market segments include trucks, buses, trains and office buildings.

## Complete range

The ABB Pilot Device family is divided into two ranges; the Modular range includes operators, holders, contact blocks and accessories that offer high flexibility with different combinations of components. The Compact range has all functions built-in as one single unit for quick installation where the same function is used in high volumes.

## Modular pilot devices

The Modular range is extensive and well known all around the world for its flexibility and durability. By combining a few basic components a large number of different devices can be acquired.

The Modular range consists of pushbuttons including pushbuttons that can be used in emergency stop circuits, selector switches, pilot lights with filament bulbs or LEDs. Buzzers, potentiometers, toggle switches, reset buttons and special definite purpose buttons (30mm) complete the range.

The main benefits are:

- Can be used in tough environments
- Large text and push area
- Up to six contact blocks on one actuator
- Easy to mount and to wire

## Compact pilot devices

The exciting new family of Compact pilot devices is establishing new standards of performance. No matter what your application, the new range will improve your product and streamline your cost.

The all-in-one design makes everything easier; the entire functionality is condensed into one unit. You never need to match items together and each item has a single ordering number.

The Compact range consists of pushbuttons, including pushbuttons that can be used in emergency stop circuits, selector switches and pilot lights that include our new integrated LED style. These work in perfect harmony with the extensive Modular range since the front design is identical.

The main benefits are:

- Reliable and durable design
- Fast mounting
- Built in LED as an option
- Reduced inventory
- Low built-in depth

## 22mm or 30mm

ABB can provide products for 30mm applications by combining the modular or compact pilot devices with a 30mm adaptor.



## 8 Emergency stop devices

The Emergency stop pushbuttons from ABB fulfill the standard IEC 60 947-5-5. The product standard for electrical emergency stop devices with a mechanical latching function, IEC 60 947-5-5, verifies the demands from the Machine Directive and its reference standard EN 60204 (Safety of machinery).

By choosing our Emergency Stop pushbuttons, you can ensure personal safety in all installations.



## Signal Towers and Signal Beacons

ABB offers a wide range of signal devices with optical and audible signal elements up to five elements or by using a bracket for 2 sided mounting up to ten elements can be mounted.

## Accessories

There is a wide assortment of accessories including legend plates, bulbs/LEDs, special blocks, different shrouds and adaptors.

## Assembled stations and enclosures

Assembled pushbutton stations can be provided and are available in 1-, 2-, 3-, 4- or 6-seat Type 4X non-metallic enclosures. We can also provide other special assemblies upon request including metal enclosures.



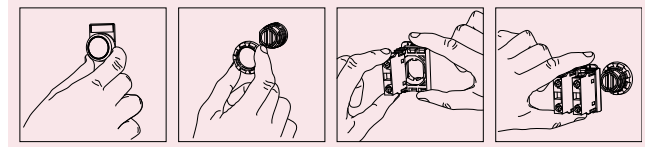
## Accessories

There is a wide assortment of accessories including legend plates, bulbs/LEDs, special blocks, different shrouds and adaptors.



## Fast and easy to install

All pilot devices are easy to install. Spring loaded tabs ensure that actuators and legend plates are in the correct position. Same actuator can be used in both 22mm notched or round holes.



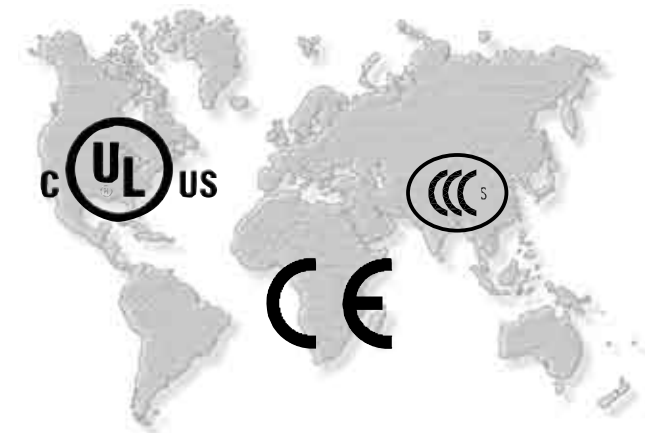
## Aesthetic – Functional – Flexible

The pilot devices have an aesthetic and functional design that withstands even the toughest environment. No additional protective boot is needed.

- Large text and push area, clear and visible markings for quick and easy handling.
- Different choices of bezels: black plastic or metal. A Grey plastic bezel can also be provided.
- Contacts provide a wiping action. The tips of the contacts rub against each other each time the contacts close thus forcing dust and oxide to the side providing a highly reliable electrical circuit. The NC block has a positive opening for high performance in safety circuits.

## Worldwide availability

ABB is represented in over 130 countries. Our pilot devices meet all major international and national standards.



# Alphanumeric

## 1SFA 611 930 R 1070 – KA1-8028

General  
information

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| 1SFA 611 930 R 1071 | 8.5      | 1SFA 616 901 R9016 | 8.64     | 1SFA 616 922 R1118 | 8.71     | C2SS210 -01  | 8.34     | CL-505R     | 8.35     |
| 1SFA 611 930 R 1072 | 8.5      | 1SFA 616 901 R9017 | 8.64     | 1SFA 616 922 R1148 | 8.71     | C2SS210 -02  | 8.34     | CL-505W     | 8.35     |
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| 1SFA 611 930 R 1075 | 8.5      | 1SFA 616 901 R9020 | 8.64     | 1SFA 616 923 R1148 | 8.7      | C2SS210 -20  | 8.34     | CL-513L     | 8.35     |
| 1SFA 611 930 R 1076 | 8.5      | 1SFA 616 901 R9021 | 8.64     | 1SFA616901R1019    | 8.63     | C2SS310 -01  | 8.34     | CL-513R     | 8.35     |
| 1SFA 611 930 R 1077 | 8.5      | 1SFA 616 901 R9022 | 8.64     | 1SFA616901R1020    | 8.63     | C2SS310 -02  | 8.34     | CL-513W     | 8.35     |
| 1SFA 611 930 R 1078 | 8.5      | 1SFA 616 901 R9023 | 8.64     | 1SFA616901R1025    | 8.63     | C2SS310 -10  | 8.34     | CL-513Y     | 8.35     |
| 1SFA 611 930 R 1079 | 8.5      | 1SFA 616 901 R9024 | 8.64     | 1SFA616901R1031    | 8.63     | C2SS310 -11  | 8.34     | CL-515G     | 8.35     |
| 1SFA 611 930 R 1080 | 8.51     | 1SFA 616 901 R9025 | 8.64     | 1SFA616901R1039    | 8.63     | C2SS310 -20  | 8.34     | CL-515L     | 8.35     |
| 1SFA 611 930 R 1081 | 8.51     | 1SFA 616 901 R9026 | 8.64     | 1SFA616901R1045    | 8.63     | C3SS110 -02  | 8.34     | CL-515R     | 8.35     |
| 1SFA 611 930 R 1082 | 8.51     | 1SFA 616 901 R9027 | 8.64     | 1SFA616901R1046    | 8.63     | C3SS110 -11  | 8.34     | CL-515W     | 8.35     |
| 1SFA 611 930 R 1083 | 8.51     | 1SFA 616 901 R9028 | 8.64     | 1SFA616901R1053    | 8.63     | C3SS110 -20  | 8.34     | CL-515Y     | 8.35     |
| 1SFA 611 930 R 1084 | 8.51     | 1SFA 616 902 R9002 | 8.64     | 1SFA616901R2030    | 8.63     | C3SS210 -02  | 8.34     | CL-520G     | 8.35     |
| 1SFA 611 930 R1000  | 8.65     | 1SFA 616 902 R9003 | 8.64     | 1SFA616901R9000    | 8.63     | C3SS210 -11  | 8.34     | CL-520L     | 8.35     |
| 1SFA 611 930 R1002  | 8.65     | 1SFA 616 902 R9004 | 8.64     | 1SFA616901R9036    | 8.63     | C3SS210 -20  | 8.34     | CL-520R     | 8.35     |
| 1SFA 611 930 R1003  | 8.65     | 1SFA 616 902 R9005 | 8.64     | 1SFA616902R1019    | 8.63     | C3SS310 -02  | 8.34     | CL-520W     | 8.35     |
| 1SFA 611 930 R1004  | 8.65     | 1SFA 616 902 R9006 | 8.64     | 1SFA616902R1020    | 8.63     | C3SS310 -11  | 8.34     | CL-520Y     | 8.35     |
| 1SFA 611 930 R1005  | 8.65     | 1SFA 616 902 R9011 | 8.64     | 1SFA616902R1025    | 8.63     | C3SS310 -20  | 8.34     | CL-523G     | 8.35     |
| 1SFA 611 930 R1006  | 8.65     | 1SFA 616 902 R9014 | 8.64     | 1SFA616902R1031    | 8.63     | C3SS710 -02  | 8.34     | CL-523L     | 8.35     |
| 1SFA 611 930 R1007  | 8.65     | 1SFA 616 902 R9015 | 8.64     | 1SFA616902R1040    | 8.63     | C3SS710 -11  | 8.34     | CL-523R     | 8.35     |
| 1SFA 611 930 R1008  | 8.65     | 1SFA 616 902 R9016 | 8.64     | 1SFA616902R2030    | 8.63     | C3SS710 -20  | 8.34     | CL-523W     | 8.35     |
| 1SFA 611 930 R1009  | 8.65     | 1SFA 616 902 R9017 | 8.64     | 1SFA616902R9000    | 8.63     | CA1-8075     | 8.38     | CL-523Y     | 8.35     |
| 1SFA 611 930 R1010  | 8.65     | 1SFA 616 902 R9018 | 8.64     | 1SFA616903R1019    | 8.63     | CA1-8076     | 8.37     | CL-530G     | 8.35     |
| 1SFA 611 930 R1011  | 8.65     | 1SFA 616 902 R9019 | 8.64     | 1SFA616903R1020    | 8.63     | CA1-8077     | 8.37     | CL-530L     | 8.35     |
| 1SFA 611 930 R1012  | 8.65     | 1SFA 616 902 R9020 | 8.64     | 1SFA616903R1025    | 8.63     | CA1-8078     | 8.37     | CL-530R     | 8.35     |
| 1SFA 611 930 R1013  | 8.65     | 1SFA 616 902 R9021 | 8.64     | 1SFA616903R1031    | 8.63     | CBK-XP       | 8.27     | CL-530W     | 8.35     |
| 1SFA 611 930 R1014  | 8.65     | 1SFA 616 902 R9022 | 8.64     | 1SFA616903R1039    | 8.63     | CBK-XPA      | 8.27     | CL-530Y     | 8.35     |
| 1SFA 611 930 R1015  | 8.65     | 1SFA 616 902 R9023 | 8.64     | 1SFA616903R2030    | 8.63     | CBK-XRG      | 8.27     | CL-541G     | 8.35     |
| 1SFA 611 930 R1016  | 8.65     | 1SFA 616 902 R9024 | 8.64     | 1SFA616903R9000    | 8.63     | CBK-XSWG     | 8.27     | CL-541L     | 8.35     |
| 1SFA 611 930 R1017  | 8.65     | 1SFA 616 902 R9025 | 8.64     | 1SFA616904R1047    | 8.63     | CBK-XSWL     | 8.27     | CL-541R     | 8.35     |
| 1SFA 611 930 R1018  | 8.65     | 1SFA 616 902 R9026 | 8.64     | 1SFA616905R1040    | 8.63     | CE3K1-10R-02 | 8.33     | CL-541W     | 8.35     |
| 1SFA 611 930 R1019  | 8.65     | 1SFA 616 902 R9027 | 8.64     | 1SFA616905R1047    | 8.63     | CE3K1-10R-11 | 8.33     | CL-541Y     | 8.35     |
| 1SFA 611 930 R1020  | 8.65     | 1SFA 616 902 R9028 | 8.64     | 1SFA616906R1039    | 8.63     | CE3P-10R-02  | 8.33     | CP110 -01   | 8.32     |
| 1SFA 611 930 R1021  | 8.65     | 1SFA 616 903 R9002 | 8.64     | 1SFA616906R1042    | 8.63     | CE3P-10R-11  | 8.33     | CP110 -02   | 8.32     |
| 1SFA 611 930 R1022  | 8.65     | 1SFA 616 903 R9003 | 8.64     | 1SFA616906R1043    | 8.63     | CE3T-10R-01  | 8.33     | CP110 -10   | 8.32     |
| 1SFA 611 930 R1023  | 8.65     | 1SFA 616 903 R9004 | 8.64     | 1SFA616906R1044    | 8.63     | CE3T-10R-02  | 8.33     | CP110 -11   | 8.32     |
| 1SFA 611 930 R1032  | 8.5      | 1SFA 616 903 R9005 | 8.64     | 1SFA616906R1045    | 8.63     | CE3T-10R-11  | 8.33     | CP110 -20   | 8.32     |
| 1SFA 611 930 R1033  | 8.5      | 1SFA 616 903 R9006 | 8.64     | 1SFA616906R1046    | 8.63     | CE3T-10R-20  | 8.33     | CP110W-10   | 8.32     |
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| 1SFA 611 930 R1036  | 8.5      | 1SFA 616 905 R9004 | 8.64     | 1SFA616906R1050    | 8.63     | CE4P-10R-02  | 8.33     | CP210 -02   | 8.32     |
| 1SFA 611 930 R1037  | 8.5      | 1SFA 616 906 R9002 | 8.64     | 1SFA616906R1051    | 8.63     | CE4P-10R-11  | 8.33     | CP210 -10   | 8.32     |
| 1SFA 611 930 R1038  | 8.5      | 1SFA 616 906 R9003 | 8.64     | 1SFA616906R1052    | 8.63     | CE4T-10R-01  | 8.33     | CP210 -11   | 8.32     |
| 1SFA 611 930 R1039  | 8.5      | 1SFA 616 906 R9011 | 8.64     | 1SFA616908R1030    | 8.63     | CE4T-10R-02  | 8.33     | CP210 -20   | 8.32     |
| 1SFA 611 930 R1040  | 8.5      | 1SFA 616 908 R9002 | 8.64     | 1SFA616908R1040    | 8.63     | CE4T-10R-11  | 8.33     | CP310 -01   | 8.32     |
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| 1SFA 611 930 R1042  | 8.5      | 1SFA 616 908 R9004 | 8.64     | 1SFA616908R1042    | 8.63     | CL-100C      | 8.35     | CP310 -10   | 8.32     |
| 1SFA 611 930 R1043  | 8.5      | 1SFA 616 908 R9005 | 8.64     | 1SFA616909R1040    | 8.63     | CL-100G      | 8.35     | CP310 -11   | 8.32     |
| 1SFA 611 930 R1044  | 8.5      | 1SFA 616 908 R9011 | 8.64     | 2154 373-1         | 8.18     | CL-100L      | 8.35     | CP310 -20   | 8.32     |
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| 1SFA 611 930 R1060  | 8.51     | 1SFA 616 908 R9014 | 8.64     | 2949 1469-2        | 8.63     | CL-100W      | 8.35     | CP410 -01   | 8.32     |
| 1SFA 611 930 R1061  | 8.51     | 1SFA 616 908 R9015 | 8.64     | 2949 1725-1        | 8.26     | CL-100Y      | 8.35     | CP410 -10   | 8.32     |
| 1SFA 611 930 R1062  | 8.51     | 1SFA 616 908 R9016 | 8.64     | 4950 512-1         | 8.25     | CL-501G      | 8.35     | CP410 -20   | 8.32     |
| 1SFA 611 930 R1063  | 8.51     | 1SFA 616 908 R9017 | 8.64     | 4950 512-2         | 8.25     | CL-501L      | 8.35     | K SB-306G   | 8.71     |
| 1SFA 611 930 R1064  | 8.51     | 1SFA 616 908 R9018 | 8.64     | 4950 512-3         | 8.25     | CL-501R      | 8.35     | K SB-306R   | 8.71     |
| 1SFA 616 105 R4016  | 8.18     | 1SFA 616 908 R9019 | 8.64     | 5396 0543-1        | 8.45     | CL-501W      | 8.35     | K SB-306Y   | 8.71     |
| 1SFA 616 105 R4026  | 8.18     | 1SFA 616 908 R9020 | 8.64     | 5911 086-11        | 8.36     | CL-501Y      | 8.35     | KA1-8002    | 8.25     |
| 1SFA 616 105 R4046  | 8.18     | 1SFA 616 908 R9021 | 8.64     | 5911 086-12        | 8.36     | CL-502G      | 8.35     | KA1-8002    | 8.37     |
| 1SFA 616 105 R4056  | 8.18     | 1SFA 616 908 R9022 | 8.64     | 5911 086-13        | 8.36     | CL-502L      | 8.35     | KA1-8005    | 8.2      |
| 1SFA 616 105 R4076  | 8.18     | 1SFA 616 908 R9023 | 8.64     | 5911 086-14        | 8.36     | CL-502R      | 8.35     | KA1-8010    | 8.25     |
| 1SFA 616 901 R9002  | 8.64     | 1SFA 616 908 R9024 | 8.64     | 5911 086-15        | 8.36     | CL-502W      | 8.35     | KA1-8010    | 8.37     |
| 1SFA 616 901 R9003  | 8.64     | 1SFA 616 908 R9025 | 8.64     | 5911 086-4         | 8.36     | CL-502Y      | 8.35     | KA1-8021    | 8.25     |
| 1SFA 616 901 R9004  | 8.64     | 1SFA 616 908 R9026 | 8.64     | 5911 086-5         | 8.36     | CL-504G      | 8.35     | KA1-8021    | 8.37     |
| 1SFA 616 901 R9005  | 8.64     | 1SFA 616 908 R9027 | 8.64     | 5911 086-7         | 8.36     | CL-504L      | 8.35     | KA1-8022    | 8.25     |
| 1SFA 616 901 R9006  | 8.64     | 1SFA 616 908 R9028 | 8.64     | C2SS110 -01        | 8.34     | CL-504R      | 8.35     | KA1-8022    | 8.37     |
| 1SFA 616 901 R9011  | 8.64     | 1SFA 616 915 R1005 | 8.52     | C2SS110 -02        | 8.34     | CL-504W      | 8.35     | KA1-8024    | 8.25     |
| 1SFA 616 901 R9012  | 8.64     | 1SFA 616 920 R8121 | 8.5      | C2SS110 -10        | 8.34     | CL-504Y      | 8.35     | KA1-8027    | 8.26     |
| 1SFA 616 901 R9014  | 8.64     | 1SFA 616 922 R1018 | 8.71     | C2SS110 -11        | 8.34     | CL-505G      | 8.35     | KA1-8028    | 8.26     |

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| KA1-8033    | 8.26     | KA2-2041    | 8.24     | KB1-4030    | 8.2      | KPR1-103G   | 8.19     | KTR1-1011   | 8.23     |
| KA1-8034    | 8.26     | KA2-2041    | 8.36     | KB1-4040    | 8.2      | KPR1-103W   | 8.19     | KTR1-1012   | 8.23     |
| KA1-8035    | 8.26     | KA2-2042    | 8.24     | KB1-4110    | 8.2      | KPR1-104B   | 8.19     | KTR1-1013   | 8.23     |
| KA1-8045    | 8.45     | KA2-2042    | 8.36     | KB1-4130    | 8.2      | KPR2-100B   | 8.19     | KTR1-1014   | 8.23     |
| KA1-8046    | 8.19     | KA2-2043    | 8.24     | KB1-4140    | 8.2      | KPR2-100R   | 8.19     | KTR1-2001   | 8.23     |
| KA1-8046MR  | 8.19     | KA2-2043    | 8.36     | KB70-1201   | 8.7      | KPR2-100W   | 8.19     | KTR1-2002   | 8.23     |
| KA1-8047    | 8.19     | KA2-2044    | 8.24     | KB70-3001   | 8.7      | KPR2-105B   | 8.19     | KTR1-2003   | 8.23     |
| KA1-8052    | 8.25     | KA2-2044    | 8.36     | KB70-3101   | 8.7      | KPR2-105R   | 8.19     | KTR1-2004   | 8.23     |
| KA1-8052    | 8.37     | KA2-2045    | 8.24     | KL70-113C   | 8.69     | KPR3-100B   | 8.19     | KTR1-2005   | 8.23     |
| KA1-8053    | 8.25     | KA2-2045    | 8.36     | KL70-113G   | 8.69     | KPR3-100G   | 8.19     | KTR1-2011   | 8.23     |
| KA1-8072    | 8.25     | KA2-2051    | 8.24     | KL70-113L   | 8.69     | KPR3-100L   | 8.19     | KTR1-2012   | 8.23     |
| KA1-8072    | 8.37     | KA2-2051    | 8.36     | KL70-113R   | 8.69     | KPR3-100R   | 8.19     | KTR1-2013   | 8.23     |
| KA1-8073    | 8.26     | KA2-2052    | 8.24     | KL70-113Y   | 8.69     | KPR3-100W   | 8.19     | KTR1-2014   | 8.23     |
| KA1-8073    | 8.38     | KA2-2052    | 8.36     | KL70-123C   | 8.69     | KPR3-100Y   | 8.19     | M2SS1-10B   | 8.12     |
| KA1-8074    | 8.26     | KA2-2053    | 8.24     | KL70-123G   | 8.69     | KPR3-101L   | 8.19     | M2SS1-10R   | 8.12     |
| KA1-8077    | 8.25     | KA2-2053    | 8.36     | KL70-123L   | 8.69     | KPR3-101W   | 8.19     | M2SS1-10U   | 8.12     |
| KA1-8079    | 8.25     | KA2-2054    | 8.24     | KL70-123R   | 8.69     | KPR3-102W   | 8.19     | M2SS1-11C   | 8.14     |
| KA1-8079    | 8.37     | KA2-2054    | 8.36     | KL70-123Y   | 8.69     | KPR3-103G   | 8.19     | M2SS1-11G   | 8.14     |
| KA1-8080    | 8.25     | KA2-2055    | 8.24     | KL70-203C   | 8.69     | KPR3-103W   | 8.19     | M2SS1-11L   | 8.14     |
| KA1-8081    | 8.26     | KA2-2055    | 8.36     | KL70-203G   | 8.69     | KPR3-104B   | 8.19     | M2SS1-11R   | 8.14     |
| KA1-8082    | 8.26     | KA2-2131    | 8.24     | KL70-203L   | 8.69     | KPR3-104BMR | 8.19     | M2SS1-11Y   | 8.14     |
| KA1-8083    | 8.26     | KA2-2131    | 8.36     | KL70-203R   | 8.69     | KPR4-100B   | 8.19     | M2SS2-10B   | 8.12     |
| KA1-8084    | 8.26     | KA2-2132    | 8.24     | KL70-203Y   | 8.69     | KPR4-100R   | 8.19     | M2SS2-10R   | 8.12     |
| KA1-8085    | 8.26     | KA2-2132    | 8.36     | KL70-302C   | 8.69     | KPR4-100W   | 8.19     | M2SS2-10U   | 8.12     |
| KA1-8086    | 8.26     | KA2-2133    | 8.24     | KL70-302G   | 8.69     | KPR4-105B   | 8.19     | M2SS2-11C   | 8.14     |
| KA1-8087    | 8.26     | KA2-2133    | 8.36     | KL70-302L   | 8.69     | KPR4-105R   | 8.19     | M2SS2-11G   | 8.14     |
| KA1-8087    | 8.37     | KA2-2134    | 8.24     | KL70-302R   | 8.69     | KS70-1104   | 8.7      | M2SS2-11L   | 8.14     |
| KA1-8088    | 8.26     | KA2-2134    | 8.36     | KL70-302Y   | 8.69     | KS70-1204   | 8.7      | M2SS2-11R   | 8.14     |
| KA1-8091    | 8.26     | KA2-2135    | 8.24     | KL70-305C   | 8.69     | KS70-2002   | 8.7      | M2SS2-11Y   | 8.14     |
| KA1-8092    | 8.26     | KA2-2135    | 8.36     | KL70-305C   | 8.69     | KS70-2004   | 8.7      | M2SS3-10B   | 8.12     |
| KA1-8093    | 8.26     | KA2-2141    | 8.24     | KL70-305C   | 8.69     | KS70-3004   | 8.7      | M2SS3-10R   | 8.12     |
| KA1-8094    | 8.26     | KA2-2141    | 8.36     | KL70-305G   | 8.69     | KSB-113C    | 8.71     | M2SS3-10U   | 8.12     |
| KA1-8095    | 8.26     | KA2-2142    | 8.24     | KL70-305L   | 8.69     | KSB-113G    | 8.71     | M2SS3-11C   | 8.14     |
| KA1-8096    | 8.26     | KA2-2142    | 8.36     | KL70-305L   | 8.69     | KSB-113L    | 8.71     | M2SS3-11G   | 8.14     |
| KA1-8097    | 8.37     | KA2-2143    | 8.24     | KL70-305L   | 8.69     | KSB-113R    | 8.71     | M2SS3-11L   | 8.14     |
| KA1-8098    | 8.26     | KA2-2143    | 8.36     | KL70-305R   | 8.69     | KSB-113Y    | 8.71     | M2SS3-11R   | 8.14     |
| KA1-8101    | 8.26     | KA2-2144    | 8.24     | KL70-305Y   | 8.69     | KSB-123C    | 8.71     | M2SS3-11Y   | 8.14     |
| KA1-8102    | 8.26     | KA2-2144    | 8.36     | KL70-306G   | 8.69     | KSB-123G    | 8.71     | M2SS4-10B   | 8.12     |
| KA1-8103    | 8.26     | KA2-2145    | 8.24     | KL70-306R   | 8.69     | KSB-123L    | 8.71     | M2SS4-10R   | 8.12     |
| KA1-8104    | 8.26     | KA2-2145    | 8.36     | KL70-306Y   | 8.69     | KSB-123R    | 8.71     | M2SS4-10U   | 8.12     |
| KA1-8105    | 8.26     | KA2-2221    | 8.24     | KL70-307G   | 8.69     | KSB-123Y    | 8.71     | M2SS4-11C   | 8.14     |
| KA1-8108    | 8.26     | KA2-2221    | 8.36     | KL70-307R   | 8.69     | KSB-203C    | 8.71     | M2SS4-11G   | 8.14     |
| KA1-8111    | 8.26     | KA2-2222    | 8.24     | KL70-307Y   | 8.69     | KSB-203G    | 8.71     | M2SS4-11L   | 8.14     |
| KA1-8112    | 8.26     | KA2-2222    | 8.36     | KL70-312C   | 8.69     | KSB-203L    | 8.71     | M2SS4-11R   | 8.14     |
| KA1-8113    | 8.26     | KA2-2223    | 8.24     | KL70-312G   | 8.69     | KSB-203R    | 8.71     | M2SS4-11Y   | 8.14     |
| KA1-8114    | 8.26     | KA2-2223    | 8.36     | KL70-312L   | 8.69     | KSB-203Y    | 8.71     | M2SS5-10B   | 8.12     |
| KA1-8115    | 8.26     | KA2-2224    | 8.24     | KL70-312R   | 8.69     | KSB-305G    | 8.71     | M2SS5-10R   | 8.12     |
| KA1-8118    | 8.26     | KA2-2224    | 8.36     | KL70-312Y   | 8.69     | KSB-305R    | 8.71     | M2SS5-10U   | 8.12     |
| KA1-8124    | 8.25     | KA2-2225    | 8.24     | KL70-322C   | 8.69     | KSB-305Y    | 8.71     | M2SS5-11C   | 8.14     |
| KA1-8124    | 8.37     | KA2-2225    | 8.36     | KL70-322G   | 8.69     | KSB-307G    | 8.71     | M2SS5-11G   | 8.14     |
| KA2-2011    | 8.24     | KA4-1021    | 8.7      | KL70-322L   | 8.69     | KSB-307R    | 8.71     | M2SS5-11L   | 8.14     |
| KA2-2011    | 8.36     | KA4-1022    | 8.7      | KL70-322R   | 8.69     | KSB-307Y    | 8.71     | M2SS5-11R   | 8.14     |
| KA2-2012    | 8.24     | KA4-1023    | 8.7      | KL70-322Y   | 8.69     | KSB-401C    | 8.71     | M2SS5-11Y   | 8.14     |
| KA2-2012    | 8.36     | KA4-1024    | 8.7      | KL70-401C   | 8.69     | KSB-401G    | 8.71     | M2SS6-10B   | 8.12     |
| KA2-2013    | 8.24     | KA4-1025    | 8.7      | KL70-401G   | 8.69     | KSB-401L    | 8.71     | M2SS6-10R   | 8.12     |
| KA2-2013    | 8.36     | KA70-1001   | 8.7      | KL70-401L   | 8.69     | KSB-401R    | 8.71     | M2SS6-10U   | 8.12     |
| KA2-2014    | 8.24     | KA70-1002   | 8.7      | KL70-401R   | 8.69     | KSB-401Y    | 8.71     | M2SS6-11C   | 8.14     |
| KA2-2014    | 8.36     | KA70-1011   | 8.7      | KL70-401Y   | 8.69     | KT-100B     | 8.21     | M2SS6-11G   | 8.14     |
| KA2-2015    | 8.24     | KA70-1012   | 8.7      | KP6-40B     | 8.18     | KT-105B     | 8.21     | M2SS6-11L   | 8.14     |
| KA2-2015    | 8.36     | KA70-1013   | 8.7      | KP6-40G     | 8.18     | KT-110B     | 8.21     | M2SS6-11R   | 8.14     |
| KA2-2021    | 8.24     | KA70-1021   | 8.7      | KP6-40R     | 8.18     | KT-300B     | 8.21     | M2SS6-11Y   | 8.14     |
| KA2-2021    | 8.36     | KA70-1022   | 8.7      | KPR1-100B   | 8.19     | KT-305B     | 8.21     | M2SSK1-10   | 8.16     |
| KA2-2022    | 8.24     | KA70-1031   | 8.7      | KPR1-100G   | 8.19     | KT-310B     | 8.21     | M2SSK2-10   | 8.16     |
| KA2-2022    | 8.36     | KA70-1032   | 8.7      | KPR1-100L   | 8.19     | KT70-1001   | 8.7      | M2SSK3-10   | 8.16     |

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| M2SSV1-11R  | 8.46     | M3SS8-10U   | 8.13     | MCBH-00     | 8.5      | MCBH-111    | 8.14     | MP1-MLPT    | 8.9      |
| M2SSV1-11Y  | 8.46     | M3SS8-11C   | 8.15     | MCBH-00     | 8.6      | MCBH-111    | 8.22     | MP1-MLRPT1  | 8.9      |
| M2SSV2-10B  | 8.46     | M3SS8-11G   | 8.15     | MCBH-00     | 8.7      | MCBH-12     | 8.22     | MP1-MLRPT2  | 8.9      |
| M2SSV2-10R  | 8.46     | M3SS8-11L   | 8.15     | MCBH-00     | 8.8      | MCBH-20     | 8.4      | MP1-MLTPN2  | 8.9      |
| M2SSV2-11G  | 8.46     | M3SS8-11R   | 8.15     | MCBH-00     | 8.1      | MCBH-20     | 8.6      | MP1-MLTPT1  | 8.9      |
| M2SSV2-11R  | 8.46     | M3SS8-11Y   | 8.15     | MCBH-00     | 8.11     | MCBH-20     | 8.1      | MP1-MLTPT2  | 8.9      |
| M2SSV2-11Y  | 8.46     | M3SSK1-10   | 8.16     | MCBH-00     | 8.12     | MCBH-20     | 8.11     | MP1-MLTPT3  | 8.9      |
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| M2SSV3-11Y  | 8.46     | M3SSV1-10B  | 8.47     | MCBH-00     | 8.22     | MCBH-20     | 8.22     | MP1-MLTPTL1 | 8.9      |
| M3SS1-10B   | 8.13     | M3SSV1-10R  | 8.47     | MCBH-001    | 8.2      | MCBH-201    | 8.5      | MP1-MLTPTL2 | 8.9      |
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| M3SS4-10U   | 8.13     | MCB-01      | 8.14     | MCBH-021    | 8.8      | MLB-1       | 8.1      | MP3-11W     | 8.5      |
| M3SS4-11C   | 8.15     | MCB-01      | 8.16     | MCBH-021    | 8.1      | MLB-1       | 8.11     | MP3-11Y     | 8.5      |
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| M3SS5-11R   | 8.15     | MCB-10      | 8.6      | MCBH-10     | 8.22     | MP1-10C     | 8.4      | MP4-11R     | 8.5      |
| M3SS5-11Y   | 8.15     | MCB-10      | 8.7      | MCBH-101    | 8.5      | MP1-10G     | 8.4      | MP4-11W     | 8.5      |
| M3SS6-10B   | 8.13     | MCB-10      | 8.8      | MCBH-101    | 8.1      | MP1-10L     | 8.4      | MP4-11Y     | 8.5      |
| M3SS6-10R   | 8.13     | MCB-10      | 8.1      | MCBH-101    | 8.11     | MP1-10R     | 8.4      | MPD1-11B    | 8.6      |
| M3SS6-10U   | 8.13     | MCB-10      | 8.11     | MCBH-101    | 8.14     | MP1-10W     | 8.4      | MPD1-11C    | 8.7      |
| M3SS6-11C   | 8.15     | MCB-10      | 8.12     | MCBH-101    | 8.22     | MP1-10Y     | 8.4      | MPD1-11G    | 8.7      |
| M3SS6-11G   | 8.15     | MCB-10      | 8.13     | MCBH-11     | 8.4      | MP1-11C     | 8.5      | MPD1-11R    | 8.7      |
| M3SS6-11L   | 8.15     | MCB-10      | 8.14     | MCBH-11     | 8.6      | MP1-11G     | 8.5      | MPD1-11Y    | 8.7      |
| M3SS6-11R   | 8.15     | MCB-10      | 8.16     | MCBH-11     | 8.1      | MP1-11L     | 8.5      | MPD12-11B   | 8.6      |
| M3SS6-11Y   | 8.15     | MCB-10      | 8.17     | MCBH-11     | 8.11     | MP1-11R     | 8.5      | MPD12-11C   | 8.8      |
| M3SS7-10B   | 8.13     | MCB-10      | 8.18     | MCBH-11     | 8.12     | MP1-11W     | 8.5      | MPD12-11G   | 8.8      |
| M3SS7-10R   | 8.13     | MCB-10      | 8.22     | MCBH-11     | 8.13     | MP1-11Y     | 8.5      | MPD12-11R   | 8.8      |
| M3SS7-10U   | 8.13     | MCB-10B     | 8.45     | MCBH-11     | 8.16     | MP1-MLFPT1  | 8.9      | MPD12-11Y   | 8.8      |
| M3SS7-11C   | 8.15     | MCB-10BG    | 8.45     | MCBH-11     | 8.17     | MP1-MLFPT6  | 8.9      | MPD13-11B   | 8.6      |
| M3SS7-11G   | 8.15     | MCB-10G     | 8.22     | MCBH-11     | 8.22     | MP1-MLFPT7  | 8.9      | MPD13-11C   | 8.8      |
| M3SS7-11L   | 8.15     | MCB-11      | 8.22     | MCBH-111    | 8.5      | MP1-MLFPT8  | 8.9      | MPD13-11G   | 8.8      |
| M3SS7-11R   | 8.15     | MCB-11B     | 8.45     | MCBH-111    | 8.7      | MP1-MLFPT9  | 8.9      | MPD13-11R   | 8.8      |

8

# Alphanumeric

## MPD13-11Y – SK 616 021-73

| Catalog No. | Page No. | Catalog No.   | Page No. | Catalog No.   | Page No. | Catalog No.   | Page No. |
|-------------|----------|---------------|----------|---------------|----------|---------------|----------|
| MPD13-11Y   | 8.8      | MPM1-11Y      | 8.1      | MP-NPE29W-03  | 8.57     | SK 615 552-29 | 8.53     |
| MPD14-11B   | 8.6      | MPM2-10B      | 8.1      | MP-NPE29W-04  | 8.57     | SK 615 552-30 | 8.53     |
| MPD14-11C   | 8.8      | MPM2-10R      | 8.1      | MP-NPE29W-05  | 8.57     | SK 615 552-31 | 8.53     |
| MPD14-11G   | 8.8      | MPM2-10Y      | 8.1      | MP-NPE29W-06  | 8.57     | SK 615 552-32 | 8.53     |
| MPD14-11R   | 8.8      | MPM2-11R      | 8.1      | MP-NPE29W-07  | 8.57     | SK 615 552-39 | 8.53     |
| MPD14-11Y   | 8.8      | MPM2-11Y      | 8.1      | MTS1-10B      | 8.17     | SK 615 552-40 | 8.53     |
| MPD15-11B   | 8.6      | MPMP3-10R     | 8.11     | MTS1-30B      | 8.17     | SK 615 552-52 | 8.54     |
| MPD15-11C   | 8.8      | MPMP3-11R     | 8.11     | MTS2-10B      | 8.17     | SK 615 552-53 | 8.54     |
| MPD15-11G   | 8.8      | MPMP4-10R     | 8.11     | MTS2-30B      | 8.17     | SK 615 552-55 | 8.54     |
| MPD15-11R   | 8.8      | MPMP4-11R     | 8.11     | MTS3-10B      | 8.17     | SK 615 552-60 | 8.55     |
| MPD15-11Y   | 8.8      | MPMT3-10R     | 8.11     | MTS3-30B      | 8.17     | SK 615 562-12 | 8.53     |
| MPD16-11B   | 8.6      | MPMT3-11R     | 8.11     | P1-1ES        | 8.42     | SK 615 562-18 | 8.53     |
| MPD16-11C   | 8.8      | MPMT4-10R     | 8.11     | P1-ES         | 8.42     | SK 615 562-27 | 8.53     |
| MPD16-11G   | 8.8      | MPMT4-11R     | 8.11     | P1-HOA        | 8.42     | SK 615 562-72 | 8.54     |
| MPD16-11R   | 8.8      | MP-NP19-01    | 8.56     | P2-1HOARL     | 8.42     | SK 615 562-82 | 8.55     |
| MPD16-11Y   | 8.8      | MP-NP19-02    | 8.56     | P2-1OORL      | 8.42     | SK 615 562-83 | 8.55     |
| MPD17-11B   | 8.6      | MP-NP19-03    | 8.56     | P2-SS         | 8.42     | SK 615 562-87 | 8.21     |
| MPD17-11C   | 8.8      | MP-NP19-04    | 8.57     | P3-1ESHOARL   | 8.42     | SK 615 562-88 | 8.21     |
| MPD17-11G   | 8.8      | MP-NP19-05    | 8.57     | P3-1HOARLGL   | 8.42     | SK 615 998-1  | 8.52     |
| MPD17-11R   | 8.8      | MP-NPE28-01   | 8.57     | P3-1HOASRL    | 8.42     | SK 615 998-2  | 8.52     |
| MPD17-11Y   | 8.8      | MP-NPE28-02   | 8.57     | P3-1OORLGL    | 8.42     | SK 615 998-3  | 8.52     |
| MPD18-11B   | 8.6      | MP-NPE28-03   | 8.57     | P3-1SSRL      | 8.42     | SK 615 998-4  | 8.52     |
| MPD18-11C   | 8.8      | MP-NPE28-04   | 8.57     | P4-1ESHOARLGL | 8.43     | SK 615 998-5  | 8.52     |
| MPD18-11G   | 8.8      | MP-NPE28-05   | 8.57     | P4-1ESOORLGL  | 8.43     | SK 616 016-2  | 8.37     |
| MPD18-11R   | 8.8      | MP-NPE28-06   | 8.57     | P4-1ESSSRL    | 8.43     | SK 616 021-71 | 8.26     |
| MPD18-11Y   | 8.8      | MP-NPE28-07   | 8.57     | P4-1HOARLYLGL | 8.43     | SK 616 021-71 | 8.38     |
| MPD19-11B   | 8.6      | MP-NPE28B-01  | 8.57     | P4-1HOASRLGL  | 8.43     | SK 616 021-72 | 8.26     |
| MPD19-11C   | 8.8      | MP-NPE28B-02  | 8.57     | P4-1OORLYLGL  | 8.43     | SK 616 021-73 | 8.26     |
| MPD19-11G   | 8.8      | MP-NPE28B-03  | 8.57     | P4-1SSRLGL    | 8.43     |               |          |
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| MPD2-11Y    | 8.7      | MP-NPE28BA-03 | 8.57     | SK 615 545-3  | 8.52     |               |          |
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| MPD3-11Y    | 8.7      | MP-NPE28W-01  | 8.57     | SK 615 546-2  | 8.52     |               |          |
| MPD4-11B    | 8.6      | MP-NPE28W-016 | 8.57     | SK 615 546-3  | 8.52     |               |          |
| MPD4-11C    | 8.7      | MP-NPE28W-02  | 8.57     | SK 615 546-4  | 8.52     |               |          |
| MPD4-11G    | 8.7      | MP-NPE28W-03  | 8.57     | SK 615 546-5  | 8.52     |               |          |
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| MPD4-11Y    | 8.7      | MP-NPE28W-05  | 8.57     | SK 615 546-8  | 8.52     |               |          |
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| MPD7-11R    | 8.7      | MP-NPE29B-06  | 8.57     | SK 615 552-16 | 8.53     |               |          |
| MPD7-11Y    | 8.7      | MP-NPE29B-07  | 8.57     | SK 615 552-17 | 8.53     |               |          |
| MPD8-11B    | 8.6      | MP-NPE29BA-01 | 8.57     | SK 615 552-18 | 8.53     |               |          |
| MPD8-11C    | 8.7      | MP-NPE29BA-02 | 8.57     | SK 615 552-20 | 8.53     |               |          |
| MPD8-11G    | 8.7      | MP-NPE29BA-03 | 8.57     | SK 615 552-21 | 8.53     |               |          |
| MPD8-11R    | 8.7      | MP-NPE29BA-04 | 8.57     | SK 615 552-22 | 8.53     |               |          |
| MPD8-11Y    | 8.7      | MP-NPE29BA-05 | 8.57     | SK 615 552-23 | 8.53     |               |          |
| MPM1-10B    | 8.1      | MP-NPE29BA-06 | 8.57     | SK 615 552-24 | 8.53     |               |          |
| MPM1-10R    | 8.1      | MP-NPE29BA-07 | 8.57     | SK 615 552-25 | 8.53     |               |          |
| MPM1-10Y    | 8.1      | MP-NPE29W-01  | 8.57     | SK 615 552-27 | 8.53     |               |          |
| MPM1-11R    | 8.1      | MP-NPE29W-02  | 8.57     | SK 615 552-28 | 8.53     |               |          |



### General construction

- Snap-on feature reduces installation time
- Bezels: Black plastic, chrome metal. Grey plastic available as an option
- Contact block holder features rear mounting with quick-release locking mechanism for high security
- Buttons available in several colors
- Engraved text caps available
- Custom-specific markings on request
- UL File# E57057
- CSA File# LR19700

### Operators

- Pushbuttons, illuminated and non-illuminated
- Double pushbuttons, illuminated and non-illuminated
- Mushroom pushbuttons, illuminated and non-illuminated, Ø 40 mm and Ø 60 mm
- Emergency stop pushbuttons, illuminated and non-illuminated, twist or pull release
- Selector switches, illuminated and non-illuminated, 2 or 3 position, short or long handle
- Key operated selector switches, 2 or 3 position
- Toggle switches, 2 or 3 position

### Pilot lights

- Full voltage, resistor and transformer
- LED & filament bulbs available for illuminated pushbuttons and pilot lights

### Contact blocks

- Quick-mount, quick-release contact block holder for fast and easy assembly
- NO & NC contact blocks are color coded for easy identification: Green = NO, Red = NC
- Silver tipped contacts
- Wiping action for high reliability
- Low energy gold plated contact blocks
- Base mounted contact blocks which snap onto a 35 mm DIN rail or into a plastic enclosure
- Contact block holder for three or five blocks in a single row

### Additional products

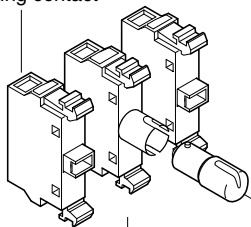
- Buzzer, continuous and pulsating
- 5 kΩ and 10 kΩ potentiometers
- Definite purpose pushbuttons
- Reset pushbuttons
- Broad range of accessories

## Mounting

### Exploded view

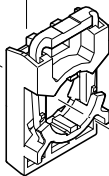
#### Contact block

Single pole with making or breaking contact

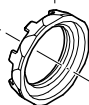


#### Holder

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

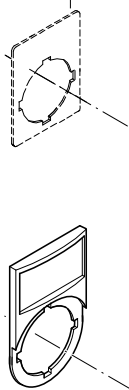


#### Nut



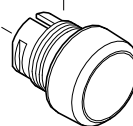
#### Legend plates

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.



#### Legend plate holder

Of black plastic. Insert of brushed aluminum. Please, see the chapter 'legend plates' for more information.



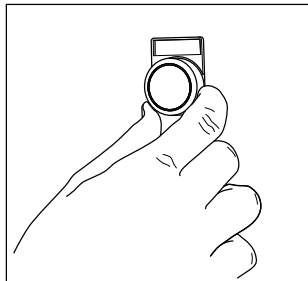
#### Bezels

Pushbuttons, selector switches and toggle switches with bezel in black plastic, chrome metal are available.

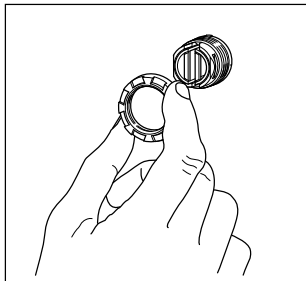
#### Lamp block

Illuminated pushbuttons, illuminated selector switches and pilot lights have a lamp block in the center position of the holder.

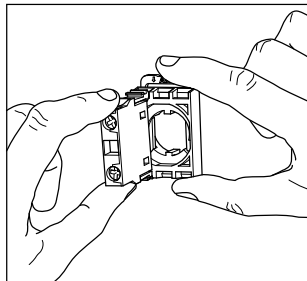
### Easy to mount



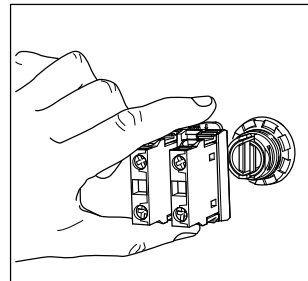
The operator is to be inserted from the front.....



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

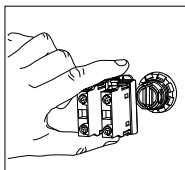
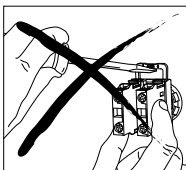


The contact blocks/lamp block are then snapped on to the holder...



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

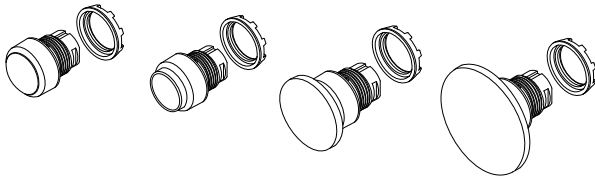
### ...and to remove



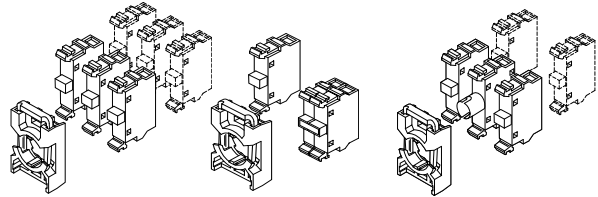
Press down the spring on the holder and pull the holder from the actuator.

# Selection Guide

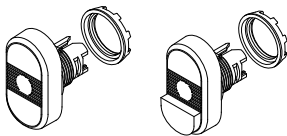
## Pushbuttons and Mushroom pushbuttons



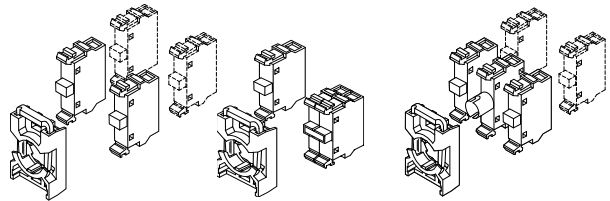
### Contact block/lamp block combinations



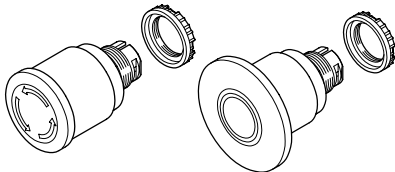
## Double pushbuttons



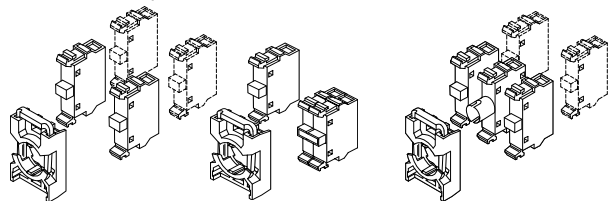
### Contact block/lamp block combinations



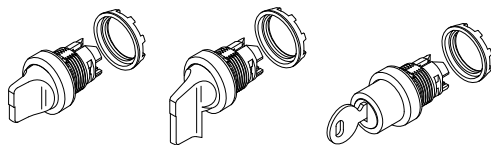
## Emergency stop pushbuttons



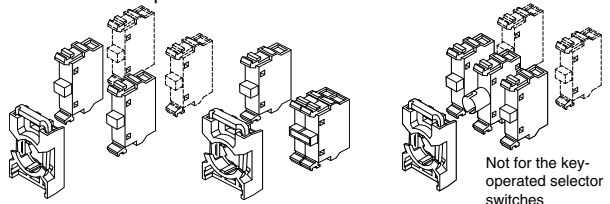
### Contact block/lamp block combinations



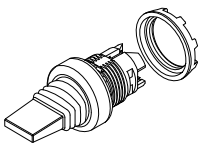
## Selector switches



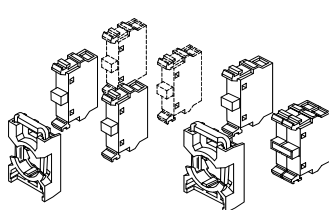
### Contact block/lamp block combinations



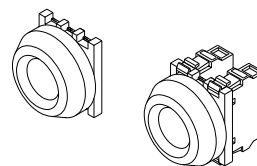
## Toggle switches



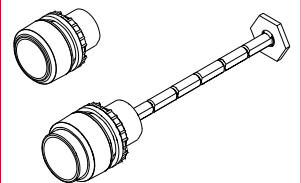
### Contact block combinations



## Definite purpose push-buttons

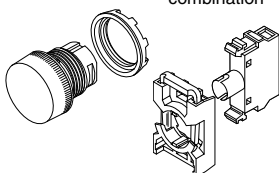


## Reset pushbuttons



## Pilot lights

Lamp block combination



## Buzzers



## Potentiometers

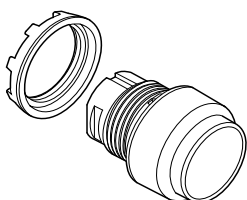
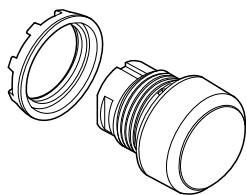


## Flush and extended pushbuttons

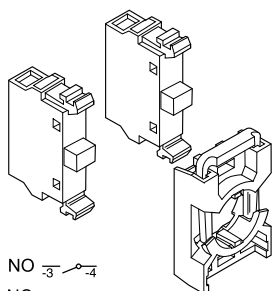
### Non-illuminated

### Momentary and maintained

8



Bezel in black plastic as standard  
Bezel in metal:  
Replace '1' in the:  
Cat No. MPX-1 0X  
Ref Code 1SFA 611XXX R 1XXX  
3 for metal bezel  
4 for grey plastic



NO  $\frac{3}{-}$   $\frac{4}{-}$   
NC  $\frac{1}{-}$   $\frac{2}{-}$

#### Operator ...

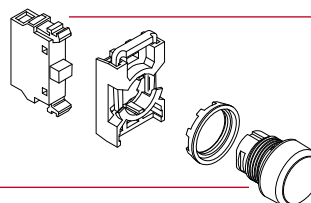
| Description          | Catalog No. | Ref. Code          | List Price |
|----------------------|-------------|--------------------|------------|
| with flush button    |             |                    |            |
| Momentary            |             |                    |            |
| Red                  | MP1-10R     | 1SFA 611 100 R1001 | \$ 6.10    |
| Green                | MP1-10G     | 1SFA 611 100 R1002 |            |
| Yellow               | MP1-10Y     | 1SFA 611 100 R1003 |            |
| Blue                 | MP1-10L     | 1SFA 611 100 R1004 |            |
| White                | MP1-10W     | 1SFA 611 100 R1005 |            |
| Black                | MP1-10B     | 1SFA 611 100 R1006 |            |
| Clear                | MP1-10C     | 1SFA 611 100 R1008 |            |
| Maintained ⓘ         |             |                    |            |
| Red                  | MP2-10R     | 1SFA 611 101 R1001 | 17.30      |
| Green                | MP2-10G     | 1SFA 611 101 R1002 |            |
| Yellow               | MP2-10Y     | 1SFA 611 101 R1003 |            |
| Blue                 | MP2-10L     | 1SFA 611 101 R1004 |            |
| White                | MP2-10W     | 1SFA 611 101 R1005 |            |
| Black                | MP2-10B     | 1SFA 611 101 R1006 |            |
| Clear                | MP2-10C     | 1SFA 611 101 R1008 |            |
| with extended button |             |                    |            |
| Momentary            |             |                    |            |
| Red                  | MP3-10R     | 1SFA 611 102 R1001 | 6.10       |
| Green                | MP3-10G     | 1SFA 611 102 R1002 |            |
| Yellow               | MP3-10Y     | 1SFA 611 102 R1003 |            |
| Blue                 | MP3-10L     | 1SFA 611 102 R1004 |            |
| White                | MP3-10W     | 1SFA 611 102 R1005 |            |
| Black                | MP3-10B     | 1SFA 611 102 R1006 |            |
| Clear                | MP3-10C     | 1SFA 611 102 R1008 |            |
| Maintained ⓘ         |             |                    |            |
| Red                  | MP4-10R     | 1SFA 611 103 R1001 | 17.30      |
| Green                | MP4-10G     | 1SFA 611 103 R1002 |            |
| Yellow               | MP4-10Y     | 1SFA 611 103 R1003 |            |
| Blue                 | MP4-10L     | 1SFA 611 103 R1004 |            |
| White                | MP4-10W     | 1SFA 611 103 R1005 |            |
| Black                | MP4-10B     | 1SFA 611 103 R1006 |            |
| Clear                | MP4-10C     | 1SFA 611 103 R1008 |            |

#### Contact blocks, and holder

| Blocks                  | Catalog No. | Ref. Code          | List Price |
|-------------------------|-------------|--------------------|------------|
| 1 NO with holder        | MCBH-10     | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder        | MCBH-01     | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder        | MCBH-20     | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder        | MCBH-02     | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder | MCBH-11     | 1SFA 611 605 R1111 | 18.00      |
| 1 NO without holder     | MCB-10      | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder     | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| Holder for 3 blocks     | MCBH-00     | 1SFA 611 605 R1100 | 2.00       |

#### Ordering example

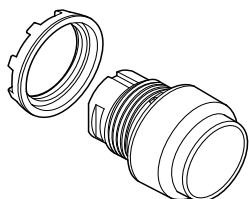
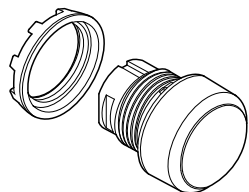
Requested: A modular pushbutton, momentary,  
with red flush button and one NO contact.  
Ref.: 1 piece of MP1-10R + 1 piece of MCBH-10



① No contact block in the center position

# Flush and extended pushbuttons Illuminated Momentary and maintained

Bulb max 1.2 W



Bezel in black plastic as standard

Bezel in metal:

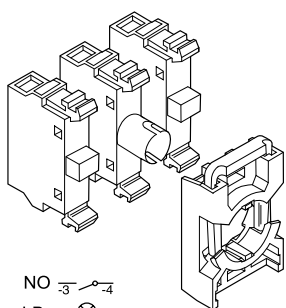
Replace '1' in the:

Catalog No. MPX-1 0X

Ref. Code 1SFA611XXX R 1XXX

3 for metal bezel

4 for grey plastic bezel


NO  $\frac{3}{-}$   $\frac{4}{-}$   
LB  $\frac{X1}{\otimes}$   $\frac{X2}{\otimes}$   
NC  $\frac{1}{-}$   $\frac{2}{-}$ 

## Operator ...

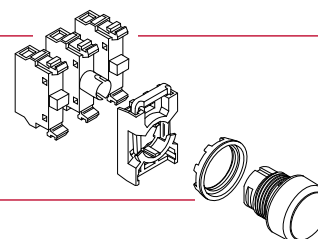
| Description                 | Catalog No. | Ref. Code          | List Price |
|-----------------------------|-------------|--------------------|------------|
| <b>with flush button</b>    |             |                    |            |
| <b>Momentary ①</b>          |             |                    |            |
| Red                         | MP1-11R     | 1SFA 611 100 R1101 | \$ 6.10    |
| Green                       | MP1-11G     | 1SFA 611 100 R1102 |            |
| Yellow                      | MP1-11Y     | 1SFA 611 100 R1103 |            |
| Blue                        | MP1-11L     | 1SFA 611 100 R1104 |            |
| White                       | MP1-11W     | 1SFA 611 100 R1105 |            |
| Clear                       | MP1-11C     | 1SFA 611 100 R1108 |            |
| <b>Maintained ①③</b>        |             |                    |            |
| Red                         | MP2-11R     | 1SFA 611 101 R1101 | 17.30      |
| Green                       | MP2-11G     | 1SFA 611 101 R1102 |            |
| Yellow                      | MP2-11Y     | 1SFA 611 101 R1103 |            |
| Blue                        | MP2-11L     | 1SFA 611 101 R1104 |            |
| White                       | MP2-11W     | 1SFA 611 101 R1105 |            |
| Clear                       | MP2-11C     | 1SFA 611 101 R1108 |            |
| <b>with extended button</b> |             |                    |            |
| <b>Momentary ①</b>          |             |                    |            |
| Red                         | MP3-11R     | 1SFA 611 102 R1101 | 6.10       |
| Green                       | MP3-11G     | 1SFA 611 102 R1102 |            |
| Yellow                      | MP3-11Y     | 1SFA 611 102 R1103 |            |
| Blue                        | MP3-11L     | 1SFA 611 102 R1104 |            |
| White                       | MP3-11W     | 1SFA 611 102 R1105 |            |
| Clear                       | MP3-11C     | 1SFA 611 102 R1108 |            |
| <b>Maintained ①③</b>        |             |                    |            |
| Red                         | MP4-11R     | 1SFA 611 103 R1101 | 17.30      |
| Green                       | MP4-11G     | 1SFA 611 103 R1102 |            |
| Yellow                      | MP4-11Y     | 1SFA 611 103 R1003 |            |
| Blue                        | MP4-11L     | 1SFA 611 103 R1004 |            |
| White                       | MP4-11W     | 1SFA 611 103 R1005 |            |
| Clear                       | MP4-11C     | 1SFA 611 103 R1108 |            |

## Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No. | Ref. Code          | List Price |
|-------------------------------------------------|-------------|--------------------|------------|
| 1 NO + 1 LB with holder                         | MCBH-101    | 1SFA 611 605 R1201 | \$ 27.50   |
| 1 NC + 1 LB with holder                         | MCBH-011    | 1SFA 611 605 R1210 | 27.50      |
| 2 NO + 1 LB with holder                         | MCBH-201    | 1SFA 611 605 R1202 | 35.50      |
| 2 NC + 1 LB with holder                         | MCBH-021    | 1SFA 611 605 R1220 | 35.50      |
| 1 NO + 1 NC + 1 LB with holder                  | MCBH-111    | 1SFA 611 605 R1211 | 35.50      |
| 1 NO without holder                             | MCB-10      | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | MLB-1       | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | MCBH-00     | 1SFA 611 605 R1100 | 2.00       |

## Ordering example

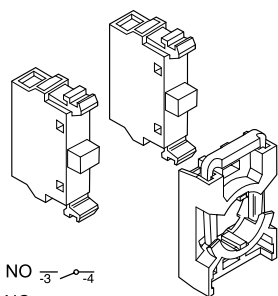
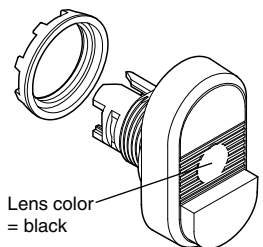
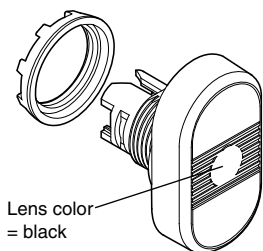
Requested: A modular pushbutton, maintained and illuminated with green flush button and one NO + one NC contact.

Ref.: 1 piece of MP2-11G + 1 piece of MCBH-111  
Bulb - see accessories


- ① No contact block in the center position  
② Lamp block MLB-1. Bulb not included. For other lamp blocks see Accessories.  
③ Bulb max 1.2 W, not included.

## Double pushbuttons Non-illuminated

8



### Operator ...

| Upper button         |         | Lower button |         | Catalog No. | Ref. Code          | List Price |
|----------------------|---------|--------------|---------|-------------|--------------------|------------|
| Color                | Text    | Color        | Text    |             |                    |            |
| with flush buttons ① |         |              |         |             |                    |            |
| Green                | No text | Red          | No text | MPD1-11B    | 1SFA 611 130 R1106 | \$ 18.00   |
|                      | I       |              | O       | MPD2-11B    | 1SFA 611 131 R1106 | 21.00      |
|                      | ON      |              | OFF     | MPD3-11B    | 1SFA 611 132 R1106 | 21.00      |
|                      | START   |              | STOP    | MPD4-11B    | 1SFA 611 133 R1106 | 21.00      |
| White                | No text | Black        | No text | MPD5-11B    | 1SFA 611 134 R1106 | 18.00      |
|                      | I       |              | O       | MPD6-11B    | 1SFA 611 135 R1106 | 21.00      |
|                      | ON      |              | OFF     | MPD7-11B    | 1SFA 611 136 R1106 | 21.00      |
|                      | START   |              | STOP    | MPD8-11B    | 1SFA 611 137 R1106 | 21.00      |

### with extended lower button ①

|       |         |       |         |                  |                    |              |
|-------|---------|-------|---------|------------------|--------------------|--------------|
| Green | No text | Red   | No text | <b>MPD12-11B</b> | 1SFA 611 141 R1106 | <b>18.00</b> |
|       | I       |       | O       | <b>MPD13-11B</b> | 1SFA 611 142 R1106 | <b>21.00</b> |
|       | ON      |       | OFF     | <b>MPD14-11B</b> | 1SFA 611 143 R1106 | <b>21.00</b> |
|       | START   |       | STOP    | <b>MPD15-11B</b> | 1SFA 611 144 R1106 | <b>21.00</b> |
| White | No text | Black | No text | <b>MPD16-11B</b> | 1SFA 611 145 R1106 | <b>18.00</b> |
|       | I       |       | O       | <b>MPD17-11B</b> | 1SFA 611 146 R1106 | <b>21.00</b> |
|       | ON      |       | OFF     | <b>MPD18-11B</b> | 1SFA 611 147 R1106 | <b>21.00</b> |
|       | START   |       | STOP    | <b>MPD19-11B</b> | 1SFA 611 148 R1106 | <b>21.00</b> |

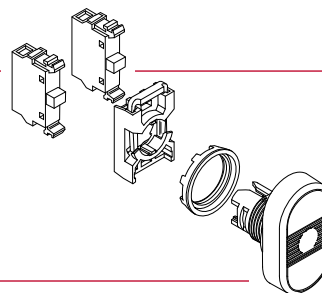
### Contact blocks, and holder

| Blocks                  | Catalog No.    | Ref. Code          | List Price      |
|-------------------------|----------------|--------------------|-----------------|
| 2 NO with holder        | <b>MCBH-20</b> | 1SFA 611 605 R1102 | <b>\$ 18.00</b> |
| 2 NC with holder        | <b>MCBH-02</b> | 1SFA 611 605 R1120 |                 |
| 1 NO + 1 NC with holder | <b>MCBH-11</b> | 1SFA 611 605 R1111 |                 |
| 1 NO without holder     | <b>MCB-10</b>  | 1SFA 611 610 R1001 | <b>8.00</b>     |
| 1 NC without holder     | <b>MCB-01</b>  | 1SFA 611 610 R1010 | <b>8.00</b>     |
| Holder for 3 blocks     | <b>MCBH-00</b> | 1SFA 611 605 R1100 | <b>2.00</b>     |

### Ordering example – Double pushbutton

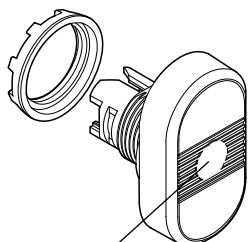
Requested: A non-illuminated double pushbutton, Green/Red,  
No text, with 2 NO blocks

Ref.: 1 piece of MPD1-11B + 1 piece of MCBH-20

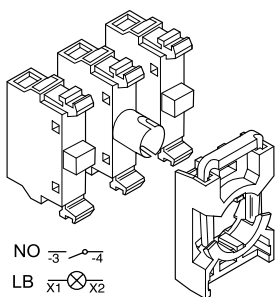


① No contact block in the center position.

## Double pushbuttons Illuminated



Lens colors:  
Red  
Green  
Yellow  
Clear



NO 3-4  
LB X1-X2  
NC 1-2

### Operator ...

| Upper button         |         | Lower button |         | Catalog No. | Ref. Code          | List Price |
|----------------------|---------|--------------|---------|-------------|--------------------|------------|
| Color                | Text    | Color        | Text    |             |                    |            |
| with flush buttons ① |         |              |         |             |                    |            |
| Red lens             |         |              |         |             |                    |            |
| Green                | No text | Red          | No text | MPD1-11R    | 1SFA 611 130 R1101 | \$ 26.00   |
|                      | I       |              | O       | MPD2-11R    | 1SFA 611 131 R1101 | 29.00      |
|                      | ON      |              | OFF     | MPD3-11R    | 1SFA 611 132 R1101 | 29.00      |
|                      | START   |              | STOP    | MPD4-11R    | 1SFA 611 133 R1101 | 29.00      |
| White                | No text | Black        | No text | MPD5-11R    | 1SFA 611 134 R1101 | 26.00      |
|                      | I       |              | O       | MPD6-11R    | 1SFA 611 135 R1101 | 29.00      |
|                      | ON      |              | OFF     | MPD7-11R    | 1SFA 611 136 R1101 | 29.00      |
|                      | START   |              | STOP    | MPD8-11R    | 1SFA 611 137 R1101 | 29.00      |
| Green lens           |         |              |         |             |                    |            |
| Green                | No text | Red          | No text | MPD1-11G    | 1SFA 611 130 R1102 | 26.00      |
|                      | I       |              | O       | MPD2-11G    | 1SFA 611 131 R1102 | 29.00      |
|                      | ON      |              | OFF     | MPD3-11G    | 1SFA 611 132 R1102 | 29.00      |
|                      | START   |              | STOP    | MPD4-11G    | 1SFA 611 133 R1102 | 29.00      |
| White                | No text | Black        | No text | MPD5-11G    | 1SFA 611 134 R1102 | 26.00      |
|                      | I       |              | O       | MPD6-11G    | 1SFA 611 135 R1102 | 29.00      |
|                      | ON      |              | OFF     | MPD7-11G    | 1SFA 611 136 R1102 | 29.00      |
|                      | START   |              | STOP    | MPD8-11G    | 1SFA 611 137 R1102 | 29.00      |
| Yellow lens          |         |              |         |             |                    |            |
| Green                | No text | Red          | No text | MPD1-11Y    | 1SFA 611 130 R1103 | 26.00      |
|                      | I       |              | O       | MPD2-11Y    | 1SFA 611 131 R1103 | 29.00      |
|                      | ON      |              | OFF     | MPD3-11Y    | 1SFA 611 132 R1103 | 29.00      |
|                      | START   |              | STOP    | MPD4-11Y    | 1SFA 611 133 R1103 | 29.00      |
| White                | No text | Black        | No text | MPD5-11Y    | 1SFA 611 134 R1103 | 26.00      |
|                      | I       |              | O       | MPD6-11Y    | 1SFA 611 135 R1103 | 29.00      |
|                      | ON      |              | OFF     | MPD7-11Y    | 1SFA 611 136 R1103 | 29.00      |
|                      | START   |              | STOP    | MPD8-11Y    | 1SFA 611 137 R1103 | 29.00      |
| Clear lens           |         |              |         |             |                    |            |
| Green                | No text | Red          | No text | MPD1-11C    | 1SFA 611 130 R1108 | 26.00      |
|                      | I       |              | O       | MPD2-11C    | 1SFA 611 131 R1108 | 29.00      |
|                      | ON      |              | OFF     | MPD3-11C    | 1SFA 611 132 R1108 | 29.00      |
|                      | START   |              | STOP    | MPD4-11C    | 1SFA 611 133 R1108 | 29.00      |
| White                | No text | Black        | No text | MPD5-11C    | 1SFA 611 134 R1108 | 26.00      |
|                      | I       |              | O       | MPD6-11C    | 1SFA 611 135 R1108 | 29.00      |
|                      | ON      |              | OFF     | MPD7-11C    | 1SFA 611 136 R1108 | 29.00      |
|                      | START   |              | STOP    | MPD8-11C    | 1SFA 611 137 R1108 | 29.00      |

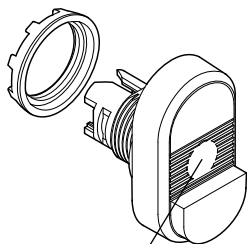
### Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No. | Ref. Code          | List Price |
|-------------------------------------------------|-------------|--------------------|------------|
| 2 NO + 1 LB with holder                         | MCBH-201    | 1SFA 611 605 R1202 | \$ 35.50   |
| 2 NC + 1 LB with holder                         | MCBH-021    | 1SFA 611 605 R1220 |            |
| 1 NO + 1 NC + 1 LB with holder                  | MCBH-111    | 1SFA 611 605 R1211 |            |
| 1 NO without holder                             | MCB-10      | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | MLB-1       | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | MCBH-00     | 1SFA 611 605 R1100 | 2.00       |

① No contact block in the center position.

② Lamp block MLB-1. Bulb not included. For other lamp blocks see Accessories, bulb max 1.2 W.

## Double pushbuttons Illuminated



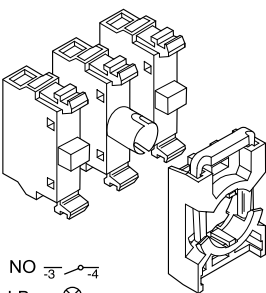
Lens colors:  
Red  
Green  
Yellow  
Clear

### Operator ...

| Upper button                 |         | Lower button |         | Catalog No. | Ref. Code          | List Price |
|------------------------------|---------|--------------|---------|-------------|--------------------|------------|
| Color                        | Text    | Color        | Text    |             |                    |            |
| with extended lower button ① |         |              |         |             |                    |            |
| Red lens                     |         |              |         |             |                    |            |
| Green                        | No text | Red          | No text | MPD12-11R   | 1SFA 611 141 R1101 | \$ 26.00   |
|                              | I       |              | O       | MPD13-11R   | 1SFA 611 142 R1101 | 29.00      |
|                              | ON      |              | OFF     | MPD14-11R   | 1SFA 611 143 R1101 | 29.00      |
|                              | START   |              | STOP    | MPD15-11R   | 1SFA 611 144 R1101 | 29.00      |
| White                        | No text | Black        | No text | MPD16-11R   | 1SFA 611 145 R1101 | 26.00      |
|                              | I       |              | O       | MPD17-11R   | 1SFA 611 146 R1101 | 29.00      |
|                              | ON      |              | OFF     | MPD18-11R   | 1SFA 611 147 R1101 | 29.00      |
|                              | START   |              | STOP    | MPD19-11R   | 1SFA 611 148 R1101 | 29.00      |
| Green lens                   |         |              |         |             |                    |            |
| Green                        | No text | Red          | No text | MPD12-11G   | 1SFA 611 141 R1102 | 26.00      |
|                              | I       |              | O       | MPD13-11G   | 1SFA 611 142 R1102 | 29.00      |
|                              | ON      |              | OFF     | MPD14-11G   | 1SFA 611 143 R1102 | 29.00      |
|                              | START   |              | STOP    | MPD15-11G   | 1SFA 611 144 R1102 | 29.00      |
| White                        | No text | Black        | No text | MPD16-11G   | 1SFA 611 145 R1102 | 26.00      |
|                              | I       |              | O       | MPD17-11G   | 1SFA 611 146 R1102 | 29.00      |
|                              | ON      |              | OFF     | MPD18-11G   | 1SFA 611 147 R1102 | 29.00      |
|                              | START   |              | STOP    | MPD19-11G   | 1SFA 611 148 R1102 | 29.00      |
| Yellow lens                  |         |              |         |             |                    |            |
| Green                        | No text | Red          | No text | MPD12-11Y   | 1SFA 611 141 R1103 | 26.00      |
|                              | I       |              | O       | MPD13-11Y   | 1SFA 611 142 R1103 | 29.00      |
|                              | ON      |              | OFF     | MPD14-11Y   | 1SFA 611 143 R1103 | 29.00      |
|                              | START   |              | STOP    | MPD15-11Y   | 1SFA 611 144 R1103 | 29.00      |
| White                        | No text | Black        | No text | MPD16-11Y   | 1SFA 611 145 R1103 | 26.00      |
|                              | I       |              | O       | MPD17-11Y   | 1SFA 611 146 R1103 | 29.00      |
|                              | ON      |              | OFF     | MPD18-11Y   | 1SFA 611 147 R1103 | 29.00      |
|                              | START   |              | STOP    | MPD19-11Y   | 1SFA 611 148 R1103 | 29.00      |
| Clear lens                   |         |              |         |             |                    |            |
| Green                        | No text | Red          | No text | MPD12-11C   | 1SFA 611 141 R1108 | 26.00      |
|                              | I       |              | O       | MPD13-11C   | 1SFA 611 142 R1108 | 29.00      |
|                              | ON      |              | OFF     | MPD14-11C   | 1SFA 611 143 R1108 | 29.00      |
|                              | START   |              | STOP    | MPD15-11C   | 1SFA 611 144 R1108 | 29.00      |
| White                        | No text | Black        | No text | MPD16-11C   | 1SFA 611 145 R1108 | 26.00      |
|                              | I       |              | O       | MPD17-11C   | 1SFA 611 146 R1108 | 29.00      |
|                              | ON      |              | OFF     | MPD18-11C   | 1SFA 611 147 R1108 | 29.00      |
|                              | START   |              | STOP    | MPD19-11C   | 1SFA 611 148 R1108 | 29.00      |

### Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No. | Ref. Code          | List Price |
|-------------------------------------------------|-------------|--------------------|------------|
| 2 NO + 1 LB with holder                         | MCBH-201    | 1SFA 611 605 R1202 | \$ 35.50   |
| 2 NC + 1 LB with holder                         | MCBH-021    | 1SFA 611 605 R1220 | 35.50      |
| 1 NO + 1 NC + 1 LB with holder                  | MCBH-111    | 1SFA 611 605 R1211 | 35.50      |
| 1 NO without holder                             | MCB-10      | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | MLB-1       | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | MCBH-00     | 1SFA 611 605 R1100 | 2.00       |



NO 3-4  
LB 1-2  
NC 1-2

① No contact block in the center position

② Lamp block MLB-1. Bulb not included. Other lamp block see Accessories, bulb max 1.2 W.

# Press-to-test pushbuttons Illuminated

Pilot Devices  
Modular Range



CBK-MLFPT1Y



CBK-MLTPT1Y

## Press-to-test

| Type                     | Black plastic ring |            |
|--------------------------|--------------------|------------|
|                          | Catalog number     | List price |
| <b>Operator only</b> ①   | MP1-MLPT★          | \$ 22.50   |
| <b>Full voltage type</b> |                    |            |
| 6V                       | MP1-MLFPT6★        | 46.00      |
| 12V                      | MP1-MLFPT7★        |            |
| 24V                      | MP1-MLFPT8★        |            |
| 48V                      | MP1-MLFPT9★        |            |
| 120V                     | MP1-MLFPT1★        |            |
| <b>Resistor type</b>     |                    |            |
| 120V                     | MP1-MLRPT1★        | 54.00      |
| 240V                     | MP1-MLRPT2★        |            |
| <b>Transformer type</b>  |                    |            |
| 120V/6V                  | MP1-MLTPT1★        | 80.00      |
| 240V/6V                  | MP1-MLTPT2★        |            |
| 380V/6V                  | MP1-MLTPT3★        |            |
| 480V/6V                  | MP1-MLTPT4★        |            |
| 120V/24V                 | MP1-MLTPT5★        | 80.00      |
| 240V/24V                 | MP1-MLTPT6★        |            |
| 380V/24V                 | MP1-MLTPT7★        |            |
| 480V/24V                 | MP1-MLTPT8★        |            |

★ Select the lens color from the "Illuminated buttons & lenses" selection chart and substitute the suffix code for the ★. The lens and bulb are included in the price.

## Press-to-test (LED bulb) ②

| Type                     | Black plastic ring |            |
|--------------------------|--------------------|------------|
|                          | Catalog number     | List price |
| <b>Full voltage type</b> |                    |            |
| 24V                      | MP1-MLFPTL8★       | \$ 55.00   |
| 120V                     | MP1-MLFPTL1★       | 55.00      |
| 230V                     | MP1-MLFPTL2★       | 61.00      |
| <b>Transformer type</b>  |                    |            |
| 120V/24V                 | MP1-MLTPTL1★       | 80.00      |
| 240V/24V                 | MP1-MLTPTL2★       |            |
| 380V/24V                 | MP1-MLTPTL3★       |            |
| 480V/24V                 | MP1-MLTPTL4★       |            |

★ Select the lens color from the "Illuminated buttons & lenses" selection chart and substitute the suffix code for the ★. The lens and bulb are included in the price.

## Press-to-test (neon bulb) ③

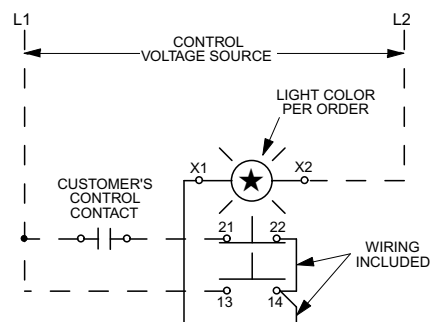
| Item                     | Black plastic ring |            |
|--------------------------|--------------------|------------|
|                          | Catalog number     | List price |
| <b>Full voltage type</b> |                    |            |
| 220VAC                   | MP1-MLTPN2★        | \$ 46.00   |

## ★ Illuminated buttons

| Button color | Suffix code |
|--------------|-------------|
| Red          | R           |
| Green        | G           |
| Yellow       | Y           |
| Blue         | L           |
| Clear        | C           |
| White        | W           |

NOTE: White LEDs use clear lenses.

## Schematic



Press- to-test schematic

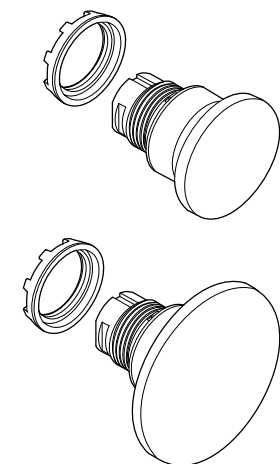
- ① 1 N.O. & 1 N.C. contact supplied; lamp module and bulb must be ordered separately.  
 ② For blue or white LEDs, add \$ 3 to the list price.  
 ③ Use with red, yellow and clear lenses only. For 120VAC, consult factory.

## Mushroom pushbuttons

### Non-illuminated and illuminated Momentary

#### Operator ...

| Operator material      | Button color | Catalog No.     | Ref. Code          | List Price |
|------------------------|--------------|-----------------|--------------------|------------|
| <b>non-illuminated</b> |              |                 |                    |            |
| <b>Ø 40 mm</b>         |              |                 |                    |            |
| Plastic                | Red          | <b>MPM1-10R</b> | 1SFA 611 124 R1001 | \$ 16.00   |
|                        | Yellow       | <b>MPM1-10Y</b> | 1SFA 611 124 R1003 | 16.00      |
|                        | Black        | <b>MPM1-10B</b> | 1SFA 611 124 R1006 | 16.00      |
| <b>Ø 60 mm</b>         |              |                 |                    |            |
| Plastic                | Red          | <b>MPM2-10R</b> | 1SFA 611 125 R1001 | 20.00      |
|                        | Yellow       | <b>MPM2-10Y</b> | 1SFA 611 125 R1003 | 20.00      |
|                        | Black        | <b>MPM2-10B</b> | 1SFA 611 125 R1006 | 20.00      |
| <b>illuminated ①</b>   |              |                 |                    |            |
| <b>Ø 40 mm</b>         |              |                 |                    |            |
| Plastic                | Red          | <b>MPM1-11R</b> | 1SFA 611 124 R1101 | 16.00      |
|                        | Yellow       | <b>MPM1-11Y</b> | 1SFA 611 124 R1103 | 16.00      |
| <b>Ø 60 mm</b>         |              |                 |                    |            |
| Plastic                | Red          | <b>MPM2-11R</b> | 1SFA 611 125 R1101 | 20.00      |
|                        | Yellow       | <b>MPM2-11Y</b> | 1SFA 611 125 R1103 | 20.00      |



Bezel in black plastic as standard

Bezel in metal:

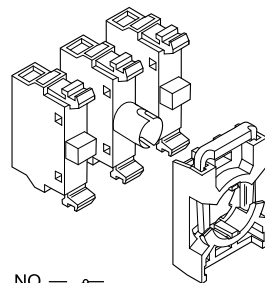
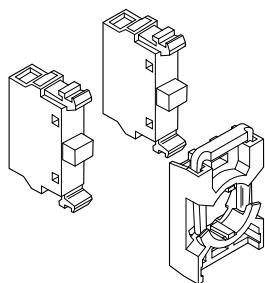
Replace '1' in the:

Catalog No. MPMX-1 0X

Ref. Code 1SFA611XXX R 1XXX

3 for metal bezel

4 for grey plastic bezel



NO  $\frac{3}{-}$   $\frac{4}{-}$   
LB  $\frac{X1}{-}$   $\frac{X2}{-}$   
NC  $\frac{1}{-}$   $\frac{2}{-}$

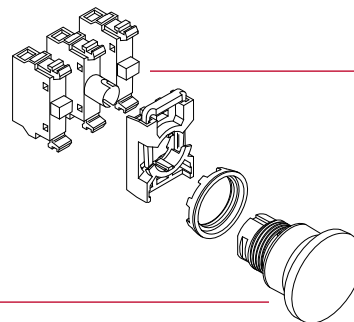
#### Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No.     | Ref. Code          | List Price |
|-------------------------------------------------|-----------------|--------------------|------------|
| 1 NO with holder                                | <b>MCBH-10</b>  | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder                                | <b>MCBH-01</b>  | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder                                | <b>MCBH-20</b>  | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder                                | <b>MCBH-02</b>  | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder                         | <b>MCBH-11</b>  | 1SFA 611 605 R1111 | 18.00      |
| 1 NO + 1 LB with holder                         | <b>MCBH-101</b> | 1SFA 611 605 R1201 | 27.50      |
| 1 NC + 1 LB with holder                         | <b>MCBH-011</b> | 1SFA 611 605 R1210 | 27.50      |
| 2 NO + 1 LB with holder ①                       | <b>MCBH-201</b> | 1SFA 611 605 R1202 | 35.50      |
| 2 NC + 1 LB with holder                         | <b>MCBH-021</b> | 1SFA 611 605 R1220 | 35.50      |
| 1 NO + 1 NC + 1 LB with holder                  | <b>MCBH-111</b> | 1SFA 611 605 R1211 | 35.50      |
| 1 NO without holder                             | <b>MCB-10</b>   | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | <b>MCB-01</b>   | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | <b>MLB-1</b>    | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | <b>MCBH-00</b>  | 1SFA 611 605 R1100 | 2.00       |

#### Ordering example – Mushroom Pushbutton

Requested: A modular mushroom pushbutton, Ø 40 mm, illuminated, red, with one NO + one NC contact and a standard lamp block

Ref.: 1 piece of MPM1-11R + 1 piece of MCBH-111  
Bulb - see accessories



① No contact block in the center position

② Lamp block MLB-1. Bulb not included. Other lamp block see Accessories, bulb max 1.2 W.

# Emergency stop pushbuttons

## Non-illuminated and illuminated

Fulfills IEC 60947-5-5

### Operator ...

| Operator function | Button color and material | Catalog No. | Ref. Code          | List Price |
|-------------------|---------------------------|-------------|--------------------|------------|
| non-illuminated   |                           |             |                    |            |
| Ø 40 mm           |                           |             |                    |            |
| Twist release     | Red, plastic              | MPMT3-10R   | 1SFA 611 510 R1001 | \$ 34.00   |
| Pull release      | Red, plastic              | MPMP3-10R   | 1SFA 611 511 R1001 |            |
| Ø 60 mm           |                           |             |                    |            |
| Twist release     | Red, plastic              | MPMT4-10R   | 1SFA 611 513 R1001 | 46.00      |
| Pull release      | Red, plastic              | MPMP4-10R   | 1SFA 611 514 R1001 |            |
| illuminated ①     |                           |             |                    |            |
| Ø 40 mm           |                           |             |                    |            |
| Twist release     | Red, plastic              | MPMT3-11R   | 1SFA 611 510 R1101 | 34.00      |
| Pull release      | Red, plastic              | MPMP3-11R   | 1SFA 611 511 R1101 |            |
| Ø 60 mm           |                           |             |                    |            |
| Twist release     | Red, plastic              | MPMT4-11R   | 1SFA 611 513 R1101 | 46.00      |
| Pull release      | Red, plastic              | MPMP4-11R   | 1SFA 611 514 R1101 |            |

For compact E-Stops, see page 8.31.

### Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No.     | Ref. Code          | List Price |
|-------------------------------------------------|-----------------|--------------------|------------|
| 1 NO with holder                                | <b>MCBH-10</b>  | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder                                | <b>MCBH-01</b>  | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder                                | <b>MCBH-20</b>  | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder                                | <b>MCBH-02</b>  | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder                         | <b>MCBH-11</b>  | 1SFA 611 605 R1111 | 18.00      |
| 1 NO + 1 LB with holder                         | <b>MCBH-101</b> | 1SFA 611 605 R1201 | 27.50      |
| 1 NC + 1 LB with holder                         | <b>MCBH-011</b> | 1SFA 611 605 R1210 | 27.50      |
| 2 NO + 1 LB with holder                         | <b>MCBH-201</b> | 1SFA 611 605 R1202 | 35.50      |
| 2 NC + 1 LB with holder                         | <b>MCBH-021</b> | 1SFA 611 605 R1220 | 35.50      |
| 1 NO + 1 NC + 1 LB with holder                  | <b>MCBH-111</b> | 1SFA 611 605 R1211 | 35.50      |
| 1 NO without holder                             | <b>MCB-10</b>   | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | <b>MCB-01</b>   | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | <b>MLB-1</b>    | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | <b>MCBH-00</b>  | 1SFA 611 605 R1100 | 2.00       |

To comply with the standard, IEC 60947-5-5, a number of tests have to be conducted:

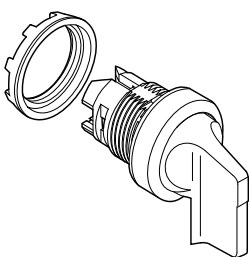
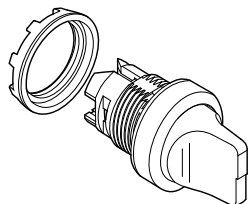
|                        |                                                                                                               |                                                 |                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------|
| <b>Durability test</b> | 6,050 cycles. This is not a test of mechanical life. The product has a mechanical life of 100,000 operations. | <b>Latching test</b>                            | Impulse voltage test at 2,500 V               |
| <b>Robustness</b>      | The force 113 N applied in three axes                                                                         | <b>Resetting test</b>                           | Pulling force < 50 N<br>Turning torque < 1 Nm |
| <b>Conditioning</b>    | Heat and cold, moist atmosphere, and in 5 % NaCl                                                              | <b>Shock</b>                                    | 15 g shock                                    |
|                        |                                                                                                               | <b>Vibration</b>                                | 2 h at 50m/s <sup>2</sup>                     |
|                        |                                                                                                               | <b>Contacts with positive opening operation</b> | 15 g shock                                    |

① No contact in the center position

② Lamp block MLB-1. Bulb not included. Other lamp block see Accessories, bulb max 2 W.

## Two-position selector switches Non-illuminated

8



Bezel in black plastic as standard

Bezel in metal:

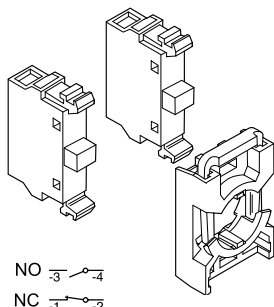
Replace '1' in the:

Catalog No. M2SSX-1 0X

Ref. Code 1SFA61 XXX R 1XXX

3 for metal bezel

4 for grey plastic bezel



NO  $\frac{3}{-}$   $\frac{4}{-}$   
NC  $\frac{1}{-}$   $\frac{2}{-}$

### Contact functions

Block positions as seen from operator front.

| Handle position | Left block | Right block |
|-----------------|------------|-------------|
| A (B)           | O          | O           |
| C               | x          | x           |

O = not actuated (normal state)  
x = actuated (state changed)

### Operator ...

| Symbol                               | Handle color | Catalog No. | Ref. Code          | List Price |
|--------------------------------------|--------------|-------------|--------------------|------------|
| with short handle ①                  |              |             |                    |            |
| Maintained                           |              |             |                    |            |
|                                      | Red          | M2SS1-10R   | 1SFA 611 200 R1001 | \$ 11.00   |
|                                      | Black        | M2SS1-10B   | 1SFA 611 200 R1006 |            |
|                                      | Grey         | M2SS1-10U   | 1SFA 611 200 R1007 |            |
| Maintained                           |              |             |                    |            |
|                                      | Red          | M2SS2-10R   | 1SFA 611 201 R1001 | \$ 11.00   |
|                                      | Black        | M2SS2-10B   | 1SFA 611 201 R1006 |            |
|                                      | Grey         | M2SS2-10U   | 1SFA 611 201 R1007 |            |
| Momentary, spring return from C to B |              |             |                    |            |
|                                      | Red          | M2SS3-10R   | 1SFA 611 202 R1001 | 14.00      |
|                                      | Black        | M2SS3-10B   | 1SFA 611 202 R1006 |            |
|                                      | Grey         | M2SS3-10U   | 1SFA 611 202 R1007 |            |
| with long handle ①                   |              |             |                    |            |
| Maintained                           |              |             |                    |            |
|                                      | Red          | M2SS4-10R   | 1SFA 611 203 R1001 | 11.00      |
|                                      | Black        | M2SS4-10B   | 1SFA 611 203 R1006 |            |
|                                      | Grey         | M2SS4-10U   | 1SFA 611 203 R1007 |            |
| Maintained                           |              |             |                    |            |
|                                      | Red          | M2SS5-10R   | 1SFA 611 204 R1001 | 11.00      |
|                                      | Black        | M2SS5-10B   | 1SFA 611 204 R1006 |            |
|                                      | Grey         | M2SS5-10U   | 1SFA 611 200 R1007 |            |
| Momentary, spring return from C to B |              |             |                    |            |
|                                      | Red          | M2SS6-10R   | 1SFA 611 205 R1001 | 14.00      |
|                                      | Black        | M2SS6-10B   | 1SFA 611 205 R1006 |            |
|                                      | Grey         | M2SS6-10U   | 1SFA 611 205 R1007 |            |

### Contact blocks and holder

| Blocks                  | Catalog No.    | Ref. Code          | List Price |
|-------------------------|----------------|--------------------|------------|
| 1 NO with holder        | <b>MCBH-10</b> | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder        | <b>MCBH-01</b> | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder        | <b>MCBH-20</b> | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder        | <b>MCBH-02</b> | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder | <b>MCBH-11</b> | 1SFA 611 605 R1111 | 18.00      |
| 1 NO without holder     | <b>MCB-10</b>  | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder     | <b>MCB-01</b>  | 1SFA 611 610 R1010 | 8.00       |
| Holder for 3 blocks     | <b>MCBH-00</b> | 1SFA 611 605 R1100 | 2.00       |

### Ordering example

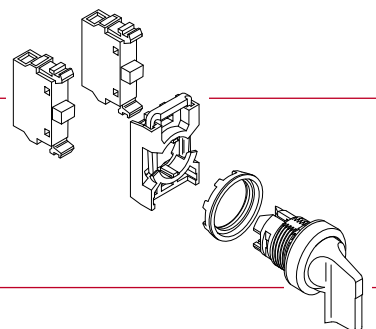
Requested: A non-illuminated modular selector switch. Black.

Maintained.

Handle positions: A and C

With 2 NC contacts

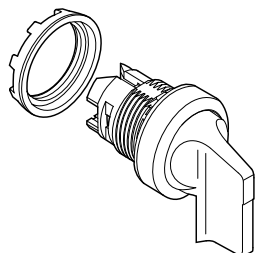
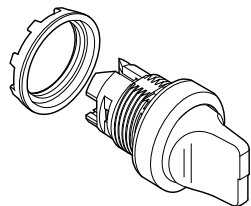
Ref.: 1 piece of M2SS2-10B + 1 piece of MCBH-02



① No contact block in the center position

# Three-position selector switches

## Non-illuminated



Bezel in black plastic as standard

Bezel in metal:

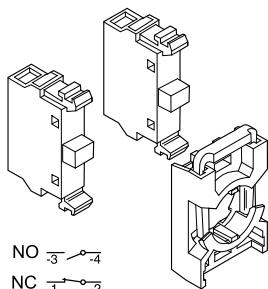
Replace '1' in the:

Catalog No. M3SSX-1 0X

Ref. Code 1SFA611XXX R 1XXX

3 for metal bezel

4 for grey plastic bezel



### Contact functions

Block positions as seen from operator front.

| Handle position | Left block | Right block |
|-----------------|------------|-------------|
| A               | x          | O           |
| B               | O          | O           |
| C               | O          | x           |

### Operator ...

| Symbol                                                  | Handle color | Catalog No. | Ref. Code          | List Price |
|---------------------------------------------------------|--------------|-------------|--------------------|------------|
| with short handle ①                                     |              |             |                    |            |
| Maintained                                              |              |             |                    |            |
|                                                         | Red          | M3SS1-10R   | 1SFA 611 210 R1001 | \$ 11.00   |
|                                                         | Black        | M3SS1-10B   | 1SFA 611 210 R1006 |            |
|                                                         | Grey         | M3SS1-10U   | 1SFA 611 210 R1007 |            |
| Momentary, spring return<br>from A to B and from C to B |              |             |                    |            |
|                                                         | Red          | M3SS2-10R   | 1SFA 611 211 R1001 | 14.00      |
|                                                         | Black        | M3SS2-10B   | 1SFA 611 211 R1006 |            |
|                                                         | Grey         | M3SS2-10U   | 1SFA 611 211 R1007 |            |
| Momentary, spring return<br>from C to B                 |              |             |                    |            |
|                                                         | Red          | M3SS3-10R   | 1SFA 611 212 R1001 | 14.00      |
|                                                         | Black        | M3SS3-10B   | 1SFA 611 212 R1006 |            |
|                                                         | Grey         | M3SS3-10U   | 1SFA 611 212 R1007 |            |
| Momentary, spring return<br>from A to B                 |              |             |                    |            |
|                                                         | Red          | M3SS7-10R   | 1SFA 611 216 R1001 | 14.00      |
|                                                         | Black        | M3SS7-10B   | 1SFA 611 216 R1006 |            |
|                                                         | Grey         | M3SS7-10U   | 1SFA 611 216 R1007 |            |

### with long handle ①

|                                                         |       |           |                    |       |
|---------------------------------------------------------|-------|-----------|--------------------|-------|
| Maintained                                              |       |           |                    |       |
|                                                         | Red   | M3SS4-10R | 1SFA 611 213 R1001 | 11.00 |
|                                                         | Black | M3SS4-10B | 1SFA 611 213 R1006 |       |
|                                                         | Grey  | M3SS4-10U | 1SFA 611 213 R1007 |       |
| Momentary, spring return<br>from A to B and from C to B |       |           |                    |       |
|                                                         | Red   | M3SS5-10R | 1SFA 611 214 R1001 | 14.00 |
|                                                         | Black | M3SS5-10B | 1SFA 611 214 R1006 |       |
|                                                         | Grey  | M3SS5-10U | 1SFA 611 214 R1007 |       |
| Momentary, spring return<br>from C to B                 |       |           |                    |       |
|                                                         | Red   | M3SS6-10R | 1SFA 611 215 R1001 | 14.00 |
|                                                         | Black | M3SS6-10B | 1SFA 611 215 R1006 |       |
|                                                         | Grey  | M3SS6-10U | 1SFA 611 215 R1007 |       |
| Momentary, spring return<br>from A to B                 |       |           |                    |       |
|                                                         | Red   | M3SS8-10R | 1SFA 611 217 R1001 | 14.00 |
|                                                         | Black | M3SS8-10B | 1SFA 611 217 R1006 |       |
|                                                         | Grey  | M3SS8-10U | 1SFA 611 217 R1007 |       |

### Contact blocks and holder

| Blocks                  | Catalog No. | Ref. Code          | List Price |
|-------------------------|-------------|--------------------|------------|
| 1 NO with holder        | MCBH-10     | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder        | MCBH-01     | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder        | MCBH-20     | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder        | MCBH-02     | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder | MCBH-11     | 1SFA 611 605 R1111 | 18.00      |
| 1 NO without holder     | MCB-10      | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder     | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| Holder for 3 blocks     | MCBH-00     | 1SFA 611 605 R1100 | 2.00       |

① No contact block in center position

## Two-position selector switches Illuminated

### Operator ...

| Symbol                                  | Handle color | Catalog No. | Ref. Code          | List Price |
|-----------------------------------------|--------------|-------------|--------------------|------------|
| with short handle ①                     |              |             |                    |            |
| Maintained                              |              |             |                    |            |
|                                         | Red          | M2SS1-11R   | 1SFA 611 200 R1101 | \$ 17.00   |
|                                         | Green        | M2SS1-11G   | 1SFA 611 200 R1102 |            |
|                                         | Yellow       | M2SS1-11Y   | 1SFA 611 200 R1103 |            |
|                                         | Blue         | M2SS1-11L   | 1SFA 611 200 R1104 |            |
|                                         | Clear        | M2SS1-11C   | 1SFA 611 200 R1108 |            |
| Maintained                              |              |             |                    |            |
|                                         | Red          | M2SS2-11R   | 1SFA 611 201 R1101 | 17.00      |
|                                         | Green        | M2SS2-11G   | 1SFA 611 201 R1102 |            |
|                                         | Yellow       | M2SS2-11Y   | 1SFA 611 201 R1103 |            |
|                                         | Blue         | M2SS2-11L   | 1SFA 611 201 R1104 |            |
|                                         | Clear        | M2SS2-11C   | 1SFA 611 201 R1108 |            |
| Momentary, spring return<br>from C to B |              |             |                    |            |
|                                         | Red          | M2SS3-11R   | 1SFA 611 202 R1101 | 26.00      |
|                                         | Green        | M2SS3-11G   | 1SFA 611 202 R1102 |            |
|                                         | Yellow       | M2SS3-11Y   | 1SFA 611 202 R1103 |            |
|                                         | Blue         | M2SS3-11L   | 1SFA 611 202 R1104 |            |
|                                         | Clear        | M2SS3-11C   | 1SFA 611 202 R1108 |            |

### with long handle ①

|                                         |        |           |                    |       |
|-----------------------------------------|--------|-----------|--------------------|-------|
| Maintained                              |        |           |                    |       |
|                                         | Red    | M2SS4-11R | 1SFA 611 203 R1101 | 17.00 |
|                                         | Green  | M2SS4-11G | 1SFA 611 203 R1102 |       |
|                                         | Yellow | M2SS4-11Y | 1SFA 611 203 R1103 |       |
|                                         | Blue   | M2SS4-11L | 1SFA 611 203 R1104 |       |
|                                         | Clear  | M2SS4-11C | 1SFA 611 203 R1108 |       |
| Maintained                              |        |           |                    |       |
|                                         | Red    | M2SS5-11R | 1SFA 611 204 R1101 | 17.00 |
|                                         | Green  | M2SS5-11G | 1SFA 611 204 R1102 |       |
|                                         | Yellow | M2SS5-11Y | 1SFA 611 204 R1103 |       |
|                                         | Blue   | M2SS5-11L | 1SFA 611 204 R1104 |       |
|                                         | Clear  | M2SS5-11C | 1SFA 611 204 R1108 |       |
| Momentary, spring return<br>from C to B |        |           |                    |       |
|                                         | Red    | M2SS6-11R | 1SFA 611 205 R1101 | 26.00 |
|                                         | Green  | M2SS6-11G | 1SFA 611 205 R1102 |       |
|                                         | Yellow | M2SS6-11Y | 1SFA 611 205 R1103 |       |
|                                         | Blue   | M2SS6-11L | 1SFA 611 205 R1104 |       |
|                                         | Clear  | M2SS6-11C | 1SFA 611 205 R1108 |       |

### Contact blocks, lamp block and holder ②

| Blocks                                          | Catalog No.     | Ref. Code          | List Price |
|-------------------------------------------------|-----------------|--------------------|------------|
| 1 NO + 1 LB with holder                         | <b>MCBH-101</b> | 1SFA 611 605 R1201 | \$ 27.50   |
| 1 NC + 1 LB with holder                         | <b>MCBH-011</b> | 1SFA 611 605 R1210 | 27.50      |
| 2 NO + 1 LB with holder                         | <b>MCBH-201</b> | 1SFA 611 605 R1202 | 35.50      |
| 2 NC + 1 LB with holder                         | <b>MCBH-021</b> | 1SFA 611 605 R1220 | 35.50      |
| 1 NO + 1 NC with holder                         | <b>MCBH-111</b> | 1SFA 611 605 R1211 | 35.50      |
| 1 NO without holder                             | <b>MCB-10</b>   | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder                             | <b>MCB-01</b>   | 1SFA 611 610 R1010 | 8.00       |
| Lamp block for 2 W, max 230 V AC/DC bulb or LED | <b>MLB-1</b>    | 1SFA 611 620 R1001 | 17.50      |
| Holder for 3 blocks                             | <b>MCBH-00</b>  | 1SFA 611 605 R1100 | 2.00       |

**Contact functions** See Page 8.11

**Ordering example** See Page 8.12

① No contact block in the center position

② Lamp block MLB-1. Bulb not included. Other lamp block see Accessories, bulb max 1.2 W.

Bezel in black plastic as standard

Bezel in metal:

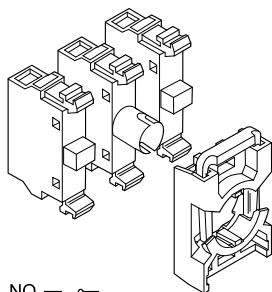
Replace '1' in the:

Catalog No. M2SSX-1 0X

Ref. Code 1SFA61 XXX R 1XXX

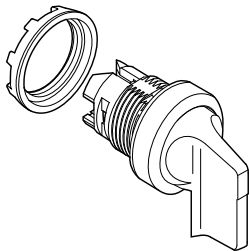
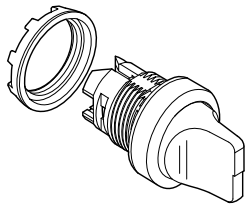
3 for metal bezel

4 for grey plastic bezel



NO  $\frac{3}{-}$   $\frac{4}{-}$   
LB  $\frac{X1}{-}$   $\frac{X2}{-}$   
NC  $\frac{1}{-}$   $\frac{2}{-}$

## Three-position selector switches Illuminated



Bezel in black plastic as standard  
**Bezel in metal:**  
 Replace '1' in the:  
 Catalog No. M3SSX-1 0X  
 Ref. Code 1SFA611XXX R 1XXX  
**3** for metal bezel  
**4** for grey plastic bezel

### Operator ...

| Symbol                                                  | Handle color | Catalog No. | Ref. Code          | List Price |
|---------------------------------------------------------|--------------|-------------|--------------------|------------|
| with short handle ①                                     |              |             |                    |            |
| Maintained                                              |              |             |                    |            |
|                                                         | Red          | M3SS1-11R   | 1SFA 611 210 R1101 | \$ 17.00   |
|                                                         | Green        | M3SS1-11G   | 1SFA 611 210 R1102 |            |
|                                                         | Yellow       | M3SS1-11Y   | 1SFA 611 210 R1103 |            |
|                                                         | Blue         | M3SS1-11L   | 1SFA 611 210 R1104 |            |
|                                                         | Clear        | M3SS1-11C   | 1SFA 611 210 R1108 |            |
| Momentary, spring return<br>from A to B and from C to B |              |             |                    |            |
|                                                         | Red          | M3SS2-11R   | 1SFA 611 211 R1101 | 26.00      |
|                                                         | Green        | M3SS2-11G   | 1SFA 611 211 R1102 |            |
|                                                         | Yellow       | M3SS2-11Y   | 1SFA 611 211 R1103 |            |
|                                                         | Blue         | M3SS2-11L   | 1SFA 611 211 R1104 |            |
|                                                         | Clear        | M3SS2-11C   | 1SFA 611 211 R1108 |            |
| Momentary, spring return<br>from C to B                 |              |             |                    |            |
|                                                         | Red          | M3SS3-11R   | 1SFA 611 212 R1101 | 26.00      |
|                                                         | Green        | M3SS3-11G   | 1SFA 611 212 R1102 |            |
|                                                         | Yellow       | M3SS3-11Y   | 1SFA 611 212 R1103 |            |
|                                                         | Blue         | M3SS3-11L   | 1SFA 611 212 R1104 |            |
|                                                         | Clear        | M3SS3-11C   | 1SFA 611 212 R1108 |            |
| Momentary, spring return<br>from A to B                 |              |             |                    |            |
|                                                         | Red          | M3SS7-11R   | 1SFA 611 216 R1101 | 26.00      |
|                                                         | Green        | M3SS7-11G   | 1SFA 611 216 R1102 |            |
|                                                         | Yellow       | M3SS7-11Y   | 1SFA 611 216 R1103 |            |
|                                                         | Blue         | M3SS7-11L   | 1SFA 611 216 R1104 |            |
|                                                         | Clear        | M3SS7-11C   | 1SFA 611 216 R1108 |            |
| with long handle ①                                      |              |             |                    |            |
| Maintained                                              |              |             |                    |            |
|                                                         | Red          | M3SS4-11R   | 1SFA 611 213 R1101 | 17.00      |
|                                                         | Green        | M3SS4-11G   | 1SFA 611 213 R1102 |            |
|                                                         | Yellow       | M3SS4-11Y   | 1SFA 611 213 R1103 |            |
|                                                         | Blue         | M3SS4-11L   | 1SFA 611 213 R1104 |            |
|                                                         | Clear        | M3SS4-11C   | 1SFA 611 213 R1108 |            |
| Momentary, spring return<br>from A to B and from C to B |              |             |                    |            |
|                                                         | Red          | M3SS5-11R   | 1SFA 611 214 R1101 | 26.00      |
|                                                         | Green        | M3SS5-11G   | 1SFA 611 214 R1102 |            |
|                                                         | Yellow       | M3SS5-11Y   | 1SFA 611 214 R1103 |            |
|                                                         | Blue         | M3SS5-11L   | 1SFA 611 214 R1104 |            |
|                                                         | Clear        | M3SS5-11C   | 1SFA 611 214 R1108 |            |
| Momentary, spring return<br>from C to B                 |              |             |                    |            |
|                                                         | Red          | M3SS6-11R   | 1SFA 611 215 R1101 | 26.00      |
|                                                         | Green        | M3SS6-11G   | 1SFA 611 215 R1102 |            |
|                                                         | Yellow       | M3SS6-11Y   | 1SFA 611 215 R1103 |            |
|                                                         | Blue         | M3SS6-11L   | 1SFA 611 215 R1104 |            |
|                                                         | Clear        | M3SS6-11C   | 1SFA 611 215 R1108 |            |
| Momentary, spring return<br>from A to B                 |              |             |                    |            |
|                                                         | Red          | M3SS8-11R   | 1SFA 611 217 R1101 | 26.00      |
|                                                         | Green        | M3SS8-11G   | 1SFA 611 217 R1102 |            |
|                                                         | Yellow       | M3SS8-11Y   | 1SFA 611 217 R1103 |            |
|                                                         | Blue         | M3SS8-11L   | 1SFA 611 217 R1104 |            |
|                                                         | Clear        | M3SS8-11C   | 1SFA 611 217 R1108 |            |

**Contact blocks, lamp block and holder** See Page 8.13

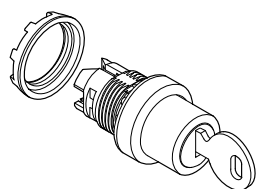
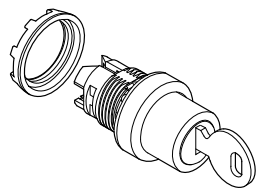
**Contact functions** See Page 8.12

**Ordering example** See Page 8.12

① No contact block in the center position

## Key-operated selector switches Two and three positions

8



Bezel in black plastic as standard

Bezel in metal:

Replace '1' in the:

Catalog No. MXSSKX-1 0■

Ref. Code 1SFA6112XX R 1XX■

3 for metal bezel

### ② Key codes

71 (standard) ■ =1

72 ■ =2

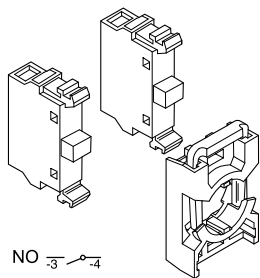
73 ■ =3

Other (on request)

### ③ Key codes

71 (standard) ■ =1

72 ■ =2



NO 3-4  
NC 1-2

### Operator ...

| Symbol                                                                                                                                           | The key can be removed in | Catalog No.         | Ref. Code            | List Price |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------|----------------------|------------|
| two positions ①                                                                                                                                  |                           |                     |                      |            |
| <b>Maintained</b><br>                                           | in both positions         | <b>M2SSK1-10■</b> ② | 1SFA 611 280 R100■ ② | \$ 41.00   |
| <b>Maintained</b><br>                                           | in position B only        | <b>M2SSK2-10■</b> ② | 1SFA 611 281 R100■ ② |            |
| <b>Momentary, spring return from C to B</b><br>                 | in position B only        | <b>M2SSK3-10■</b> ② | 1SFA 611 282 R100■ ② |            |
| three positions ①                                                                                                                                |                           |                     |                      |            |
| <b>Maintained</b><br>                                           | in all positions          | <b>M3SSK1-10■</b> ② | 1SFA 611 283 R100■ ② | \$ 53.00   |
| <b>Maintained</b><br>                                           | in position B only        | <b>M3SSK2-10■</b> ② | 1SFA 611 284 R100■ ② |            |
| <b>Momentary, spring return from A to B and from C to B</b><br> | in position B only        | <b>M3SSK3-10■</b> ② | 1SFA 611 285 R100■ ② |            |
| <b>Momentary, spring return from C to B</b><br>               | in position A only        | <b>M3SSK4-10■</b> ③ | 1SFA 611 286 R100■ ③ |            |
| <b>Momentary, spring return from C to B</b><br>               | in all positions          | <b>M3SSK5-10■</b> ② | 1SFA 611 287 R100■ ② |            |

### Contact blocks and holder

| Blocks                  | Catalog No.    | Ref. Code          | List Price      |
|-------------------------|----------------|--------------------|-----------------|
| 2 NO with holder        | <b>MCBH-20</b> | 1SFA 611 605 R1102 | <b>\$ 18.00</b> |
| 2 NC with holder        | <b>MCBH-02</b> | 1SFA 611 605 R1120 |                 |
| 1 NO + 1 NC with holder | <b>MCBH-11</b> | 1SFA 611 605 R1111 |                 |
| 1 NO without holder     | <b>MCB-10</b>  | 1SFA 611 610 R1001 | <b>8.00</b>     |
| 1 NC without holder     | <b>MCB-01</b>  | 1SFA 611 610 R1010 | <b>8.00</b>     |
| Holder for 3 blocks     | <b>MCBH-00</b> | 1SFA 611 605 R1100 | <b>2.00</b>     |

### Contact functions

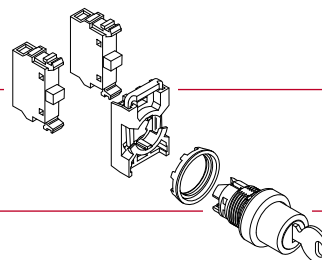
Two positions: See Page 8.12

Three positions: See Page 8.13

### Ordering example

Requested: A key-operated selector switch. Three positions. Maintained. The key removeable in position B. Key code 72. With 2 NC contacts

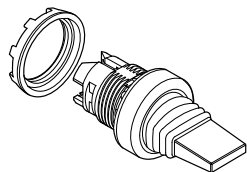
Ref.: 1 piece of M3SSK2-102 + 1 piece of MCBH-02



① No contact block in the center position

# Toggle switches

## Two and three positions



### Operator

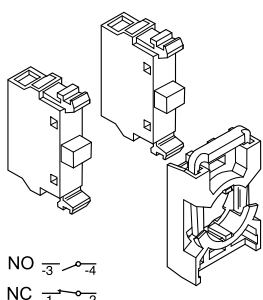
| Symbol                                  | Bezel         | Catalog No.     | Ref. Code           | List Price |
|-----------------------------------------|---------------|-----------------|---------------------|------------|
| <b>Toggle switch with two positions</b> |               |                 |                     |            |
| <b>Maintained</b>                       |               |                 |                     |            |
|                                         | Black plastic | <b>MTS1-10B</b> | 1SFA 611 300 R1006  | \$ 18.00   |
|                                         | Metal         | <b>MTS1-30B</b> | 1SFA 611 300 R 3006 |            |

### Toggle switch with three positions

#### Momentary, spring return from A to B and from C to B

|                   |                        |                                    |                                           |       |
|-------------------|------------------------|------------------------------------|-------------------------------------------|-------|
|                   | Black plastic<br>Metal | <b>MTS2-10B</b><br><b>MTS2-30B</b> | 1SFA 611 301 R1006<br>1SFA 611 301 R 3006 | 18.00 |
| <b>Maintained</b> |                        |                                    |                                           |       |
|                   | Black plastic<br>Metal | <b>MTS3-10B</b><br><b>MTS3-30B</b> | 1SFA 611 302 R1006<br>1SFA 611 302 R 3006 | 18.00 |

8



### Contact blocks and holder

| Blocks                  | Catalog No.    | Ref. Code          | List Price |
|-------------------------|----------------|--------------------|------------|
| 1 NO with holder        | <b>MCBH-10</b> | 1SFA 611 605 R1101 | \$ 10.00   |
| 1 NC with holder        | <b>MCBH-01</b> | 1SFA 611 605 R1110 | 10.00      |
| 2 NO with holder        | <b>MCBH-20</b> | 1SFA 611 605 R1102 | 18.00      |
| 2 NC with holder        | <b>MCBH-02</b> | 1SFA 611 605 R1120 | 18.00      |
| 1 NO + 1 NC with holder | <b>MCBH-11</b> | 1SFA 611 605 R1111 | 18.00      |
| 1 NO without holder     | <b>MCB-10</b>  | 1SFA 611 610 R1001 | 8.00       |
| 1 NC without holder     | <b>MCB-01</b>  | 1SFA 611 610 R1010 | 8.00       |
| Holder for 3 blocks     | <b>MCBH-00</b> | 1SFA 611 605 R1100 | 2.00       |

### Contact block functions

Block positions as seen from operator front.

#### Two-position maintained switch

| Handle position | Left block | Right block |
|-----------------|------------|-------------|
| A               | O          | O           |
| C               | x          | x           |

O = not actuated (normal state)

x = actuated (state changed)

#### Three-position switch

| Handle position | Left block | Middle block | Right block |
|-----------------|------------|--------------|-------------|
| A               | O          | x            | x           |
| B               | O          | O            | O           |
| C               | x          | x            | O           |

O = not actuated (normal state)

x = actuated (state changed)

## Definite purpose pushbuttons

30 mm

IP 66 Rated only

### Definite purpose pushbuttons

The definite purpose pushbutton, 30 mm, 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.

| Included contact blocks | Membrane color | Catalog No.               | Ref. Code          | List Price      |
|-------------------------|----------------|---------------------------|--------------------|-----------------|
| 1 NO + 1 NC             | Black          | <b>1SFA 616 105 R4076</b> | 1SFA 616 105 R4076 | <b>\$ 45.00</b> |
| 1 NO                    | Black          | <b>1SFA 616 105 R4016</b> | 1SFA 616 105 R4016 | <b>37.00</b>    |
| 1 NC                    | Black          | <b>1SFA 616 105 R4046</b> | 1SFA 616 105 R4046 | <b>37.00</b>    |
| 2 NO                    | Black          | <b>1SFA 616 105 R4026</b> | 1SFA 616 105 R4026 | <b>45.00</b>    |
| 2 NC                    | Black          | <b>1SFA 616 105 R4056</b> | 1SFA 616 105 R4056 | <b>45.00</b>    |
| –                       | Red            | <b>KP6-40R</b>            | 1SFA 616 105 R4001 | <b>29.00</b>    |
| –                       | Green          | <b>KP6-40G</b>            | 1SFA 616 105 R4002 | <b>29.00</b>    |
| –                       | Black          | <b>KP6-40B</b>            | 1SFA 616 105 R4006 | <b>29.00</b>    |

### Contact block

| Description | Catalog No.   | Ref. Code          | List Price     |
|-------------|---------------|--------------------|----------------|
| 1 NO        | <b>MCB-10</b> | 1SFA 611 610 R1001 | <b>\$ 8.00</b> |
| 1 NC        | <b>MCB-01</b> | 1SFA 611 610 R1010 |                |

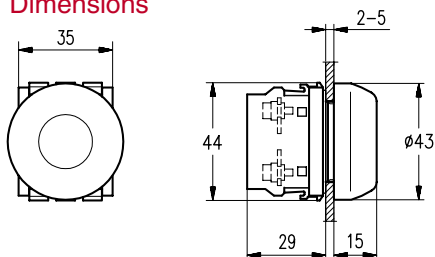
### Accessories

| Description                                    | Catalog No. ①     | Ref. Code  | List Price     |
|------------------------------------------------|-------------------|------------|----------------|
| Guide washer for positioning and anti rotation | <b>2154 373-1</b> | 2154 373-1 | <b>\$ 3.00</b> |

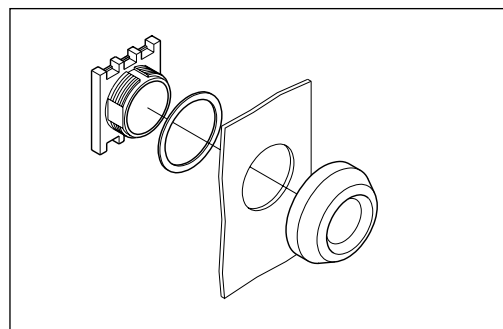
### Technical data

|                      |              |
|----------------------|--------------|
| Degree of protection | IP66         |
| Ambient temperature  | -30° ...+70° |

### Dimensions

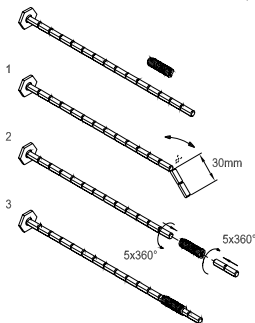
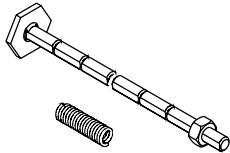
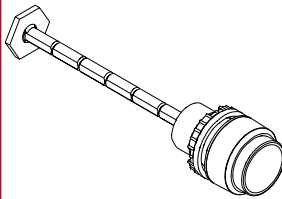
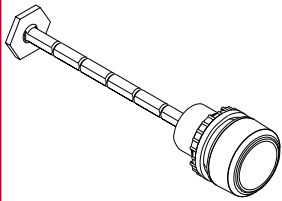
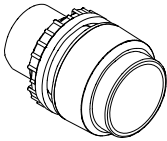
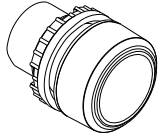


### Mounting



① IP66 Rating only.

## Reset pushbuttons



### Reset pushbutton without shaft

| Lens Color                  | Text    | Catalog No. | Ref. Code          | List Price |
|-----------------------------|---------|-------------|--------------------|------------|
| <b>With flush button</b>    |         |             |                    |            |
| Red                         | No text | KPR1-100R   | 1SFA 616 160 R1001 | \$ 8.50    |
| Green                       | No text | KPR1-100G   | 1SFA 616 160 R1002 | 8.50       |
|                             | II      | KPR1-103G   | 1SFA 616 160 R1032 | 8.50       |
| Yellow                      | No text | KPR1-100Y   | 1SFA 616 160 R1003 | 8.50       |
| Blue                        | No text | KPR1-100L   | 1SFA 616 160 R1004 | 8.50       |
|                             | R       | KPR1-101L   | 1SFA 616 160 R1014 | 8.50       |
| White                       | No text | KPR1-100W   | 1SFA 616 160 R1005 | 8.50       |
|                             | R       | KPR1-101W   | 1SFA 616 160 R1015 | 8.50       |
|                             | I       | KPR1-102W   | 1SFA 616 160 R1025 | 8.50       |
|                             | II      | KPR1-103W   | 1SFA 616 160 R1035 | 8.50       |
| Black                       | No text | KPR1-100B   | 1SFA 616 160 R1006 | 8.50       |
|                             | RESET   | KPR1-104B   | 1SFA 616 160 R1046 | 12.00      |
| <b>With extended button</b> |         |             |                    |            |
| Red                         | No text | KPR2-100R   | 1SFA 616 161 R1001 | 9.10       |
|                             | O       | KPR2-105R   | 1SFA 616 161 R1051 |            |
| White                       | No text | KPR2-100W   | 1SFA 616 161 R1005 |            |
| Black                       | No text | KPR2-100B   | 1SFA 616 161 R1006 |            |
|                             | O       | KPR2-105B   | 1SFA 616 161 R1056 |            |

### Reset pushbutton with shaft The shaft can be cut to desired length

| Lens Color                  | Text    | Catalog No. | Ref. Code             | List Price |
|-----------------------------|---------|-------------|-----------------------|------------|
| <b>With flush button</b>    |         |             |                       |            |
| Red                         | No text | KPR3-100R   | 1SFA 616 162 R1001    | \$ 11.00   |
| Green                       | No text | KPR3-100G   | 1SFA 616 162 R1002    | 11.00      |
|                             | II      | KPR3-103G   | 1SFA 616 162 R1032    | 11.00      |
| Yellow                      | No text | KPR3-100Y   | 1SFA 616 162 R1003    | 11.00      |
| Blue                        | No text | KPR3-100L   | 1SFA 616 162 R1004    | 11.00      |
|                             | R       | KPR3-101L   | 1SFA 616 162 R1014    | 11.00      |
| White                       | No text | KPR3-100W   | 1SFA 616 162 R1005    | 11.00      |
|                             | R       | KPR3-101W   | 1SFA 616 162 R1015    | 11.00      |
|                             | I       | KPR3-102W   | 1SFA 616 162 R1025    | 11.00      |
|                             | II      | KPR3-103W   | 1SFA 616 162 R1035    | 11.00      |
| Black                       | No text | KPR3-100B   | 1SFA 616 162 R1006    | 11.00      |
|                             | RESET   | KPR3-104B   | 1SFA 616 162 R1046    | 14.00      |
|                             | RESET   | KPR3-104BMR | (Reset w/metal shaft) | 29.00      |
| <b>With extended button</b> |         |             |                       |            |
| Red                         | No text | KPR4-100R   | 1SFA 616 163 R1001    | 12.00      |
|                             | O       | KPR4-105R   | 1SFA 616 163 R1051    |            |
| White                       | No text | KPR4-100W   | 1SFA 616 163 R1005    |            |
| Black                       | No text | KPR4-100B   | 1SFA 616 163 R1006    |            |
|                             | O       | KPR4-105B   | 1SFA 616 163 R1056    |            |

### Accessories

In applications with a long shaft, a flexible joint can be used to avoid damage to the shaft.

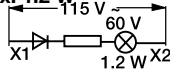
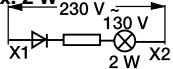
| Description                 | Catalog No. | Ref. Code          | List Price |
|-----------------------------|-------------|--------------------|------------|
| <b>Shaft</b>                |             |                    |            |
| Including fixing nut        | KA1-8046    | 1SFA 616 920 R8046 | \$ 2.25    |
| <b>Flexible joint</b>       | KA1-8047    | 1SFA 616 920 R8047 | 5.00       |
| <b>Metal shaft</b>          |             |                    |            |
| Including fixing nut & foot | KA1-8046MR  | —                  | 12.00      |

## Pilot lights and Buzzers

### Pilot light head ②②

| Lens color | Catalog No.     | Ref. Code          | List Price     |
|------------|-----------------|--------------------|----------------|
| Red        | <b>ML1-100R</b> | 1SFA 611 400 R1001 | <b>\$ 4.50</b> |
| Green      | <b>ML1-100G</b> | 1SFA 611 400 R1002 |                |
| Yellow     | <b>ML1-100Y</b> | 1SFA 611 400 R1003 |                |
| Blue       | <b>ML1-100L</b> | 1SFA 611 400 R1004 |                |
| White      | <b>ML1-100W</b> | 1SFA 611 400 R1005 |                |
| Clear      | <b>ML1-100C</b> | 1SFA 611 400 R1008 |                |

### Lamp blocks with holder ①

| Supply voltage                                                                                                                                               | Catalog No.     | Ref. Code          | List Price      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|-----------------|
| <b>For max. 2 W, 230 V AC and DC filament bulb or LED</b><br>230 V, 2 W<br> | <b>MCBH-001</b> | 1SFA 611 605 R1200 | <b>\$ 19.50</b> |
| 115 V AC supply voltage.<br><b>For 60 V filament bulb max. 1.2 W</b><br>    | <b>MCBH-002</b> | 1SFA 611 605 R1300 | <b>23.50</b>    |
| 230 V AC supply voltage.<br><b>For 130 V filament bulb max. 2 W</b><br>     | <b>MCBH-003</b> | 1SFA 611 605 R1400 | <b>23.50</b>    |

### Light diffusing lens

To improve illumination. *Note: Cannot be used with text cap.*

| Description                          | Catalog No.     | Ref. Code          | List Price     |
|--------------------------------------|-----------------|--------------------|----------------|
| The lens is used instead of text cap | <b>KA1-8005</b> | 1SFA 616 920 R8005 | <b>\$ 3.00</b> |

### Buzzers

Black. Frequency: Approx. 2400 Hz. Loudness: Min 80 dB (A)/10 cm  
Rated current: ≤ 8 mA. Service life: >5000 h

| Supply voltage | Tone       | Catalog No.     | Ref. Code          | List Price      |
|----------------|------------|-----------------|--------------------|-----------------|
| 24 V AC/DC     | Continuous | <b>KB1-4010</b> | 1SFA 616 401 R4010 | <b>\$ 75.00</b> |
| 115 V AC/DC    | Continuous | <b>KB1-4030</b> | 1SFA 616 401 R4030 | <b>75.00</b>    |
| 230 V AC       | Continuous | <b>KB1-4040</b> | 1SFA 616 401 R4040 | <b>75.00</b>    |
| 24 V AC/DC     | Pulsating  | <b>KB1-4110</b> | 1SFA 616 401 R4110 | <b>85.00</b>    |
| 115 V AC/DC    | Pulsating  | <b>KB1-4130</b> | 1SFA 616 401 R4130 | <b>85.00</b>    |
| 230 V AC       | Pulsating  | <b>KB1-4140</b> | 1SFA 616 401 R4140 | <b>85.00</b>    |

① Bulb not included. See page 8.23

② For compact style, see page 8.33.

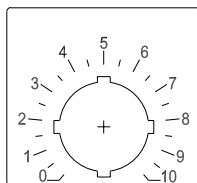


## Resistor data

|                       |             |
|-----------------------|-------------|
| Element Catalog No.   | Cermet      |
| Power rating          | 2 W         |
| Mechanical angle      | 280°        |
| Terminals             | Solder lugs |
| Insulation voltage    | 900 V       |
| Operating temperature | -1 – +70 °C |



29.6 x 44.5 mm



48.5 x 44.5 mm

## Complete potentiometers

Black knob with integrated position indication and marking in white.

| Description                    | Catalog No.    | Ref. Code          | List Price      |
|--------------------------------|----------------|--------------------|-----------------|
| <b>- with resistor 5 kohm</b>  |                |                    |                 |
| Black plastic                  | <b>KT-105B</b> | 1SFA 616 410 R1056 | <b>\$ 90.00</b> |
| Metal                          | <b>KT-305B</b> | 1SFA 616 410 R3056 | <b>95.00</b>    |
| <b>- with resistor 10 kohm</b> |                |                    |                 |
| Black plastic                  | <b>KT-110B</b> | 1SFA 616 410 R1106 | <b>90.00</b>    |
| Metal                          | <b>KT-310B</b> | 1SFA 616 410 R3106 | <b>95.00</b>    |

## Operating knob – without resistor

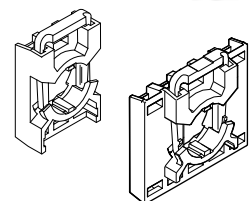
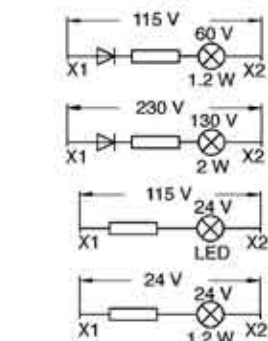
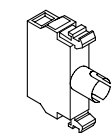
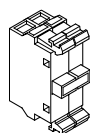
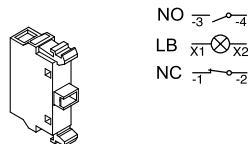
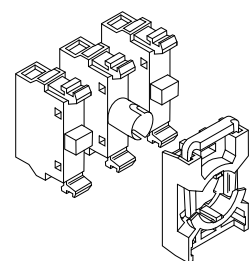
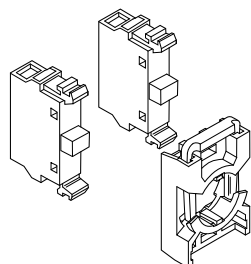
Black knob with integrated position indication and marking in white.

For shaft diameter 6 - 6.35 mm.  
Min. shaft length 20 mm

| Description   | Catalog No.    | Ref. Code          | List Price      |
|---------------|----------------|--------------------|-----------------|
| Black plastic | <b>KT-100B</b> | 1SFA 616 410 R1006 | <b>\$ 15.00</b> |
| Metal         | <b>KT-300B</b> | 1SFA 616 410 R3006 | <b>20.00</b>    |

## Legend plates

| Aluminum            |                      |               |                 |
|---------------------|----------------------|---------------|-----------------|
| Description         | Catalog No.          | Ref. Code     | List Price      |
| Symbol - see figure | <b>SK 615 562-87</b> | SK 615 562-87 | <b>\$ 10.00</b> |
| Scale: 0 - 10       | <b>SK 615 562-88</b> | SK 615 562-88 |                 |



## Contact blocks and lamp blocks with holder for front mounting

| Max. number of blocks in holder | Included blocks | Catalog No. | Ref. Code          | List Price |
|---------------------------------|-----------------|-------------|--------------------|------------|
| 3                               | 1 NC            | MCBH-01     | 1SFA 611 605 R1110 | \$ 10.00   |
| 3                               | 1 NO            | MCBH-10     | 1SFA 611 605 R1101 | 10.00      |
| 3                               | 2 NC            | MCBH-02     | 1SFA 611 605 R1120 | 18.00      |
| 3                               | 2 NO            | MCBH-20     | 1SFA 611 605 R1102 | 18.00      |
| 3                               | 3 NC            | MCBH-03     | 1SFA 611 605 R1130 | 26.00      |
| 3                               | 3 NO            | MCBH-30     | 1SFA 611 605 R1103 | 26.00      |
| 3                               | 1 NO + 1 NC     | MCBH-11     | 1SFA 611 605 R1111 | 18.00      |
| 3                               | 1 NO + 2 NC     | MCBH-12     | 1SFA 611 605 R1121 | 26.00      |
| 3                               | 2 NO + 1 NC     | MCBH-21     | 1SFA 611 605 R1112 | 26.00      |

### For non-illuminated operators

### For illuminated operators

|   |                    |          |                    |       |
|---|--------------------|----------|--------------------|-------|
| 3 | 1 NC + 1 LB        | MCBH-011 | 1SFA 611 605 R1210 | 27.50 |
| 3 | 1 NO + 1 LB        | MCBH-101 | 1SFA 611 605 R1201 | 27.50 |
| 3 | 1 NO + 1 NC + 1 LB | MCBH-111 | 1SFA 611 605 R1211 | 35.50 |
| 3 | 2 NC + 1 LB        | MCBH-021 | 1SFA 611 605 R1220 | 35.50 |
| 3 | 2 NO + 1 LB        | MCBH-201 | 1SFA 611 605 R1202 | 35.50 |

## Single contact blocks for front mounting

| Included blocks                | Catalog No. | Ref. Code          | List Price |
|--------------------------------|-------------|--------------------|------------|
| 1 NO                           | MCB-10      | 1SFA 611 610 R1001 | \$ 8.00    |
| 1 NC                           | MCB-01      | 1SFA 611 610 R1010 | 8.00       |
| 1 NO with gold plated contacts | MCB-10G     | 1SFA 611 610 R1101 | 16.00      |
| 1 NC with gold plated contacts | MCB-01G     | 1SFA 611 610 R1110 | 16.00      |

## Double contact block for front mounting

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

| Included blocks | Catalog No. | Ref. Code          | List Price |
|-----------------|-------------|--------------------|------------|
| 2 NO            | MCB-20      | 1SFA 611 610 R1002 | \$ 16.00   |
| 2 NC            | MCB-02      | 1SFA 611 610 R1020 |            |
| 1 NO + 1 NC     | MCB-11      | 1SFA 611 610 R1011 |            |

## Single lamp blocks for front mounting, Ba 9s base

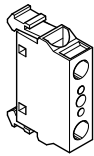
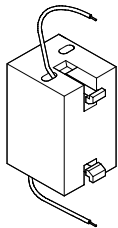
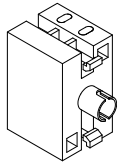
| Description                                                                                                                                         | Catalog No. | Ref. Code          | List Price |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|------------|
| <b>For max. 2 W, 230 V AC and DC filament bulb or LED</b>                                                                                           | MLB-1       | 1SFA 611 620 R1001 | \$ 17.50   |
| 115 V AC supply voltage.                                                                                                                            |             |                    |            |
| <b>For 60 V filament bulb max. 1.2 W</b>                                                                                                            | MLB-2       | 1SFA 611 620 R1002 | 21.50      |
| 230 V AC supply voltage.                                                                                                                            |             |                    |            |
| <b>For 130 V filament bulb max. 2 W</b>                                                                                                             | MLB-3       | 1SFA 611 620 R1003 | 21.50      |
| 115 V AC and DC supply voltage                                                                                                                      |             |                    |            |
| <b>For 24 V LED</b>                                                                                                                                 | MLB-4       | 1SFA 611 620 R1004 | 21.50      |
| 24 V AC and DC supply voltage.                                                                                                                      |             |                    |            |
| With resistor. Intended for electronic circuits. The resistor limits the making current and protects against disturbances in the electronic circuit | MLB-5       | 1SFA 611 620 R1005 | 21.50      |
| <b>For 24 V filament bulb</b>                                                                                                                       |             |                    |            |

## Holders

| Description                | Catalog No. | Ref. Code          | List Price |
|----------------------------|-------------|--------------------|------------|
| Holders for front mounting | MCBH-00     | 1SFA 611 605 R1100 | \$ 2.00    |
| For three blocks           |             |                    |            |
| For five blocks            | MCBH5-00    | 1SFA 611 601 R1100 | 4.00       |

Contact blocks and lamp blocks for rear mounting See Page 8.43

## Accessories



### Transformer block

For 6 or 24 V filament bulb and 24 V LED. Rated power 1.5 W.

| Primary voltage                                        | Secondary voltage | Catalog No.      | Ref. Code          | List Price |
|--------------------------------------------------------|-------------------|------------------|--------------------|------------|
| <b>With lamp holder for front mounting, Ba 9s base</b> |                   |                  |                    |            |
| Intended to supply a 1.2 W filament bulb.              |                   |                  |                    |            |
| 110 - 127V AC                                          | 6 V AC            | <b>KTR1-1001</b> | 1SFA 616 950 R1001 | \$ 35.00   |
| 220 - 250 V AC                                         | 6 V AC            | <b>KTR1-1002</b> | 1SFA 616 950 R1002 |            |
| 380 - 420 V AC                                         | 6 V AC            | <b>KTR1-1003</b> | 1SFA 616 950 R1003 |            |
| 440 - 480 V AC                                         | 6 V AC            | <b>KTR1-1004</b> | 1SFA 616 950 R1004 |            |
| 500 - 600 V AC                                         | 6 V AC            | <b>KTR1-1005</b> | 1SFA 616 950 R1005 |            |
| 110 - 127 V AC                                         | 24 V AC ①         | <b>KTR1-1011</b> | 1SFA 616 950 R1011 |            |
| 220 - 250 V AC                                         | 24 V AC ①         | <b>KTR1-1012</b> | 1SFA 616 950 R1012 |            |
| 380 - 420 V AC                                         | 24 V AC ①         | <b>KTR1-1013</b> | 1SFA 616 950 R1013 |            |
| 440 - 480 V AC                                         | 24 V AC ①         | <b>KTR1-1014</b> | 1SFA 616 950 R1014 |            |

### For illuminated operators ②

Intended to supply a 1.2 W filament bulb mounted in lamp block MLB-1 (1SFA 611 620 R1001) only.

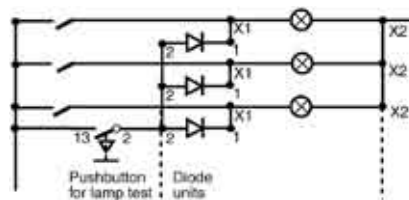
|                |           |                  |                    |       |
|----------------|-----------|------------------|--------------------|-------|
| 110 - 127V AC  | 6 V AC    | <b>KTR1-2001</b> | 1SFA 616 950 R2001 | 35.00 |
| 220 - 250 V AC | 6 V AC    | <b>KTR1-2002</b> | 1SFA 616 950 R2002 |       |
| 380 - 420 V AC | 6 V AC    | <b>KTR1-2003</b> | 1SFA 616 950 R2003 |       |
| 440 - 480 V AC | 6 V AC    | <b>KTR1-2004</b> | 1SFA 616 950 R2004 |       |
| 500 - 600 V AC | 6 V AC    | <b>KTR1-2005</b> | 1SFA 616 950 R2005 |       |
| 110 - 127 V AC | 24 V AC ① | <b>KTR1-2011</b> | 1SFA 616 950 R2011 |       |
| 220 - 250 V AC | 24 V AC ① | <b>KTR1-2012</b> | 1SFA 616 950 R2012 |       |
| 380 - 420 V AC | 24 V AC ① | <b>KTR1-2013</b> | 1SFA 616 950 R2013 |       |
| 440 - 480 V AC | 24 V AC ① | <b>KTR1-2014</b> | 1SFA 616 950 R2014 |       |

### Diode block

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.

| Description | Catalog No.     | Ref. Code          | List Price |
|-------------|-----------------|--------------------|------------|
| Diode block | <b>MDB-1001</b> | 1SFA 611 630 R1001 | \$ 14.00   |

### Diagram for lamp test with three diode block



① Can be used with LED bulb  
② To be used with with directly supplied lamp blocks only.

## Accessories



### Filament bulbs

Ba 9s base Catalog No. of current: AC/DC. A lamp changing tool is required for changing bulb.

| Description     |                  |                |                |               | Catalog No. | Ref. Code   | List Price |
|-----------------|------------------|----------------|----------------|---------------|-------------|-------------|------------|
| Rated voltage V | Rated current mA | Rated output W | Service life h | Luminance mcd |             |             |            |
| 6               | 200              | 1.2            | 10 000         | 350           | 5911 086-11 | 5911 086-11 | \$6.00     |
| 12              | 100              | 1.2            | 10 000         | 230           | 5911 086-12 | 5911 086-12 |            |
| 24              | 50               | 1.2            | 10 000         | 280           | 5911 086-13 | 5911 086-13 |            |
| 30              | 40               | 1.2            | 10 000         | 250           | 5911 086-4  | 5911 086-4  |            |
| 48              | 42               | 2              | 6 000          | 500           | 5911 086-5  | 5911 086-5  |            |
| 60              | 20               | 1.2            | 5 000          | 190           | 5911 086-14 | 5911 086-14 |            |
| 110             | 18               | 2              | 7 500          | 250           | 5911 086-7  | 5911 086-7  |            |
| 130             | 15               | 2              | 7 500          | 120           | 5911 086-7  | 5911 086-7  |            |

### LEDs

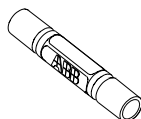
With one diode chip mounted on a Ba 9s base. Choose the same color for the LED and the lamp cap or else use a clear lamp cap.

For white light use white LED with clear lamp cap. At DC the lamp base have to be connected to cathode (-) and the bottom contact to anode (+).

| Description                                            |                  |                  |               | Catalog No. | Ref. Code          | List Price |
|--------------------------------------------------------|------------------|------------------|---------------|-------------|--------------------|------------|
| Color                                                  | Rated current mA | Wave-length nm   | Luminance mcd |             |                    |            |
| Rated voltage 12 V, DC Service life >50 000 h          |                  |                  |               |             |                    |            |
| Red                                                    | 15               | 630              | 250           | KA2-2011    | 1SFA 616 921 R2011 | \$ 21.00   |
| Green                                                  | 15               | 525              | 1000          | KA2-2012    | 1SFA 616 921 R2012 |            |
| Yellow                                                 | 15               | 592              | 250           | KA2-2013    | 1SFA 616 921 R2013 |            |
| Blue                                                   | 15               | 470              | 450           | KA2-2014    | 1SFA 616 921 R2014 |            |
| White                                                  | 15               | x=0.31<br>y=0.32 | 600           | KA2-2015    | 1SFA 616 921 R2015 |            |
| Rated voltage 24 V, (AC)/DC ① Service life >50 000 h   |                  |                  |               |             |                    |            |
| Red                                                    | 15               | 630              | 250           | KA2-2021    | 1SFA 616 921 R2021 | 15.00      |
| Green                                                  | 15               | 525              | 800           | KA2-2022    | 1SFA 616 921 R2022 |            |
| Yellow                                                 | 15               | 592              | 250           | KA2-2023    | 1SFA 616 921 R2023 |            |
| Blue                                                   | 15               | 470              | 400           | KA2-2024    | 1SFA 616 921 R2024 |            |
| White                                                  | 15               | x=0.31<br>y=0.32 | 500           | KA2-2025    | 1SFA 616 921 R2025 |            |
| Rated voltage 48 V, (AC)/DC ① Service life >50 000 h   |                  |                  |               |             |                    |            |
| Red                                                    | 12               | 630              | 200           | KA2-2041    | 1SFA 616 921 R2041 | 21.00      |
| Green                                                  | 12               | 525              | 1700          | KA2-2042    | 1SFA 616 921 R2042 |            |
| Yellow                                                 | 12               | 592              | 240           | KA2-2043    | 1SFA 616 921 R2043 |            |
| Blue                                                   | 12               | 470              | 720           | KA2-2044    | 1SFA 616 921 R2044 |            |
| White                                                  | 12               | x=0.31<br>y=0.32 | 1200          | KA2-2045    | 1SFA 616 921 R2045 |            |
| Rated voltage 60 V, (AC)/DC ① Service life >50 000 h   |                  |                  |               |             |                    |            |
| Red                                                    | 10               | 630              | 160           | KA2-2051    | 1SFA 616 921 R2051 | 21.00      |
| Green                                                  | 10               | 525              | 1400          | KA2-2052    | 1SFA 616 921 R2052 |            |
| Yellow                                                 | 10               | 592              | 200           | KA2-2053    | 1SFA 616 921 R2053 |            |
| Blue                                                   | 10               | 470              | 600           | KA2-2054    | 1SFA 616 921 R2054 |            |
| White                                                  | 10               | x=0.31<br>y=0.32 | 1000          | KA2-2055    | 1SFA 616 921 R2055 |            |
| Rated voltage 110-130 V, AC ① Service life 25 000 h    |                  |                  |               |             |                    |            |
| Red                                                    | 4-6              | 630              | 60-100        | KA2-2131    | 1SFA 616 921 R2131 | 15.00      |
| Green                                                  | 4-6              | 525              | 500-850       | KA2-2132    | 1SFA 616 921 R2132 |            |
| Yellow                                                 | 4-6              | 592              | 70-120        | KA2-2133    | 1SFA 616 921 R2133 |            |
| Blue                                                   | 4-6              | 470              | 220-350       | KA2-2134    | 1SFA 616 921 R2134 |            |
| White                                                  | 4-6              | x=0.31<br>y=0.32 | 350-600       | KA2-2135    | 1SFA 616 921 R2135 |            |
| Rated voltage 110-130 V, AC/DC ① Service life 25 000 h |                  |                  |               |             |                    |            |
| Red                                                    | 4-6              | 630              | 60-100        | KA2-2141    | 1SFA 616 921 R2141 | 21.00      |
| Green                                                  | 4-6              | 525              | 500-850       | KA2-2142    | 1SFA 616 921 R2142 |            |
| Yellow                                                 | 4-6              | 592              | 70-120        | KA2-2143    | 1SFA 616 921 R2143 |            |
| Blue                                                   | 4-6              | 470              | 220-350       | KA2-2144    | 1SFA 616 921 R2144 |            |
| White                                                  | 4-6              | x=0.31<br>y=0.32 | 350-600       | KA2-2145    | 1SFA 616 921 R2145 |            |
| Rated voltage 230 V, AC ① Service life 25 000 h        |                  |                  |               |             |                    |            |
| Red                                                    | 4                | 630              | 60            | KA2-2221    | 1SFA 616 921 R2221 | 21.00      |
| Green                                                  | 4                | 525              | 500           | KA2-2222    | 1SFA 616 921 R2222 |            |
| Yellow                                                 | 4                | 592              | 70            | KA2-2223    | 1SFA 616 921 R2223 |            |
| Blue                                                   | 4                | 470              | 220           | KA2-2224    | 1SFA 616 921 R2224 |            |
| White                                                  | 4                | x=0.31<br>v=0.32 | 350           | KA2-2225    | 1SFA 616 921 R2225 |            |

① At AC the luminance is decreased with 30 % and there is also a slight flickering.

## Accessories



## Flashing LED

A lamp changing tool is required for changing bulb.

Choose the same color for the LED and the lamp cap or use a clear lamp cap.

The lamp base has to be connected to cathode (-) and the bottom contact to anode (+).

| Description                                    |                      |                          | Catalog No. | Ref. Code  | List Price |
|------------------------------------------------|----------------------|--------------------------|-------------|------------|------------|
| Rated voltage 24 V,<br>rated current 25 mA, DC |                      |                          |             |            |            |
| Color                                          | Wave<br>length<br>nm | Service<br>life<br>hours |             |            |            |
| Red                                            | 630                  | 50 000                   | 4950 512-1  | 4950 512-1 | \$ 20.00   |
| Green                                          | 565                  | 50 000                   | 4950 512-2  | 4950 512-2 | 44.25      |
| Yellow                                         | 585                  | 50 000                   | 4950 512-3  | 4950 512-3 | 20.00      |

## Lamp changing tool

| Description            | Catalog No.     | Ref. Code          | List Price      |
|------------------------|-----------------|--------------------|-----------------|
| For LEDs and for bulbs | <b>KA1-8072</b> | 1SFA 616 920 R8072 | <b>\$ 10.00</b> |

## Mounting tool

| Description                    | Catalog No.     | Ref. Code          | List Price      |
|--------------------------------|-----------------|--------------------|-----------------|
| Used for tightening the sleeve | <b>MA1-8015</b> | 1SFA 611 920 R8015 | <b>\$ 10.00</b> |

Membrane of rubber

Of transparent, heat and cold resistant rubber. Does not harden at low temperature.

Gives IP 67 degree of protection. When membrane is used, remove the gasket.

| For operator with | Catalog No.     | Ref. Code          | List Price     |
|-------------------|-----------------|--------------------|----------------|
| Flush button      | <b>KA1-8052</b> | 1SFA 616 920 R8052 | <b>\$ 8.00</b> |
| Extended button   | <b>KA1-8002</b> | 1SFA 616 920 R8002 |                |

## Emergency stop shroud

For 40 mm Emergency Stop Pushbuttons. Not for use with plastic enclosure.

| Color                                       | Catalog No.     | Ref. Code          | List Price      |
|---------------------------------------------|-----------------|--------------------|-----------------|
| To prevent inadvertant operation.<br>Yellow | <b>KA1-8053</b> | 1SFA 616 920 R8053 | <b>\$ 16.00</b> |

## Protective ring

For flush and extended buttons

| Description                                                                 | Catalog No.         | Ref. Code    | List Price     |
|-----------------------------------------------------------------------------|---------------------|--------------|----------------|
| To prevent inadvertant operation.<br>Not together with legend plate holder. | <b>SK 615 512-1</b> | SK 615 512-1 | <b>\$ 4.00</b> |

## Protective cover

| Description                                                                                      | Catalog No.     | Ref. Code          | List Price      |
|--------------------------------------------------------------------------------------------------|-----------------|--------------------|-----------------|
| For flush button.<br>To prevent inadvertent operation.<br>Not together with legend plate holder. | <b>KA1-8010</b> | 1SFA 616 920 R8010 | <b>\$ 15.00</b> |

**Bezel** (Packing unit 10 pieces)

| Description                | Catalog No.     | Ref. Code          | List Price     |
|----------------------------|-----------------|--------------------|----------------|
| <b>For pushbutton</b>      |                 |                    |                |
| Grey, plastic              | <b>KA1-8079</b> | 1SFA 616 920 R8079 | <b>\$ 1.00</b> |
| Black, plastic             | <b>KA1-8022</b> | 1SFA 616 920 R8022 | <b>1.00</b>    |
| Metal                      | <b>KA1-8021</b> | 1SFA 616 920 R8021 | <b>2.50</b>    |
| <b>For selector switch</b> |                 |                    |                |
| Grey, plastic              | <b>KA1-8077</b> | 1SFA 616 920 R8077 | <b>1.00</b>    |
| Black, plastic             | <b>KA1-8080</b> | 1SFA 616 920 R8080 | <b>1.00</b>    |
| Metal                      | <b>KA1-8024</b> | 1SFA 616 920 R8024 | <b>2.50</b>    |

### Square bezel

|                                         |                     |                    |             |
|-----------------------------------------|---------------------|--------------------|-------------|
| Black, plastic (Packing unit 10 pieces) | <b>SK 616 016-2</b> | SK 616 016-2       | <b>2.00</b> |
| Grey, plastic (Packing unit 10 pieces)  | <b>KA1-8124</b>     | 1SFA 611 920 R8124 |             |

## Accessories

### 30 mm adaptors

For use when fitting the 22 mm pilot devices in 30 mm mounting holes. (1.5 – 4 mm panels)

| Description                                                                                  | Catalog No. | Ref. Code          | List Price |
|----------------------------------------------------------------------------------------------|-------------|--------------------|------------|
| <b>For use with emergency stop pushbuttons</b>                                               |             |                    |            |
| Black plastic.                                                                               | KA1-8027    | 1SFA 616 920 R8027 | \$ 8.00    |
| Metal.                                                                                       | KA1-8028    | 1SFA 616 920 R8028 | 10.00      |
| <b>For use with pushbuttons, selector switches, pilot lights, potentiometers and buzzers</b> |             |                    |            |
| Black plastic.                                                                               | KA1-8029    | 1SFA 616 920 R8029 | 8.00       |
| Metal.                                                                                       | KA1-8030    | 1SFA 616 920 R8030 | 10.00      |

### Adaptors

| Description                                | Catalog No. | Ref. Code          | List Price |
|--------------------------------------------|-------------|--------------------|------------|
| <b>For flush mounted pushbuttons</b>       | KA1-8073    | 1SFA 616 920 R8073 | \$ 15.00   |
| <b>For flush mounted selector switches</b> | KA1-8074    | 1SFA 616 920 R8074 |            |

### Extra key

| Description                | Catalog No.   | Ref. Code     | List Price |
|----------------------------|---------------|---------------|------------|
| Ronis 455 (key code 71)    | SK 616 021-71 | SK 616 021-71 | \$ 10.00   |
| Ronis 421 (key code 72)    | SK 616 021-72 | SK 616 021-72 |            |
| Ronis 3433-E (key code 73) | SK 616 021-73 | SK 616 021-73 |            |

### Label sheet

| Description                                 | Catalog No. | Ref. Code   | List Price |
|---------------------------------------------|-------------|-------------|------------|
| For marking of contact blocks at two levels | 2949 1725-1 | 2949 1725-1 | \$ 10.00   |

### Lenses for pilot lights (Packing unit 10 pieces)

| Description/Color | Catalog No. | Ref. Code          | List Price |
|-------------------|-------------|--------------------|------------|
| Red               | KA1-8031    | 1SFA 616 920 R8031 | \$ 2.50    |
| Green             | KA1-8032    | 1SFA 616 920 R8032 |            |
| Yellow            | KA1-8033    | 1SFA 616 920 R8033 |            |
| Blue              | KA1-8034    | 1SFA 616 920 R8034 |            |
| White             | KA1-8035    | 1SFA 616 920 R8035 |            |

### Buttons for pushbuttons (Packing unit 10 pieces)

| Description                  | Color  | Catalog No. | Ref. Code          | List Price |
|------------------------------|--------|-------------|--------------------|------------|
| <b>Flush, opaque</b>         | Red    | KA1-8081    | 1SFA 616 920 R8081 |            |
|                              | Green  | KA1-8082    | 1SFA 616 920 R8082 |            |
|                              | Yellow | KA1-8083    | 1SFA 616 920 R8083 |            |
|                              | Blue   | KA1-8084    | 1SFA 616 920 R8084 |            |
|                              | White  | KA1-8085    | 1SFA 616 920 R8085 |            |
|                              | Black  | KA1-8086    | 1SFA 616 920 R8086 |            |
|                              | Grey   | KA1-8087    | 1SFA 616 920 R8087 |            |
|                              | Clear  | KA1-8088    | 1SFA 616 920 R8088 |            |
| <b>Extended, opaque</b>      | Red    | KA1-8091    | 1SFA 616 920 R8091 |            |
|                              | Green  | KA1-8092    | 1SFA 616 920 R8092 |            |
|                              | Yellow | KA1-8093    | 1SFA 616 920 R8093 |            |
|                              | Blue   | KA1-8094    | 1SFA 616 920 R8094 |            |
|                              | White  | KA1-8095    | 1SFA 616 920 R8095 |            |
|                              | Black  | KA1-8096    | 1SFA 616 920 R8096 |            |
|                              | Grey   | KA1-8097    | 1SFA 616 920 R8097 |            |
|                              | Clear  | KA1-8098    | 1SFA 616 920 R8098 |            |
| <b>Flush, transparent</b>    | Red    | KA1-8101    | 1SFA 616 920 R8101 |            |
|                              | Green  | KA1-8102    | 1SFA 616 920 R8102 |            |
|                              | Yellow | KA1-8103    | 1SFA 616 920 R8103 |            |
|                              | Blue   | KA1-8104    | 1SFA 616 920 R8104 |            |
|                              | White  | KA1-8105    | 1SFA 616 920 R8105 |            |
|                              | Clear  | KA1-8108    | 1SFA 616 920 R8108 |            |
| <b>Extended, transparent</b> | Red    | KA1-8111    | 1SFA 616 920 R8111 |            |
|                              | Green  | KA1-8112    | 1SFA 616 920 R8112 |            |
|                              | Yellow | KA1-8113    | 1SFA 616 920 R8113 |            |
|                              | Blue   | KA1-8114    | 1SFA 616 920 R8114 |            |
|                              | White  | KA1-8115    | 1SFA 616 920 R8115 |            |
|                              | Clear  | KA1-8118    | 1SFA 616 920 R8118 |            |

## Accessories



### 22mm hole plug (UL Type 1, 3R, 4, 4X, 12)

Hole plugs are used to cover pushbutton holes in panels

| Description    | Catalog No.   | List Price     |
|----------------|---------------|----------------|
| 22mm hole plug | <b>CBK-XP</b> | <b>\$ 2.00</b> |

### Padlock attachment for 30mm mushroom head (twist release only)

Prevents unauthorized use of equipment. Provides space for up to 4 padlocks with the button in the depressed position. Holes fit standard 1/4" padlock.

| Description        | Catalog No.    | List Price      |
|--------------------|----------------|-----------------|
| Padlock attachment | <b>CBK-XPA</b> | <b>\$ 20.00</b> |

### Spare gasket

| Description | Catalog No.    | List Price     |
|-------------|----------------|----------------|
| Gasket      | <b>CBK-XRG</b> | <b>\$ 1.00</b> |

### Selector switch lock

| Description          | Catalog No.     | List Price      |
|----------------------|-----------------|-----------------|
| Selector switch lock | <b>CBK-XSWL</b> | <b>\$ 35.00</b> |

### Selector switch guard

| Description           | Catalog No.     | List Price     |
|-----------------------|-----------------|----------------|
| Selector switch guard | <b>CBK-XSWG</b> | <b>\$ 8.00</b> |



## Approvals

The pushbuttons, selector switches and pilot lights are approved by:  
- National approval agencies: UL, CSA and China Compulsory Product Certification

For detail information please contact ABB

## Standards

|                 |                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC 60947-1     | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC 60947-5-1   | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| 8 IEC 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 60073       | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators                                     |
| IEC 60529       | Degrees of protection provided by enclosures (IP Code)                                                                                                                 |
| EN 60947-1      | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| EN 60947-5-1    | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| 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 |
| EN 60073        | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indication devices and actuators                             |
| 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                                    |
| UL 508          | Industrial Control Equipment                                                                                                                                           |
| CSA C22.2 No 14 | Industrial Control Equipment                                                                                                                                           |

## Degrees of protection

| Operators                                           | IP    | UL/CSA                    |
|-----------------------------------------------------|-------|---------------------------|
| Pushbutton with flush or extended button, <b>MP</b> | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Double pushbutton, <b>MPD</b>                       | IP 66 | Type1, 3R, 4, 4X, 12, 13  |
| Mushroom pushbutton, momentary, <b>MPM</b>          | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Emergency stop pushbutton, <b>MPMT/P</b>            | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Selector switch, <b>M2SS/M3SS</b>                   | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Key operated selector switch, <b>M2SSK/M3SSK</b>    | IP 66 | Type 1, 3R, 4, 4X, 12     |
| Toggle switch, <b>MTS2/MTS3</b>                     | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Definite purpose pushbutton, 30 mm, <b>KP6</b>      | IP 66 | —                         |
| Reset button, <b>KPR</b>                            | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Pilot lights, <b>ML</b>                             | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| Buzzer, <b>KB</b>                                   | IP 65 | Type 4X                   |
| Potentiometer, <b>KT</b>                            | IP 66 | Type 1, 3R, 4, 4X, 12, 13 |
| <b>Contact block &amp; transformer block</b>        | IP 20 |                           |
| <b>Enclosures</b>                                   |       |                           |
| Plastic enclosures                                  | IP 66 |                           |
| Metallic enclosures                                 | IP 67 |                           |



## Material

**No ozone depleting substances in the products.**

All front parts are made of polycarbonate

| Material    |               |                                                                                                                                                              |
|-------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PC          | Polycarbonate | High impact strength, good outdoor resistance. Can withstand light acid solutions, aliphatic hydrocarbons, paraffin, alcohols, animal and vegetable greases. |
| 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.                                                                                         |
| Rubber      |               | Chloroprene<br>Nitrile                                                                                                                                       |

## Mechanical life

### Operators

|                                                                                                     |                        |
|-----------------------------------------------------------------------------------------------------|------------------------|
| Pushbuttons with flush or extended button, momentary mushroom pushbutton                            | 2 million operations   |
| Selector switch, maintained mushroom pushbutton, key operated selector switch and double pushbutton | 0.5 million operations |
| Emergency stop pushbutton                                                                           | 0.1 million operations |
| Toggle switch                                                                                       | 1 million operations   |
| Lockable pushbuttons                                                                                | 0.3 million operations |

## Temperature

|                                                                      |               |
|----------------------------------------------------------------------|---------------|
| Ambient temperature during operation                                 | -25 to +70 °C |
| Exception: All pilot devices with 2 W continuously lit filament bulb | -25 to +40 °C |
| Storage temperature                                                  | -30 to +85 °C |

## 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 |
| Recommended torque                              | 0.9 Nm                                                                          |
| Tightening torque                               |                                                                                 |
| Locking nut, M22                                | Min. 2 Nm<br>Max. 2.3 Nm                                                        |

## Contact blocks

Mechanical endurance 10 million operations

Self cleaning contacts of silver, NC contact with positive opening.

At voltages and currents below 24 V and 5.6 mA two contact blocks in parallel are recommended. As an alternative, gold plated contacts can be used.

| Ratings as per UL, CSA, NEMA | A600                                                    | Q600                                                            |
|------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|
|                              | AC                                                      | DC                                                              |
| Rated insulation voltage     | 600 V                                                   | 600 V                                                           |
| Rated thermal current        | 10 A                                                    | 2.5 A                                                           |
| Rated operational current    | at 120 V 6 A<br>240 V 3 A<br>480 V 1.5 A<br>600 V 1.2 A | at 125 V 0.55 A<br>250 V 0.27 A<br>480 V 0.10 A<br>600 V 0.10 A |

### Ratings as per IEC 60 947-5-1

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Rated insulation voltage, $U_i$  | 690 V                                               |
| Rated thermal current, $I_{th}$  | 10 A                                                |
| Rated operational current, $I_o$ |                                                     |
| utilisation category AC 15,      | at 120 V 8 A<br>230 V 6 A<br>400 V 4 A<br>690 V 2 A |

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Rated operational current, $I_o$ |                                            |
| utilisation category DC 13,      | at 24 V 5 A<br>125 V 1.1 A<br>250 V 0.55 A |

|                          |              |
|--------------------------|--------------|
| Contact resistance       | < 25 mΩ      |
| Compulsory function test | at 5V, 16 mA |

### Max. number of contact blocks per operator ①

|                                                                                                |                               |
|------------------------------------------------------------------------------------------------|-------------------------------|
| Pushbutton, toggle switch and mushroom pushbutton                                              | 6                             |
| Maintained pushbutton                                                                          | 4                             |
| Double pushbutton, selector switch, key operated selector switch and emergency stop pushbutton | 4                             |
| Short circuit protection                                                                       |                               |
| Max. fuse at 1 kA                                                                              | 16 A ordinary<br>10 A delayed |

## Lamp block

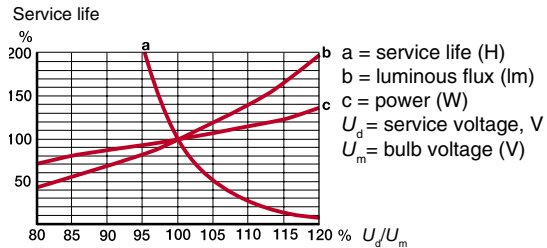
### Ratings as per IEC 60 947-5-1

|                          |       |
|--------------------------|-------|
| Rated insulation voltage | 230 V |
| Base                     | Ba 9s |
| Permissible power, up to | 2 W   |

### Service life of filament bulb

Relative service life, luminous flux and power consumption at different service voltages.

It is generally true to say that bulbs for lower voltages give more light and have better vibration-withstand capability than bulbs for higher voltages.



### Lamp comparison

| Bulb Catalog No. | Approx. life (hours) | Shock and service immunity | High vibration temperature | Low power operating | Brightness consumption |
|------------------|----------------------|----------------------------|----------------------------|---------------------|------------------------|
| Filament         | 5000 - 10 000        | +                          | +                          | +                   | +++                    |
| LED              | 25 000 - 50 000      | +++                        | ++                         | ++                  | ++                     |

Very good +++  
Good ++  
Less good +

## Transformer block

Suitable for filament bulb 6 or 24 V AC and 1.2 W and LED 24 V.

|                                                 |                                  |
|-------------------------------------------------|----------------------------------|
| Rated power                                     | 1.5 W                            |
| Rated voltage                                   | Ratio, see Accessories page 8.25 |
| Rated insulation voltage acc. to IEC 70 °C (DT) | Class E                          |

① 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.





## Compact range



8

**The compact range is a new competitive choice for customers with high requirements of cost efficient, easy to use and reliable products.**

### General construction

- "All-in-one function"
- One Ref. code = one complete function
- Easy mounting
- Less inventory
- Broad range of accessories
- Same front design as for the modular range.
- Durable actuators in clear colors with large text and push area
- UL File# E57057
- CSA File# LR19700

### Technical advantages

- High degree of protection: UL Type 1, 3R, 4, 4X, 12 & 13
- One or two built-in electrically separated contacts (1NO, 1NC, 2NO, 2NC or 1NC & 1NO)
- Contacts with wiping action
- Low built-in depth

### Operators

- Pushbuttons, non-illuminated
- Emergency stop pushbuttons, non-illuminated, twist, pull or key release
- Selector switches, non-illuminated, 2 or 3 position

### Pilot lights

- Ba 9s base for bulbs (6-130 V) or LED (12-130 V DC, 24-230 V AC)
- Pilot light with integrated LED (12-220 V DC, 24-230 V AC)

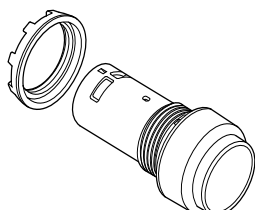
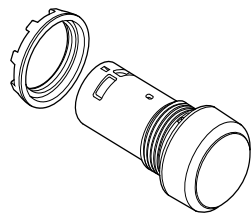


42 mm

## Flush and extended pushbuttons

### Non-illuminated

8



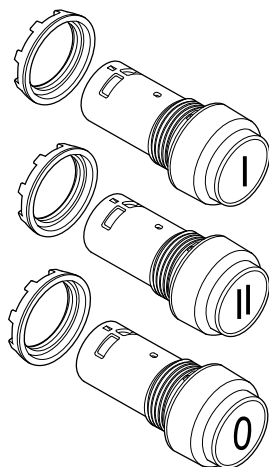
Bezel in black plastic as standard  
Bezel in metal:

Replace '1' in the:

Catalog No. CPX-1 0X

Ref. Code 1SFA619XXX R 1XXX

3 for metal bezel



#### Codes for button colors

|        | Catalog No. | Ref. Code |
|--------|-------------|-----------|
|        | ■           | □         |
| Red    | R           | 1         |
| Green  | G           | 2         |
| Yellow | Y           | 3         |
| Blue   | L           | 4         |
| White  | W           | 5         |
| Black  | B           | 6         |
| Grey   | U           | 7         |

#### Pushbutton with ...

| Description | Catalog No. | Ref. Code | List Price |
|-------------|-------------|-----------|------------|
|-------------|-------------|-----------|------------|

#### Flush button

##### Momentary

##### Contacts included:

|            |           |                    |          |
|------------|-----------|--------------------|----------|
| 1 NO       | CP110■-10 | 1SFA 619 100 R101□ | \$ 15.20 |
| 2 NO       | CP110■-20 | 1SFA 619 100 R102□ | 19.90    |
| 1 NC       | CP110■-01 | 1SFA 619 100 R104□ | 15.20    |
| 2 NC       | CP110■-02 | 1SFA 619 100 R105□ | 19.90    |
| 1 NO +1 NC | CP110■-11 | 1SFA 619 100 R107□ | 19.90    |

##### Maintained

##### Contacts included:

|            |           |                    |       |
|------------|-----------|--------------------|-------|
| 1 NO       | CP210■-10 | 1SFA 619 101 R101□ | 19.90 |
| 2 NO       | CP210■-20 | 1SFA 619 101 R102□ | 22.50 |
| 1 NC       | CP210■-01 | 1SFA 619 101 R104□ | 19.90 |
| 2 NC       | CP210■-02 | 1SFA 619 101 R105□ | 22.50 |
| 1 NO +1 NC | CP210■-11 | 1SFA 619 101 R107□ | 22.50 |

#### Extended button

##### Momentary

##### Contacts included:

|            |           |                    |       |
|------------|-----------|--------------------|-------|
| 1 NO       | CP310■-10 | 1SFA 619 102 R101□ | 15.20 |
| 2 NO       | CP310■-20 | 1SFA 619 102 R102□ | 19.90 |
| 1 NC       | CP310■-01 | 1SFA 619 102 R104□ | 15.20 |
| 2 NC       | CP310■-02 | 1SFA 619 102 R105□ | 19.90 |
| 1 NO +1 NC | CP310■-11 | 1SFA 619 102 R107□ | 19.90 |

##### Maintained

##### Contacts included:

|            |           |                    |       |
|------------|-----------|--------------------|-------|
| 1 NO       | CP410■-10 | 1SFA 619 103 R101□ | 19.90 |
| 2 NO       | CP410■-20 | 1SFA 619 103 R102□ | 22.50 |
| 1 NC       | CP410■-01 | 1SFA 619 103 R104□ | 19.90 |
| 2 NC       | CP410■-02 | 1SFA 619 103 R105□ | 22.50 |
| 1 NO +1 NC | CP410■-11 | 1SFA 619 103 R107□ | 22.50 |

#### Flush button

##### Momentary

White button with black I

##### Contacts included:

|      |            |                    |       |
|------|------------|--------------------|-------|
| 1 NO | CP1110W-10 | 1SFA 619 110 R1015 | 16.70 |
|------|------------|--------------------|-------|

##### Momentary

White button with black II

##### Contacts included:

|      |            |                    |       |
|------|------------|--------------------|-------|
| 1 NO | CP1210W-10 | 1SFA 619 120 R1015 | 16.70 |
|------|------------|--------------------|-------|

#### Extended button

##### Momentary

Black button with white O

##### Contacts included:

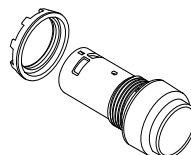
|      |            |                    |       |
|------|------------|--------------------|-------|
| 1 NC | CP3310B-01 | 1SFA 619 132 R1046 | 16.70 |
|------|------------|--------------------|-------|

#### Ordering example – Compact pushbutton

Requested: A compact pushbutton, momentary,  
with red extended button and one NO contact.

Ref.: 10 pieces of CP3-10R-10

Minimum Ref. quantity: 10 pieces  
Packing: 10 pieces/plastic bag, 10 bags/box



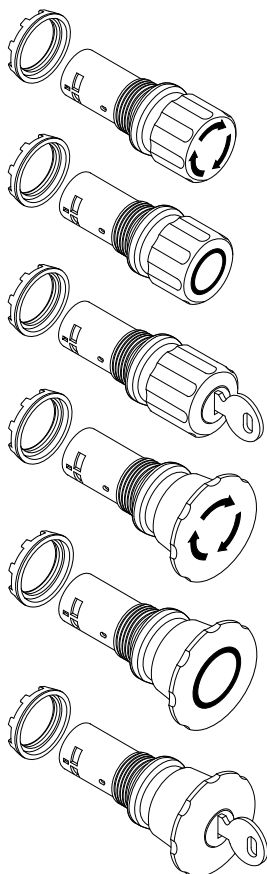
# Emergency stop pushbuttons

## Non-illuminated

Pilot Devices  
Compact range

Fulfills IEC 60947-5-5

8



### Plastic operator

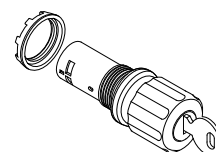
| Description               | Color | Catalog No.         | Ref. Code          | List Price      |
|---------------------------|-------|---------------------|--------------------|-----------------|
| <b>Ø 30 mm</b>            |       |                     |                    |                 |
| Twist release             | Red   |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 1 NC                      |       | <b>CE3T-10R-01</b>  | 1SFA 619 500 R1041 | <b>\$ 28.00</b> |
| 2 NO                      |       | <b>CE3T-10R-20</b>  | 1SFA 619 500 R1021 | <b>28.00</b>    |
| 2 NC                      |       | <b>CE3T-10R-02</b>  | 1SFA 619 500 R1051 | <b>33.60</b>    |
| 1 NO +1 NC                |       | <b>CE3T-10R-11</b>  | 1SFA 619 500 R1071 | <b>33.60</b>    |
| Pull release              | Red   |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 2 NC                      |       | <b>CE3P-10R-02</b>  | 1SFA 619 501 R1051 | <b>33.60</b>    |
| 1 NO +1 NC                |       | <b>CE3P-10R-11</b>  | 1SFA 619 501 R1071 | <b>33.60</b>    |
| Key release               | Red   |                     |                    |                 |
| (Key code 71, Ronis 455)  |       |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 2 NC                      |       | <b>CE3K1-10R-02</b> | 1SFA 619 502 R1051 | <b>53.40</b>    |
| 1 NO +1 NC                |       | <b>CE3K1-10R-11</b> | 1SFA 619 502 R1071 | <b>53.40</b>    |
| <b>Ø 40 mm</b>            |       |                     |                    |                 |
| Twist release             | Red   |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 1 NC                      |       | <b>CE4T-10R-01</b>  | 1SFA 619 550 R1041 | <b>30.80</b>    |
| 2 NO                      |       | <b>CE4T-10R-20</b>  | 1SFA 619 550 R1021 | <b>36.40</b>    |
| 2 NC                      |       | <b>CE4T-10R-02</b>  | 1SFA 619 550 R1051 | <b>36.40</b>    |
| 1 NO +1 NC                |       | <b>CE4T-10R-11</b>  | 1SFA 619 550 R1071 | <b>36.40</b>    |
| Pull release              | Red   |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 2 NC                      |       | <b>CE4P-10R-02</b>  | 1SFA 619 551 R1051 | <b>36.40</b>    |
| 1 NO +1 NC                |       | <b>CE4P-10R-11</b>  | 1SFA 619 551 R1071 | <b>36.40</b>    |
| Key release               | Red   |                     |                    |                 |
| (Key code 71, Ronis 455)  |       |                     |                    |                 |
| <u>Contacts included:</u> |       |                     |                    |                 |
| 2 NC                      |       | <b>CE4K1-10R-02</b> | 1SFA 619 552 R1051 | <b>57.50</b>    |
| 1 NO +1 NC                |       | <b>CE4K1-10R-11</b> | 1SFA 619 552 R1071 | <b>57.50</b>    |

The emergency stops with key release are delivered with two keys.

### Ordering example – Compact Emergency stop pushbutton

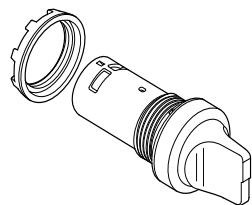
Requested: A compact emergency stop pushbutton, 30 mm, with key release and two NC contacts.

Ref.: 10 pieces of CE3K1-10R-02.



Minimum Ref. quantity: 10 pieces  
Packing: 1 piece/plastic bag.

## Two and three position selector switches Non-illuminated

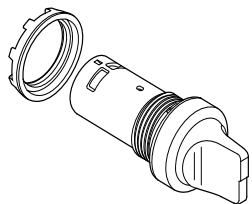


### Contacts actuated

#### Two position selector switch

Contacts included:

|           | actuated in position C |    |    |    |
|-----------|------------------------|----|----|----|
|           | NC                     | NO | NC | NO |
| 1NO       | —                      | 1  | —  | —  |
| 2NO       | —                      | 1  | —  | 1  |
| 1NC       | 1                      | —  | —  | —  |
| 2NC       | 1                      | —  | 1  | —  |
| 1NO + 1NC | —                      | 1  | 1  | —  |



Bezel in black plastic as standard  
Bezel in metal:

Replace '1' in the:

Catalog No. CPX-1 0X

Ref. Code 1SFA619XXX R 1XXX

3 for metal bezel

### Contacts actuated

#### Three position selector switch

Contacts included:

|           | actuated in position: A |    |    |    | C  |    |    |    |
|-----------|-------------------------|----|----|----|----|----|----|----|
|           | NC                      | NO | NC | NO | NC | NO | NC | NO |
| 2NO       | —                       | 1  | —  | —  | —  | 1  | —  | —  |
| 2NC       | 1                       | —  | —  | —  | 1  | —  | —  | —  |
| 1NO + 1NC | 1                       | —  | —  | —  | —  | —  | 1  | —  |

### Codes for handle colors

|       | Catalog No. | Ref. Code |
|-------|-------------|-----------|
| Red   | R           | 1         |
| Black | B           | 6         |
| Grey  | U           | 7         |

### Selector switch with ...

| Description | Catalog No. | Ref. Code | List Price |
|-------------|-------------|-----------|------------|
|-------------|-------------|-----------|------------|

#### Short handle. Two positions

##### Maintained

Contacts included:

|             |            |                   |          |
|-------------|------------|-------------------|----------|
| 1 NO        | C2SS110-10 | 1SFA 619 200 R101 | \$ 19.60 |
| 2 NO        | C2SS110-20 | 1SFA 619 200 R102 | 27.20    |
| 1 NC        | C2SS110-01 | 1SFA 619 200 R104 | 22.70    |
| 2 NC        | C2SS110-02 | 1SFA 619 200 R105 | 27.20    |
| 1 NO + 1 NC | C2SS110-11 | 1SFA 619 200 R107 | 27.20    |

##### Maintained

Contacts included:

|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 1 NO        | C2SS210-10 | 1SFA 619 201 R101 | 16.70 |
| 2 NO        | C2SS210-20 | 1SFA 619 201 R102 | 27.20 |
| 1 NC        | C2SS210-01 | 1SFA 619 201 R104 | 22.70 |
| 2 NC        | C2SS210-02 | 1SFA 619 201 R105 | 27.20 |
| 1 NO + 1 NC | C2SS210-11 | 1SFA 619 201 R107 | 27.20 |

##### Momentary

Contacts included:

|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 1 NO        | C2SS310-10 | 1SFA 619 202 R101 | 22.70 |
| 2 NO        | C2SS310-20 | 1SFA 619 202 R102 | 27.20 |
| 1 NC        | C2SS310-01 | 1SFA 619 202 R104 | 22.70 |
| 2 NC        | C2SS310-02 | 1SFA 619 202 R105 | 27.20 |
| 1 NO + 1 NC | C2SS310-11 | 1SFA 619 202 R107 | 27.20 |

#### Short handle. Three positions

##### Maintained

Contacts included:

|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 2 NO        | C3SS110-20 | 1SFA 619 210 R102 | 27.20 |
| 2 NC        | C3SS110-02 | 1SFA 619 210 R105 |       |
| 1 NO + 1 NC | C3SS110-11 | 1SFA 619 210 R107 |       |

##### Momentary

Contacts included:

|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 2 NO        | C3SS210-20 | 1SFA 619 211 R102 | 27.20 |
| 2 NC        | C3SS210-02 | 1SFA 619 211 R105 |       |
| 1 NO + 1 NC | C3SS210-11 | 1SFA 619 211 R107 |       |

##### Momentary

Contacts included:

|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 2 NO        | C3SS310-20 | 1SFA 619 212 R102 | 27.20 |
| 2 NC        | C3SS310-02 | 1SFA 619 212 R105 |       |
| 1 NO + 1 NC | C3SS310-11 | 1SFA 619 212 R107 |       |

##### Momentary

Contacts included:

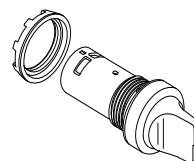
|             |            |                   |       |
|-------------|------------|-------------------|-------|
| 2 NO        | C3SS710-20 | 1SFA 619 216 R102 | 27.20 |
| 2 NC        | C3SS710-02 | 1SFA 619 216 R105 |       |
| 1 NO + 1 NC | C3SS710-11 | 1SFA 619 216 R107 |       |

### Ordering example – Compact selector switch

Requested: A red compact selector switch with three positions, Momentary, spring return from A to B and maintained position in C. With 2 NC contacts.

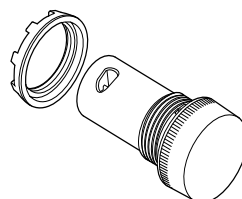
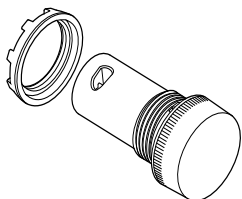
Ref.: 10 pieces of C3SS7-10R-02

Minimum Ref. quantity: 10 pieces  
Packing: 10 pieces/plastic bag, 10 bags/box



# Pilot lights

Pilot Devices  
Compact range



## Pilot light Ba 9s base, bulb not included

| Description | Catalog No. | Ref. Code          | List Price |
|-------------|-------------|--------------------|------------|
| Color:      |             |                    |            |
| Red         | CL-100R     | 1SFA 619 402 R1001 | \$ 14.00   |
| Green       | CL-100G     | 1SFA 619 402 R1002 |            |
| Yellow      | CL-100Y     | 1SFA 619 402 R1003 |            |
| Blue        | CL-100L     | 1SFA 619 402 R1004 |            |
| White       | CL-100W     | 1SFA 619 402 R1005 |            |
| Clear       | CL-100C     | 1SFA 619 402 R1008 |            |

## Pilot light with integrated LED Service life >50 000 hours

| Color                         | Rated current<br>mA | Lumi-<br>nance<br>mcd | Wave-<br>length<br>nm | Catalog No. | Ref. Code          | List Price |
|-------------------------------|---------------------|-----------------------|-----------------------|-------------|--------------------|------------|
| Rated voltage 12 V, DC ①      |                     |                       |                       |             |                    |            |
| Red                           | 30                  | 60                    | 625                   | CL-501R     | 1SFA 619 402 R5011 | \$ 25.00   |
| Green                         | 15                  | 126                   | 520                   | CL-501G     | 1SFA 619 402 R5012 |            |
| Yellow                        | 30                  | 60                    | 590                   | CL-501Y     | 1SFA 619 402 R5013 |            |
| Blue                          | 30                  | 22                    | 470                   | CL-501L     | 1SFA 619 402 R5014 |            |
| White                         | 30                  | 88                    | ②                     | CL-501W     | 1SFA 619 402 R5015 |            |
| Rated voltage 24 V, AC/DC     |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-502R     | 1SFA 619 402 R5021 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-502G     | 1SFA 619 402 R5022 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-502Y     | 1SFA 619 402 R5023 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-502L     | 1SFA 619 402 R5024 |            |
| White                         | 15                  | 88                    | ②                     | CL-502W     | 1SFA 619 402 R5025 |            |
| Rated voltage 48 V, AC/DC     |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-504R     | 1SFA 619 402 R5041 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-504G     | 1SFA 619 402 R5042 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-504Y     | 1SFA 619 402 R5043 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-504L     | 1SFA 619 402 R5044 |            |
| White                         | 15                  | 88                    | ②                     | CL-504W     | 1SFA 619 402 R5045 |            |
| Rated voltage 60 V, AC/DC     |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-505R     | 1SFA 619 402 R5051 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-505G     | 1SFA 619 402 R5052 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-505Y     | 1SFA 619 402 R5053 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-505L     | 1SFA 619 402 R5054 |            |
| White                         | 15                  | 88                    | ②                     | CL-505W     | 1SFA 619 402 R5055 |            |
| Rated voltage 110-130 V, AC   |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-513R     | 1SFA 619 402 R5131 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-513G     | 1SFA 619 402 R5132 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-513Y     | 1SFA 619 402 R5133 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-513L     | 1SFA 619 402 R5134 |            |
| White                         | 15                  | 88                    | ②                     | CL-513W     | 1SFA 619 402 R5135 |            |
| Rated voltage 110-130 V, DC ① |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-515R     | 1SFA 619 402 R5151 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-515G     | 1SFA 619 402 R5152 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-515Y     | 1SFA 619 402 R5153 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-515L     | 1SFA 619 402 R5154 |            |
| White                         | 15                  | 88                    | ②                     | CL-515W     | 1SFA 619 402 R5155 |            |
| Rated voltage 220 V, DC ①     |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-520R     | 1SFA 619 402 R5201 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-520G     | 1SFA 619 402 R5202 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-520Y     | 1SFA 619 402 R5203 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-520L     | 1SFA 619 402 R5204 |            |
| White                         | 15                  | 88                    | ②                     | CL-520W     | 1SFA 619 402 R5205 |            |
| Rated voltage 230 V, AC       |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-523R     | 1SFA 619 402 R5231 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-523G     | 1SFA 619 402 R5232 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-523Y     | 1SFA 619 402 R5233 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-523L     | 1SFA 619 402 R5234 |            |
| White                         | 15                  | 88                    | ②                     | CL-523W     | 1SFA 619 402 R5235 |            |
| Rated voltage 380 V, AC       |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-530R     | 1SFA 619 402 R5301 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-530G     | 1SFA 619 402 R5302 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-530Y     | 1SFA 619 402 R5303 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-530L     | 1SFA 619 402 R5304 |            |
| White                         | 15                  | 88                    | ②                     | CL-530W     | 1SFA 619 402 R5305 |            |
| Rated voltage 415 V, AC       |                     |                       |                       |             |                    |            |
| Red                           | 15                  | 60                    | 625                   | CL-541R     | 1SFA 619 402 R5411 | 25.00      |
| Green                         | 15                  | 126                   | 520                   | CL-541G     | 1SFA 619 402 R5412 |            |
| Yellow                        | 15                  | 60                    | 590                   | CL-541Y     | 1SFA 619 402 R5413 |            |
| Blue                          | 15                  | 22                    | 470                   | CL-541L     | 1SFA 619 402 R5414 |            |
| White                         | 15                  | 88                    | ②                     | CL-541W     | 1SFA 619 402 R5415 |            |

- ① Care should be taken for DC supply where + and - must be correctly connected. (this is marked on the product, X1 (+) and X2 (-)).
- ② X=0.31, Y=0.32

Minimum Ref. quantity: 10 pieces  
Packing: 10 pieces/plastic bag, 10 bags/box

# Accessories



**Filament bulbs** Ba 9s base Catalog No. of current: AC/DC. A lamp changing tool is required for changing bulb.

| Description     |                  |                |                |                | Catalog No. | Ref. Code   | List Price |
|-----------------|------------------|----------------|----------------|----------------|-------------|-------------|------------|
| Rated voltage V | Rated current mA | Rated output W | Service life h | Lumi-nance mcd |             |             |            |
| 6               | 200              | 1.2            | 10 000         | 350            | 5911 086-11 | 5911 086-11 | \$ 6.00    |
| 12              | 100              | 1.2            | 10 000         | 230            | 5911 086-12 | 5911 086-12 |            |
| 24              | 50               | 1.2            | 10 000         | 280            | 5911 086-13 | 5911 086-13 |            |
| 30              | 40               | 1.2            | 10 000         | 250            | 5911 086-4  | 5911 086-4  |            |
| 48              | 42               | 2              | 6 000          | 500            | 5911 086-5  | 5911 086-5  |            |
| 60              | 20               | 1.2            | 5 000          | 190            | 5911 086-14 | 5911 086-14 |            |
| 110             | 18               | 2              | 7 500          | 250            | 5911 086-7  | 5911 086-7  |            |
| 130             | 15               | 2              | 7 500          | 120            | 5911 086-15 | 5911 086-15 |            |

## LEDs

With one diode chip mounted on a Ba 9s base. Choose the same color for the LED and the lamp cap or else use a clear lamp cap.

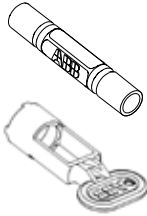
For white light use white LED with clear lamp cap. At DC the lamp base have to be connected to cathode (-) and the bottom contact to anode (+).

| Color                                                  | Rated current mA | Wave-length nm   | Lumi-nance mcd | Catalog No. | Ref. Code          | List Price |
|--------------------------------------------------------|------------------|------------------|----------------|-------------|--------------------|------------|
| Rated voltage 12 V, DC Service life >50 000 h          |                  |                  |                |             |                    |            |
| Red                                                    | 15               | 630              | 250            | KA2-2011    | 1SFA 616 921 R2011 | \$ 21.00   |
| Green                                                  | 15               | 525              | 1000           | KA2-2012    | 1SFA 616 921 R2012 |            |
| Yellow                                                 | 15               | 592              | 250            | KA2-2013    | 1SFA 616 921 R2013 |            |
| Blue                                                   | 15               | 470              | 450            | KA2-2014    | 1SFA 616 921 R2014 |            |
| White                                                  | 15               | x=0.31<br>y=0.32 | 600            | KA2-2015    | 1SFA 616 921 R2015 |            |
| Rated voltage 24 V, (AC)/DC ⓘ Service life >50 000 h   |                  |                  |                |             |                    |            |
| Red                                                    | 15               | 630              | 250            | KA2-2021    | 1SFA 616 921 R2021 | 15.00      |
| Green                                                  | 15               | 525              | 800            | KA2-2022    | 1SFA 616 921 R2022 |            |
| Yellow                                                 | 15               | 592              | 250            | KA2-2023    | 1SFA 616 921 R2023 |            |
| Blue                                                   | 15               | 470              | 400            | KA2-2024    | 1SFA 616 921 R2024 |            |
| White                                                  | 15               | x=0.31<br>y=0.32 | 500            | KA2-2025    | 1SFA 616 921 R2025 |            |
| Rated voltage 48 V, (AC)/DC ⓘ Service life >50 000 h   |                  |                  |                |             |                    |            |
| Red                                                    | 12               | 630              | 200            | KA2-2041    | 1SFA 616 921 R2041 | 21.00      |
| Green                                                  | 12               | 525              | 1700           | KA2-2042    | 1SFA 616 921 R2042 |            |
| Yellow                                                 | 12               | 592              | 240            | KA2-2043    | 1SFA 616 921 R2043 |            |
| Blue                                                   | 12               | 470              | 720            | KA2-2044    | 1SFA 616 921 R2044 |            |
| White                                                  | 12               | x=0.31<br>y=0.32 | 1200           | KA2-2045    | 1SFA 616 921 R2045 |            |
| Rated voltage 60 V, (AC)/DC ⓘ Service life >50 000 h   |                  |                  |                |             |                    |            |
| Red                                                    | 10               | 630              | 160            | KA2-2051    | 1SFA 616 921 R2051 | 21.00      |
| Green                                                  | 10               | 525              | 1400           | KA2-2052    | 1SFA 616 921 R2052 |            |
| Yellow                                                 | 10               | 592              | 200            | KA2-2053    | 1SFA 616 921 R2053 |            |
| Blue                                                   | 10               | 470              | 600            | KA2-2054    | 1SFA 616 921 R2054 |            |
| White                                                  | 10               | x=0.31<br>y=0.32 | 1000           | KA2-2055    | 1SFA 616 921 R2055 |            |
| Rated voltage 110-130 V, AC ⓘ Service life 25 000 h    |                  |                  |                |             |                    |            |
| Red                                                    | 4-6              | 630              | 60-100         | KA2-2131    | 1SFA 616 921 R2131 | 15.00      |
| Green                                                  | 4-6              | 525              | 500-850        | KA2-2132    | 1SFA 616 921 R2132 |            |
| Yellow                                                 | 4-6              | 592              | 70-120         | KA2-2133    | 1SFA 616 921 R2133 |            |
| Blue                                                   | 4-6              | 470              | 220-350        | KA2-2134    | 1SFA 616 921 R2134 |            |
| White                                                  | 4-6              | x=0.31<br>y=0.32 | 350-600        | KA2-2135    | 1SFA 616 921 R2135 |            |
| Rated voltage 110-130 V, AC/DC ⓘ Service life 25 000 h |                  |                  |                |             |                    |            |
| Red                                                    | 4-6              | 630              | 60-100         | KA2-2141    | 1SFA 616 921 R2141 | 21.00      |
| Green                                                  | 4-6              | 525              | 500-850        | KA2-2142    | 1SFA 616 921 R2142 |            |
| Yellow                                                 | 4-6              | 592              | 70-120         | KA2-2143    | 1SFA 616 921 R2143 |            |
| Blue                                                   | 4-6              | 470              | 220-350        | KA2-2144    | 1SFA 616 921 R2144 |            |
| White                                                  | 4-6              | x=0.31<br>y=0.32 | 350-600        | KA2-2145    | 1SFA 616 921 R2145 |            |
| Rated voltage 230 V, AC ⓘ Service life 25 000 h        |                  |                  |                |             |                    |            |
| Red                                                    | 4                | 630              | 60             | KA2-2221    | 1SFA 616 921 R2221 | 21.00      |
| Green                                                  | 4                | 525              | 500            | KA2-2222    | 1SFA 616 921 R2222 |            |
| Yellow                                                 | 4                | 592              | 70             | KA2-2223    | 1SFA 616 921 R2223 |            |
| Blue                                                   | 4                | 470              | 220            | KA2-2224    | 1SFA 616 921 R2224 |            |
| White                                                  | 4                | x=0.31<br>y=0.32 | 350            | KA2-2225    | 1SFA 616 921 R2225 |            |

① At AC the luminance is decreased with 30 % and there is also a slight flickering.

## Accessories

Pilot Devices  
Compact range



### Lamp changing tool

| Description            | Catalog No.     | Ref. Code          | List Price |
|------------------------|-----------------|--------------------|------------|
| For LEDs and for bulbs | <b>KA1-8072</b> | 1SFA 616 920 R8072 | \$ 10.00   |

### Mounting tool

| Description                         | Catalog No.     | Ref. Code          | List Price |
|-------------------------------------|-----------------|--------------------|------------|
| Used for tightening the locking nut | <b>MA1-8015</b> | 1SFA 611 920 R8015 | \$ 10.00   |

### Membrane of silicone

Of transparent, heat and cold resistant silicon rubber. Does not harden at low temperature. Gives IP 67 degree of protection. When membrane is used, remove the gasket.

| For operator with | Catalog No.     | Ref. Code          | List Price |
|-------------------|-----------------|--------------------|------------|
| Flush button      | <b>KA1-8052</b> | 1SFA 616 920 R8052 | \$ 8.00    |
| Extended button   | <b>KA1-8002</b> | 1SFA 616 920 R8002 | 8.00       |

### Protective ring

| Description                                                                                                      | Catalog No.         | Ref. Code    | List Price |
|------------------------------------------------------------------------------------------------------------------|---------------------|--------------|------------|
| For flush and extended pushbutton<br>To prevent inadvertant operation.<br>Not together with legend plate holder. | <b>SK 615 512-1</b> | SK 615 512-1 | \$ 4.00    |

### Protective cover

| Description                                                                                | Catalog No.     | Ref. Code          | List Price |
|--------------------------------------------------------------------------------------------|-----------------|--------------------|------------|
| For flush button. To prevent inadvertant operation. Not together with legend plate holder. | <b>KA1-8010</b> | 1SFA 616 920 R8010 | \$ 15.00   |

### Button

| Description                             | Catalog No.     | Ref. Code          | List Price |
|-----------------------------------------|-----------------|--------------------|------------|
| Grey, flush (Packing unit 10 pieces)    | <b>KA1-8087</b> | 1SFA 616 920 R8087 | \$ 1.50    |
| Grey, extended (Packing unit 10 pieces) | <b>KA1-8097</b> | 1SFA 616 920 R8097 | 1.50       |

### Bezel

| Description                    | Catalog No.     | Ref. Code          | List Price |
|--------------------------------|-----------------|--------------------|------------|
| <b>For pushbutton</b>          |                 |                    |            |
| Grey (Packing unit 10 pieces)  | <b>KA1-8079</b> | 1SFA 616 920 R8079 | \$ 1.00    |
| Black (Packing unit 10 pieces) | <b>KA1-8022</b> | 1SFA 616 920 R8022 | 1.00       |
| Metal (Packing unit 10 pieces) | <b>KA1-8021</b> | 1SFA 616 920 R8021 | 2.50       |
| <b>For selector switch</b>     |                 |                    |            |
| Grey (Packing unit 10 pieces)  | <b>CA1-8076</b> | 1SFA 619 920 R8076 | 1.00       |
| Black (Packing unit 10 pieces) | <b>CA1-8077</b> | 1SFA 619 920 R8077 | 1.00       |
| Metal (Packing unit 10 pieces) | <b>CA1-8078</b> | 1SFA 619 920 R8078 | 2.50       |

### Square bezel

| Description                             | Catalog No.         | Ref. Code          | List Price |
|-----------------------------------------|---------------------|--------------------|------------|
| Black, plastic (Packing unit 10 pieces) | <b>SK 616 016-2</b> | SK 616 016-2       | 2.00       |
| Grey, plastic (Packing unit 10 pieces)  | <b>KA1-8124</b>     | 1SFA 611 920 R8124 | 2.00       |

## Accessories



### 30 mm adaptors

For use when fitting the 22 mm pilot devices in 30 mm mounting holes. (1.5 – 4 mm panels)

| Description                                                                                     | Catalog No.     | Ref. Code          | List Price     |
|-------------------------------------------------------------------------------------------------|-----------------|--------------------|----------------|
| <b>For use with pushbuttons, selector switches, emergency stop push-button and pilot lights</b> |                 |                    |                |
| Black plastic.                                                                                  | <b>KA1-8029</b> | 1SFA 616 920 R8029 | <b>\$ 8.00</b> |
| Metal.                                                                                          | <b>KA1-8030</b> | 1SFA 616 920 R8030 | <b>10.00</b>   |

### Adaptors

|                                            |                 |                    |              |
|--------------------------------------------|-----------------|--------------------|--------------|
| <b>For flush mounted pushbutton</b>        | <b>KA1-8073</b> | 1SFA 616 920 R8073 | <b>15.00</b> |
| <b>For flush mounted selector switches</b> | <b>CA1-8075</b> | 1SFA 619 920 R8075 |              |

### Extra key

| Description             | Catalog No.          | Ref. Code     | List Price      |
|-------------------------|----------------------|---------------|-----------------|
| Ronis 455 (key code 71) | <b>SK 616 021-71</b> | SK 616 021-71 | <b>\$ 10.00</b> |

# Technical data

Pilot Devices  
Compact range



## Approvals

The pushbuttons, selector switches and pilot lights are approved by:  
- National approval agencies: UL and China Compulsory Product Certification

For detail information please contact ABB

## Standards

|                 |                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC 60947-1     | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC 60947-5-1   | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC 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 60073       | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators                                     |
| IEC 60529       | Degrees of protection provided by enclosures (IP Code)                                                                                                                 |
| EN 60947-1      | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| EN 60947-5-1    | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| 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 |
| EN 60073        | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indication devices and actuators                             |
| 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                                    |
| UL 508          | Industrial Control Equipment                                                                                                                                           |
| CSA C22.2 No 14 | Industrial Control Equipment                                                                                                                                           |

## Degrees of protection

| Pilot device                                                                   | IP   | UL/CSA                    |
|--------------------------------------------------------------------------------|------|---------------------------|
| Compact pushbutton, <b>CP1, CP2, CP3, CP4</b>                                  | IP66 | Type 1, 3R, 4, 4X, 12, 13 |
| Compact selector switch, <b>C2SS, C3SS</b>                                     | IP66 | Type 1, 3R, 4, 4X, 12, 13 |
| Compact pilot light, <b>CL</b>                                                 | IP66 | Type 1, 3R, 4, 4X, 12, 13 |
| Compact emergency stop pushbutton, <b>CE3T, CE3P, CE4T, CE4P, CE3K1, CE4K1</b> | IP66 | Type 1, 3R, 4, 4X, 12, 13 |
| <b>Terminals</b>                                                               | IP20 |                           |

## Temperature

|                                                                      |               |
|----------------------------------------------------------------------|---------------|
| Ambient temperature during operation                                 | -25 to +70 °C |
| Exception: All pilot devices with 2 W continuously lit filament bulb | -25 to +40 °C |
| Storage temperature                                                  | -30 to +85 °C |

## Tightening torque

|                  |                          |
|------------------|--------------------------|
| Locking nut, M22 | Min. 2 Nm<br>Max. 2.3 Nm |
|------------------|--------------------------|

## Contacts

| Ratings as per UL, CSA, NEMA                                   | C300                                                                               | R300   |
|----------------------------------------------------------------|------------------------------------------------------------------------------------|--------|
| Rated insulation voltage                                       | 250 V                                                                              | 250 V  |
| Rated thermal current                                          | 2.5 A                                                                              | 1 A    |
| Rated operational current                                      |                                                                                    |        |
| at 120 V                                                       | 1.5 A                                                                              |        |
| 125 V                                                          |                                                                                    | 0.22 A |
| 240 V                                                          | 0.75 A                                                                             |        |
| 250 V                                                          |                                                                                    | 0.11 A |
| <b>Ratings as per IEC 60947-5-1</b>                            |                                                                                    |        |
| Rated insulation voltage, $U_i$                                | 300 V                                                                              |        |
| Rated thermal current, $I_{th}$                                | 5 A                                                                                |        |
| Rated operational current, $I_e$                               |                                                                                    |        |
| utilisation category AC-15                                     |                                                                                    |        |
| at 120 V                                                       | 1.5 A                                                                              |        |
| 240 V                                                          | 1 A                                                                                |        |
| Rated operational current, $I_e$ , utilisation category DC-13, |                                                                                    |        |
| at 24 V                                                        | 0.3 A                                                                              |        |
| 125 V                                                          | 0.2 A                                                                              |        |
| <b>Short circuit protection</b>                                |                                                                                    |        |
| Max. fuse at 1 kA                                              | 16 A ordinary<br>10 A delayed                                                      |        |
| <b>Tightening torque</b>                                       |                                                                                    |        |
| compact pushbutton & selector switch                           | 0.8 Nm (M3)                                                                        |        |
| compact pilot light                                            | 0.9 Nm (M3.5)                                                                      |        |
| compact emergency stop pushbutton                              | 0.8 Nm (M3)                                                                        |        |
| <b>Terminals</b>                                               |                                                                                    |        |
| Plus-minus Pozidriv No. 2                                      |                                                                                    |        |
| Compact pushbutton                                             |                                                                                    |        |
| Compact selector switch                                        |                                                                                    |        |
| Compact emergency stop                                         |                                                                                    |        |
| Connectable area                                               | 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 |        |
| Compact pilot light                                            |                                                                                    |        |
| Connectable area                                               | 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 |        |

## Material

### No ozone depleting substances in the products.

All front parts are made of polycarbonate

| Material         | Characteristics                                                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PC Polycarbonate | High impact strength, good outdoor resistance. Can withstand light acid solutions, aliphatic hydrocarbons, paraffin, alcohols, animal and vegetable greases. |
| PA Polyamide     | Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions.                   |
| PBT              | Can withstand 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.                                                                                         |
| Rubber           | Chloroprene<br>Nitrile                                                                                                                                       |

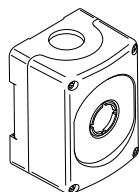




## Features

- Available for 1, 2, 3, 4 & 6 operators.
- Base mounted contacts allow for easy removal of operator cover. Wiring remains with base.
- Up to 5 contact blocks can be used per operator for some combinations.
- Environmental ratings: UL/CSA Type 1, 3R, 4, 4X, 12 & 13, IP66
- Available in high impact strength polycarbonate (plastic) material.
- Rated for outdoor use.
- Enclosures can withstand light acid solutions and other chemicals.
- Metallic enclosures available.

## Plastic enclosures 1, 2 & 3 seat



1 Position

### 1-seat Plastic enclosures. Yellow top/light grey bottom

| Description |                           |         |         |         | Catalog No. | List Price |
|-------------|---------------------------|---------|---------|---------|-------------|------------|
|             | Pos - 1                   | Pos - 2 | Pos - 3 | Pos - 4 |             |            |
| Type        | Twist Release 40mm E      | —       | —       | —       | P1-ES       | \$ 84.00   |
| Color       | Stop                      | —       | —       | —       |             |            |
| Contacts    | Red                       | —       | —       | —       |             |            |
| Contacts    | 2 NC                      | —       | —       | —       |             |            |
| Name plate  | EMERGENCY STOP            | —       | —       | —       |             |            |
| Type        | III. Twist Release 40mm E | —       | —       | —       | P1-1ES      | 107.50     |
| Color       | 40mm E-Stop               | —       | —       | —       |             |            |
| Color       | Red, 120V                 | —       | —       | —       |             |            |
| Contacts    | 2 NC, 1 LB                | —       | —       | —       |             |            |
| Name plate  | EMERGENCY STOP            | —       | —       | —       |             |            |

### 1-seat Plastic enclosure, dark grey top/light grey bottom

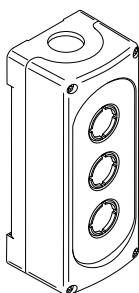
| Description |                 |         |         |         | Catalog No. | List Price |
|-------------|-----------------|---------|---------|---------|-------------|------------|
|             | Pos - 1         | Pos - 2 | Pos - 3 | Pos - 4 |             |            |
| Type        | 3-pos sel. Main | —       | —       | —       | P1-HOA      | \$ 55.00   |
| Color       | Black           | —       | —       | —       |             |            |
| Contacts    | 2 NO            | —       | —       | —       |             |            |
| Name plate  | HAND/OFF/AUTO   | —       | —       | —       |             |            |
|             |                 |         |         |         |             |            |

### 2-seat Plastic enclosure, dark grey top/light grey bottom

| Description |                  |                   |         |         | Catalog No. | List Price |
|-------------|------------------|-------------------|---------|---------|-------------|------------|
|             | Pos - 1          | Pos - 2           | Pos - 3 | Pos - 4 |             |            |
| Type        | Button mom, Ext. | Button mom, Flush | —       | —       | P2-SS       | \$ 63.20   |
| Color       | Red              | Green             | —       | —       |             |            |
| Contacts    | 1 NC             | 1 NO              | —       | —       |             |            |
| Name plate  | STOP             | START             | —       | —       |             |            |
|             |                  |                   |         |         |             |            |
| Type        | 3-pos sel. Main  | Pilot Light       | —       | —       | P2-1HOARL   | 90.00      |
| Color       | Black            | Red               | —       | —       |             |            |
| Contacts    | 2 NO             | 1 LB              | —       | —       |             |            |
| Name plate  | HAND/OFF/AUTO    | RUN               | —       | —       |             |            |
|             |                  |                   |         |         |             |            |
| Type        | 2-pos sel. Main  | Pilot Light       | —       | —       | P2-1OORL    | 82.00      |
| Color       | Black            | Red               | —       | —       |             |            |
| Contacts    | 1 NO             | 1 LB              | —       | —       |             |            |
| Name plate  | ON/OFF           | RUN               | —       | —       |             |            |
|             |                  |                   |         |         |             |            |

### 3-seat Plastic enclosure, dark grey top/light grey bottom

| Description |                           |                   |             |         | Catalog No. | List Price |
|-------------|---------------------------|-------------------|-------------|---------|-------------|------------|
|             | Pos - 1                   | Pos - 2           | Pos - 3     | Pos - 4 |             |            |
| Type        | Button mom, Ext.          | Button mom, Flush | Pilot Light | —       | P3-1SSRL    | \$ 96.70   |
| Color       | Red                       | Green             | Red         | —       |             |            |
| Contacts    | 1 NC                      | 1 NO              | 1 LB        | —       |             |            |
| Name plate  | STOP                      | START             | RUN         | —       |             |            |
|             |                           |                   |             |         |             |            |
| Type        | 3-pos sel. Main           | Pilot Light       | Pilot Light | —       | P3-1HOARLGL | 123.50     |
| Color       | Black                     | Red               | Green       | —       |             |            |
| Contacts    | 2 NO                      | 1 LB              | 1 LB        | —       |             |            |
| Name plate  | HAND/OFF/AUTO             | RUN               | OFF         | —       |             |            |
|             |                           |                   |             |         |             |            |
| Type        | 2-pos sel. Main           | Pilot Light       | Pilot Light | —       | P3-1OORLGL  | 115.50     |
| Color       | Black                     | Red               | Green       | —       |             |            |
| Contacts    | 1 NO                      | 1 LB              | 1 LB        | —       |             |            |
| Name plate  | ON/OFF                    | RUN               | OFF         | —       |             |            |
|             |                           |                   |             |         |             |            |
| Type        | 3-pos sel. Main           | Button mom, Flush | Pilot Light | —       | P3-1HOASRL  | 109.60     |
| Color       | Black                     | Green             | Red         | —       |             |            |
| Contacts    | 2 NO                      | 1 NO              | 1 LB        | —       |             |            |
| Name plate  | HAND/OFF/AUTO             | START             | RUN         | —       |             |            |
|             |                           |                   |             |         |             |            |
| Type        | Twist Release 40mm E Stop | 3-pos sel. Main   | Pilot Light | —       | P3-1ESHOARL | 145.50     |
| Color       | Red                       | Black             | Red         | —       |             |            |
| Contacts    | 2 NC                      | 2 NO              | 1 LB        | —       |             |            |
| Name plate  | EMERGENCY STOP            | HAND/OFF/AUTO     | RUN         | —       |             |            |
|             |                           |                   |             |         |             |            |



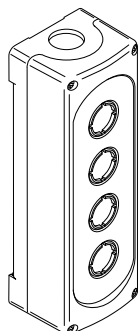
3 Position

2 Position

1 Position

## Plastic enclosures 4 seat

Pilot Devices  
Enclosed



← 4 Position

← 3 Position

← 2 Position

← 1 Position

### 4-seat Plastic enclosure, dark grey top/light grey bottom

| Description |                           |                    |                    |             | Catalog No.   | List Price |
|-------------|---------------------------|--------------------|--------------------|-------------|---------------|------------|
|             | Pos - 1                   | Pos - 2            | Pos - 3            | Pos - 4     |               |            |
| Type        | Button mom., Ext.         | Button mom., Flush | Pilot Light        | Pilot Light |               |            |
| Color       | Red                       | Green              | Green              | Red         |               |            |
| Contacts    | 1 NC                      | 1 NO               | 1 LB               | 1 LB        |               |            |
| Name plate  | STOP                      | START              | OFF                | RUN         | P4-1SSRLGL    | \$ 134.20  |
| Type        | 3-pos sel. Main           | Button mom., Flush | Pilot Light        | Pilot Light |               |            |
| Color       | Black                     | Green              | Green              | RED         |               |            |
| Contacts    | 2 NO                      | 1 NO               | 1 LB               | 1 LB        |               |            |
| Name plate  | HAND/OFF/AUTO             | START              | OFF                | RUN         | P4-1HOASRLGL  | 147.10     |
| Type        | 3-pos sel. Main           | Pilot Light        | Pilot Light        | Pilot Light |               |            |
| Color       | Black                     | Green              | Yellow             | Red         |               |            |
| Contacts    | 2 NO                      | 1 LB               | 1 LB               | 1 LB        |               |            |
| Name plate  | HAND/OFF/AUTO             | OFF                | FAULT              | RUN         | P4-1HOARLYLGL | 161.00     |
| Type        | 2-pos. sel. Main          | Pilot Light        | Pilot Light        | Pilot Light |               |            |
| Color       | Black                     | Green              | Yellow             | Red         |               |            |
| Contacts    | 1 NO                      | 1 LB               | 1 LB               | 1 LB        |               |            |
| Name plate  | ON/OFF                    | OFF                | FAULT              | RUN         | P4-1OORLYLGL  | 153.00     |
| Type        | Twist Release 40mm E Stop | Button mom., Ext.  | Button mom., Flush | Pilot Light |               |            |
| Color       | Red                       | Red                | Green              | Red         |               |            |
| Contacts    | 2 NC                      | 1 NC               | 1 NO               | 1 LB        |               |            |
| Name plate  | EMERGENCY STOP            | STOP               | START              | RUN         | P4-1ESSRL     | 156.20     |
| Type        | Twist Release 40mm E Stop | 3-pos. sel. Main   | Pilot Light        | Pilot Light |               |            |
| Color       | Red                       | Black              | Green              | Red         |               |            |
| Contacts    | 2 NC                      | 2 NO               | 1 LB               | 1 LB        |               |            |
| Name plate  | EMERGENCY STOP            | HAND/OFF/AUTO      | OFF                | RUN         | P4-1ESHOARLGL | 183.00     |
| Type        | Twist Release 40mm E Stop | 2-pos sel. Main    | Pilot Light        | Pilot Light |               |            |
| Color       | Red                       | Black              | Green              | Red         |               |            |
| Contacts    | 2 NC                      | 1 NO               | 1 LB               | 1 LB        |               |            |
| Name plate  | EMERGENCY STOP            | ON/OFF             | OFF                | RUN         | P4-1ESOORLGL  | 175.00     |

8

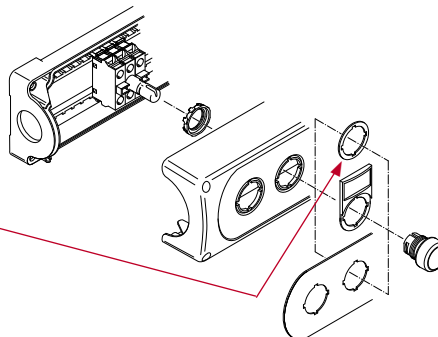
## Degree of protection IP 66

### Empty plastic enclosures Now with stainless steel screws

| Size   | Color top/bottom     | Catalog No.   | Ref. Code          | List Price      |
|--------|----------------------|---------------|--------------------|-----------------|
| 1-seat | Dark grey/Light grey | <b>MEP1-0</b> | 1SFA 611 811 R1000 | <b>\$ 28.00</b> |
| 1-seat | Yellow/Light grey    | <b>MEPY-0</b> | 1SFA 611 821 R1000 | <b>28.00</b>    |
| 2-seat | Dark grey/Light grey | <b>MEP2-0</b> | 1SFA 611 812 R1000 | <b>32.00</b>    |
| 3-seat | Dark grey/Light grey | <b>MEP3-0</b> | 1SFA 611 813 R1000 | <b>36.00</b>    |
| 4-seat | Dark grey/Light grey | <b>MEP4-0</b> | 1SFA 611 814 R1000 | <b>44.00</b>    |
| 6-seat | Dark grey/Light grey | <b>MEP6-0</b> | 1SFA 611 816 R1000 | <b>52.00</b>    |

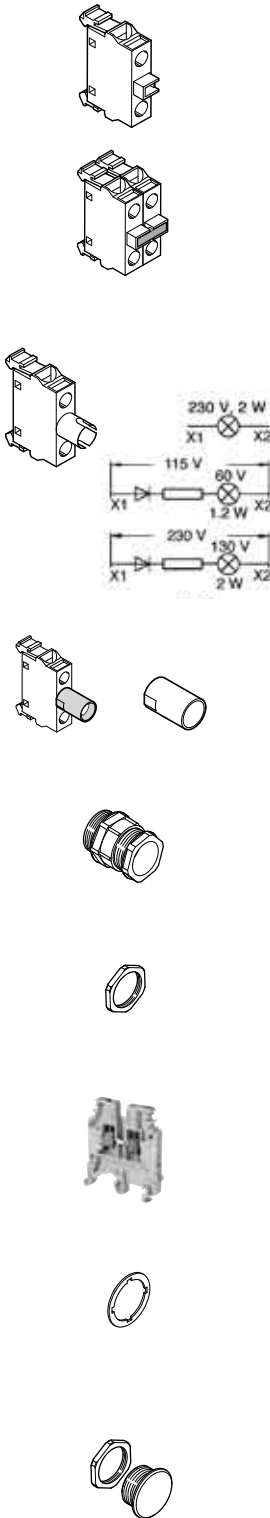
### When Ordering

- Select operators from page 8.4 and 8.38.  
N.B. Selector switches with short handle for vertically mounted selector switches must be Ref.ed from page 8.45 - 8.46
- Select contact blocks and lamp blocks for **rear** mounting, see page 8.44.
- Accessories, see page 8.43  
N.B. **One spacer per operator** has to be Ref.ed if legend plate is not used.  
(for rear mounted pilot devices)



## Accessories

Pilot Devices  
Enclosed



### Contact blocks for rear mounting

| Description          | Catalog No.    | Ref. Code          | List Price     |
|----------------------|----------------|--------------------|----------------|
| <b>Contact block</b> |                |                    |                |
| 1NO                  | <b>MCB-10B</b> | 1SFA 611 610 R2001 | <b>\$ 8.00</b> |
| 1NC                  | <b>MCB-01B</b> | 1SFA 611 610 R2010 |                |

### Double contact block

|         |                |                    |              |
|---------|----------------|--------------------|--------------|
| 2NO     | <b>MCB-20B</b> | 1SFA 611 610 R2002 | <b>16.00</b> |
| 2NC     | <b>MCB-02B</b> | 1SFA 611 610 R2020 |              |
| 1NO+1NC | <b>MCB-11B</b> | 1SFA 611 610 R2011 |              |

### Contact block with gold plated contacts

|     |                 |                    |              |
|-----|-----------------|--------------------|--------------|
| 1NO | <b>MCB-10BG</b> | 1SFA 611 610 R2101 | <b>16.00</b> |
| 1NC | <b>MCB-01BG</b> | 1SFA 611 610 R2110 |              |

### Lamp blocks

**For max. 2 W, 230 V AC and DC filament bulb or LED**

115 V AC supply voltage.

**For 60 V filament bulb max. 1.2 W**

230 V AC supply voltage.

**For 130 V filament bulb max. 2 W**

|  |               |                    |              |
|--|---------------|--------------------|--------------|
|  | <b>MLB-1B</b> | 1SFA 611 620 R2001 | <b>17.50</b> |
|  | <b>MLB-2B</b> | 1SFA 611 620 R2002 | <b>21.50</b> |
|  | <b>MLB-3B</b> | 1SFA 611 620 R2003 | <b>21.50</b> |

### Protective sleeve

| Description                                              | Catalog No.        | Ref. Code   | List Price     |
|----------------------------------------------------------|--------------------|-------------|----------------|
| To make a rear mounted lamp block screen protected. IP20 | <b>5396 0543-1</b> | 5396 0543-1 | <b>\$ 2.00</b> |

### Earthing terminal

| Description            | Catalog No.     | Ref. Code          | List Price     |
|------------------------|-----------------|--------------------|----------------|
| For plastic enclosure. | <b>MA5-2005</b> | 1SFA 611 925 R3005 | <b>\$ 2.00</b> |

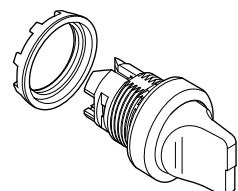
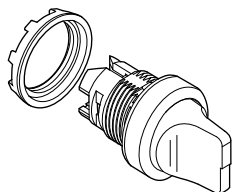
### Spacer

| Description                                                                       | Catalog No.         | Ref. Code           | List Price     |
|-----------------------------------------------------------------------------------|---------------------|---------------------|----------------|
| 1 mm thick. Needed when legend plates are not used in plastic enclosures.         |                     |                     |                |
| Spacer (Packing unit 10 pieces)                                                   | <b>SK 615 516-1</b> | SK 615 516-1        | <b>\$ 1.00</b> |
| Spacer for Modular emergency stop pushbutton, page ??<br>(Packing unit 10 pieces) | <b>KA1-8045</b>     | 1SFA 616 920 R 8045 | <b>1.00</b>    |

### Blanking plug (22mm)

| Description   | Catalog No.         | Ref. Code    | List Price     |
|---------------|---------------------|--------------|----------------|
| Black plastic | <b>SK 615 502-B</b> | SK 615 502-B | <b>\$ 2.00</b> |

## Two position selector switches for mounting in vertically mounted enclosures



Bezel in black plastic as standard

**Bezel in metal:**

Replace '1' in the:

Catalog No. M2SSX-1 0X

Ref. Code 1SFA611XXX R 1XXX

3 for metal bezel

4 for grey plastic bezel

### Contact functions

Block positions as seen from operator front.

| Handle position | Left block | Right block |
|-----------------|------------|-------------|
| A (B)           | O          | O           |
| O               | x          | x           |

O = not actuated (normal state)

x = actuated (state changed)

### Non-illuminated operator ... ①

| Symbol                                      | Handle color | Catalog No.                            | Ref. Code                                | List Price |
|---------------------------------------------|--------------|----------------------------------------|------------------------------------------|------------|
| <b>with short handle</b>                    |              |                                        |                                          |            |
| <b>Maintained</b>                           |              |                                        |                                          |            |
|                                             | Red<br>Black | <b>M2SSV1-10R</b><br><b>M2SSV1-10B</b> | 1SFA 611 220 R1001<br>1SFA 611 220 R1006 | \$ 11.00   |
| <b>Maintained</b>                           |              |                                        |                                          |            |
|                                             | Red<br>Black | <b>M2SSV2-10R</b><br><b>M2SSV2-10B</b> | 1SFA 611 221 R1001<br>1SFA 611 221 R1006 | 11.00      |
| <b>Momentary, spring return from C to B</b> |              |                                        |                                          |            |
|                                             | Red<br>Black | <b>M2SSV3-10R</b><br><b>M2SSV3-10B</b> | 1SFA 611 222 R1001<br>1SFA 611 222 R1006 | 14.00      |

### Illuminated operator ... ① ②

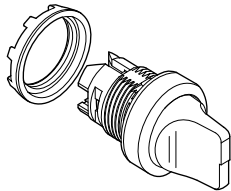
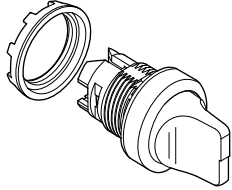
| Symbol                                      | Handle color           | Catalog No.                                                 | Ref. Code                                                      | List Price |
|---------------------------------------------|------------------------|-------------------------------------------------------------|----------------------------------------------------------------|------------|
| <b>with short handle</b>                    |                        |                                                             |                                                                |            |
| <b>Maintained</b>                           |                        |                                                             |                                                                |            |
|                                             | Red<br>Green<br>Yellow | <b>M2SSV1-11R</b><br><b>M2SSV1-11G</b><br><b>M2SSV1-11Y</b> | 1SFA 611 220 R1101<br>1SFA 611 220 R1102<br>1SFA 611 220 R1103 | \$ 17.00   |
| <b>Maintained</b>                           |                        |                                                             |                                                                |            |
|                                             | Red<br>Green<br>Yellow | <b>M2SSV2-11R</b><br><b>M2SSV2-11G</b><br><b>M2SSV2-11Y</b> | 1SFA 611 221 R1101<br>1SFA 611 221 R1102<br>1SFA 611 221 R1103 | 17.00      |
| <b>Momentary, spring return from C to B</b> |                        |                                                             |                                                                |            |
|                                             | Red<br>Green<br>Yellow | <b>M2SSV3-11R</b><br><b>M2SSV3-11G</b><br><b>M2SSV3-11Y</b> | 1SFA 611 222 R1101<br>1SFA 611 222 R1102<br>1SFA 611 222 R1103 | 26.00      |

① No contact in center position

② Lamp block for max 230 V AC/DC. Bulb not included. Other lamp block see Accessories

## Three position selector switches for mounting in vertically mounted enclosures

Pilot Devices  
Enclosed



**Bezel in black plastic as standard**  
**Bezel in metal:**  
Replace '1' in the:  
Catalog No. M3SSX-1 0X  
Ref. Code 1SFA611XXX R 1XXX  
**3** for metal bezel  
**4** for grey plastic bezel

### Contact functions

Block positions as seen from operator front.

| Handle position | Left block | Right block |
|-----------------|------------|-------------|
| A               | x          | O           |
| B               | O          | O           |
| C               | O          | x           |

### Non-illuminated operator ... ①

| Symbol                                               | Handle color | Catalog No. | Ref. Code          | List Price |
|------------------------------------------------------|--------------|-------------|--------------------|------------|
| with short handle                                    |              |             |                    |            |
| Maintained                                           |              |             |                    |            |
|                                                      | Red          | M3SSV1-10R  | 1SFA 611 230 R1001 | \$ 11.00   |
|                                                      | Black        | M3SSV1-10B  | 1SFA 611 230 R1006 |            |
| Momentary, spring return from A to B and from C to B |              |             |                    |            |
|                                                      | Red          | M3SSV2-10R  | 1SFA 611 231 R1001 | 14.00      |
|                                                      | Black        | M3SSV2-10B  | 1SFA 611 231 R1006 |            |
| Momentary, spring return from C to B                 |              |             |                    |            |
|                                                      | Red          | M3SSV3-10R  | 1SFA 611 232 R1001 | 14.00      |
|                                                      | Black        | M3SSV3-10B  | 1SFA 611 232 R1006 |            |

### Illuminated operator ... ① ②

| Symbol                                                                              | Handle color | Catalog No. | Ref. Code          | List Price |
|-------------------------------------------------------------------------------------|--------------|-------------|--------------------|------------|
| with short handle                                                                   |              |             |                    |            |
| Maintained                                                                          |              |             |                    |            |
|    | Red          | M3SSV1-11R  | 1SFA 611 230 R1101 | \$ 17.00   |
|                                                                                     | Green        | M3SSV1-11G  | 1SFA 611 230 R1102 |            |
|                                                                                     | Yellow       | M3SSV1-11Y  | 1SFA 611 230 R1103 |            |
| Momentary, spring return from A to B and from C to B                                |              |             |                    |            |
|   | Red          | M3SSV2-11R  | 1SFA 611 231 R1101 | 26.00      |
|                                                                                     | Green        | M3SSV2-11G  | 1SFA 611 231 R1102 |            |
|                                                                                     | Yellow       | M3SSV2-11Y  | 1SFA 611 231 R1103 |            |
| Momentary, spring return from C to B                                                |              |             |                    |            |
|  | Red          | M3SSV3-11R  | 1SFA 611 232 R1001 | 26.00      |
|                                                                                     | Green        | M3SSV3-11G  | 1SFA 611 232 R1002 |            |
|                                                                                     | Yellow       | M3SSV3-11Y  | 1SFA 611 232 R1003 |            |

**Contact blocks, lamp block and holder** See Page 8.45

① No contact in center position

② Lamp block for max 230 V AC/DC. Bulb not included. Other lamp block see Accessories



## Notes

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### Fixed legend plates

- Of silvergrey aluminum for:
  - pushbuttons
  - two-position selector switches
  - three-position selector switches
  - toggle switches
  - customer selected text
- Of black/white plastic. Text on one side or both sides:
  - with customer selected text

### Text caps

- For illuminated pushbuttons (flush or extended) and pilot lights with or without text or symbol or with customer selected text.

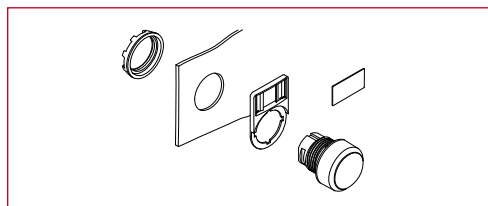
### Special legend plates

- For emergency stop pushbuttons
- Legend plate with or without customer selected text
- Legend plate holders with inserts of brushed aluminum on black plastic. With or without text or symbol for:
  - pushbuttons
  - two-position selector switch
  - three position selector switch
  - customer selected text
 For plastic enclosures:
- Legend plate holders with inserts of brushed aluminum on black plastic. With or without text or symbol for push-buttons
- Legend plates of silvergrey aluminum
  - For 1- 2-, 3- 4- or 6-seat plastic enclosures
  - With or without text or symbol for:
    - pushbuttons

## Special legend plates

### Legend plate holders with inserts

- Holder of black plastic.
  - Holder of grey plastic for plastic enclosures.
  - Insert of brushed aluminum on black plastic.
- The insert is securely retained in a pocket and can be removed.  
3 mm high text in typeface Helvetica.



### Legend plate holder (black)

| Description | Catalog No.        | List Price |
|-------------|--------------------|------------|
| Black       | 1SFA 616 920 R8120 | \$ .70     |

### Inserts

| Description                                                    | Catalog No.        | List Price |
|----------------------------------------------------------------|--------------------|------------|
| Of brushed aluminum on black plastic<br>Without text or symbol | 1SFA 616 920 R8121 | \$ .70     |

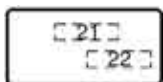
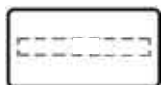
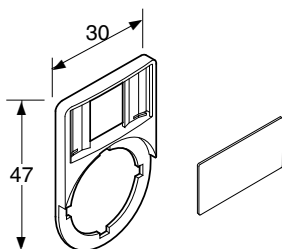
### Inserts with text/symbol

| Description                                                 | Catalog No.        | List Price |
|-------------------------------------------------------------|--------------------|------------|
| Of brushed aluminum on black plastic<br>With text or symbol |                    |            |
| O                                                           | 1SFA 611 930 R1032 | \$ .70     |
| I                                                           | 1SFA 611 930 R1033 |            |
| →                                                           | 1SFA 611 930 R1034 |            |
| →→                                                          | 1SFA 611 930 R1035 |            |
| Close                                                       | 1SFA 611 930 R1036 |            |
| Open                                                        | 1SFA 611 930 R1037 |            |
| On                                                          | 1SFA 611 930 R1038 |            |
| Off                                                         | 1SFA 611 930 R1039 |            |
| Fast                                                        | 1SFA 611 930 R1040 |            |
| Slow                                                        | 1SFA 611 930 R1041 |            |
| Down                                                        | 1SFA 611 930 R1042 |            |
| Up                                                          | 1SFA 611 930 R1043 |            |
| Start                                                       | 1SFA 611 930 R1044 |            |
| Stop                                                        | 1SFA 611 930 R1045 |            |

### Inserts for two-position selector switches

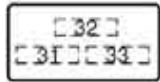
Of brushed aluminum on black plastic. Text on both sides.

| Description         | Catalog No.         | List Price |
|---------------------|---------------------|------------|
| With text or symbol |                     |            |
| Pos. 21   Pos. 22   |                     |            |
| O      I            | 1SFA 611 930 R 1070 | \$ .70     |
| I      II           | 1SFA 611 930 R 1071 |            |
| →      →→           | 1SFA 611 930 R 1072 |            |
| Off      On         | 1SFA 611 930 R 1073 |            |
| Stop      Start     | 1SFA 611 930 R 1074 |            |
| Low      High       | 1SFA 611 930 R 1075 |            |
| Slow      Fast      | 1SFA 611 930 R 1076 |            |
| Close      Open     | 1SFA 611 930 R 1077 |            |
| Jog      Run        | 1SFA 611 930 R 1078 |            |
| Hand      Auto      | 1SFA 611 930 R 1079 |            |

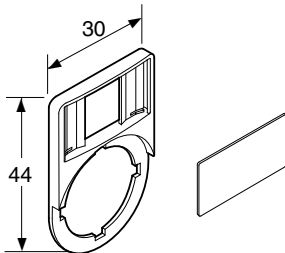
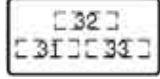
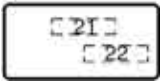
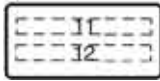
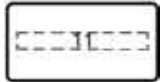


For two-position selector switch

## Special legend plates



For three-position selector switch



### Inserts for three-position selector switches

Of brushed aluminum on black plastic. Text on both sides.

| Description                 | Catalog No.         | List Price |
|-----------------------------|---------------------|------------|
| With text or symbol         |                     |            |
| Pos. 31   Pos. 32   Pos. 33 |                     |            |
| ←   O   →                   | 1SFA 611 930 R 1080 | \$ .70     |
| →   O   →→                  | 1SFA 611 930 R 1081 |            |
| I   O   II                  | 1SFA 611 930 R 1082 |            |
| Hand   O   Auto             | 1SFA 611 930 R 1083 |            |
| Slow   Off   Fast           | 1SFA 611 930 R 1084 |            |

### Legend plate holder (grey) for plastic enclosures

| Description | Catalog No.        | List Price |
|-------------|--------------------|------------|
| Grey        | 1SFA 611 930 R1060 | \$ .70     |

### Inserts

| Description                          | Catalog No.        | List Price |
|--------------------------------------|--------------------|------------|
| Of brushed aluminum on black plastic |                    |            |
| Without text or symbol               | 1SFA 611 930 R1061 | \$ .70     |

### Inserts with text/symbol

| Description                          | Catalog No.        | List Price |
|--------------------------------------|--------------------|------------|
| Of brushed aluminum on black plastic |                    |            |
| With text or symbol                  |                    |            |
| O                                    | 1SFA 611 930 R1062 | \$ .70     |
| I                                    | 1SFA 611 930 R1063 |            |
| II                                   | 1SFA 611 930 R1064 |            |

## Special legend plates

### Emergency stop legend plates ①

| Description/Text                                                                                                                                                                                        | Catalog No.                                                                                                                       | List Price |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------|
| Black text on a yellow aluminum plate.<br>Nöd Stopp<br>Emergency Stop<br>Not Aus<br>ARRET D'URGENCE<br>HÄTÄSEIS<br>PARADA DE EMERGENCIA<br>EMERGENCY STOP<br>NOT AUS<br>ARRET D'URGENCE<br>Without text | SK 615 546-1<br>SK 615 546-2<br>SK 615 546-3<br>SK 615 546-4<br>SK 615 546-5<br>SK 615 546-6<br><br>SK 615 546-13<br>SK 615 546-8 | \$ 6.00    |
| Black text on a yellow plastic plate.<br>Quantity per package: 10<br>Can be used as yellow background.<br>Emergency Stop                                                                                | 1SFA 616 915 R1005                                                                                                                | 5.00       |

More emergency stop legend plates on page 8.60.

### Legend plates without or with customer-selected text

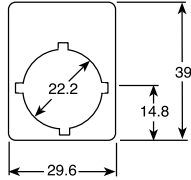
| Of aluminum          |                                    |                     | Without text ② | With text ③  | List Price |
|----------------------|------------------------------------|---------------------|----------------|--------------|------------|
| Number of operations | Max. number of characters per line | Dimensions<br>A L C | Catalog No.    | Catalog No.  |            |
| 1                    | 7                                  | - 29.6 23.6         | SK 615 545-1   | SK 615 998-1 | \$ 6.00    |
| 2                    | 20                                 | 30.5 60 54          | SK 615 545-2   | SK 615 998-2 |            |
| 2                    | 24                                 | 40 70 64            | SK 615 545-3   | SK 615 998-3 |            |
| 3                    | 33                                 | 30.5 90 84          | SK 615 545-4   | SK 615 998-4 |            |
| 3                    | 42                                 | 40 110 104          | SK 615 545-5   | SK 615 998-5 |            |

① Does not work with pushbutton enclosure.

② Quantity per package: 10.

③ When ordering, please state text and position (Line 21 and Line 22). Only the initial character is upper case unless other is stated. Quantity per package: 1.

## Legend plates for pushbuttons



### Engraved fixed legend plates, with symbols ①

Of silvergrey aluminum

| Symbol | Catalog No.   | List Price |
|--------|---------------|------------|
| O      | SK 615 550-61 | \$ 1.50    |
| I      | SK 615 550-62 |            |
| II     | SK 615 550-63 |            |
| ←      | SK 615 562-12 |            |
| →      | SK 615 562-18 |            |
| ↔      | SK 615 562-27 |            |

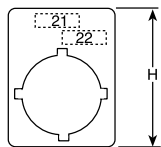
### Engraved fixed legend plates, with text ①

Of silvergrey aluminum

| Text           | Catalog No.   | List Price |
|----------------|---------------|------------|
| <b>English</b> |               | \$ 1.50    |
| Close          | SK 615 552-13 |            |
| Down           | SK 615 552-14 |            |
| Emergency stop | SK 615 552-15 |            |
| Fast           | SK 615 552-16 |            |
| Forward        | SK 615 552-17 |            |
| In             | SK 615 550-29 |            |
| Inching        | SK 615 552-18 |            |
| Left           | SK 615 552-39 |            |
| Lower          | SK 615 552-20 |            |
| Off            | SK 615 552-21 |            |
| On             | SK 615 552-22 |            |
| Open           | SK 615 552-23 |            |
| Out            | SK 615 552-24 |            |
| Raise          | SK 615 552-25 |            |
| Reset          | SK 615 552-27 |            |
| Reverse        | SK 615 552-28 |            |
| Right          | SK 615 552-40 |            |
| Run            | SK 615 552-29 |            |
| Slow           | SK 615 552-30 |            |
| Start          | SK 615 550-44 |            |
| Stop           | SK 615 552-31 |            |
| Up             | SK 615 552-32 |            |

① Text height 3 mm.

## Legend plates for two-position selector switches



H = 39 mm

### Engraved fixed legend plates, with symbols ①

Of silvergrey aluminum

Symbol/Text

Pos 21 Pos. 22

O I  
I II  
→ →→

Catalog No.

SK 615 550-75  
SK 615 550-76  
SK 615 562-72

List Price

\$ 1.50

### Engraved fixed legend plates, with text ①

Of silvergrey aluminum

Symbol/Text

Pos 21 Pos. 22

#### English

Hand Auto  
Jog Run  
Off On  
Stop Start

Catalog No.

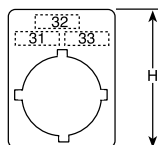
SK 615 550-71  
SK 615 552-52  
SK 615 552-53  
SK 615 552-55

List Price

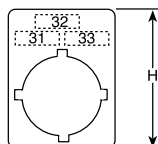
\$ 1.50

① Text height 3 mm. Only the initial character is upper case unless other is stated.

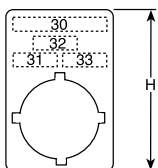
## Legend plates for three-position selector switches



H = 39 mm



H = 39 mm



H = 44.5 mm

### Engraved fixed legend plates, with symbols ①

Of silvergrey aluminum

Symbol/Text

Pos 31 Pos. 32 Pos. 33

|   |   |    |
|---|---|----|
| I | O | II |
| ← | O | →  |
| → | O | →→ |

Catalog No.

SK 615 550-81

SK 615 562-82

SK 615 562-83

List Price

\$ 1.50

### Engraved fixed legend plates, with text ①

Of silvergrey aluminum

Symbol/Text

Pos 31 Pos. 32 Pos. 33

#### English

|      |     |      |
|------|-----|------|
| Hand | O   | Auto |
| Slow | Off | Fast |

Catalog No.

SK 615 550-80

SK 615 552-60

List Price

\$ 1.50

① Text height 3 mm. Only the initial character is upper case unless other is stated.

## Custom engraved inserts

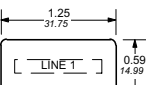
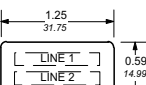
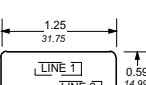
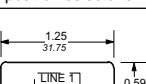
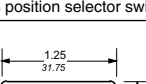
Start

Stop

CBK-NPE19-01

### Nameplate inserts — aluminum ①

8

| Type                                                                                                                  | Maximum letters per line | Catalog number | List price     |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------|----------------|----------------|
|  <p>1 line</p>                       | 11                       | MP-NP19-01     | <b>\$ 5.90</b> |
|  <p>2 lines</p>                      | 11                       | MP-NP19-02     |                |
|  <p>2 position selector switch</p> | 5                        | MP-NP19-03     |                |
|  <p>3 position selector switch</p> | 5                        | MP-NP19-04     |                |
|  <p>2 position selector switch</p> | 5                        | MP-NP19-05     |                |

### General specifications

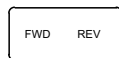
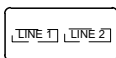
- All characters are 1/8" high, upper & lower case. Please specify if all capital letters are desired.
- The legend plate inserts and the fixed legend plates are silver-grey anodized aluminum.
- All special engravings involve engraving the desired lettering into the metal surface and then treating the engraved surfaces with black ink.

#### EXAMPLE:

MP-NP19-05

1: FWD

2: REV



"MP-NP19" is the blank legend plate catalog number. "-05" refers to the layout of text (see dimension illustrations).

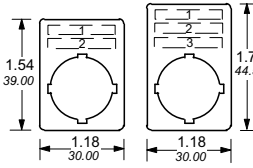
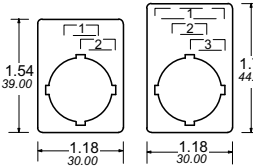
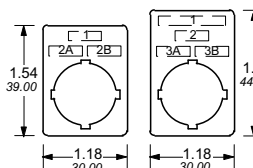
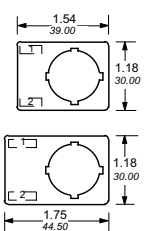
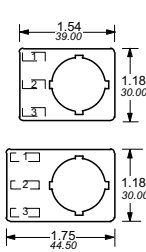
① For drilling plans, see page 8.68.

② "PW" and "PB" are the same material with either the white or black side showing.

# Custom engraved nameplates

Pilot Devices  
Legend plates

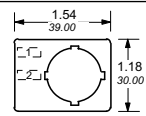
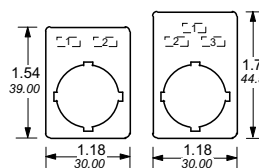
## Fixed nameplates — aluminum or plastic ①

| Type                                                                                                               | Maximum letters per line                                | Finish ②          | Catalog number                                               | List price |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------|--------------------------------------------------------------|------------|
| <br>Pushbuttons or pilot lights   | 11                                                      | A<br>B<br>BA<br>W | MP-NPE28-01<br>MP-NPE28B-01<br>MP-NPE28BA-01<br>MP-NPE28W-01 | \$ 6.50    |
|                                                                                                                    | 11                                                      | A<br>B<br>BA<br>W | MP-NPE29-01<br>MP-NPE29B-01<br>MP-NPE29BA-01<br>MP-NPE29W-01 |            |
| <br>2 Position selector switches  | 5                                                       | A<br>B<br>BA<br>W | MP-NPE28-02<br>MP-NPE28B-02<br>MP-NPE28BA-02<br>MP-NPE28W-02 |            |
|                                                                                                                    | 11 (line 1)<br>5 (line 2)<br>5 (line 3)                 | A<br>B<br>BA<br>W | MP-NPE29-02<br>MP-NPE29B-02<br>MP-NPE29BA-02<br>MP-NPE29W-02 |            |
| <br>3 Position selector switches | 5                                                       | A<br>B<br>BA<br>W | MP-NPE28-03<br>MP-NPE28B-03<br>MP-NPE28BA-03<br>MP-NPE28W-03 |            |
|                                                                                                                    | 11 (line 1)<br>5 (line 2)<br>5 (line 3A)<br>5 (line 3B) | A<br>B<br>BA<br>W | MP-NPE29-03<br>MP-NPE29B-03<br>MP-NPE29BA-03<br>MP-NPE29W-03 |            |
| <br>2 Position toggle switches  | 4                                                       | A<br>B<br>BA<br>W | MP-NPE28-04<br>MP-NPE28B-04<br>MP-NPE28BA-04<br>MP-NPE28W-04 |            |
|                                                                                                                    | 5                                                       | A<br>B<br>BA<br>W | MP-NPE29-04<br>MP-NPE29B-04<br>MP-NPE29BA-04<br>MP-NPE29W-04 |            |
| <br>3 Position toggle switches  |                                                         | A<br>B<br>BA<br>W | MP-NPE28-05<br>MP-NPE28B-05<br>MP-NPE28BA-05<br>MP-NPE28W-05 |            |
|                                                                                                                    |                                                         | A<br>B<br>BA<br>W | MP-NPE29-05<br>MP-NPE29B-05<br>MP-NPE29BA-05<br>MP-NPE29W-05 |            |



CBK-NPE28-02

## Fixed nameplates — aluminum or plastic ①

| Type                                                                                                                 | Maximum letters per line                | Finish ②          | Catalog number                                                | List price |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------|---------------------------------------------------------------|------------|
| <br>Pushbuttons or pilot lights    | 11                                      | A<br>B<br>BA<br>W | MP-NPE28-06<br>MP-NPE28B-06<br>MP-NPE28BA-06<br>MP-NPE28W-016 | \$ 6.50    |
|                                                                                                                      | 11                                      | A<br>B<br>BA<br>W | MP-NPE29-06<br>MP-NPE29B-06<br>MP-NPE29BA-06<br>MP-NPE29W-06  |            |
| <br>2 Position selector switches | 5                                       | A<br>B<br>BA<br>W | MP-NPE28-07<br>MP-NPE28B-07<br>MP-NPE28BA-07<br>MP-NPE28W-07  |            |
|                                                                                                                      | 11 (line 1)<br>5 (line 2)<br>5 (line 3) | A<br>B<br>BA<br>W | MP-NPE29-07<br>MP-NPE29B-07<br>MP-NPE29BA-07<br>MP-NPE29W-07  |            |

## General specifications

1. All characters are 1/8" high, upper & lower case. Please specify if all capital letters are desired.
2. The legend plate inserts and the fixed legend plates are silver-grey anodized aluminum.
3. All special engravings involve engraving the desired lettering into the metal surface and then treating the engraved surfaces with black ink.

## Ordering custom engraved nameplates

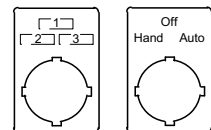
1. Select the desired legend plate.
2. Indicate the catalog number.
3. Write the desired words to be engraved on each line.

### EXAMPLE:

MP-NPE28P-03

- 1: OFF
- 2: HAND
- 3: AUTO

"MP-NPE28P" is the blank legend plate catalog number. "B" indicates that the black side of the plate is to be engraved. "-03" refers to the layout of text (see dimension illustrations above).



① For drilling plans, see page 8.68.

② Finish: A = brushed aluminum; B = black plastic face with white letters; BA = plastic with brushed aluminum finish; W = white plastic face with black letters.

## Engraved legend plate form

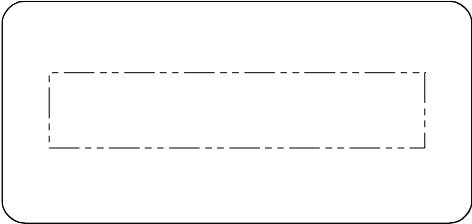
### Custom engraved nameplates

8

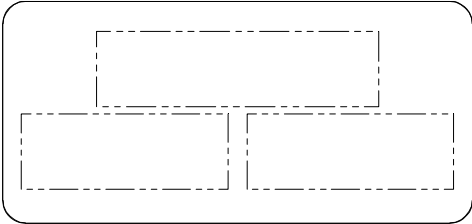
| ENGRAVED LEGEND PLATE FORM<br>MP-NP19, MP-NP19B, MP-NP19W |                              | PAGE: ____ OF: ____ |
|-----------------------------------------------------------|------------------------------|---------------------|
| MP-NP19- ____ ( BRUSHED ALUMINUM )                        | ORDER NUMBER: _____          |                     |
| MP-NP19B- ____ ( PLASTIC, BLACK FACE / WHITE LTRS )       | ORDER: QTY: ____             |                     |
| MP-NP19W- ____ ( PLASTIC, WHITE FACE / BLACK LTRS )       | SHIPPING METHOD: _____       |                     |
| ORIG. DATE: _____                                         | DUE DATE: ____ - ____ - ____ |                     |
| ISSUED BY: _____                                          | ENGRAVER: _____              |                     |
| ALL CAPITALS?    YES    NO                                | Q.C. INSPECTION: _____       |                     |
| REMARKS: _____                                            |                              |                     |

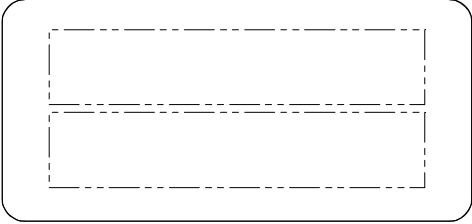
**PRINT INFORMATION TO BE ENGRAVED**



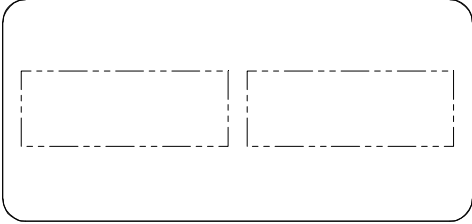
-01



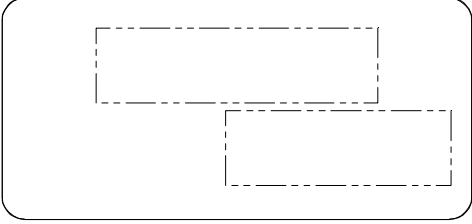
-04



-02



-05



-03

MP-NP19: REV. A  
03/04/05

Engraved legend plate form  
Custom engraved nameplates

ENGRAVED LEGEND PLATE FORM

MP-NPE28, MP-NPE28P, MP-NPE28B, MP-NPE28W

PAGE: \_\_\_\_ OF: \_\_\_\_

MP-NPE28-\_\_\_\_ (BRUSHED ALUMINUM)

MP-NPE28BA-\_\_\_\_ (PLASTIC, BRUSHED FINISH)

MP-NPE28B-\_\_\_\_ (PLASTIC, BLACK FACE/WHITE LTRS)

MP-NPE28W-\_\_\_\_ (PLASTIC, WHITE FACE/BLACK LTRS)

ORIG. DATE: \_\_\_\_\_

ISSUED BY: \_\_\_\_\_

ALL CAPITALS?   YES   NO

REMARKS: \_\_\_\_\_

ORDER NUMBER: \_\_\_\_\_

ORDER: QTY: \_\_\_\_\_

SHIPPING METHOD: \_\_\_\_\_

DUE DATE: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

ENGRAVER: \_\_\_\_\_

Q.C. INSPECTION: \_\_\_\_\_

PRINT INFORMATION TO BE ENGRAVED

-01

-02

-03

-04, -05 or -06

-07

MP-NPE28  
5/26/04

## Engraved legend plate form

### Custom engraved nameplates

#### ENGRAVED LEGEND PLATE FORM

G1 MP-NPE28, G1 MP-NPE28P, G1 MP-NPE28B, G1 MP-NPE28W

PAGE: \_\_\_\_ OF: \_\_\_\_

G1 MP-NPE28-\_\_\_\_ (BRUSHED ALUMNINUM)

ORDER NUMBER: \_\_\_\_\_

G1 MP-NPE28BA-\_\_\_\_ (PLASTIC, BRUSHED FINISH)

ORDER: QTY: \_\_\_\_\_

G1 MP-NPE28B-\_\_\_\_ (PLASTIC, BLACK FACE/WHITE LTRS)

SHIPPING METHOD: \_\_\_\_\_

G1 MP-NPE28W-\_\_\_\_ (PLASTIC, WHITE FACE/BLACK LTRS)

DUE DATE: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

ORIG. DATE: \_\_\_\_\_

ISSUED BY: \_\_\_\_\_

ENGRAVER: \_\_\_\_\_

ALL CAPITALS? YES NO

Q.C. INSPECTION: \_\_\_\_\_

REMARKS: \_\_\_\_\_

#### PRINT INFORMATION TO BE ENGRAVED

-01

-02

-03

-04, -05 or -06

-07

G1 MP-NPE28  
6/10/04

Engraved legend plate form  
Custom engraved nameplates

ENGRAVED LEGEND PLATE FORM

G1 MP-NPE29, G1 MP-NPE29P, G1 MP-NPE29B, G1 MP-NPE29W

PAGE: \_\_\_\_ OF: \_\_\_\_

G1 MP-NPE29-\_\_\_\_ (BRUSHED ALUMINUM)

ORDER NUMBER: \_\_\_\_\_

G1 MP-NPE29BA-\_\_\_\_ (PLASTIC, BRUSHED FINISH)

ORDER: QTY: \_\_\_\_\_

G1 MP-NPE29B-\_\_\_\_ (PLASTIC, BLACK FACE/WHITE LTRS)

SHIPPING METHOD: \_\_\_\_\_

G1 MP-NPE29W-\_\_\_\_ (PLASTIC, WHITE FACE/BLACK LTRS)

DUE DATE: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

ORIG. DATE: \_\_\_\_\_

ENGRAVER: \_\_\_\_\_

ISSUED BY: \_\_\_\_\_

Q.C. INSPECTION: \_\_\_\_\_

ALL CAPITALS?   YES   NO

REMARKS: \_\_\_\_\_

PRINT INFORMATION TO BE ENGRAVED

-01

-02

-03

-04, -05 or -06

-07

G1 MP-NPE29

6/10/04

## Engraved legend plate form

### Custom engraved nameplates

#### ENGRAVED LEGEND PLATE FORM

MP-NPE29, MP-NPE29P, MP-NPE29B, MP-NPE29W

PAGE: \_\_\_\_ OF: \_\_\_\_

MP-NPE29- \_\_\_\_ (BRUSHED ALUMINUM)

ORDER NUMBER: \_\_\_\_

MP-NPE29BA- \_\_\_\_ (PLASTIC, BRUSHED FINISH)

ORDER: QTY: \_\_\_\_

MP-NPE29B- \_\_\_\_ (PLASTIC, BLACK FACE/WHITE LTRS)

SHIPPING METHOD: \_\_\_\_

MP-NPE29W- \_\_\_\_ (PLASTIC, WHITE FACE/BLACK LTRS)

DUE DATE: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

ORIG. DATE: \_\_\_\_

ISSUED BY: \_\_\_\_

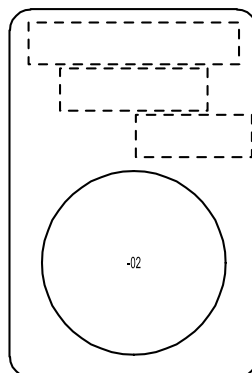
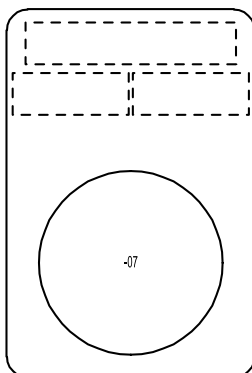
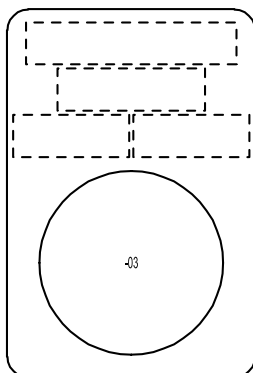
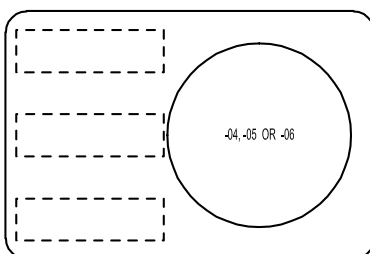
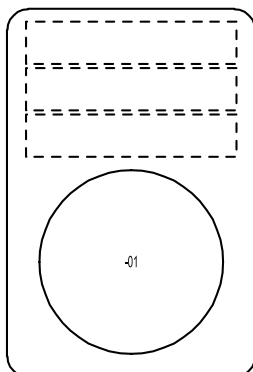
ENGRAVER: \_\_\_\_

ALL CAPITALS? YES NO

Q.C. INSPECTION: \_\_\_\_

REMARKS: \_\_\_\_

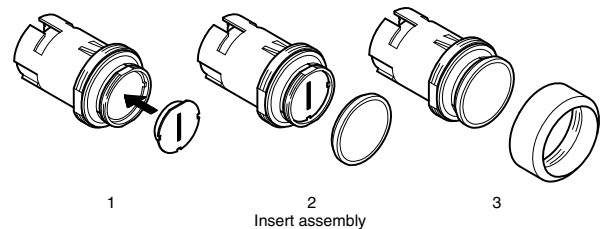
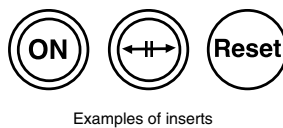
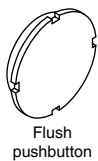
#### PRINT INFORMATION TO BE ENGRAVED



MP-NPE29  
6/10/04

## Text caps

| Legend                                                                            | Cap color<br>① | Suffix<br>code ② | Flush button<br>catalog<br>number | Extended button<br>catalog<br>number | Pilot light<br>catalog<br>number | List<br>price |
|-----------------------------------------------------------------------------------|----------------|------------------|-----------------------------------|--------------------------------------|----------------------------------|---------------|
|  | White          | C82              | 1SFA616901R9036                   | —                                    | —                                | \$ .90        |
| Start                                                                             | White          | C67              | 1SFA616901R2030                   | 1SFA616902R2030                      | 1SFA616903R2030                  |               |
| START                                                                             | Green          | C5               | 1SFA616906R1042                   | —                                    | —                                |               |
|                                                                                   | Black          | C81              | 1SFA616908R1042                   | —                                    | —                                |               |
| On                                                                                | White          | C68              | 1SFA616901R1020                   | 1SFA616902R1020                      | 1SFA616903R1020                  |               |
| ON                                                                                | White          | C69              | 1SFA616901R1039                   | —                                    | 1SFA616903R1039                  |               |
|                                                                                   | Green          | C70              | 1SFA616906R1039                   | —                                    | —                                |               |
|                                                                                   | Black          | C1               | 1SFA616908R1030                   | —                                    | —                                |               |
| Off                                                                               | White          | C71              | 1SFA616901R1019                   | 1SFA616902R1019                      | 1SFA616903R1019                  |               |
| OFF                                                                               | White          | C72              | —                                 | 1SFA616902R1040                      | —                                |               |
|                                                                                   | Red            | C73              | —                                 | 1SFA616905R1040                      | —                                |               |
|                                                                                   | Black          | C2               | 1SFA616908R1040                   | 1SFA616909R1040                      | —                                |               |
| Stop                                                                              | White          | C74              | 1SFA616901R1031                   | 1SFA616902R1031                      | 1SFA616903R1031                  |               |
| STOP                                                                              | Red            | C4               | 1SFA616904R1047                   | 1SFA616905R1047                      | —                                |               |
| Reset                                                                             | White          | C75              | 1SFA616901R1025                   | 1SFA616902R1025                      | 1SFA616903R1025                  |               |
| Blank                                                                             | White          | C15              | 1SFA616901R9000                   | 1SFA616902R9000                      | 1SFA616903R9000                  |               |
|                                                                                   | Green          | CG               | 2949 1468-2                       | 2949 1469-2                          | —                                |               |
| UP                                                                                | Green          | C11              | 1SFA616906R1043                   | —                                    | —                                |               |
| DOWN                                                                              | Green          | C12              | 1SFA616906R1044                   | —                                    | —                                |               |
| OPEN                                                                              | White          | C16              | 1SFA616901R1045                   | —                                    | —                                |               |
|                                                                                   | Green          | C19              | 1SFA616906R1045                   | —                                    | —                                |               |
| CLOSE                                                                             | White          | C17              | 1SFA616901R1046                   | —                                    | —                                |               |
|                                                                                   | Green          | C20              | 1SFA616906R1046                   | —                                    | —                                |               |
| REV                                                                               | Green          | C6               | 1SFA616906R1048                   | —                                    | —                                |               |
| FWD                                                                               | Green          | C7               | 1SFA616906R1049                   | —                                    | —                                |               |
| SLOW                                                                              | Green          | C8               | 1SFA616906R1050                   | —                                    | —                                |               |
| FAST                                                                              | Green          | C9               | 1SFA616906R1051                   | —                                    | —                                |               |
| JOG                                                                               | Green          | C10              | 1SFA616906R1052                   | —                                    | —                                |               |
| RESET                                                                             | Black          | C3               | 1SFA616908R1041                   | —                                    | —                                |               |
| LATCH                                                                             | White          | C18              | 1SFA616901R1053                   | —                                    | —                                |               |



① Illuminated pushbuttons and pilot lights must use white insert.

② For extended pushbuttons, insert "E" at the end of the catalog number. For pilot lights, insert "P" at end of the catalog number.

## Text caps

Flush button



Can be turned 90° or 180°

Extended button



Pilot light



### Text caps for illuminated pushbuttons and pilot lights

| Text/Symbol <sup>①</sup> | Cap color <sup>②</sup> | Suffix | Flush button<br>Catalog No. | Extended button<br>Catalog No. | Pilot light<br>Catalog No. | List<br>Price |
|--------------------------|------------------------|--------|-----------------------------|--------------------------------|----------------------------|---------------|
| →→                       | White                  | C14    | 1SFA 616 901 R9006          | 1SFA 616 902 R9006             | 1SFA 616 903 R9006         | \$ .90        |
| O                        | White                  | C21    | 1SFA 616 901 R9004          | 1SFA 616 902 R9004             | 1SFA 616 903 R9004         |               |
|                          | Red                    | C22    | 1SFA 616 904 R9004          | 1SFA 616 905 R9004             | –                          |               |
|                          | Black                  | C23    | 1SFA 616 908 R9004          | –                              | –                          |               |
| I                        | White                  | C24    | 1SFA 616 901 R9002          | 1SFA 616 902 R9002             | 1SFA 616 903 R9002         |               |
|                          | Green                  | C25    | 1SFA 616 906 R9002          | –                              | –                          |               |
|                          | Black                  | C26    | 1SFA 616 908 R9002          | –                              | –                          |               |
| II                       | White                  | C27    | 1SFA 616 901 R9003          | 1SFA 616 902 R9003             | 1SFA 616 903 R9003         |               |
|                          | Green                  | C28    | 1SFA 616 906 R9003          | –                              | –                          |               |
|                          | Black                  | C29    | 1SFA 616 908 R9003          | –                              | –                          |               |
| III                      | White                  | C30    | 1SFA 616 901 R9028          | 1SFA 616 902 R9028             | –                          |               |
|                          | Black                  | C31    | 1SFA 616 908 R9028          | –                              | –                          |               |
| +                        | White                  | C32    | 1SFA 616 901 R9011          | 1SFA 616 902 R9011             | –                          |               |
|                          | Green                  | C33    | 1SFA 616 906 R9011          | –                              | –                          |               |
|                          | Black                  | C34    | 1SFA 616 908 R9011          | –                              | –                          |               |
| –                        | White                  | C35    | 1SFA 616 901 R9012          | –                              | –                          |               |
|                          | Red                    | C36    | 1SFA 616 904 R9012          | –                              | –                          |               |
|                          | Black                  | C37    | 1SFA 616 908 R9012          | –                              | –                          |               |
| ↑                        | White                  | C38    | 1SFA 616 901 R9005          | 1SFA 616 902 R9005             | 1SFA 616 903 R9005         |               |
|                          | Black                  | C39    | 1SFA 616 908 R9005          | –                              | –                          |               |
| ↗                        | White                  | C40    | 1SFA 616 901 R9014          | 1SFA 616 902 R9014             | –                          |               |
|                          | Black                  | C41    | 1SFA 616 908 R9014          | –                              | –                          |               |
| ↔                        | White                  | C42    | 1SFA 616 901 R9015          | 1SFA 616 902 R9015             | –                          |               |
|                          | Black                  | C43    | 1SFA 616 908 R9015          | –                              | –                          |               |
| ↔↔                       | White                  | C44    | 1SFA 616 901 R9016          | 1SFA 616 902 R9016             | –                          |               |
|                          | Black                  | C45    | 1SFA 616 908 R9016          | –                              | –                          |               |
| →▷                       | White                  | C46    | 1SFA 616 901 R9017          | 1SFA 616 902 R9017             | –                          |               |
|                          | Black                  | C47    | 1SFA 616 908 R9017          | –                              | –                          |               |
| ⊕                        | White                  | C47    | 1SFA 616 901 R9018          | 1SFA 616 902 R9018             | –                          |               |
|                          | Black                  | C48    | 1SFA 616 908 R9018          | –                              | –                          |               |
| ●                        | White                  | C49    | 1SFA 616 901 R9019          | 1SFA 616 902 R9019             | –                          |               |
|                          | Black                  | C50    | 1SFA 616 908 R9019          | –                              | –                          |               |
| ⊙                        | White                  | C51    | 1SFA 616 901 R9020          | 1SFA 616 902 R9020             | –                          |               |
|                          | Black                  | C52    | 1SFA 616 908 R9020          | –                              | –                          |               |
| ✋                        | White                  | C53    | 1SFA 616 901 R9021          | 1SFA 616 902 R9021             | –                          |               |
|                          | Black                  | C54    | 1SFA 616 908 R9021          | –                              | –                          |               |
| ~                        | White                  | C55    | 1SFA 616 901 R9022          | 1SFA 616 902 R9022             | –                          |               |
|                          | Black                  | C56    | 1SFA 616 908 R9022          | –                              | –                          |               |
| ⚡                        | White                  | C57    | 1SFA 616 901 R9023          | 1SFA 616 902 R9023             | –                          |               |
|                          | Black                  | C58    | 1SFA 616 908 R9023          | –                              | –                          |               |
| ⚓                        | White                  | C59    | 1SFA 616 901 R9024          | 1SFA 616 902 R9024             | –                          |               |
|                          | Black                  | C60    | 1SFA 616 908 R9024          | –                              | –                          |               |
| ↕↑                       | White                  | C61    | 1SFA 616 901 R9025          | 1SFA 616 902 R9025             | –                          |               |
|                          | Black                  | C62    | 1SFA 616 908 R9025          | –                              | –                          |               |
| ↕↓                       | White                  | C63    | 1SFA 616 901 R9026          | 1SFA 616 902 R9026             | –                          |               |
|                          | Black                  | C64    | 1SFA 616 908 R9026          | –                              | –                          |               |
| ⚡                        | White                  | C65    | 1SFA 616 901 R9027          | 1SFA 616 902 R9027             | –                          |               |
|                          | Black                  | C66    | 1SFA 616 908 R9027          | –                              | –                          |               |

① Use only white caps for illuminated pushbutton and pilot lights.

② Add "E" for extended button or "P" for pilot light.

## Special legend plates for plastic enclosures

### Legend plates for plastic enclosures

For 1, 2, 3, 4 or 6-seat

| Description             | Catalog No.               | List Price   |
|-------------------------|---------------------------|--------------|
| Of silvergrey aluminum. |                           |              |
| <b>1-seat</b>           | <b>1SFA 611 930 R1000</b> | <b>\$ 12</b> |
| <b>2-seat</b>           | <b>1SFA 611 930 R1002</b> | <b>15</b>    |
| <b>3-seat</b>           | <b>1SFA 611 930 R1003</b> | <b>18</b>    |
| <b>4-seat</b>           | <b>1SFA 611 930 R1004</b> | <b>21</b>    |
| <b>6-seat</b>           | <b>1SFA 611 930 R1005</b> | <b>27</b>    |

Of silvergrey aluminum.(Pos. 1 Yellow)

|               |                           |           |
|---------------|---------------------------|-----------|
| <b>2-seat</b> | <b>1SFA 611 930 R1006</b> | <b>20</b> |
| <b>3-seat</b> | <b>1SFA 611 930 R1007</b> | <b>23</b> |
| <b>4-seat</b> | <b>1SFA 611 930 R1008</b> | <b>26</b> |
| <b>6-seat</b> | <b>1SFA 611 930 R1009</b> | <b>32</b> |

Symbol/Text  
Pos

| 1 2 3                   | Catalog No.               | List Price   |
|-------------------------|---------------------------|--------------|
| Of silvergrey aluminum. |                           |              |
| <b>1-seat</b>           |                           |              |
| <b>OFF</b>              | <b>1SFA 611 930 R1012</b> | <b>\$ 17</b> |
| <b>1-seat</b>           |                           |              |
| <b>ON</b>               | <b>1SFA 611 930 R1013</b> | <b>17</b>    |
| <b>2-seat</b>           |                           |              |
| <b>OFF/ON</b>           | <b>1SFA 611 930 R1014</b> | <b>20</b>    |
| <b>3-seat</b>           |                           |              |
| <b>OFF/ON/RUN</b>       | <b>1SFA 611 930 R1015</b> | <b>23</b>    |
| <b>3-seat</b>           |                           |              |
| <b>HAND/OFF/AUTO</b>    | <b>1SFA 611 930 R1016</b> | <b>23</b>    |

### Emergency stop legend plate

| Description/Text                             | Catalog No.               | List Price   |
|----------------------------------------------|---------------------------|--------------|
| Black text on an yellow aluminum plate.      |                           |              |
| Legend plate without text                    | <b>1SFA 611 930 R1010</b> |              |
| Legend plate (1SFA 611 930 R1010) with text: |                           |              |
| Nöd stopp                                    | <b>1SFA 611 930 R1017</b> |              |
| Not Aus                                      | <b>1SFA 611 930 R1018</b> |              |
| Emergency Stop                               | <b>1SFA 611 930 R1019</b> | <b>\$ 15</b> |
| ARRET D'URGENCE                              | <b>1SFA 611 930 R1020</b> |              |
| Hätäseis                                     | <b>1SFA 611 930 R1021</b> |              |
| PARADA DE EMERGENCIA                         | <b>1SFA 611 930 R1022</b> |              |
| Black text on an yellow plastic plate.       |                           |              |
| Legend plate without text                    | <b>1SFA 611 930 R1011</b> | <b>5</b>     |
| Legend plate (1SFA 611 930 R1011) with text: |                           |              |
| Emergency Stop                               | <b>1SFA 611 930 R1023</b> | <b>10</b>    |





Signal Towers K70 and Signal Beacons KSB offer 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.
- Flashing light elements can be mounted in each module.
- Up to 5 flashing light elements possible.
- High protection rating optical and audible signal elements with IP 54.
- LED elements for long life
- Large variety of different versions
  - Permanent light, 12-240V, AC/DC
  - Blinking light, 24-230V
  - Flashing light, 24-230V
  - Audible 85db continuous or pulsating
  - LED, 24-230V

## Signal Beacons KSB

- Large variety of different versions:
  - Permanent light, max. 250V
  - Blinking light, 24V, AC/DC
  - Flashing light, 24-230VAC
  - LED light, 24V, AC/DC
- IP65 for outdoor use
- Available in 5 colors
- High impact polycarbonate

## Signal Towers K70 Description

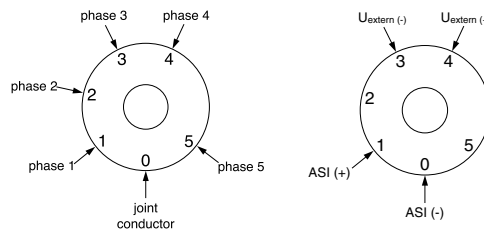
### Simple fitting with quick fix system

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).

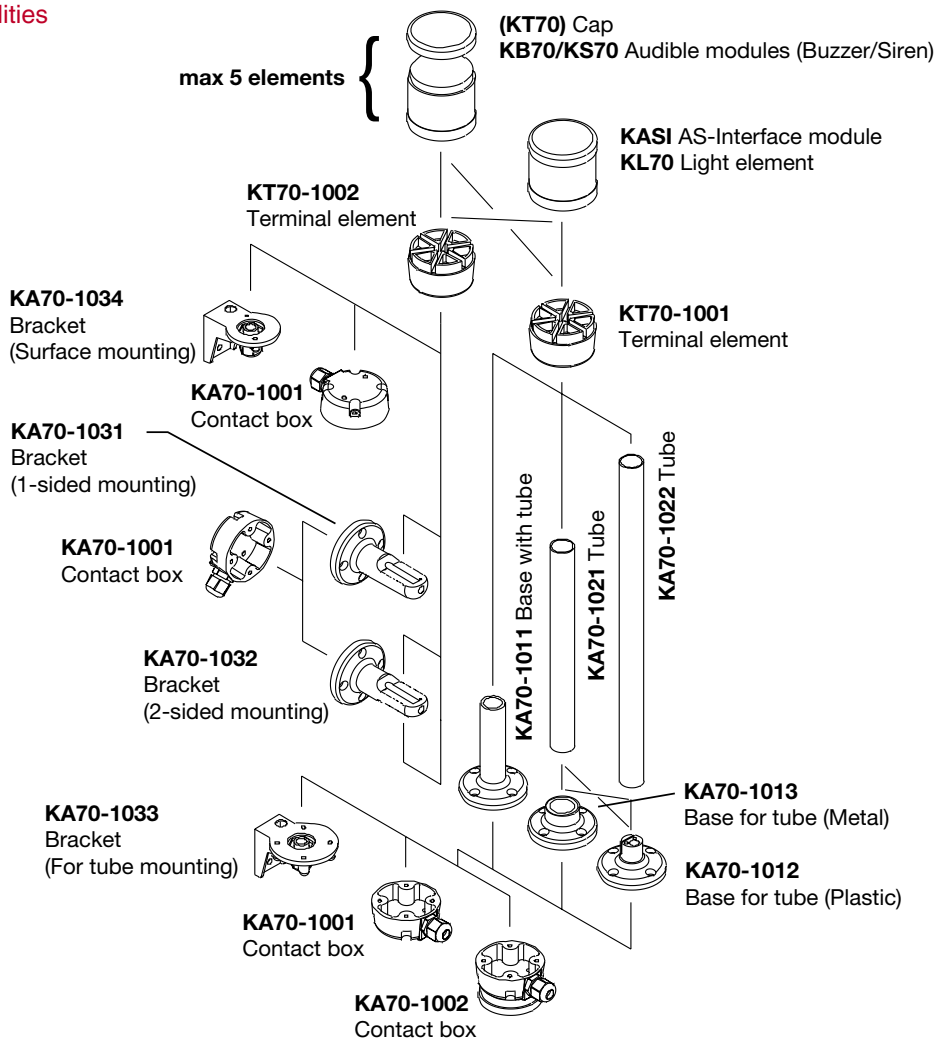


### Connection plans

#### With AS Interface module



### Combination possibilities



# Signal Towers K70



## Optical modules

| Description                                                         | Catalog No. | Ref. Code          | List Price |
|---------------------------------------------------------------------|-------------|--------------------|------------|
| Light element                                                       |             |                    |            |
| Permanent light, 12-240 V AC/DC. For bulb BA15d. Bulb not included. |             |                    |            |
| Red                                                                 | KL70-401R   | 1SFA 616 070 R4011 | \$ 36.00   |
| Green                                                               | KL70-401G   | 1SFA 616 070 R4012 |            |
| Yellow                                                              | KL70-401Y   | 1SFA 616 070 R4013 |            |
| Blue                                                                | KL70-401L   | 1SFA 616 070 R4014 |            |
| Clear                                                               | KL70-401C   | 1SFA 616 070 R4018 |            |
| Blinking light, 24 V AC/DC. For bulb BA15d. Bulb not included.      |             |                    |            |
| Red                                                                 | KL70-302R   | 1SFA 616 070 R3021 | 100.00     |
| Green                                                               | KL70-302G   | 1SFA 616 070 R3022 |            |
| Yellow                                                              | KL70-302Y   | 1SFA 616 070 R3023 |            |
| Blue                                                                | KL70-302L   | 1SFA 616 070 R3024 |            |
| Clear                                                               | KL70-302C   | 1SFA 616 070 R3028 |            |
| Flashing light, 24 V DC. Xenon tube included. Not changeable.       |             |                    |            |
| Red                                                                 | KL70-203R   | 1SFA 616 070 R2031 | 165.00     |
| Green                                                               | KL70-203G   | 1SFA 616 070 R2032 |            |
| Yellow                                                              | KL70-203Y   | 1SFA 616 070 R2033 |            |
| Blue                                                                | KL70-203L   | 1SFA 616 070 R2034 |            |
| Clear                                                               | KL70-203C   | 1SFA 616 070 R2038 |            |
| Blinking light, 115 V AC/DC. For bulb BA15d. Bulb not included.     |             |                    |            |
| Red                                                                 | KL70-312R   | 1SFA 616 070 R3121 | 100.00     |
| Green                                                               | KL70-312G   | 1SFA 616 070 R3122 |            |
| Yellow                                                              | KL70-312Y   | 1SFA 616 070 R3123 |            |
| Blue                                                                | KL70-312L   | 1SFA 616 070 R3124 |            |
| Clear                                                               | KL70-312C   | 1SFA 616 070 R3128 |            |
| Flashing light, 115 V AC. Xenon tube included. Not changeable.      |             |                    |            |
| Red                                                                 | KL70-113R   | 1SFA 616 070 R1131 | 155.00     |
| Green                                                               | KL70-113G   | 1SFA 616 070 R1132 |            |
| Yellow                                                              | KL70-113Y   | 1SFA 616 070 R1133 |            |
| Blue                                                                | KL70-113L   | 1SFA 616 070 R1134 |            |
| Clear                                                               | KL70-113C   | 1SFA 616 070 R1138 |            |
| Blinking light, 230 V AC/DC. For bulb BA15d. Bulb not included.     |             |                    |            |
| Red                                                                 | KL70-322R   | 1SFA 616 070 R3221 | 100.00     |
| Green                                                               | KL70-322G   | 1SFA 616 070 R3222 |            |
| Yellow                                                              | KL70-322Y   | 1SFA 616 070 R3223 |            |
| Blue                                                                | KL70-322L   | 1SFA 616 070 R3224 |            |
| Clear                                                               | KL70-322C   | 1SFA 616 070 R3228 |            |
| Flashing light, 230 V AC. Xenon tube included. Not changeable.      |             |                    |            |
| Red                                                                 | KL70-123R   | 1SFA 616 070 R1231 | 155.00     |
| Green                                                               | KL70-123G   | 1SFA 616 070 R1232 |            |
| Yellow                                                              | KL70-123Y   | 1SFA 616 070 R1233 |            |
| Blue                                                                | KL70-123L   | 1SFA 616 070 R1234 |            |
| Clear                                                               | KL70-123C   | 1SFA 616 070 R1238 |            |
| LED Permanent light, 24 V AC/DC. LED included. Not changeable.      |             |                    |            |
| Red                                                                 | KL70-305R   | 1SFA 616 070 R3051 | 135.00     |
| Green                                                               | KL70-305G   | 1SFA 616 070 R3052 |            |
| Yellow                                                              | KL70-305Y   | 1SFA 616 070 R3053 |            |
| Blue                                                                | KL70-305L   | 1SFA 616 070 R3054 |            |
| White                                                               | KL70-305C   | 1SFA 616 070 R3058 |            |
| LED Blinking light, 24 V AC/DC. LED included. Not changeable.       |             |                    |            |
| Red                                                                 | KL70-306R   | 1SFA 616 070 R3061 | 140.00     |
| Green                                                               | KL70-306G   | 1SFA 616 070 R3062 |            |
| Yellow                                                              | KL70-306Y   | 1SFA 616 070 R3063 |            |
| Blue                                                                | KL70-305L   | 1SFA 616 070 R3064 |            |
| White                                                               | KL70-305C   | 1SFA 616 070 R3068 |            |
| LED Rotating light, 24 V AC/DC. LED included. Not changeable.       |             |                    |            |
| Red                                                                 | KL70-307R   | 1SFA 616 070 R3071 | 140.00     |
| Green                                                               | KL70-307G   | 1SFA 616 070 R3072 |            |
| Yellow                                                              | KL70-307Y   | 1SFA 616 070 R3073 |            |
| Blue                                                                | KL70-305L   | 1SFA 616 070 R3074 |            |
| White                                                               | KL70-305C   | 1SFA 616 070 R3078 |            |

## Signal Towers K70 Accessories

| Description                                                                                    | Catalog No.               | Ref. Code          | List Price     |
|------------------------------------------------------------------------------------------------|---------------------------|--------------------|----------------|
| <b>Bulbs for Signal Tower K70</b> Bulb Ba 15d, 42 mm, Max 7 W For permanent or blinking light. |                           |                    |                |
| 24 V, 5 W, AC/DC                                                                               | <b>1SFA 616 923 R1028</b> | 1SFA 616 923 R1028 | <b>\$ 8.00</b> |
| 115 V, 5 W, AC/DC                                                                              | <b>1SFA 616 923 R1118</b> | 1SFA 616 923 R1118 |                |
| 230 V, 5 W, AC/DC                                                                              | <b>1SFA 616 923 R1148</b> | 1SFA 616 923 R1148 |                |
| <b>LED bulbs for Signal Tower K70</b> Ba 15d. For 24 V AC/DC, 40 mA                            |                           |                    |                |
| Color:                                                                                         |                           |                    | <b>175.00</b>  |
| Red                                                                                            | <b>KA4-1021</b>           | 1SFA 616 924 R1021 |                |
| Green                                                                                          | <b>KA4-1022</b>           | 1SFA 616 924 R1022 |                |
| Yellow                                                                                         | <b>KA4-1023</b>           | 1SFA 616 924 R1023 |                |
| Blue                                                                                           | <b>KA4-1024</b>           | 1SFA 616 924 R1024 |                |
| White                                                                                          | <b>KA4-1025</b>           | 1SFA 616 924 R1025 |                |
| <b>Audible modules</b>                                                                         |                           |                    |                |
| <b>Buzzer element</b>                                                                          |                           |                    |                |
| 85 dB, continuous or pulsating tone, adjustable                                                |                           |                    |                |
| 24 V AC/DC                                                                                     | <b>KB70-3001</b>          | 1SFA 616 071 R3001 | <b>95.00</b>   |
| 115 V AC/DC                                                                                    | <b>KB70-3101</b>          | 1SFA 616 071 R3101 | <b>115.00</b>  |
| 230 V AC                                                                                       | <b>KB70-1201</b>          | 1SFA 616 071 R1201 | <b>115.00</b>  |
| <b>Siren element</b>                                                                           |                           |                    |                |
| Multi function, 8 diff. tones adjustable, volume adjustable 100 dB, 115 V AC                   | <b>KS70-1104</b>          | 1SFA 616 073 R1104 | <b>155.00</b>  |
| Multi function, 8 diff. tones adjustable, volume adjustable 100 dB, 230 V AC                   | <b>KS70-1204</b>          | 1SFA 616 073 R1204 | <b>155.00</b>  |
| Multi function, 7 diff. tones adjustable, volume adjustable, remote control 100 dB, 24 V DC    | <b>KS70-2004</b>          | 1SFA 616 073 R2004 | <b>145.00</b>  |
| Multi function, 8 diff. tones adjustable, volume adjustable,100 dB, 24 V AC/DC                 | <b>KS70-3004</b>          | 1SFA 616 073 R3004 | <b>145.00</b>  |
| Continuous tone alternating 108 dB, 24 V DC                                                    | <b>KS70-2002</b>          | 1SFA 616 073 R2002 | <b>100.00</b>  |
| <b>AS-Interface Module</b>                                                                     |                           |                    |                |
| 18,5-31,6 V AC/DC                                                                              | <b>KASI-4101</b>          | 1SFA 616 079 R4101 | <b>300.00</b>  |
| for external voltage                                                                           |                           |                    |                |
| 18,5-31,6 V AC/DC                                                                              | <b>KASI-4102</b>          | 1SFA 616 079 R4102 | <b>300.00</b>  |
| <b>Terminal elements</b>                                                                       |                           |                    |                |
| For tube mounting, including cap                                                               | <b>KT70-1001</b>          | 1SFA 616 075 R1001 | <b>40.00</b>   |
| For bracket or base, including cap                                                             | <b>KT70-1002</b>          | 1SFA 616 075 R1002 | <b>40.00</b>   |
| <b>Special parts</b>                                                                           |                           |                    |                |
| <b>Contact box</b>                                                                             |                           |                    |                |
| Cable exit at side                                                                             | <b>KA70-1001</b>          | 1SFA 616 077 R1001 | <b>23.00</b>   |
| Magnetic base                                                                                  | <b>KA70-1002</b>          | 1SFA 616 077 R1002 | <b>65.00</b>   |
| <b>Base with tube</b>                                                                          |                           |                    |                |
| D=25 mm L=110 mm                                                                               | <b>KA70-1011</b>          | 1SFA 616 077 R1011 | <b>33.00</b>   |
| <b>Base for tube</b>                                                                           |                           |                    |                |
| D=25 mm, Plastic                                                                               | <b>KA70-1012</b>          | 1SFA 616 077 R1012 | <b>15.00</b>   |
| D=25 mm, Metal                                                                                 | <b>KA70-1013</b>          | 1SFA 616 077 R1013 | <b>32.00</b>   |
| <b>Tube, anodized aluminum</b>                                                                 |                           |                    |                |
| D=25 mm L=250 mm                                                                               | <b>KA70-1021</b>          | 1SFA 616 077 R1021 | <b>20.00</b>   |
| D=25 mm L=400 mm                                                                               | <b>KA70-1022</b>          | 1SFA 616 077 R1022 | <b>27.00</b>   |
| <b>Bracket</b>                                                                                 |                           |                    |                |
| 1-sided mounting                                                                               | <b>KA70-1031</b>          | 1SFA 616 077 R1031 | <b>20.00</b>   |
| 2-sided mounting                                                                               | <b>KA70-1032</b>          | 1SFA 616 077 R1032 | <b>20.00</b>   |
| For tube mounting                                                                              | <b>KA70-1033</b>          | 1SFA 616 077 R1033 | <b>20.00</b>   |
| For surface mounting                                                                           | <b>KA70-1034</b>          | 1SFA 616 077 R1034 | <b>20.00</b>   |



KA70-1001



KA70-1002



KA70-1012



KA70-1013

KA70-1021



KA70-1011



KA70-1032



KA70-1033

# Signal Beacons KSB

Pilot Devices  
Stacklights &  
signal beacons



## Signal Beacons KSB

| Description                                                                 | Catalog No.               | Ref. Code          | List Price |
|-----------------------------------------------------------------------------|---------------------------|--------------------|------------|
| <b>Permanent light</b> , 12-240 V AC/DC. For bulb BA15d. Bulb not included. |                           |                    |            |
| Red                                                                         | <b>KSB-401R</b>           | 1SFA 616 080 R4011 | \$ 55.00   |
| Green                                                                       | <b>KSB-401G</b>           | 1SFA 616 080 R4012 |            |
| Yellow                                                                      | <b>KSB-401Y</b>           | 1SFA 616 080 R4013 |            |
| Blue                                                                        | <b>KSB-401L</b>           | 1SFA 616 080 R4014 |            |
| Clear                                                                       | <b>KSB-401C</b>           | 1SFA 616 080 R4018 |            |
| <b>Flashing light</b> , 24 V DC. Xenon tube included. Not changeable.       |                           |                    |            |
| Red                                                                         | <b>KSB-203R</b>           | 1SFA 616 080 R2031 | 180.00     |
| Green                                                                       | <b>KSB-203G</b>           | 1SFA 616 080 R2032 |            |
| Yellow                                                                      | <b>KSB-203Y</b>           | 1SFA 616 080 R2033 |            |
| Blue                                                                        | <b>KSB-203L</b>           | 1SFA 616 080 R2034 |            |
| Clear                                                                       | <b>KSB-203C</b>           | 1SFA 616 080 R2038 |            |
| <b>Flashing light</b> , 115 V AC. Xenon tube included. Not changeable.      |                           |                    |            |
| Red                                                                         | <b>KSB-113R</b>           | 1SFA 616 080 R1131 | 155.00     |
| Green                                                                       | <b>KSB-113G</b>           | 1SFA 616 080 R1132 |            |
| Yellow                                                                      | <b>KSB-113Y</b>           | 1SFA 616 080 R1133 |            |
| Blue                                                                        | <b>KSB-113L</b>           | 1SFA 616 080 R1134 |            |
| Clear                                                                       | <b>KSB-113C</b>           | 1SFA 616 080 R1138 |            |
| <b>Flashing light</b> , 230 V AC. Xenon tube included. Not changeable.      |                           |                    |            |
| Red                                                                         | <b>KSB-123R</b>           | 1SFA 616 080 R1231 | 155.00     |
| Green                                                                       | <b>KSB-123G</b>           | 1SFA 616 080 R1232 |            |
| Yellow                                                                      | <b>KSB-123Y</b>           | 1SFA 616 080 R1233 |            |
| Blue                                                                        | <b>KSB-123L</b>           | 1SFA 616 080 R1234 |            |
| Clear                                                                       | <b>KSB-123C</b>           | 1SFA 616 080 R1238 |            |
| <b>LED Permanent light</b> , 24 V AC/DC. LED included. Not changeable.      |                           |                    |            |
| Red                                                                         | <b>KSB-305R</b>           | 1SFA 616 080 R3051 | 190.00     |
| Green                                                                       | <b>KSB-305G</b>           | 1SFA 616 080 R3052 |            |
| Yellow                                                                      | <b>KSB-305Y</b>           | 1SFA 616 080 R3053 |            |
| <b>LED Blinking light</b> , 24 V AC/DC. LED included. Not changeable.       |                           |                    |            |
| Red                                                                         | <b>K SB-306R</b>          | 1SFA 616 080 R3061 | 195.00     |
| Green                                                                       | <b>K SB-306G</b>          | 1SFA 616 080 R3062 |            |
| Yellow                                                                      | <b>K SB-306Y</b>          | 1SFA 616 080 R3063 |            |
| <b>LED Rotating light</b> , 24 V AC/DC. LED included. Not changeable.       |                           |                    |            |
| Red                                                                         | <b>KSB-307R</b>           | 1SFA 616 080 R3071 | 195.00     |
| Green                                                                       | <b>KSB-307G</b>           | 1SFA 616 080 R3072 |            |
| Yellow                                                                      | <b>KSB-307Y</b>           | 1SFA 616 080 R3073 |            |
| <b>Special parts</b>                                                        |                           |                    |            |
| Anti-twist device                                                           | <b>KASB-100</b>           | 1SFA 616 087 R1000 | 8.00       |
| <b>Bulbs for Signal Beacons</b> Max 10 W. For permanent light.              |                           |                    |            |
| Bulb Ba15d, 52 mm:                                                          |                           |                    | 8.00       |
| 12 V, 7 W, AC/DC                                                            | <b>1SFA 616 922 R1018</b> | 1SFA 616 922 R1018 |            |
| 24 V, 7 W, AC/DC                                                            | <b>1SFA 616 922 R1028</b> | 1SFA 616 922 R1028 |            |
| 115 V, 7 W, AC/DC                                                           | <b>1SFA 616 922 R1118</b> | 1SFA 616 922 R1118 |            |
| 220-260 V, 7-10 W, AC/DC                                                    | <b>1SFA 616 922 R1148</b> | 1SFA 616 922 R1148 |            |

## Technical data

### Signal Towers K70

### Signal Beacons KSB

#### Signal Towers K70

##### Approvals



##### Technical specifications

###### Housing and accessories

###### Dome

###### Fixing

###### Socket

Polyamide, high impact, black

Polycarbonate, transparent

Base mounting

Tube mounting, for tube ø 25 mm

Bracket mounting

B 15 d, for bulb max. 7W

Screwable connection up to 2.5 mm²

max. 5

max.10 elements

###### Connection

###### Number of modules possible

2-sided bracket

##### 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

###### Blinking light element AC/DC

| 24 V              | 115 V | 230 V |
|-------------------|-------|-------|
| AC/DC             | AC/DC | AC/DC |
| Bulb not included |       |       |
| < 0.5 A           |       |       |

Starting current

###### Flashing light element

| 24 V | 115 V | 230 V |
|------|-------|-------|
| DC   | AC    | 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 20 mA 35 mA

reduced for AS-Interface

80 mA

Starting current

< 0.5 A at 24 V

###### LED Permanent light element

| 24 V  | 115 V | 230 V |
|-------|-------|-------|
| AC/DC | AC    | AC    |

Current consumption

45 mA 25 mA 25 mA

Starting current

< 0.5 A at 24 V

###### LED Blinking light element

| 24 V  | 115 V | 230 V |
|-------|-------|-------|
| AC/DC | AC    | AC    |

Current consumption

25 mA 25 mA 25 mA

Starting current

< 0.5 A at 24 V

Blink frequency

c. 1 Hz c. 1 Hz c. 1 Hz

###### LED Rotating light element

24 V, AC/DC

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



##### Technical specifications

###### Housing and accessories

###### Dome

###### Fixing

###### Bulb socket

###### Bulb change

PC/ABS-Blend, high impact, black

Polycarbonate, transparent

Installation mounting for ø 37 mm (PG 29)

B 15 d, max. 10 W

via rear access with bayonet mechanism (Bulb not included)

Screwable connection max. 2.5 mm²

###### Connection

##### Degrees of protection

IP 65 UL Type 5

##### Electrical data

###### Permanent light element

Operating voltage

max. 250 V

Bulb socket B 15 d, max 10 W

Bulb not included

###### LED version:

###### Permanent light

24 V, AC/DC

Current consumption

45 mA

###### Blinking light element

24 V, AC/DC

Current consumption

25 mA

###### Rotating light element

24 V, AC/DC

Current consumption

70 mA

Starting current

< 0.5 A

###### Flashing light element

Operating voltage

| 24 V  | 115 V | 230 V |
|-------|-------|-------|
| AC/DC | AC    | 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 20 mA 35 mA

Starting current

< 0.5 A < 0.5 A < 0.25 A

##### Temperature

Ambient temperature during operations

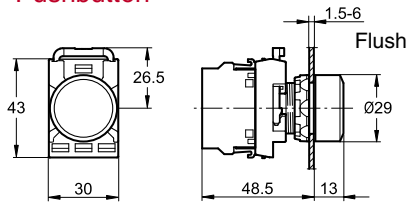
-20 to +50 °C

## Approximate dimensions Modular range

Pilot Devices  
Dimensions

All dimensions in MM

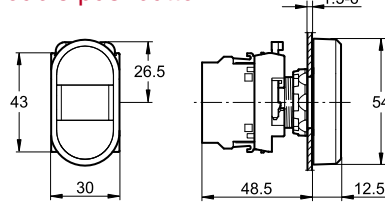
Pushbutton



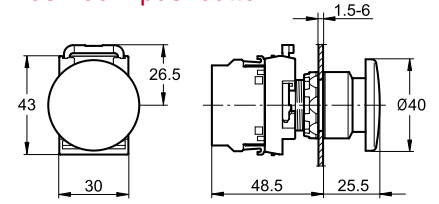
Extended



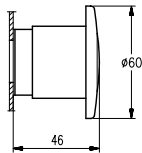
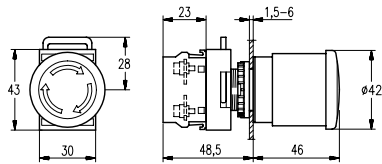
Double pushbutton



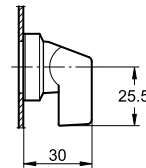
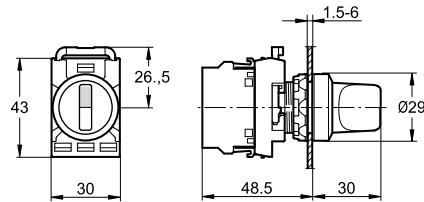
Mushroom pushbutton



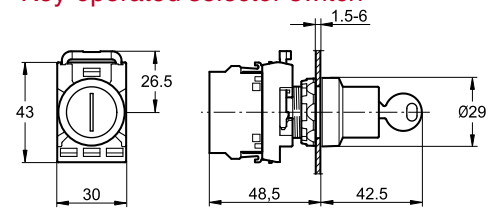
Emergency stop pushbutton



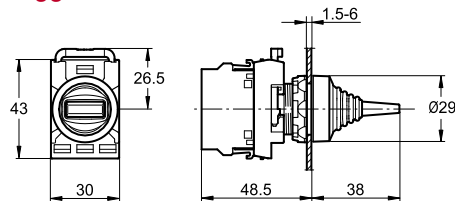
Selector switch



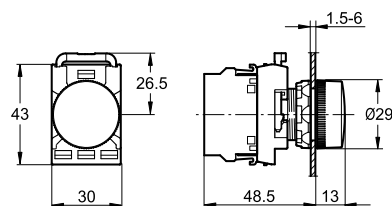
Key-operated selector switch



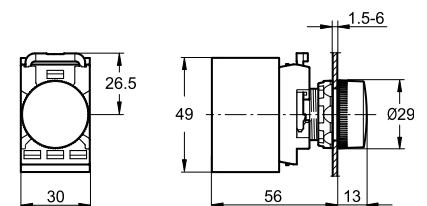
Toggle switch



Pilot light



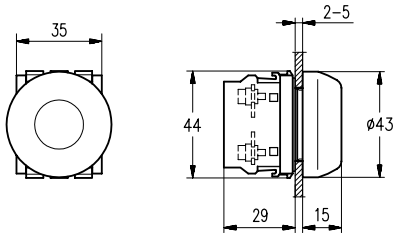
Pilot light with transformer



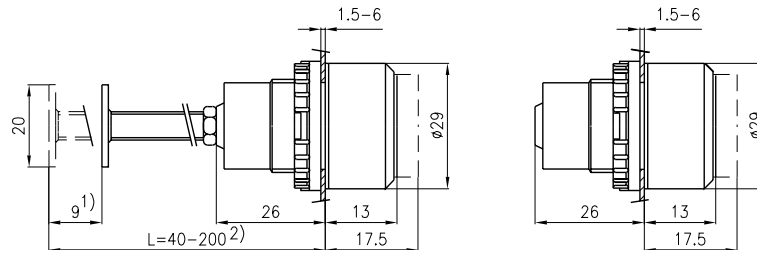
## Approximate dimensions and drilling plans Miscellaneous

All dimensions in MM

### Definite purpose pushbutton

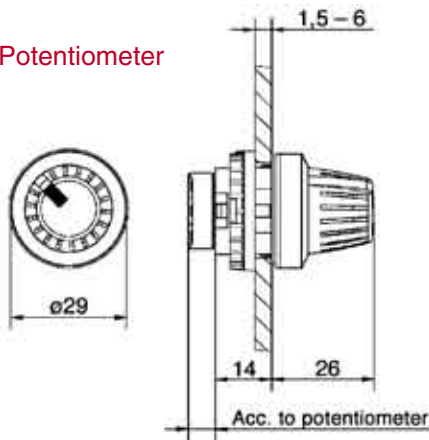


### Reset pushbutton

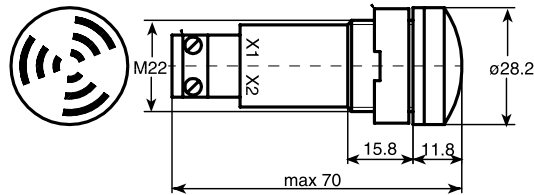


- <sup>1)</sup> Length of stroke.  
<sup>2)</sup> Can be cut to desired length.

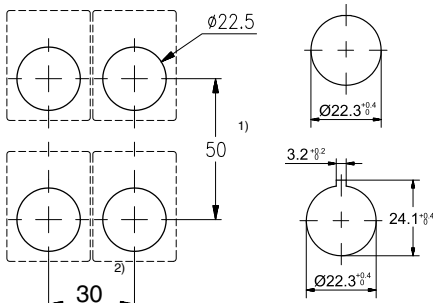
### Potentiometer



### Buzzer

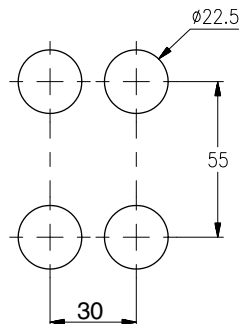


### Drilling plans for pushbuttons, switches and pilot lights

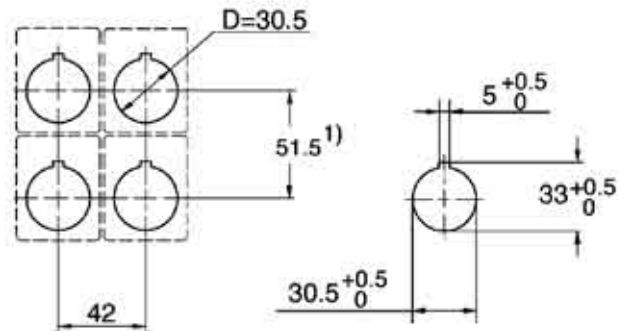


- <sup>1)</sup> 55 mm when legend plate H= 44.5 mm is used.  
61 mm for mushroom pushbutton with D=60 mm  
<sup>2)</sup> 37 mm when legend plate with insert is used,

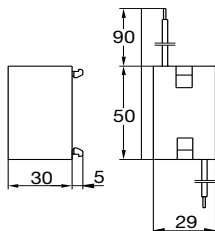
### Drilling plan for double pushbutton



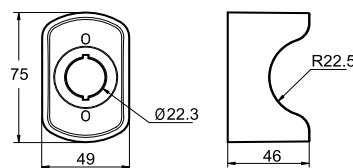
### Drilling plan for 30 mm adaptor



### Transformer block



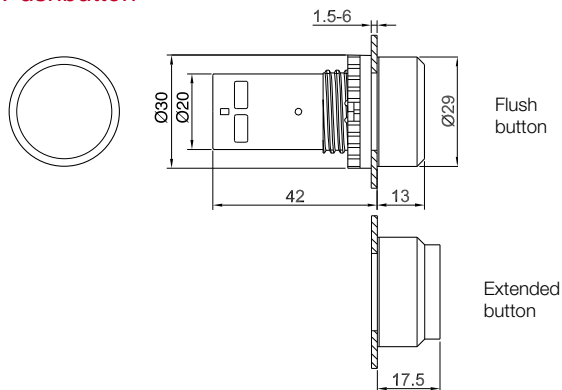
### Emergency stop shroud



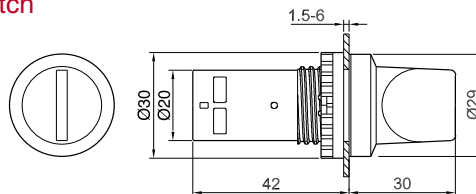
## Approximate dimensions Compact range

All dimensions in MM

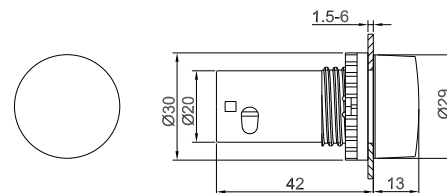
### Pushbutton



### Selector switch

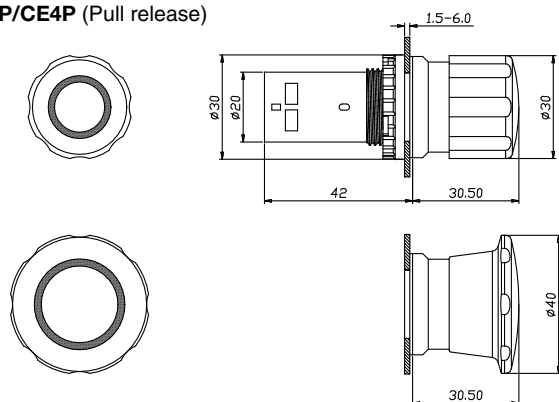


### Pilot light

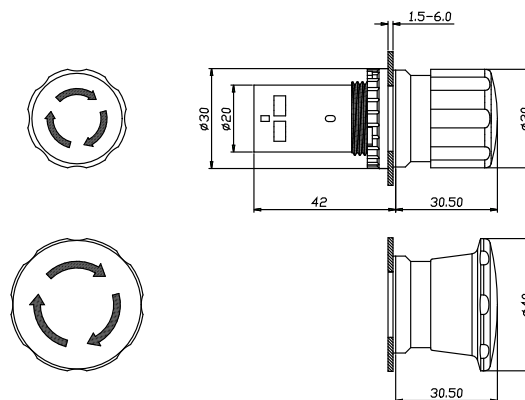


### Emergency stop pushbuttons

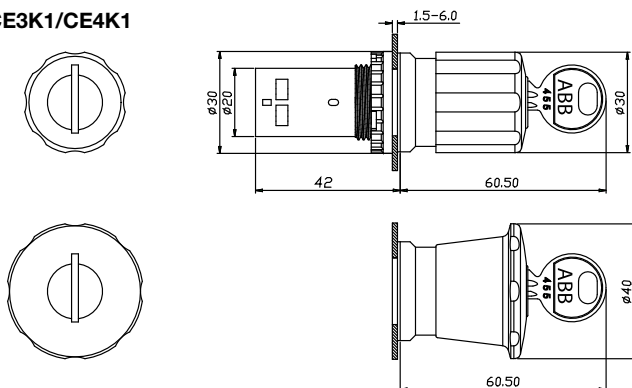
**CE3P/CE4P** (Pull release)



**CE3T/CE4T** (Twist release)



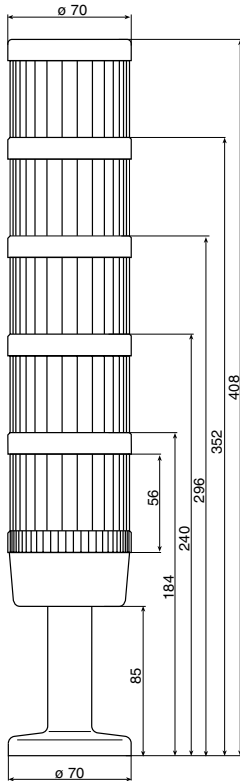
**CE3K1/CE4K1**



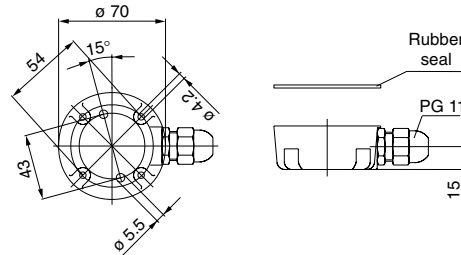
## Approximate dimensions and drilling plans Signal Towers/Signal Beacons

All dimensions in MM

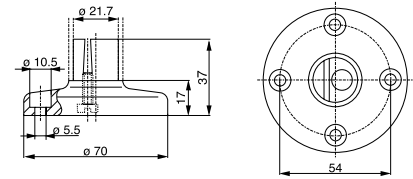
### Signal Towers K 70



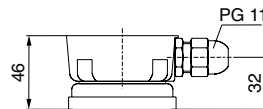
### Contact box for cable exit at side



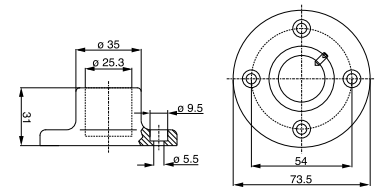
### Base for tube, plastic



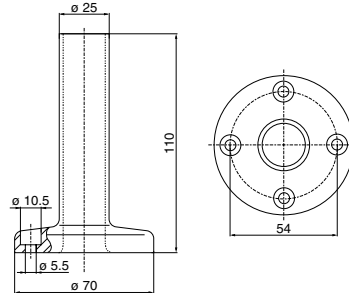
### Contact box with magnetic base



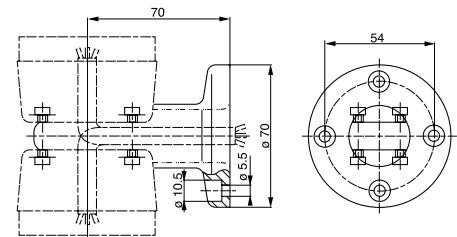
### Base for tube, metal



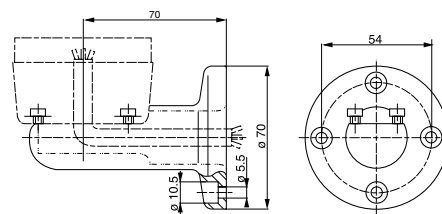
### Base with integrated tube



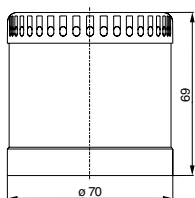
### Bracket 2-sided mounting



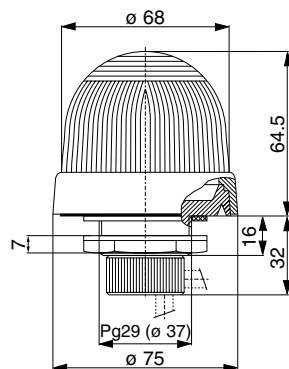
### Bracket 1-sided mounting



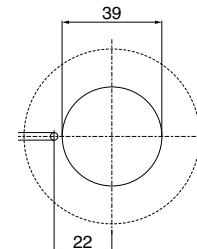
### Audible module



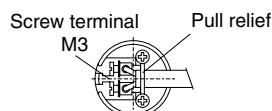
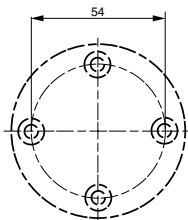
### Signal Beacons K SB



### Drilling plan for Signal Beacons KSB



### Drilling plan for Signal Towers K 70

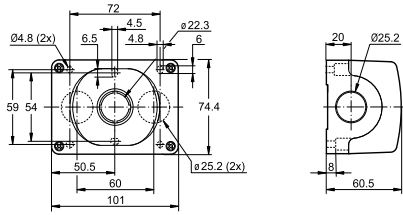


# Approximate dimensions Enclosures

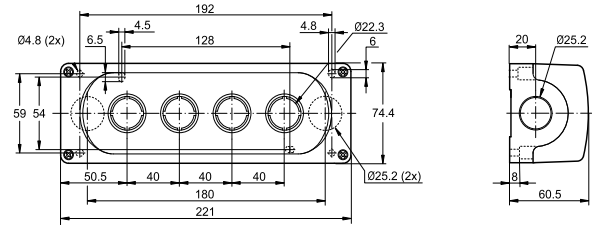
All dimensions in MM

## Plastic enclosures

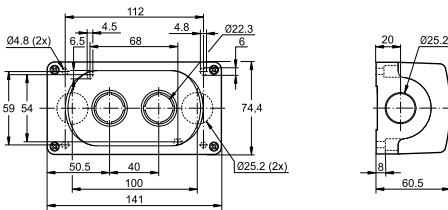
### 1 seat



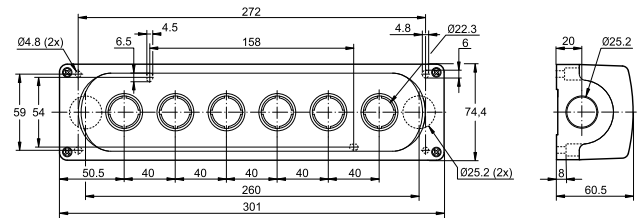
### 4 seats



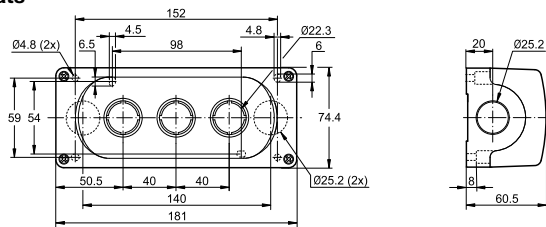
### 2 seats



### 6 seats



### 3 seats



## Color selection

### Color selection according to IEC 60204-1

IEC 60204-1 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

| Color              | Meaning                          |                      |                    |
|--------------------|----------------------------------|----------------------|--------------------|
|                    | Safety of persons or environment | Condition of process | State of equipment |
| RED                | Danger                           | Emergency            | Faulty             |
| YELLOW             | Warning/caution                  | Abnormal             | Abnormal           |
| GREEN              | Safe                             | Normal               | Normal             |
| 8 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** and **STOP** or **ON** and **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** and **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.

## Explanation of type codes

### Modular Pilot Devices

#### Pilot light

Example 1: Type **ML1-100R**

**L1** 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  
**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  
**KB** Buzzer  
**KT** Potentiometer  
**TS** Toggle Switch

#### Button color:

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

#### Lens color for double pushbuttons:

R = Red  
G = Green  
Y = Yellow  
C = Clear  
B = Black (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 NO  
20 2 NC

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 pushbuttons

R = Red W = White  
G = Green B = Black  
Y = Yellow C = Clear (pilot light only)  
Y = Blue U = Grey

#### Button color for compact selector switch

R = Red  
B = Black  
U = Grey

C= Compact Range







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