



## General data

### RAFIX 22 FS control component range

- For a mounting hole diameter of 22.3 mm to IEC 60947
- Contact blocks with gold or silver contacts
- Depth behind panel only 9.2 mm
- Water-jet proof IP65
- 2 collar shapes
- The contact blocks can be combined with other components on the same PCB.

The specified data apply only if actuators/signal indicators are combined with contact blocks and lamp sockets within the same product range.

**RAFIX  
22 FS**

## Content

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Control components

Stock items are marked  
by **bold printed** order numbers.

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The new RAFIX 22 FS control component range **can be combined on a common printed circuit board together with short-travel keys and other components** thanks to its **extremely small mounting depth of 9.2 mm**.

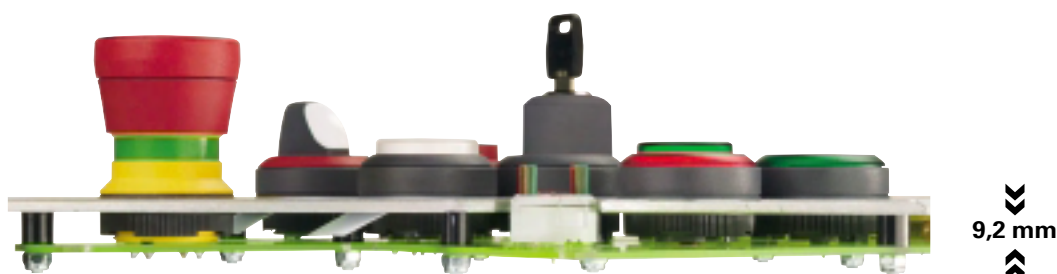
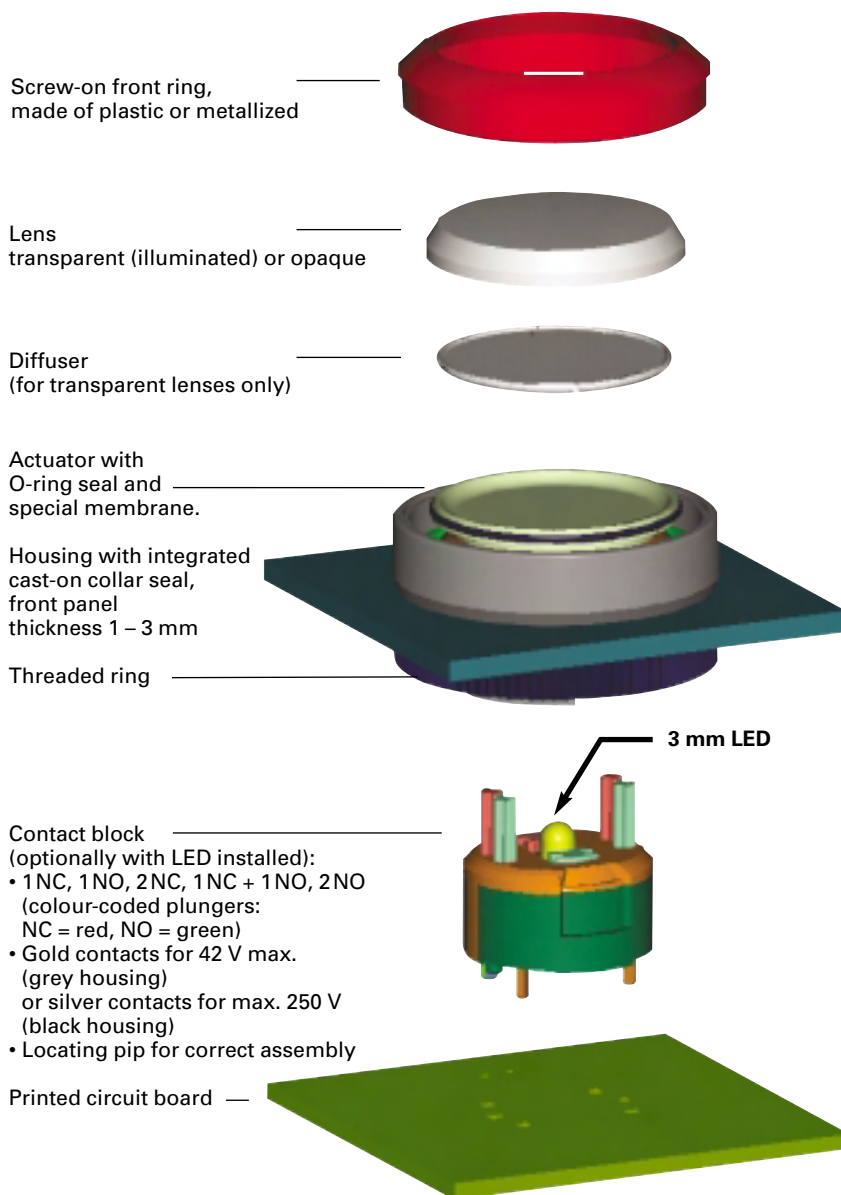
# 2

The actuators and signal indicators are fastened to the front panel with a threaded ring in a 22.3 mm panel cut-out to IEC 60947. The cast-on collar seal made of thermoflex and an integrated special membrane provide a water-jet proof degree of protection IP 65 to DIN.

The contact blocks are soldered onto the PCB. Illumination of the actuator is provided by a 3 mm LED inserted into the base of the contact block and soldered to the PCB together with the contact block.

RAFIX  
22 FS

The printed circuit board is fastened to the front panel with bolts, with the contact blocks sliding almost completely into the actuators. In this way an extremely low profile is achieved. Additional advantages: Individual wiring is made unnecessary and there is no more need for a cut-out in the PCB in the control component areas.





### Combined with short-travel keys

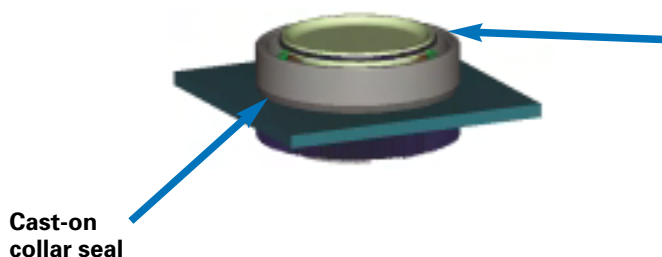
The actuators of the RAFIX 22FS system are suited for integration into low-profile data entry systems. The small mounting depth and the PCB solder terminals make it possible to combine the contact blocks with Rafi short-travel keys RACON 8 an 12, RF 15 and RF 19 as well as KN 19 on one and the same printed circuit board.

### Illumination

RAFIX 22 FS pushbuttons, selector switches and emergency stop buttons are also available as illuminated versions. For illumination, we recommend to use the superbright 3 mm LEDs in the colour matching the lens. The LEDs are fitted into the contact block and soldered together with it. The signal indicators are also illuminated with superbright LEDs soldered directly onto the printed circuit board. In order to ensure full illumination, the LED must be mounted on a base. Bases are available as accessories.

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RAFIX  
22 FS

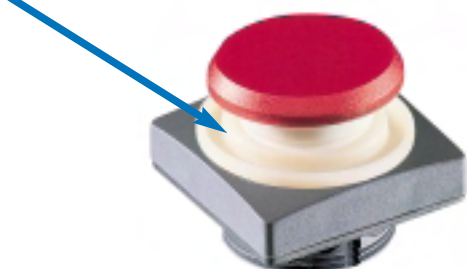


### Sealed against moisture and dirt

#### O-ring seal

The O-ring seals the space between the lens and the actuator. The cast-on collar seal cannot be lost or distorted during assembly. During assembly, the actuator is held in the mounting hole by the cast-on seal and can then be fixed by screwing from the rear.

#### Special sealing



The special membrane seal safely prevents moisture, oil or dust from reaching the contact block. In contrast with seals sliding up and down along the shaft, the special membrane seal is arranged in a fixed position on the housing. In this way, RAFIX 22 FS guarantees switching reliability for the full service life (degree of protection IP65 to DIN).



RAFIX 22 FS is available with many options. Various lens and frontring combinations offer nearly unlimited design options for your panels. RAFX 22 FS is available both with a round or a square collar.

The square version can be arranged one collar to the next just as an integral keypad.



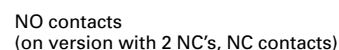
All actuators are provided with a locating pip.

With a grid spacing of 30 mm, the collars of the square actuators are arranged next to each other without a space in between. We recommend to use this grid spacing also for the round collar shapes (IEC 60947).

### Assembly indication

**Assembly indication**  
The mismatch of actuators and contact blocks must be in a range of  $\varnothing 0.2$  mm.

**Hole patterns PCB,  
view on component side**



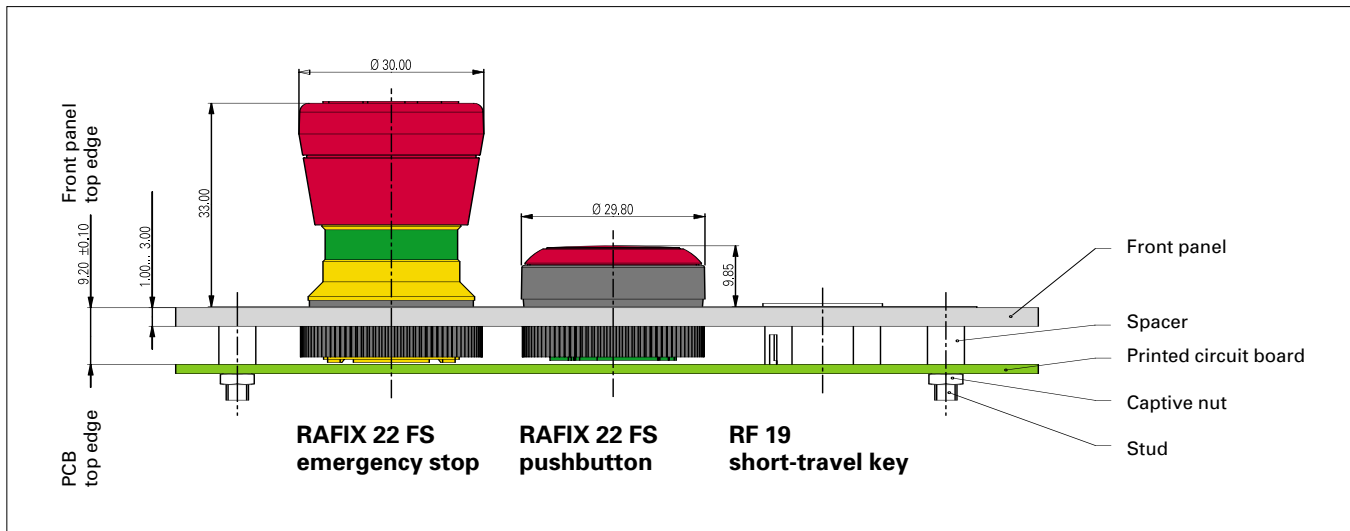
### Locating pip 2\*

LED anode

NC contacts  
(on version with 2 NO's, NO contacts)

\* For better distinction the locating pip 2 has a bigger diameter than pip 1. In order to ease the mounting, the positions are additionally marked on the upper side of the housing.



**Installation drawing****2****RAFIX  
22 FS**

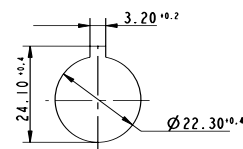
### RAFIX 22 FS pushbuttons



Pict.: green/silver



silver/blue



panel cut-out acc. to IEC 60947-5-1

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### Technical data

#### General information

|                      |                 |
|----------------------|-----------------|
| Form of lens         | see order block |
| Colour of lens       | see order block |
| Colout of front ring | see order block |
| Form of collar       | see order block |

#### Dimensions

|                    |                 |
|--------------------|-----------------|
| Length of collar   | see order block |
| Width of collar    | see order block |
| Overall height     | see order block |
| Mounting depth     | 9.2 mm          |
| Mounting hole      | 22.3 mm         |
| Key grid           | 30 x 30 mm      |
| Diameter of collar | see order block |

#### Mechanical design

|                  |                 |
|------------------|-----------------|
| Mounting         | ring nut        |
| Contact function | see order block |
| Illuminability   | yes             |

#### Mechanical characteristics

|                  |       |
|------------------|-------|
| Operating travel | 4 mm  |
| Robustness min.  | 100 N |

#### Other specifications

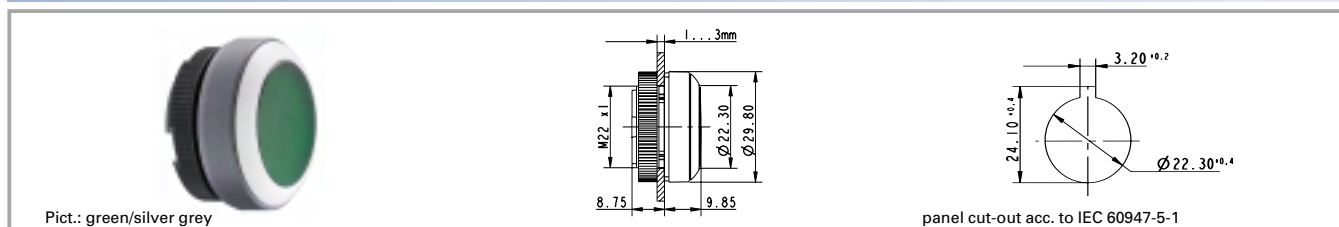
|                                      |                                              |
|--------------------------------------|----------------------------------------------|
| Ambient temp. operating min.         | -25 °C                                       |
| Ambient temp. operating max.         | +70 °C                                       |
| Storage temperature min.             | -40 °C                                       |
| Storage temperature max.             | +80 °C                                       |
| Operating life                       | 1 million momentary/<br>0,5 million latching |
| Degree of protection from front side | IP65                                         |
| Resistance to constant environment   | IEC 60068-2-3 and 2-30                       |
| Resistance at variable environment   | IEC 60068-2-14 and 2-33                      |

### Accessories RAFIX 22 FS pushbuttons

| Description                                                     | Photo | Order no.                | Page    |
|-----------------------------------------------------------------|-------|--------------------------|---------|
| RAFIX 22 FS universal contact block, 1 NC + 1 NO, gold contacts |       | <b>1.20.126.003/0000</b> | 2 - 189 |
| RAFIX 22 FS universal contact block, silver contacts, 1 NO      |       | <b>1.20.126.202/0000</b> | 2 - 191 |
| Fixing spanner for ring nut and front ring                      |       | <b>5.05.800.062/0000</b> | 5 - 25  |

For additional accessories, refer to the chapter „Special accessories“.

### RAFIX 22 FS pushbutton, flush lens, round collar



| Illuminability | Colour of lens     | Order no. momentary |                          | Order no. latching |                          |
|----------------|--------------------|---------------------|--------------------------|--------------------|--------------------------|
|                |                    | Plastic front ring  | Metallized front ring    | Plastic front ring | Metallized front ring    |
| yes            | transparent white  | 1.30.250.001/10xx   | <b>1.30.250.021/1000</b> | 1.30.250.011/10xx  | <b>1.30.250.031/1000</b> |
| yes            | transparent red    | 1.30.250.001/13xx   | <b>1.30.250.021/1300</b> | 1.30.250.011/13xx  | <b>1.30.250.031/1300</b> |
| yes            | transparent yellow | 1.30.250.001/14xx   | <b>1.30.250.021/1400</b> | 1.30.250.011/14xx  | <b>1.30.250.031/1400</b> |
| yes            | transparent green  | 1.30.250.001/15xx   | <b>1.30.250.021/1500</b> | 1.30.250.011/15xx  | <b>1.30.250.031/1500</b> |
| yes            | transparent blue   | 1.30.250.001/16xx   | <b>1.30.250.021/1600</b> | 1.30.250.011/16xx  | <b>1.30.250.031/1600</b> |
| no             | opaque black       | 1.30.250.101/01xx   | <b>1.30.250.121/0100</b> | 1.30.250.111/01xx  | 1.30.250.131/0100        |
| no             | opaque white       | 1.30.250.101/02xx   | <b>1.30.250.121/0200</b> | 1.30.250.111/02xx  | 1.30.250.131/0200        |
| no             | opaque red         | 1.30.250.101/03xx   | <b>1.30.250.121/0300</b> | 1.30.250.111/03xx  | 1.30.250.131/0300        |
| no             | opaque yellow      | 1.30.250.101/04xx   | <b>1.30.250.121/0400</b> | 1.30.250.111/04xx  | 1.30.250.131/0400        |
| no             | opaque green       | 1.30.250.101/05xx   | <b>1.30.250.121/0500</b> | 1.30.250.111/05xx  | 1.30.250.131/0500        |
| no             | opaque blue        | 1.30.250.101/06xx   | <b>1.30.250.121/0600</b> | 1.30.250.111/06xx  | 1.30.250.131/0600        |
| no             | opaque slate-grey  | 1.30.250.101/07xx   | <b>1.30.250.121/0700</b> | 1.30.250.111/07xx  | 1.30.250.131/0700        |

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#### Accessories:

Plastic frontring black with protection cap: 5.05.004.986/0100  
 Plastic frontring red with protection cap: 5.05.004.986/0300  
 Plastic frontring yellow with protection cap: 5.05.004.986/0400  
 Plastic frontring green with protection cap: 5.05.004.986/0500  
 Plastic frontring blue with protection cap: 5.05.004.986/0600  
 Plastic frontring slate grey with protection cap: 5.05.004.986/0700  
 Plastic frontring silver grey with protection cap: 5.05.004.986/0800  
 Legend insert without legend: 5.70.800.000/2000

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

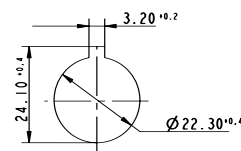
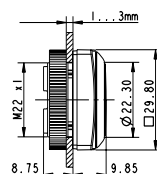
Order numbers **1.30.250.001/—08** and **1.30.250.011/—08** (with silver grey plastic front ring) are **stock items**.



## RAFIX 22 FS pushbutton, protruding lens, round collar



Pict.: black/metallized



panel cut-out acc. to IEC 60947-5-1

| Illuminability | Colour of lens     | Order no. momentary |                          | Order no. latching |                          |
|----------------|--------------------|---------------------|--------------------------|--------------------|--------------------------|
|                |                    | Plastic front ring  | Metallized front ring    | Plastic front ring | Metallized front ring    |
| yes            | transparent white  | 1.30.250.201/10xx   | <b>1.30.250.221/1000</b> | 1.30.250.211/10xx  | <b>1.30.250.231/1000</b> |
| yes            | transparent red    | 1.30.250.201/13xx   | <b>1.30.250.221/1300</b> | 1.30.250.211/13xx  | <b>1.30.250.231/1300</b> |
| yes            | transparent yellow | 1.30.250.201/14xx   | <b>1.30.250.221/1400</b> | 1.30.250.211/14xx  | <b>1.30.250.231/1400</b> |
| yes            | transparent green  | 1.30.250.201/15xx   | <b>1.30.250.221/1500</b> | 1.30.250.211/15xx  | <b>1.30.250.231/1500</b> |
| yes            | transparent blue   | 1.30.250.201/16xx   | <b>1.30.250.221/1600</b> | 1.30.250.211/16xx  | <b>1.30.250.231/1600</b> |
| no             | opaque black       | 1.30.250.301/01xx   | 1.30.250.321/0100        | 1.30.250.311/01xx  | 1.30.250.331/0100        |
| no             | opaque white       | 1.30.250.301/02xx   | 1.30.250.321/0200        | 1.30.250.311/02xx  | 1.30.250.331/0200        |
| no             | opaque red         | 1.30.250.301/03xx   | 1.30.250.321/0300        | 1.30.250.311/03xx  | 1.30.250.331/0300        |
| no             | opaque yellow      | 1.30.250.301/04xx   | 1.30.250.321/0400        | 1.30.250.311/04xx  | 1.30.250.331/0400        |
| no             | opaque green       | 1.30.250.301/05xx   | 1.30.250.321/0500        | 1.30.250.311/05xx  | 1.30.250.331/0500        |
| no             | opaque blue        | 1.30.250.301/06xx   | 1.30.250.321/0600        | 1.30.250.311/06xx  | 1.30.250.331/0600        |
| no             | opaque slate-grey  | 1.30.250.301/07xx   | 1.30.250.321/0700        | 1.30.250.311/07xx  | 1.30.250.331/0700        |

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### Accessories:

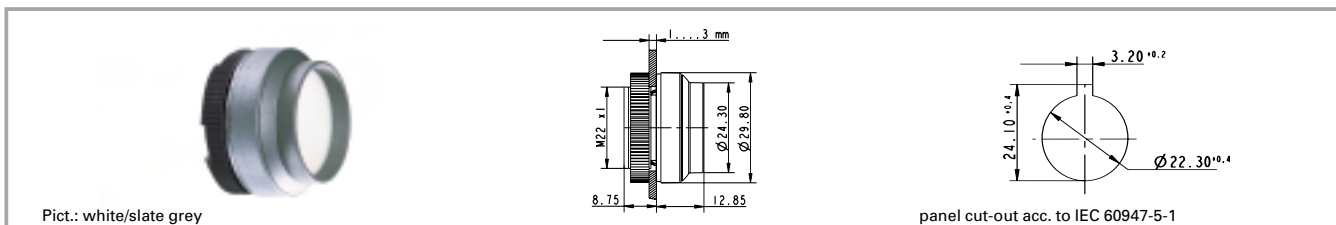
Legend insert without legend: **5.70.802.000/2000**

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

Order numbers **1.30.250.201/—08** and **1.30.250.211/—08** (with silver grey plastic front ring) are **stock items**.



### RAFIX 22 FS pushbutton, protruding front ring, round collar



| Illuminability | Colour of lens     | Order no. momentary |                       | Order no. latching |                       |
|----------------|--------------------|---------------------|-----------------------|--------------------|-----------------------|
|                |                    | Plastic front ring  | Metallized front ring | Plastic front ring | Metallized front ring |
| yes            | transparent white  | 1.30.250.401/10xx   | 1.30.250.421/1000     |                    |                       |
| yes            | transparent red    | 1.30.250.401/13xx   | 1.30.250.421/1300     |                    |                       |
| yes            | transparent yellow | 1.30.250.401/14xx   | 1.30.250.421/1400     |                    |                       |
| yes            | transparent green  | 1.30.250.401/15xx   | 1.30.250.421/1500     |                    |                       |
| yes            | transparent blue   | 1.30.250.401/16xx   | 1.30.250.421/1600     |                    |                       |
| no             | opaque black       | 1.30.250.501/01xx   | 1.30.250.521/0100     |                    |                       |
| no             | opaque white       | 1.30.250.501/02xx   | 1.30.250.521/0200     |                    |                       |
| no             | opaque red         | 1.30.250.501/03xx   | 1.30.250.521/0300     |                    |                       |
| no             | opaque yellow      | 1.30.250.501/04xx   | 1.30.250.521/0400     |                    |                       |
| no             | opaque green       | 1.30.250.501/05xx   | 1.30.250.521/0500     |                    |                       |
| no             | opaque blue        | 1.30.250.501/06xx   | 1.30.250.521/0600     |                    |                       |
| no             | opaque slate-grey  | 1.30.250.501/07xx   | 1.30.250.521/0700     |                    |                       |

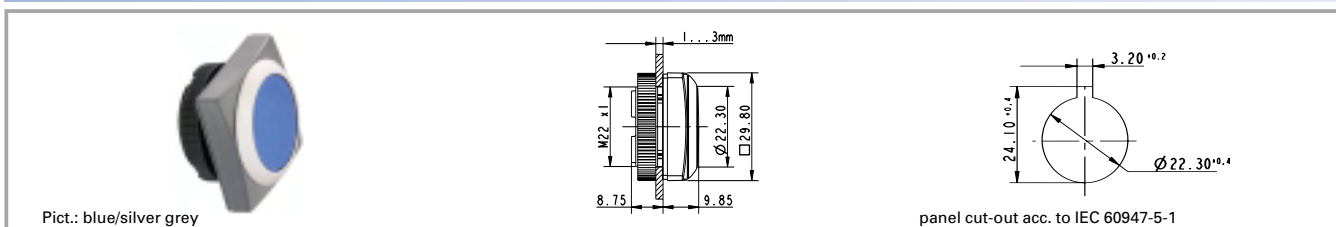
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#### Accessories:

Legend insert without legend: 5.70.800.000/2000

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

## RAFIX 22 FS pushbutton, flush lens, square collar



| Illuminability | Colour of lens     | Order no. momentary |                          | Order no. latching |                          |
|----------------|--------------------|---------------------|--------------------------|--------------------|--------------------------|
|                |                    | Plastic front ring  | Metallized front ring    | Plastic front ring | Metallized front ring    |
| yes            | transparent white  | 1.30.250.051/10xx   | <b>1.30.250.071/1000</b> | 1.30.250.061/10xx  | <b>1.30.250.081/1000</b> |
| yes            | transparent red    | 1.30.250.051/13xx   | <b>1.30.250.071/1300</b> | 1.30.250.061/13xx  | <b>1.30.250.081/1300</b> |
| yes            | transparent yellow | 1.30.250.051/14xx   | <b>1.30.250.071/1400</b> | 1.30.250.061/14xx  | <b>1.30.250.081/1400</b> |
| yes            | transparent green  | 1.30.250.051/15xx   | <b>1.30.250.071/1500</b> | 1.30.250.061/15xx  | <b>1.30.250.081/1500</b> |
| yes            | transparent blue   | 1.30.250.051/16xx   | <b>1.30.250.071/1600</b> | 1.30.250.061/16xx  | <b>1.30.250.081/1600</b> |
| no             | opaque black       | 1.30.250.151/01xx   | <b>1.30.250.171/0100</b> | 1.30.250.161/01xx  | 1.30.250.181/0100        |
| no             | opaque white       | 1.30.250.151/02xx   | <b>1.30.250.171/0200</b> | 1.30.250.161/02xx  | 1.30.250.181/0200        |
| no             | opaque red         | 1.30.250.151/03xx   | <b>1.30.250.171/0300</b> | 1.30.250.161/03xx  | 1.30.250.181/0300        |
| no             | opaque yellow      | 1.30.250.151/04xx   | <b>1.30.250.171/0400</b> | 1.30.250.161/04xx  | 1.30.250.181/0400        |
| no             | opaque green       | 1.30.250.151/05xx   | <b>1.30.250.171/0500</b> | 1.30.250.161/05xx  | 1.30.250.181/0500        |
| no             | opaque blue        | 1.30.250.151/06xx   | <b>1.30.250.171/0600</b> | 1.30.250.161/06xx  | 1.30.250.181/0600        |
| no             | opaque slate-grey  | 1.30.250.151/07xx   | <b>1.30.250.171/0700</b> | 1.30.250.161/07xx  | 1.30.250.181/0700        |

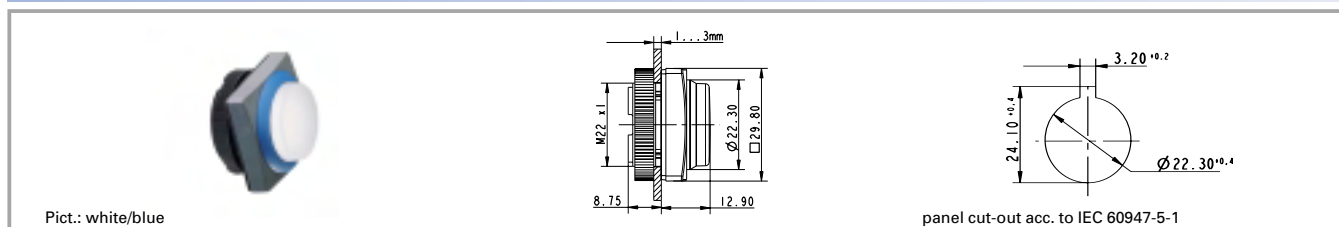
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### Accessories:

Plastic frontring black with protection cap: 5.05.004.986/0100  
 Plastic frontring red with protection cap: 5.05.004.986/0300  
 Plastic frontring yellow with protection cap: 5.05.004.986/0400  
 Plastic frontring green with protection cap: 5.05.004.986/0500  
 Plastic frontring blue with protection cap: 5.05.004.986/0600  
 Plastic frontring slate grey with protection cap: 5.05.004.986/0700  
 Plastic frontring silver grey with protection cap: 5.05.004.986/0800  
 Legend insert without legend: 5.70.800.000/2000

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

Order numbers **1.30.250.051/—08** and **1.30.250.061/—08** (with silver grey plastic front ring) are **stock items**.

**RAFIX 22 FS pushbutton, protruding lens, square collar**


| Illuminability | Colour of lens     | Order no. momentary |                          | Order no. latching |                          |
|----------------|--------------------|---------------------|--------------------------|--------------------|--------------------------|
|                |                    | Plastic front ring  | Metallized front ring    | Plastic front ring | Metallized front ring    |
| yes            | transparent white  | 1.30.250.251/10xx   | <b>1.30.250.271/1000</b> | 1.30.250.261/10xx  | <b>1.30.250.281/1000</b> |
| yes            | transparent red    | 1.30.250.251/13xx   | <b>1.30.250.271/1300</b> | 1.30.250.261/13xx  | <b>1.30.250.281/1300</b> |
| yes            | transparent yellow | 1.30.250.251/14xx   | <b>1.30.250.271/1400</b> | 1.30.250.261/14xx  | <b>1.30.250.281/1400</b> |
| yes            | transparent green  | 1.30.250.251/15xx   | <b>1.30.250.271/1500</b> | 1.30.250.261/15xx  | <b>1.30.250.281/1500</b> |
| yes            | transparent blue   | 1.30.250.251/16xx   | <b>1.30.250.271/1600</b> | 1.30.250.261/16xx  | <b>1.30.250.281/1600</b> |
| no             | opaque black       | 1.30.250.351/01xx   | 1.30.250.371/0100        | 1.30.250.361/01xx  | 1.30.250.381/0100        |
| no             | opaque white       | 1.30.250.351/02xx   | 1.30.250.371/0200        | 1.30.250.361/02xx  | 1.30.250.381/0200        |
| no             | opaque red         | 1.30.250.351/03xx   | 1.30.250.371/0300        | 1.30.250.361/03xx  | 1.30.250.381/0300        |
| no             | opaque yellow      | 1.30.250.351/04xx   | 1.30.250.371/0400        | 1.30.250.361/04xx  | 1.30.250.381/0400        |
| no             | opaque green       | 1.30.250.351/05xx   | 1.30.250.371/0500        | 1.30.250.361/05xx  | 1.30.250.381/0500        |
| no             | opaque blue        | 1.30.250.351/06xx   | 1.30.250.371/0600        | 1.30.250.361/06xx  | 1.30.250.381/0600        |
| no             | opaque slate-grey  | 1.30.250.351/07xx   | 1.30.250.371/0700        | 1.30.250.361/07xx  | 1.30.250.381/0700        |

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**Accessories:**

Legend insert without legend: **5.70.802.000/2000**

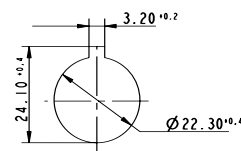
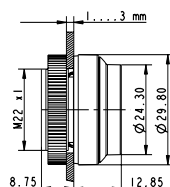
xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

Order numbers **1.30.250.251/—08** and **1.30.250.261/—08** (with silver grey plastic front ring) are **stock items**.

### RAFIX 22 FS pushbutton, protruding front ring



Pict.: green/metallized



panel cut-out acc. to IEC 60947-5-1

| Illuminability | Colour of lens     | Order no. momentary |                       | Order no. latching |                       |
|----------------|--------------------|---------------------|-----------------------|--------------------|-----------------------|
|                |                    | Plastic front ring  | Metallized front ring | Plastic front ring | Metallized front ring |
| yes            | transparent white  | 1.30.250.451/10xx   | 1.30.250.471/1000     |                    |                       |
| yes            | transparent red    | 1.30.250.451/13xx   | 1.30.250.471/1300     |                    |                       |
| yes            | transparent yellow | 1.30.250.451/14xx   | 1.30.250.471/1400     |                    |                       |
| yes            | transparent green  | 1.30.250.451/15xx   | 1.30.250.471/1500     |                    |                       |
| yes            | transparent blue   | 1.30.250.451/16xx   | 1.30.250.471/1600     |                    |                       |
| no             | opaque black       | 1.30.250.551/01xx   | 1.30.250.571/0100     |                    |                       |
| no             | opaque white       | 1.30.250.551/02xx   | 1.30.250.571/0200     |                    |                       |
| no             | opaque red         | 1.30.250.551/03xx   | 1.30.250.571/0300     |                    |                       |
| no             | opaque yellow      | 1.30.250.551/04xx   | 1.30.250.571/0400     |                    |                       |
| no             | opaque green       | 1.30.250.551/05xx   | 1.30.250.571/0500     |                    |                       |
| no             | opaque blue        | 1.30.250.551/06xx   | 1.30.250.571/0600     |                    |                       |
| no             | opaque slate-grey  | 1.30.250.551/07xx   | 1.30.250.571/0700     |                    |                       |

Technical data see page 2 - 168

#### Accessories:

Legend insert without legend: 5.70.800.000/2000

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

### RAFIX 22 FS selector switches



2

### General data

The illuminated selector switches are provided with translucent handle markings. These are opaque on the non-illuminated versions.

### Technical data

#### General information

|                      |                          |
|----------------------|--------------------------|
| Form of lens         | handle                   |
| Colour of lens       | translucent/opaque white |
| Colour of front ring | see order block          |
| Form of collar       | see order block          |

#### Dimensions

|                    |                 |
|--------------------|-----------------|
| Length of collar   | see order block |
| Width of collar    | see order block |
| Overall height     | 22.24 mm        |
| Mounting depth     | 9.2 mm          |
| Mounting hole      | 22.3 mm         |
| Key grid           | 30 x 30 mm      |
| Diameter of collar | see order block |

#### Mechanical design

|                  |                 |
|------------------|-----------------|
| Mounting         | ring nut        |
| Contact function | see order block |
| Illuminability   | yes             |
| Rotating angle   | see order block |

#### Mechanical characteristics

|             |        |
|-------------|--------|
| Torque max. | 1.5 Nm |
|-------------|--------|

#### Other specifications

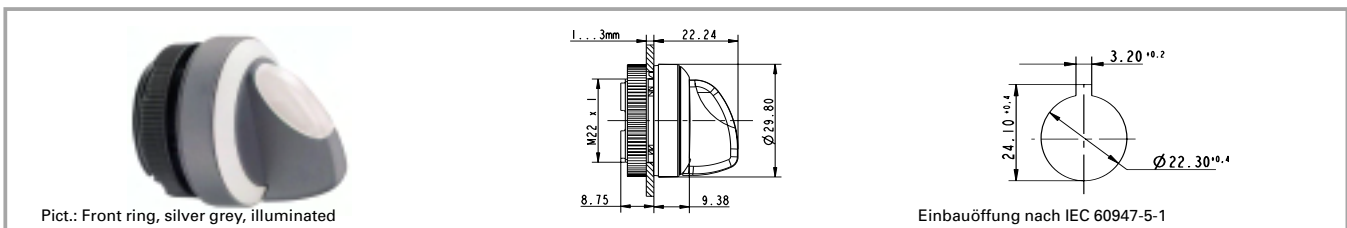
|                                      |                                              |
|--------------------------------------|----------------------------------------------|
| Operating life                       | 0.5 million momentary / 0.5 million latching |
| Degree of protection from front side | IP65                                         |
| Ambient temp. operating min.         | -25 °C                                       |
| Ambient temp. operating max.         | +70 °C                                       |
| Storage temperature min.             | -40 °C                                       |
| Storage temperature max.             | +80 °C                                       |
| Resistance to constant environment   | IEC 600 68-2-3 and 2-30                      |
| Resistance at variable environment   | IEC 600 68-2-14 and 2-33                     |

### Accessories RAFX 22 FS selector switches

| Description                                                | Photo | Order no.                | Page    |
|------------------------------------------------------------|-------|--------------------------|---------|
| RAFIX 22 FS universal contact block, 1 NO                  |       | <b>1.20.126.002/0000</b> | 2 - 189 |
| RAFIX 22 FS universal contact block, silver contacts, 1 NC |       | <b>1.20.126.201/0000</b> | 2 - 191 |

For additional accessories, refer to the chapter „Special accessories“.

### RAFIX 22 FS selector switch, round collar



| Illuminability | Contact function                       | Rotating angle      | Drehwinkel | Order no.          |                          |
|----------------|----------------------------------------|---------------------|------------|--------------------|--------------------------|
|                |                                        |                     |            | Plastic front ring | Metal front ring         |
| yes            | momentary                              | 1 x 40°             |            | 1.30.252.001/22xx  | <b>1.30.252.002/2200</b> |
| yes            | momentary                              | 2 x 40°             |            | 1.30.252.026/22xx  | <b>1.30.252.027/2200</b> |
| yes            | latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° |            | 1.30.252.426/22xx  | 1.30.252.427/2200        |
| yes            | latching                               | 1 x 90°, form L     |            | 1.30.252.101/22xx  | <b>1.30.252.102/2200</b> |
| yes            | latching                               | 1 x 90°, form V     |            | 1.30.252.201/22xx  | <b>1.30.252.202/2200</b> |
| yes            | latching                               | 2 x 60°             |            | 1.30.252.301/22xx  | <b>1.30.252.302/2200</b> |
| yes            | latching                               | 2 x 90°             |            | 1.30.252.126/22xx  | 1.30.252.127/2200        |
| no             | momentary                              | 1 x 40°             |            | 1.30.252.501/02xx  | <b>1.30.252.502/0200</b> |
| no             | momentary                              | 2 x 40°             |            | 1.30.252.526/02xx  | <b>1.30.252.527/0200</b> |
| no             | latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° |            | 1.30.252.926/02xx  | 1.30.252.927/0200        |
| no             | latching                               | 1 x 90°, form L     |            | 1.30.252.601/02xx  | <b>1.30.252.602/0200</b> |
| no             | latching                               | 1 x 90°, form V     |            | 1.30.252.701/02xx  | <b>1.30.252.702/0200</b> |
| no             | latching                               | 2 x 60°             |            | 1.30.252.801/02xx  | <b>1.30.252.802/0200</b> |
| no             | latching                               | 2 x 90°             |            | 1.30.252.626/02xx  | 1.30.252.627/0200        |

Technical data see page 2 - 176

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

Other handle marking colours available on request.

The following selector switches with silver grey plastic front ring are stock items:

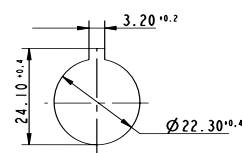
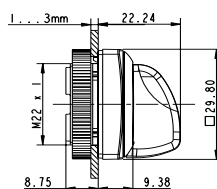
Illuminated: **1.30.242.001/2208**, **1.30.242.026/2208**, **1.30.242.101/2208**, **1.30.242.201/2208**, **1.30.242.301/2208**

Non-illuminated: **1.30.242.501/0208**, **1.30.242.526/0208**, **1.30.242.601/0208**, **1.30.242.701/0208**, **1.30.242.801/0208**

## RAFIX 22 FS selector switch, square collar



Pict.: Front ring, metallized, illuminated



Einbauöffnung nach IEC 60947-5-1

| Illuminability | Contact function                       | Rotating angle      | Drehwinkel | Order no.          |                          |
|----------------|----------------------------------------|---------------------|------------|--------------------|--------------------------|
|                |                                        |                     |            | Plastic front ring | Metal front ring         |
| yes            | momentary                              | 1 x 40°             |            | 1.30.252.051/22xx  | <b>1.30.252.052/2200</b> |
| yes            | momentary                              | 2 x 40°             |            | 1.30.252.076/22xx  | <b>1.30.252.077/2200</b> |
| yes            | latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° |            | 1.30.252.476/22xx  | 1.30.252.477/2200        |
| yes            | latching                               | 1 x 90°, form L     |            | 1.30.252.151/22xx  | <b>1.30.252.152/2200</b> |
| yes            | latching                               | 1 x 90°, form V     |            | 1.30.252.251/22xx  | <b>1.30.252.252/2200</b> |
| yes            | latching                               | 2 x 60°             |            | 1.30.252.351/22xx  | <b>1.30.252.352/2200</b> |
| yes            | latching                               | 2 x 90°             |            | 1.30.252.176/22xx  | 1.30.252.177/2200        |
| no             | momentary                              | 1 x 40°             |            | 1.30.252.551/02xx  | <b>1.30.252.552/0200</b> |
| no             | momentary                              | 2 x 40°             |            | 1.30.252.576/02xx  | <b>1.30.252.577/0200</b> |
| no             | latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° |            | 1.30.252.976/02xx  | 1.30.252.977/0200        |
| no             | latching                               | 1 x 90°, form L     |            | 1.30.252.651/02xx  | <b>1.30.252.652/0200</b> |
| no             | latching                               | 1 x 90°, form V     |            | 1.30.252.751/02xx  | <b>1.30.252.752/0200</b> |
| no             | latching                               | 2 x 60°             |            | 1.30.252.851/02xx  | <b>1.30.252.852/0200</b> |
| no             | latching                               | 2 x 90°             |            | 1.30.252.676/02xx  | 1.30.252.677/0200        |

Technical data see page 2 - 176

xx = Front ring colour: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate grey = 07, silver grey = 08

Other handle marking colours available on request.

The following selector switches with silver grey plastic front ring are stock items:

Illuminated: **1.30.252.051/2205**, **1.30.252.076/2208**, **1.30.252.151/2208**, **1.30.252.251/2208**, **1.30.252.351/2208**

Non-illuminated: **1.30.252.551/0208**, **1.30.252.576/0208**, **1.30.252.651/0208**, **1.30.252.751/0208**, **1.30.252.851/0208**



### RAFIX 22 FS keylock switch



2

### Technical data

#### General information

|                      |                 |
|----------------------|-----------------|
| Colour of front ring | see order block |
| Form of collar       | see order block |

#### Dimensions

|                    |                 |
|--------------------|-----------------|
| Length of collar   | see order block |
| Width of collar    | see order block |
| Overall height     | 44.1 mm         |
| Mounting depth     | 9.2 mm          |
| Mounting hole      | 22.3 mm         |
| Key grid           | 30 x 30 mm      |
| Diameter of collar | see order block |

#### Mechanical design

|                             |                 |
|-----------------------------|-----------------|
| Mounting                    | ring nut        |
| Contact function            | see order block |
| Lock                        | Micromec        |
| Wafers                      | 5               |
| Illuminability              | no              |
| Lock type                   | 001             |
| Number of locking positions | 500             |
| Main key                    | no              |
| Symmetric key               | no              |
| Rotating angle              | see order block |
| Key removal position        | see order block |

#### Mechanical characteristics

|             |        |
|-------------|--------|
| Torque max. | 1.3 Nm |
|-------------|--------|

#### Other specifications

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Operating life                       | 0.3 Mio. tastend/<br>50000 rastend |
| Degree of protection from front side | IP65                               |
| Ambient temp. operating min.         | -25 °C                             |
| Ambient temp. operating max.         | +70 °C                             |
| Storage temperature min.             | -40 °C                             |
| Storage temperature max.             | +80 °C                             |
| Resistance to constant environment   | IEC 600 68-2-3 and 2-30            |
| Resistance at variable environment   | IEC 600 68-2-14 and 2-33           |
| ESD-strength lock / contact          | 15 kV                              |
| ESD-strength key/ front panel        | 15 kV                              |

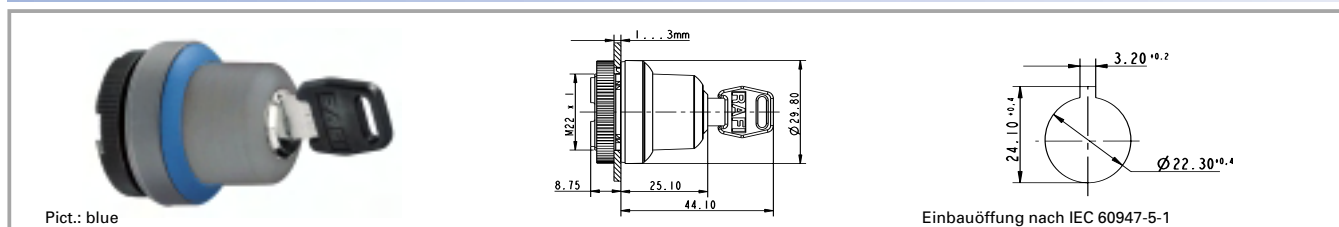
RAFIX  
22 FS

### Accessories RAFIX 22 FS keylock switch

| Description                                                      | Photo | Order no.                | Page    |
|------------------------------------------------------------------|-------|--------------------------|---------|
| RAFIX 22 FS universal contact block, 1 NC                        |       | <b>1.20.126.001/0000</b> | 2 - 189 |
| RAFIX 22 FS universal contact block, silver contacts, 1 NC, 1 NO |       | <b>1.20.126.203/0000</b> | 2 - 191 |
| Fixing spanner for ring nut and front ring                       |       | <b>5.05.800.062/0000</b> | 5 - 25  |

For additional accessories, refer to the chapter „Special accessories“.

### RAFIX 22 FS keylock switch, round collar



| Contact function                       | Rotating angle      | Key removal position | Drehwinkel | Order no.          |                          |
|----------------------------------------|---------------------|----------------------|------------|--------------------|--------------------------|
|                                        |                     |                      |            | Plastic front ring | Metal front ring         |
| momentary                              | 1 x 40°             | 0                    |            | 1.30.255.001/xxxx  | <b>1.30.255.002/0000</b> |
| momentary                              | 2 x 40°             | 0                    |            | 1.30.255.101/xxxx  | 1.30.255.102/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 0                    |            | 1.30.255.501/xxxx  | 1.30.255.502/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 0+2                  |            | 1.30.255.521/xxxx  | 1.30.255.522/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 2                    |            | 1.30.255.511/xxxx  | 1.30.255.512/0000        |
| latching                               | 1 x 90°, form L     | 0                    |            | 1.30.255.201/xxxx  | <b>1.30.255.202/0000</b> |
| latching                               | 1 x 90°, form L     | 0+1                  |            | 1.30.255.221/xxxx  | <b>1.30.255.222/0000</b> |
| latching                               | 1 x 90°, form L     | 1                    |            | 1.30.255.211/xxxx  | 1.30.255.212/0000        |
| latching                               | 1 x 90°, form V     | 0                    |            | 1.30.255.301/xxxx  | <b>1.30.255.302/0000</b> |
| latching                               | 1 x 90°, form V     | 0+1                  |            | 1.30.255.321/xxxx  | <b>1.30.255.322/0000</b> |
| latching                               | 1 x 90°, form V     | 1                    |            | 1.30.255.311/xxxx  | 1.30.255.312/0000        |
| latching                               | 2 x 90°             | 0                    |            | 1.30.255.401/xxxx  | 1.30.255.402/0000        |
| latching                               | 2 x 90°             | 0+1                  |            | 1.30.255.411/xxxx  | 1.30.255.412/0000        |
| latching                               | 2 x 90°             | 0+1+2                |            | 1.30.255.431/xxxx  | <b>1.30.255.432/0000</b> |
| latching                               | 2 x 90°             | 0+2                  |            | 1.30.255.421/xxxx  | 1.30.255.422/0000        |

Technical data see page 2 - 180

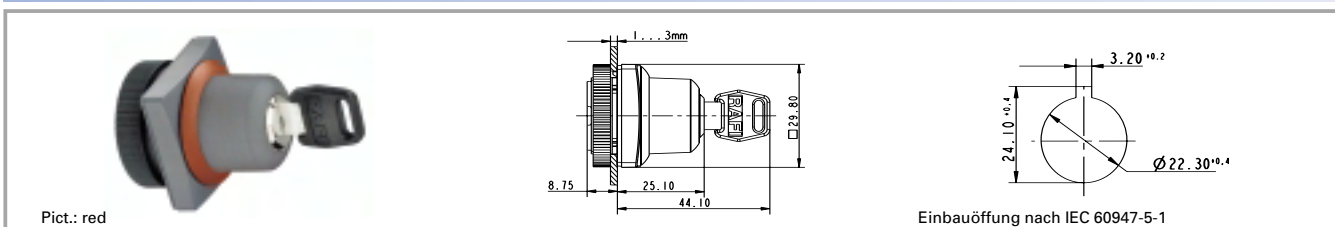
xxxx = Front ring colour: black = 0100, red = 0300, yellow = 0400, green = 0500, blue = 0600, slate grey = 0700, silver grey = 0800

Other lock variants available on request.

Included: 2 keys.

The following keylock switches with silver grey plastic front ring are stock items: **1.30.255.001/0800**, **1.30.255.201/0800**, **1.30.255.221/0800**, **1.30.255.301/0800**, **1.30.255.321/0800**, **1.30.255.431/0800**

### RAFIX 22 FS keylock switch, square collar



| Contact function                       | Rotating angle      | Key removal position | Drehwinkel | Order no.          |                          |
|----------------------------------------|---------------------|----------------------|------------|--------------------|--------------------------|
|                                        |                     |                      |            | Plastic front ring | Metal front ring         |
| momentary                              | 1 x 40°             | 0                    |            | 1.30.255.051/xxxx  | <b>1.30.255.052/0000</b> |
| momentary                              | 2 x 40°             | 0                    |            | 1.30.255.151/xxxx  | 1.30.255.152/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 0                    |            | 1.30.255.551/xxxx  | 1.30.255.552/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 0+2                  |            | 1.30.255.571/xxxx  | 1.30.255.572/0000        |
| latching 1 x 90° and momentary 1 x 40° | 1 x 90° and 1 x 40° | 2                    |            | 1.30.255.561/xxxx  | 1.30.255.562/0000        |
| latching                               | 1 x 90°, form L     | 0                    |            | 1.30.255.251/xxxx  | <b>1.30.255.252/0000</b> |
| latching                               | 1 x 90°, form L     | 0+1                  |            | 1.30.255.271/xxxx  | <b>1.30.255.272/0000</b> |
| latching                               | 1 x 90°, form L     | 1                    |            | 1.30.255.261/xxxx  | 1.30.255.262/0000        |
| latching                               | 1 x 90°, form V     | 0                    |            | 1.30.255.351/xxxx  | <b>1.30.255.352/0000</b> |
| latching                               | 1 x 90°, form V     | 0+1                  |            | 1.30.255.371/xxxx  | <b>1.30.255.372/0000</b> |
| latching                               | 1 x 90°, form V     | 1                    |            | 1.30.255.361/xxxx  | 1.30.255.362/0000        |
| latching                               | 2 x 90°             | 0                    |            | 1.30.255.451/xxxx  | 1.30.255.452/0000        |
| latching                               | 2 x 90°             | 0+1                  |            | 1.30.255.461/xxxx  | 1.30.255.462/0000        |
| latching                               | 2 x 90°             | 0+1+2                |            | 1.30.255.481/xxxx  | <b>1.30.255.482/0000</b> |
| latching                               | 2 x 90°             | 0+2                  |            | 1.30.255.471/xxxx  | 1.30.255.472/0000        |

Technical data see page 2 - 180

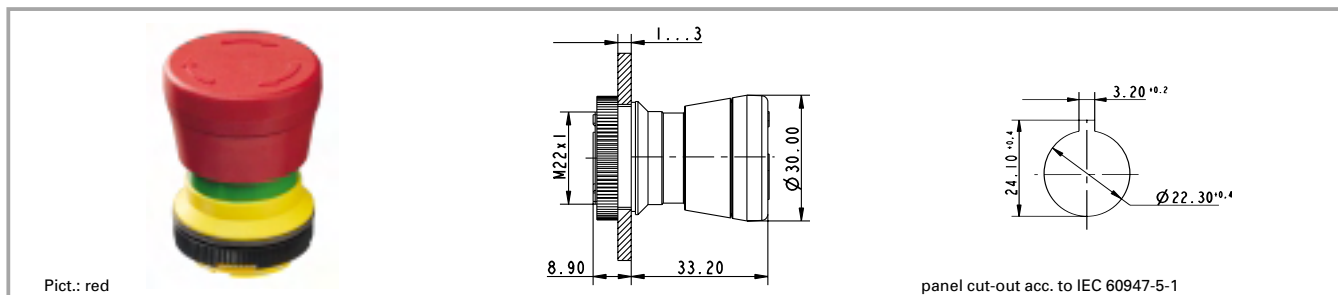
xxxx = Front ring colour: black = 0100, red = 0300, yellow = 0400, green = 0500, blue = 0600, slate grey = 0700, silver grey = 0800

Other lock variants available on request.

Included: 2 keys.

The following keylock switches with silver grey plastic front ring are stock items: **1.30.255.051/0800**, **1.30.255.251/0800**, **1.30.255.271/0800**, **1.30.255.351/0800**, **1.30.255.371/0800**, **1.30.255.481/0800**

## RAFIX 22 FS emergency stop pushbutton



2

### General data

The emergency stop pushbuttons comply with IEC 60 204, IEC 60 073, IEC 60 947 and VDE 0113 Part 1. They are designed dupe-proof according to EN 418 with a positive mechanical movement sequence. A certain operating force must be exerted at the action point in order to prevent inadvertent operation. The pushbutton latches when pressed and is reset by turning it in a clockwise direction.

The special shape of the actuator prevents the emergency stop pushbutton from being blocked. This means that the emergency stop process - once initiated - cannot be impeded by any jamming objects.

Only use contact block 1.20.126.4xx.

### Technical data

RAFIX  
22 FS

#### General information

|                |                       |
|----------------|-----------------------|
| Form of lens   | conical mushroom form |
| Colour of lens | red                   |
| Form of collar | round                 |

#### Dimensions

|                    |            |
|--------------------|------------|
| Mushroom Diameter  | 30 mm      |
| Overall height     | 33.2 mm    |
| Mounting depth     | 9.2 mm     |
| Mounting hole      | 22.3 mm    |
| Key grid           | 30 x 30 mm |
| Diameter of collar | 29.8 mm    |

#### Mechanical design

|                  |                 |
|------------------|-----------------|
| Mounting         | ring nut        |
| Contact function | latching        |
| Illuminability   | see order block |

#### Mechanical characteristics

|                 |       |
|-----------------|-------|
| Robustness min. | 100 N |
|-----------------|-------|

#### Other specifications

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Ambient temp. operating min.         | -25 °C                          |
| Ambient temp. operating max.         | +70 °C                          |
| Approvals acc. to IEC                | 60947-5-x, 60204, 60073, 601058 |
| Approvals, other                     | UL 508, CSA, cURuS (UL + CSA)   |
| Robustness                           | acc. IEC 600 68-2-3 and 2-30    |
| Operating life                       | 50000                           |
| Degree of protection from front side | IP65                            |
| Storage temperature min.             | -40 °C                          |
| Storage temperature max.             | +80 °C                          |
| Resistance to constant environment   | IEC 600 68-2-3 and 2-30         |
| Resistance at variable environment   | IEC 600 68-2-14 and 2-33        |

### Accessories RAFX 22 FS emergency stop pushbutton

| Description                                                   | Photo | Order no.                | Page    |
|---------------------------------------------------------------|-------|--------------------------|---------|
| RAFIX 22 FS emergency stop contact block, 1 NC, gold contacts |       | <b>1.20.126.401/0000</b> | 2 - 189 |
| RAFIX 22 FS emergency stop contact block, 2 NC, gold contacts |       | <b>1.20.126.404/0000</b> | 2 - 189 |

## RAFIX 22 FS

2

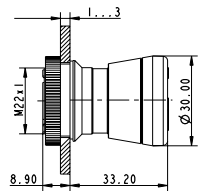
### Accessories RAFIX 22 FS emergency stop pushbutton

| Description                                                                            | Photo                                                                              | Order no.                | Page    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------|---------|
| RAFIX 22 FS emergency stop contact block, silver contacts, 1 NC                        |   | <b>1.20.126.601/0000</b> | 2 - 191 |
| Fixing spanner for ring nut and front ring                                             |  | <b>5.05.800.062/0000</b> | 5 - 25  |
| Emergency stop label, yellow, round 60 mm, PVC adhesive, without legend                |   | 5.76.204.100/0400        | 2 - 161 |
| Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend "NOT-AUS"         |   | 5.76.204.101/0400        | 2 - 161 |
| Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend "ARRET D'URGENCE" |   | 5.76.204.102/0400        | 2 - 161 |
| Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend "EMERGENCY-STOP"  |   | 5.76.204.103/0400        | 2 - 161 |
| Emergency stop label, yellow 36 x 64 mm, PVC adhesive, without legend                  |   | 5.76.205.011/0400        | 2 - 161 |

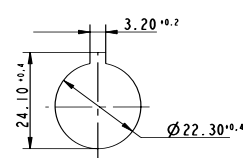
### RAFIX 22 FS emergency stop pushbutton, non-illuminated, dupe-proof to EN 418, non-blocking



Pict.: red



Technical drawing showing dimensions: 1.3, 8.90, 33.20, 30.00, 22.1, M22x1.



panel cut-out acc. to IEC 60947-5-1

RAFIX  
22 FS

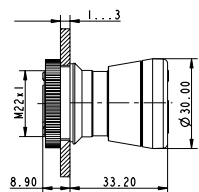
| Illuminability | Approvals acc. to IEC           | Order no. complete       |
|----------------|---------------------------------|--------------------------|
| no             | 60947-5-x, 60204, 60073, 601058 | <b>1.30.253.501/0300</b> |

Technical data see page 2 - 184

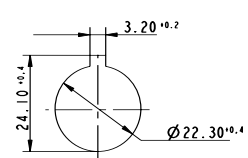
### RAFIX 22 FS emergency stop pushbutton, illuminated, dupe-proof to EN 418, non-blocking



Pict.: red



Technical drawing showing dimensions: 1.3, 8.90, 33.20, 30.00, 22.1, M22x1.

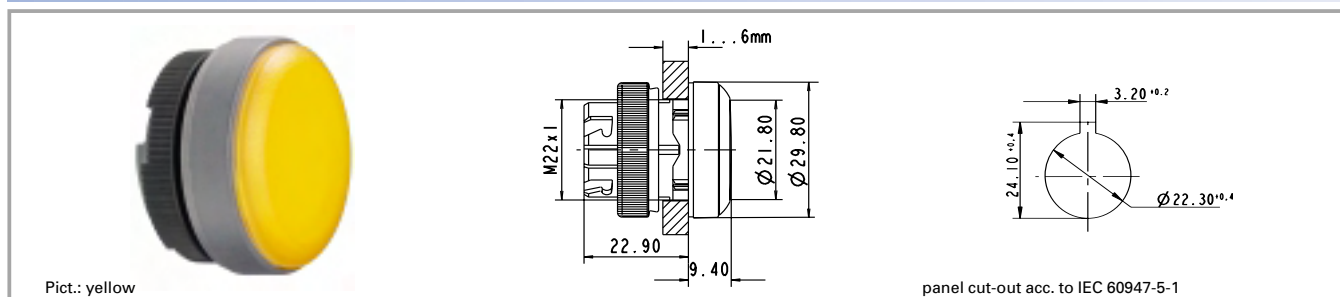


panel cut-out acc. to IEC 60947-5-1

| Illuminability | Approvals acc. to IEC           | Order no. complete       |
|----------------|---------------------------------|--------------------------|
| yes            | 60947-5-x, 60204, 60073, 601058 | <b>1.30.253.001/0300</b> |

Technical data see page 2 - 184

## RAFIX 22 FS signal indicator



2

## Technical data

### General information

|                |                 |
|----------------|-----------------|
| Form of lens   | flat lens       |
| Colour of lens | see order block |
| Form of collar | see order block |

### Dimensions

|                    |                 |
|--------------------|-----------------|
| Length of collar   | see order block |
| Width of collar    | see order block |
| Overall height     | 9.7 mm          |
| Mounting depth     | 9.2 mm          |
| Mounting hole      | 22.3 mm         |
| Key grid           | 30 x 30 mm      |
| Diameter of collar | see order block |

### Mechanical design

|                |          |
|----------------|----------|
| Mounting       | ring nut |
| Illuminability | yes      |

### Mechanical characteristics

|                 |       |
|-----------------|-------|
| Robustness min. | 100 N |
|-----------------|-------|

### Other specifications

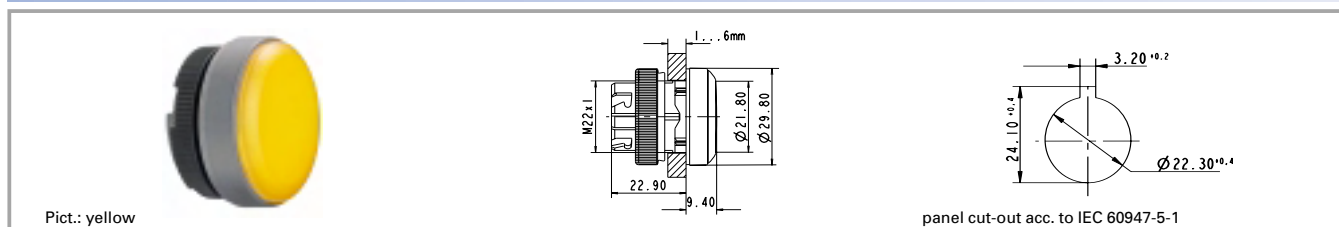
|                                      |                          |
|--------------------------------------|--------------------------|
| Degree of protection from front side | IP65                     |
| Ambient temp. operating min.         | -25 °C                   |
| Ambient temp. operating max.         | +70 °C                   |
| Storage temperature min.             | -40 °C                   |
| Storage temperature max.             | +80 °C                   |
| Resistance to constant environment   | IEC 600 68-2-3 and 2-30  |
| Resistance at variable environment   | IEC 600 68-2-14 and 2-33 |

## Accessories RAFX 22 FS signal indicator

| Description                                | Photo | Order no.         | Page    |
|--------------------------------------------|-------|-------------------|---------|
| 3 mm LED superbright red                   |       | 1.90.690.269/0000 | 5 - 21  |
| Fixing spanner for ring nut and front ring |       | 5.05.800.062/0000 | 5 - 25  |
| LED base for signal indicators             |       | 5.30.109.020/0756 | 2 - 193 |
| Legend insert blank                        |       | 5.70.806.000/2000 |         |

## RAFIX 22 FS

### RAFIX 22 FS signal indicator, round collar



| Form of collar | Colour of lens         | Order no. complete |
|----------------|------------------------|--------------------|
| round          | transparent colourless | 1.74.506.001/1000  |
| round          | transparent red        | 1.74.506.001/1300  |
| round          | transparent yellow     | 1.74.506.001/1400  |
| round          | transparent green      | 1.74.506.001/1500  |
| round          | transparent blue       | 1.74.506.001/1600  |

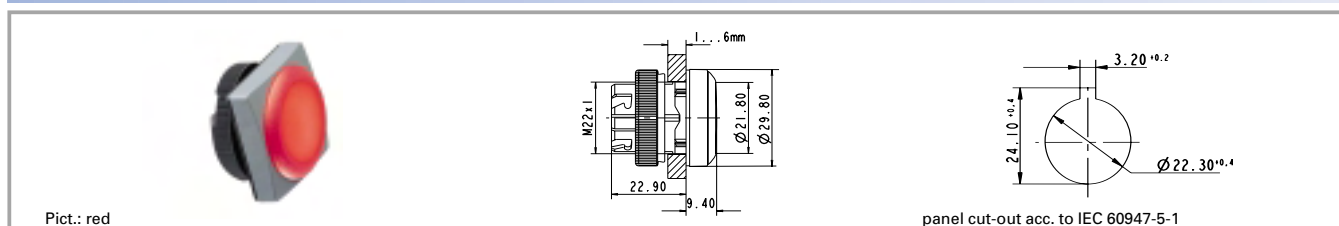
Technical data see page 2 - 186

#### Accessories:

Legend insert blank: 5.70.806.000/2000

RAFIX  
22 FS

### RAFIX 22 FS signal indicator, square collar



| Form of collar | Colour of lens         | Order no. complete |
|----------------|------------------------|--------------------|
| square         | transparent colourless | 1.74.506.051/1000  |
| square         | transparent red        | 1.74.506.051/1300  |
| square         | transparent yellow     | 1.74.506.051/1400  |
| square         | transparent green      | 1.74.506.051/1500  |
| square         | transparent blue       | 1.74.506.051/1600  |

Technical data see page 2 - 186

#### Accessories:

Legend insert blank: 5.70.806.000/2000

## RAFIX 22 FS contact blocks with gold contacts



Pict.: Universal contact block, 1 NC + 1 NO, gold contacts Emergency stop contact block, gold contacts, 2 NC

## General data

### Illumination information:

The contact blocks are suitable for use with illuminated actuators: Insert the desired LED into the integrated LED base and subsequently solder it together with the contact block.

We strongly recommend using the Rafi superbright LED since this ensures homogeneous illumination.

## Technical data

### General information

Lamp LED

### Dimensions

Diameter 17.3 mm  
Recommended key grid 30 mm  
Mounting depth 9.2 mm

### Mechanical design

Mounting soldering in PCB  
Contact system bridgecontact self cleaning  
Contact materials Au  
Contact arrangement see order block  
NC contact forcibly actuated acc. to IEC 60947-5-1 yes  
Terminals solder terminal with locating lug  
Robustness 100 N

### Electrical characteristics acc. to IEC 60947, AC-15

Operating voltage AC/DC 42 V  
Operating current AC/DC 100 mA  
Rated power max. 250 mW

### Other specifications

Operating life 1 million at 10 mA/ 24 V DC  
Switching reliability at 24V/5mA DC  $10 \times 10^{-6}$

Approvals acc. to IEC

Approvals, other

Ambient temp. operating min.  
Ambient temp. operating max.  
Storage temperature min.  
Storage temperature max.  
Colour of plunger  
Robustness

Shock resistance acc. to IEC 60068-2-27

Resistance to vibrations acc. to IEC 60068-2-6  
Resistance to constant environment  
Resistance at variable environment  
Salt spray  
Solderability / solder heat resistance  
Solder techniques

Type  
Colour of housing

60947-5-x, 60204, 60073, 601058  
UL 508, CSA, cURus (UL + CSA)

-25 °C

+70 °C

-40 °C

+80

see order block acc. to IEC 60947-5-5 (TÜV)

50 g at 11 ms, amplitude half sinusoidal

5 g at 10 ... 500 Hz

IEC 600 68-2-3 and 2-30

IEC 600 68-2-14 and 2-33  
IEC 600 68-2-11

IEC 600 68-2-20  
wave solder bath / manual soldering  
see order block  
grey



### Accessories RAFIX 22 FS contact blocks with gold contacts

| Description                 | Photo                                                                              | Order no.         | Page   |
|-----------------------------|------------------------------------------------------------------------------------|-------------------|--------|
| 3 mm LED superbright yellow |  | 1.90.690.267/0000 | 5 - 21 |
| 3 mm LED superbright red    |  | 1.90.690.269/0000 | 5 - 21 |
| 3 mm LED superbright blue   |  | 1.90.690.282/0000 | 5 - 21 |
| 3 mm LED superbright green  |  | 1.90.690.285/0000 | 5 - 21 |
| 3 mm LED superbright white  |  | 1.90.690.295/0000 | 5 - 21 |

For additional accessories, refer to the chapter „RAFIX 22 FS special accessories“.

### RAFIX 22 FS contact block with gold contacts



| Contact arrangement | Type           | Colour of housing | Colour of plunger | Order no. complete       |
|---------------------|----------------|-------------------|-------------------|--------------------------|
| 1 NC                | Universal      | grey              | red               | <b>1.20.126.001/0000</b> |
| 1 NO                | Universal      | grey              | green             | <b>1.20.126.002/0000</b> |
| 1 NC + 1 NO         | Universal      | grey              | red and green     | <b>1.20.126.003/0000</b> |
| 2 NC                | Universal      | grey              | red               | <b>1.20.126.004/0000</b> |
| 2 NO                | Universal      | grey              | green             | <b>1.20.126.005/0000</b> |
| 1 NC                | emergency stop | grey              | red               | <b>1.20.126.401/0000</b> |
| 1 NO                | emergency stop | grey              | green             | 1.20.126.402/0000        |
| 1 NC + 1 NO         | emergency stop | grey              | yellow            | <b>1.20.126.403/0000</b> |
| 2 NC                | emergency stop | grey              | red               | <b>1.20.126.404/0000</b> |
| 2 NO                | emergency stop | grey              | green             | 1.20.126.405/0000        |

Technical data see page 2 - 188

Caution: Emergency stop contact blocks can only be used with emergency stop pushbuttons. Universal contact blocks are not suitable for emergency stop pushbuttons.

## RAFIX 22 FS contact blocks with silver contacts



Pict.: Silver contacts, 1 NC + 1 NO



Silver contacts, universal type, 1 NC

## General data

### Illumination information:

The contact blocks are suitable for use with illuminated actuators: Insert the desired LED into the integrated LED base and subsequently solder it together with the contact block.

We strongly recommend using the Rafi superbright LED since this ensures homogeneous illumination.

## Technical data

### General information

Lamp LED

Operating life at 250V / 4A

70000

### Dimensions

Diameter 17.3 mm

Recommended key grid 30 mm

Mounting depth 9.2 mm

Switching reliability at 24V/5mA DC

$10 \times 10^{-6}$

Ambient temp. operating min.

-25 °C

Ambient temp. operating max.

+70 °C

Storage temperature min.

-40 °C

Storage temperature max.

+80 °C

Colour of plunger

see order block

Approvals acc. to IEC

60947-5-x, 60204, 60073, 601058

Approvals, other

UL 508, CSA, cURus (UL + CSA)

Robustness

acc. to IEC 60947-5-5 (TÜV)

### Mechanical design

Mounting soldering in PCB

Contact system bridgecontact self cleaning

Contact materials Ag

Contact arrangement see order block

NC contact forcibly actuated acc. to IEC 60947-5-1 yes

Terminals solder terminal with locating lug

Robustness 100 N

Shock resistance acc. to IEC 60068-2-27

50 g at 11 ms, amplitude half sinusoidal

### Electrical characteristics acc. to IEC 60947, AC-15

Rated insulation voltage

250 V

AC/DC 2500 V

Rated peak voltage

2500 V

Rated operating current

$I_E$ , AC15 B300 3 A/120 V; 1.5 A/240 V;  $I_{the}$ : 5 A

Rated operating current

$I_E$ , DC13 Q300 550 mA/120 V; 270 mA/240 V;  $I_{the}$ : 2.5 A

Resistance to vibrations acc. to IEC 60068-2-6

5 g at 10 ... 500 Hz

Resistance to constant environment

IEC 600 68-2-3 and 2-30

Resistance at variable environment

IEC 600 68-2-14 and 2-33

Salt spray

IEC 600 68-2-11

Solderability / solder

heat resistance

Solder techniques

IEC 600 68-2-20 wave solder bath / manual soldering V 0

### Other specifications

Operating life at 250V / 1A 1000000

Operating life at 250V / 2A 100000

Flame class acc. to UL 94

Hot wire ignition acc. to IEC 60695-2-1

Type

yes see order block

Colour of housing

black

## RAFIX 22 FS

### Accessories RAFIX 22 FS contact blocks with silver contacts

| Description                 | Photo                                                                              | Order no.         | Page   |
|-----------------------------|------------------------------------------------------------------------------------|-------------------|--------|
| 3 mm LED superbright yellow |  | 1.90.690.267/0000 | 5 - 21 |
| 3 mm LED superbright red    |  | 1.90.690.269/0000 | 5 - 21 |
| 3 mm LED superbright blue   |  | 1.90.690.282/0000 | 5 - 21 |
| 3 mm LED superbright green  |  | 1.90.690.285/0000 | 5 - 21 |
| 3 mm LED superbright white  |  | 1.90.690.295/0000 | 5 - 21 |

For additional accessories, refer to the chapter „RAFIX 22 FS special accessories“.

### RAFIX 22 FS contact blocks with silver contacts



| Contact arrangement | Type           | Colour of housing | Colour of plunger | Order no. complete       |
|---------------------|----------------|-------------------|-------------------|--------------------------|
| 1 NC                | Universal      | black             | red               | <b>1.20.126.201/0000</b> |
| 1 NO                | Universal      | black             | green             | <b>1.20.126.202/0000</b> |
| 1 NC + 1 NO         | Universal      | black             | red and green     | <b>1.20.126.203/0000</b> |
| 2 NC                | Universal      | black             | red               | <b>1.20.126.204/0000</b> |
| 2 NO                | Universal      | black             | green             | <b>1.20.126.205/0000</b> |
| 1 NC                | emergency stop | black             | red               | <b>1.20.126.601/0000</b> |
| 1 NO                | emergency stop | black             | green             | <b>1.20.126.602/0000</b> |
| 1 NC + 1 NO         | emergency stop | black             | yellow            | <b>1.20.126.603/0000</b> |
| 2 NC                | emergency stop | black             | red               | <b>1.20.126.604/0000</b> |
| 2 NO                | emergency stop | black             | green             | <b>1.20.126.605/0000</b> |

Technical data see page 2 - 190

Caution: Emergency stop contact blocks can only be used with emergency stop pushbuttons. Universal contact blocks are not suitable for emergency stop pushbuttons.

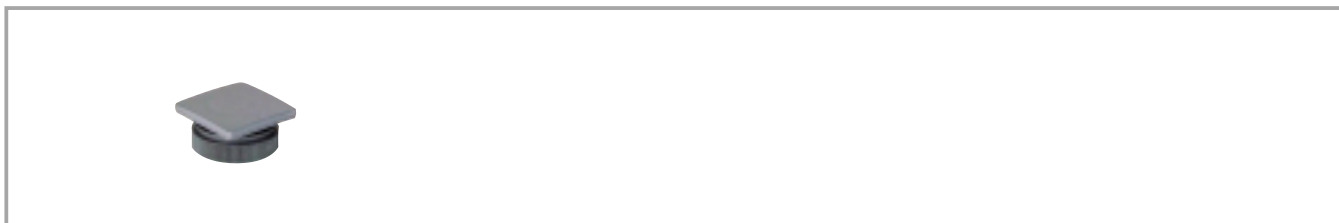
## RAFIX 22 FS special accessories



## Accessories RAFX 22 QR special accessories

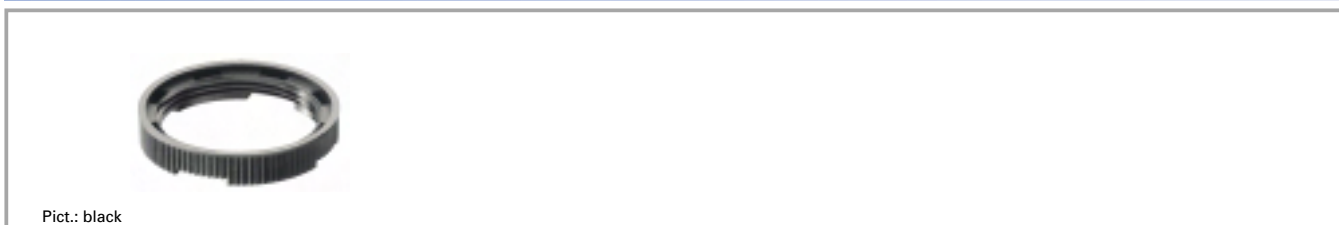
| Description                                | Photo                                                                              | Order no.         | Page   |
|--------------------------------------------|------------------------------------------------------------------------------------|-------------------|--------|
| Fixing spanner for ring nut and front ring |  | 5.05.800.062/0000 | 5 - 25 |

## Blanking cap

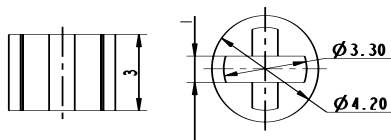


| Short text                          | Feature 1 | Feature 2 | Order no.         |
|-------------------------------------|-----------|-----------|-------------------|
| Blanking cap IP65, ring nut, square |           |           | 5.05.800.068/0000 |
| Blanking cap IP65, ring nut, round  |           |           | 5.05.800.067/0000 |

## Ring nut



| Short text            | Feature 1 | Feature 2 | Order no.         |
|-----------------------|-----------|-----------|-------------------|
| Ring nut (spare part) |           |           | 5.24.279.014/0100 |

**LED base for signal indicators**


| Short text                     | Feature 1 | Feature 2 | Order no.         |
|--------------------------------|-----------|-----------|-------------------|
| LED base for signal indicators |           |           | 5.30.109.020/0756 |

**Plastic frontring with protective cap**


| Short text                                        | Frontring   | Feature 2 | Order no.         |
|---------------------------------------------------|-------------|-----------|-------------------|
| Plastic frontring black with protection cap       | black       |           | 5.05.004.986/0100 |
| Plastic frontring red with protection cap         | red         |           | 5.05.004.986/0300 |
| Plastic frontring yellow with protection cap      | yellow      |           | 5.05.004.986/0400 |
| Plastic frontring green with protection cap       | green       |           | 5.05.004.986/0500 |
| Plastic frontring blue with protection cap        | blue        |           | 5.05.004.986/0600 |
| Plastic frontring slate grey with protection cap  | slate grey  |           | 5.05.004.986/0700 |
| Plastic frontring silver grey with protection cap | silver grey |           | 5.05.004.986/0800 |