



## RAFIX 16

---

### RAFIX 16 control component range

- Panel cut-out acc. to IEC 60947: Ø 16,2 mm / Ø 22,3 mm / □ 23,1 mm
- 250 V / 6 A max.
- Degree of protection: IP65 acc. to DIN EN 60529
- Contact blocks: Gold and silver contacts with quick-connect terminals 2.8 x 0.8 mm or screw terminals; Option: PCB plug-in socket
- 3 collar shapes RAFIX 16, 2 collar shapes RAFIX 16F
- The contact blocks snap directly onto the actuators without a coupling element and can be easily removed by turning = cost reducing assembly.
- All products are RoHS compliant.

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

---

# CONTROL COMPONENTS

RAFIX 16

## Content

|                                                                                     |               |
|-------------------------------------------------------------------------------------|---------------|
| <b>RAFIX 16 Pushbuttons</b>                                                         | <b>2 - 9</b>  |
| RAFIX 16 Pushbutton, flush lens, square collar                                      | 2 - 10        |
| RAFIX 16 Pushbutton, protruding lens, square collar                                 | 2 - 11        |
| RAFIX 16 Pushbutton, protruding collar, square collar                               | 2 - 12        |
| RAFIX 16 Pushbutton, flush lens, round collar                                       | 2 - 12        |
| RAFIX 16 Pushbutton IP66 with protective cap                                        | 2 - 13        |
| RAFIX 16 Pushbutton, protruding lens, round collar                                  | 2 - 14        |
| RAFIX 16 Pushbutton, protruding collar, round collar                                | 2 - 15        |
| RAFIX 16 Pushbutton, flush lens, square collar, alignable without gaps              | 2 - 15        |
| <b>RAFIX 16 Selector switches</b>                                                   | <b>2 - 17</b> |
| RAFIX 16 Selector switch, square collar                                             | 2 - 18        |
| RAFIX 16 Selector switch, round collar                                              | 2 - 19        |
| RAFIX 16 Selector switch, square collar, alignable without gaps                     | 2 - 20        |
| <b>RAFIX 16 Keylock switches</b>                                                    | <b>2 - 21</b> |
| RAFIX 16 Keylock switch, square collar                                              | 2 - 22        |
| RAFIX 16 Keylock switch, round collar                                               | 2 - 23        |
| RAFIX 16 Keylock switch, square collar, alignable without gaps                      | 2 - 24        |
| <b>RAFIX 16 Mushroom-headed pushbuttons</b>                                         | <b>2 - 25</b> |
| RAFIX 16 Mushroom-headed pushbutton, round collar                                   | 2 - 26        |
| <b>RAFIX 16 Emergency stop pushbuttons</b>                                          | <b>2 - 27</b> |
| RAFIX 16 Emergency stop pushbutton, round collar, dupe-proof, non-blocking          | 2 - 28        |
| RAFIX 16 Emergency stop pushbutton, round collar, conical, dupe-proof, non-blocking | 2 - 29        |
| <b>RAFIX 16 Toggle switches</b>                                                     | <b>2 - 30</b> |
| RAFIX 16 Toggle switch, square collar                                               | 2 - 31        |
| RAFIX 16 Toggle switch, round collar                                                | 2 - 31        |
| RAFIX 16 Toggle switch, square collar, alignable without gaps                       | 2 - 32        |
| <b>RAFIX 16 Potentiometer drives</b>                                                | <b>2 - 33</b> |
| RAFIX 16 Potentiometer drive, square collar                                         | 2 - 34        |
| RAFIX 16 Potentiometer drive, round collar                                          | 2 - 34        |
| RAFIX 16 Potentiometer drive, square collar, alignable without gaps                 | 2 - 35        |
| <b>RAFIX 16 Buzzers</b>                                                             | <b>2 - 36</b> |
| RAFIX 16 Buzzer, square collar                                                      | 2 - 37        |
| RAFIX 16 Buzzer, round collar                                                       | 2 - 37        |
| RAFIX 16 Buzzer, square collar, alignable without gaps                              | 2 - 38        |
| <b>RAFIX 16 Signal indicators</b>                                                   | <b>2 - 39</b> |
| RAFIX 16 Signal indicator, square lens                                              | 2 - 40        |
| RAFIX 16 Signal indicator, square collar, flush lens                                | 2 - 40        |
| RAFIX 16 Signal indicator, round lens                                               | 2 - 41        |
| <b>RAFIX 16 F Pushbuttons</b>                                                       | <b>2 - 43</b> |
| RAFIX 16 F Pushbutton, flush lens, square black collar                              | 2 - 44        |
| RAFIX 16 F Pushbutton, flush lens, round black collar                               | 2 - 45        |
| RAFIX 16 F Pushbutton, flush lens, round metallized collar                          | 2 - 46        |
| <b>RAFIX 16 F Selector switches</b>                                                 | <b>2 - 47</b> |
| RAFIX 16 F Selector switch, square black collar                                     | 2 - 48        |
| RAFIX 16 F Selector switch, round black collar                                      | 2 - 49        |
| RAFIX 16 F Selector switch, round metallized collar                                 | 2 - 50        |
| <b>RAFIX 16 F Keylock switches</b>                                                  | <b>2 - 52</b> |
| RAFIX 16 F Keylock switch, square black collar                                      | 2 - 53        |
| RAFIX 16 F Keylock switch, round black collar                                       | 2 - 54        |
| RAFIX 16 F Keylock switch, round metallized collar                                  | 2 - 55        |

## Content

|                                                                                                          |               |
|----------------------------------------------------------------------------------------------------------|---------------|
| <b>RAFIX 16 F Emergency stop pushbuttons</b>                                                             | <b>2 - 56</b> |
| RAFIX 16 F Emergency stop pushbutton, square collar                                                      | 2 - 57        |
| RAFIX 16 F Emergency stop pushbutton, round collar                                                       | 2 - 58        |
| <b>RAFIX 16 F Signal indicators</b>                                                                      | <b>2 - 59</b> |
| RAFIX 16 F Signal indicator, flush lens, square black collar                                             | 2 - 60        |
| RAFIX 16 F Signal indicator, flush lens, round black collar                                              | 2 - 60        |
| RAFIX 16 F Signal indicator, flush lens, round metallized collar                                         | 2 - 61        |
| <b>RAFIX 16 Contact blocks with gold contacts</b>                                                        | <b>2 - 62</b> |
| RAFIX 16 Standard contact block, gold contacts, with quick-connect terminals                             | 2 - 63        |
| RAFIX 16 Standard contact block, gold contacts, with screw terminals                                     | 2 - 64        |
| RAFIX 16 Universal contact block, gold contacts, with quick-connect terminals                            | 2 - 65        |
| RAFIX 16 Universal contact block, gold contacts, with screw terminals                                    | 2 - 66        |
| <b>RAFIX 16 Contact blocks with silver contacts</b>                                                      | <b>2 - 67</b> |
| RAFIX 16 Standard contact block, silver contacts, with quick-connect terminals                           | 2 - 68        |
| RAFIX 16 Standard contact block, silver contacts, with screw terminals                                   | 2 - 69        |
| RAFIX 16 Universal contact block, silver contacts, with quick-connect terminals                          | 2 - 70        |
| RAFIX 16 Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals | 2 - 71        |
| RAFIX 16 Universal contact block, silver contacts, with screw terminals                                  | 2 - 71        |
| <b>RAFIX 16 Lamp sockets</b>                                                                             | <b>2 - 73</b> |
| RAFIX 16 Lamp socket W 2 x 4.6 d                                                                         | 2 - 74        |
| RAFIX 16 Lamp socket W 2 x 4.6 d                                                                         | 2 - 74        |
| <b>RAFIX 16 Special accessories</b>                                                                      | <b>2 - 75</b> |
| PCB plug-in socket                                                                                       | 2 - 75        |
| Multipole connector                                                                                      | 2 - 76        |
| Female quick-connect terminal DIN 46340-B 2.8-1-MS                                                       | 2 - 76        |
| Plug distributor                                                                                         | 2 - 76        |
| Protection against contact                                                                               | 2 - 77        |
| Protective cover, suitable for lead seal, for pushbuttons, alignable without gaps                        | 2 - 77        |
| Fixing spanner for hexagon nut                                                                           | 2 - 78        |
| RAFIX Insulating housing, Ø 16.2 mm                                                                      | 2 - 78        |
| RAFIX Insulating housing IP65, Ø 22.3 mm                                                                 | 2 - 79        |
| RAFIX 16 Label holder, flush, for square collar                                                          | 2 - 80        |
| RAFIX 16 Label holder, flush, for round collar                                                           | 2 - 80        |
| RAFIX 16 Label holder, protruding, for square flush fitting collar                                       | 2 - 81        |
| Emergency stop label, PVC adhesive, Ø 16.3 mm                                                            | 2 - 81        |
| Emergency stop label, Ø 22.3 mm                                                                          | 2 - 82        |
| RAFIX 16 Blanking cap with sealing and threaded ring, Ø 16.2 mm                                          | 2 - 83        |
| RAFIX 16 F Blanking cap                                                                                  | 2 - 83        |

# CONTROL COMPONENTS

RAFIX 16 - GENERAL INFORMATION

## Control Components RAFIX 16

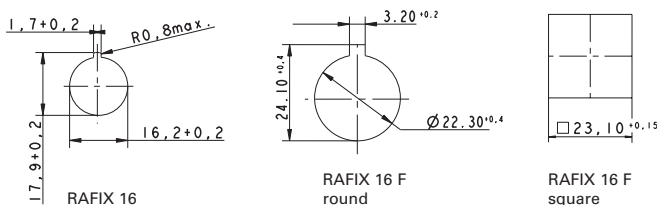
RAFIX 16 is a complete control component series and enables you to design attractive control panels with a minimum of space requirements and at the same time sufficiently large actuating areas.



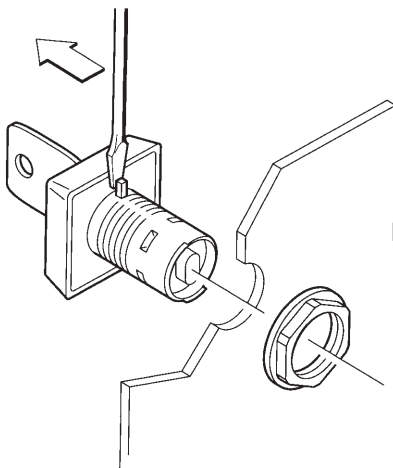
RAFIX 16 F,  
round

## Actuators

### Mounting hole according to IEC 60947



- Locating lug (easily removable).  
The locating lug can be easily removed using a screwdriver.



- Degree of protection IP65 on frontside of the panel.  
This is achieved by a reliable, tried and tested special seal.

### RAFIX 16 actuators

- Grid spacing 25 x 25 mm (RAFIX 16 F 30 x 30 mm)
- 7 mm height from front panel (RAFIX 16 F 1.9 mm)
- Three collar shapes, in black
  - Square
  - Round
  - Square, alignable in flush fitting rows, which avoids accumulation of dirt between the collars.

## Contact blocks

- Contact blocks standard: for actuators with one-way operation
  - latching function
  - momentary function
- Contact blocks universal: for E-stop pushbuttons and for actuators with two-way operation, e. g. selector or keylock switches
  - momentary function

### Contact material

- Silver contacts for mains voltage
- Gold contacts for electronic circuits

### Illumination

- LED or wedge base lamp, socket W 2 x 4.6 d

### Assembly

- Single-handed cost-effective assembly method
- Panel thickness 0.5 ... 5 mm for RAFIX 16 (RAFIX 16 F 0.5 ... 3.5 mm)
- Fixing with hexagon nut
- Starting torque 1.2 Nm max.

### Shock-resistance according to IEC 600 68-2-27

- Shock amplitude:  $\leq 50$  g
- Shock time: 11 ms
- Shock type: half sinusoidal

### Environment conditions

- acc. to IEC 600 68-2, -14, -30, -33 and -78

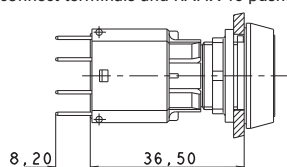
### Temperature range

- Operating temperature:
  - non-illuminated: - 25 ... + 70 °C
  - illuminated: - 25 ... + 55 °C (with LED)
- Storage temperature: - 40 ... + 85 °C

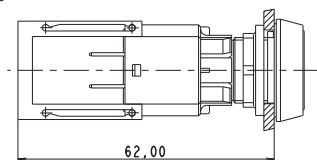
## Dimensional Drawings

Actuator with contact block resp. signal indicator with lamp socket

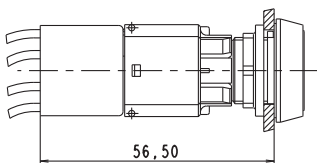
Contact block with quick-connect terminals and RAFIX 16 pushbutton



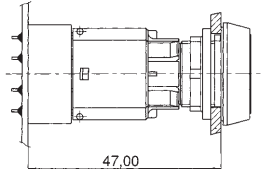
... with protection cage



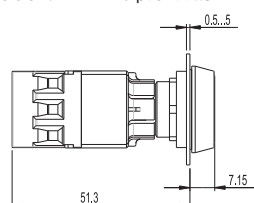
... with multipole connector



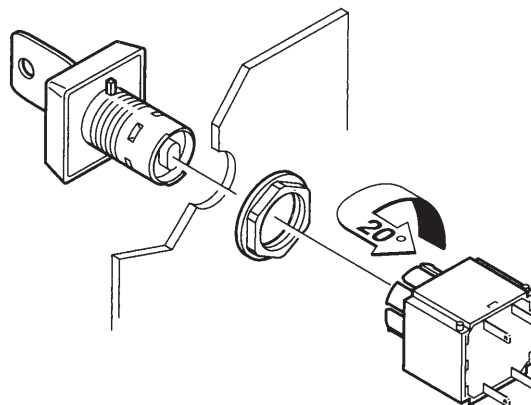
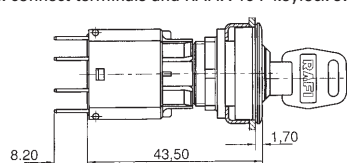
... with PCB plug-in socket



Contact block with screw terminals and RAFIX 16 pushbutton



Contact block with quick-connect terminals and RAFIX 16 F keylock switch



Assembly/Disassembly

## Assembly

- Insert the actuator through the panel cut-out from the front.
- If there is no locating indent provided in the cut-out, first remove the locating lug using a screwdriver.
- Screw the hexagon nut onto the actuator or signal indicator from the rear and tighten it using a fixing spanner.
- Click the contact block onto the actuator from the rear.
- Install protection against accidental contact, if applicable.
- Install PCB if applicable.

### With quick-connect terminals

Contact cables with quick connector

### With screw terminals

Push in cables and fix by screwing

## Disassembly

- Turn the contact block by approx. 20° to the left or right – the latches open.
- Pull the contact block off towards the rear.
- To dismount a PCB, pull the PCB with the soldered plug-in sockets off the mounted contact blocks.

2

RAFIX  
16

## Legending

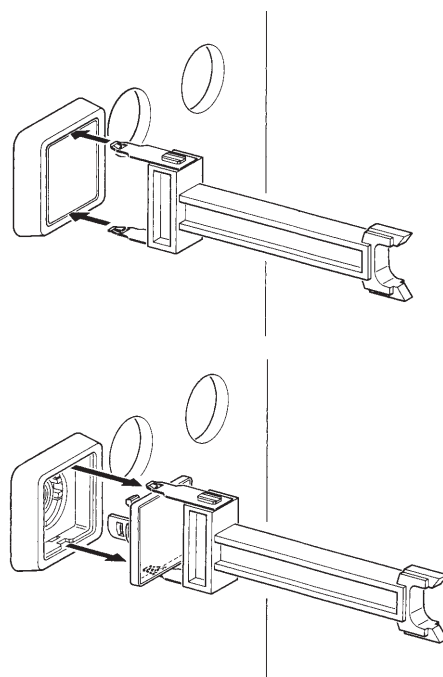
- **Label holders**  
All elements can be labelled using a **separate label holder**. The label holder is mounted together with the actuator/signal indicator.
- **Non-illuminated pushbuttons and mushroom-headed pushbuttons**  
Can be **printed** or laser engraved.
- **Legend inserts**  
All illuminated pushbuttons and the majority of the signal indicators can be **labelled by means of legend inserts**. The legend inserts are fitted between actuator body and lens and can be easily changed.

Alternatively, the plungers can be printed directly. The mounted lens protects the printing against abrasion.

RAFI also provides custom legending. Price and delivery on request.

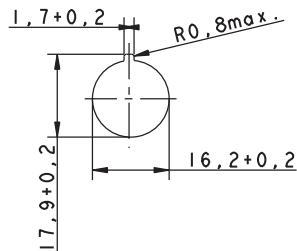
## Lamp replacement from front

Use the disassembly tool to grasp the actuator body and pull it towards the front with the lens. Alternatively, you can use a screwdriver in place of the disassembly tool. In this case, insert the screwdriver between actuator body and collar and carefully raise the actuator body. Replace the lamp using a lamp extractor or a suitable insulation sleeve.



Lamp replacement from front

## RAFIX 16 Pushbuttons



Panel cut-out



2

### Technical Data

#### → General information

|                |                 |
|----------------|-----------------|
| Actuator       | see order block |
| Color of lens  | see order block |
| Form of collar | see order block |

#### → Dimensions

|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | see order block |
| Mounting depth    | 44.7 mm         |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

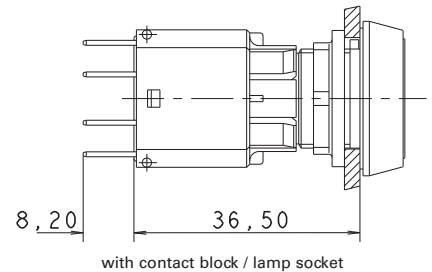
|                     |                            |
|---------------------|----------------------------|
| Mounting            | ring nut, max. 1.2 Nm      |
| Contact function    | according to contact block |
| Contact arrangement | according to contact block |
| Illumination        | see order block            |

#### → Mechanical characteristics

|                  |       |
|------------------|-------|
| Operating travel | 3 mm  |
| Robustness max.  | 100 N |

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 2,000,000                                |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



with contact block / lamp socket

### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp



C22.2 No.  
14-M91



### Accessories RAFIX 16 - Pushbutton

| → Description                                  | Photo | Order no. | Additional accessories see page |
|------------------------------------------------|-------|-----------|---------------------------------|
| RAFIX 16 - Contact blocks with gold contacts   |       | -         | 2 - 62                          |
| RAFIX 16 - Contact blocks with silver contacts |       | -         | 2 - 67                          |

# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

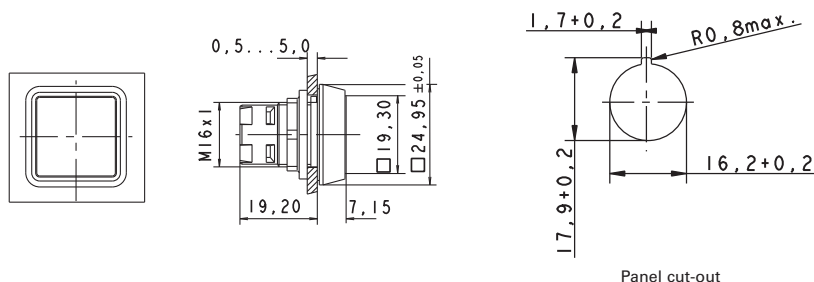
– Table (continued) –  
Accessories RAFIX 16 - Pushbutton

| → Description                              | Photo                                                                              | Order no.         | Additional accessories see page |
|--------------------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| Socket W 2 x 4.6d, LED superbright         |   | -                 | 5 - 5                           |
| Disassembly tool for LUMOTAST 25, RAFIX 16 |  | 5.05.800.042/0000 | 5 - 27                          |
| Fixing spanner for hexagon nut             |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |



## RAFIX 16 Pushbutton, flush lens, square collar

Technical data see page 2 - 9



Panel cut-out

| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.001/1306  | 1.30.070.501/0000      | 5.49.077.011/1306 |
| yes            | transparent yellow    | 1.30.070.001/1403  | 1.30.070.501/0000      | 5.49.077.011/1403 |
| yes            | transparent green     | 1.30.070.001/1505  | 1.30.070.501/0000      | 5.49.077.011/1505 |
| yes            | transparent blue      | 1.30.070.001/1607  | 1.30.070.501/0000      | 5.49.077.011/1607 |
| yes            | transparent colorless | 1.30.070.001/1002  | 1.30.070.501/0000      | 5.49.077.011/1002 |
| no             | opaque red            | 1.30.070.251/0300  | 1.30.070.501/0000      | 5.49.077.011/0313 |
| no             | opaque yellow         | 1.30.070.251/0400  | 1.30.070.501/0000      | 5.49.077.011/0410 |
| no             | opaque green          | 1.30.070.251/0500  | 1.30.070.501/0000      | 5.49.077.011/0518 |
| no             | opaque blue           | 1.30.070.251/0600  | 1.30.070.501/0000      | 5.49.077.011/0612 |
| no             | opaque white          | 1.30.070.251/0200  | 1.30.070.501/0000      | 5.49.077.011/0200 |
| no             | opaque black          | 1.30.070.251/0100  | 1.30.070.501/0000      | 5.49.077.011/0104 |

For the „latching“ function, please use the standard contact block with „latching“ function.

### Accessoires:

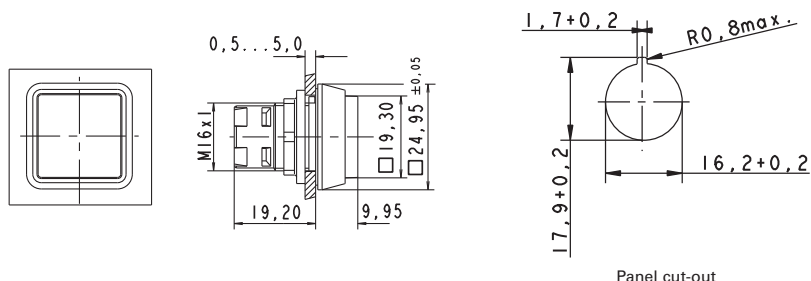
Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80



## RAFIX 16 Pushbutton, protruding lens, square collar

Technical data see page 2 - 9



| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.051/1306  | 1.30.070.551/0000      | 5.49.077.012/1306 |
| yes            | transparent yellow    | 1.30.070.051/1403  | 1.30.070.551/0000      | 5.49.077.012/1403 |
| yes            | transparent green     | 1.30.070.051/1505  | 1.30.070.551/0000      | 5.49.077.012/1505 |
| yes            | transparent blue      | 1.30.070.051/1607  | 1.30.070.551/0000      | 5.49.077.012/1607 |
| yes            | transparent colorless | 1.30.070.051/1002  | 1.30.070.551/0000      | 5.49.077.012/1002 |
| no             | opaque red            | 1.30.070.301/0300  | 1.30.070.801/0000      | 5.46.657.442/0300 |
| no             | opaque black          | 1.30.070.301/0100  | 1.30.070.801/0000      | 5.46.657.442/0100 |

For the „latching“ function, please use the standard contact block with „latching“ function.

### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80

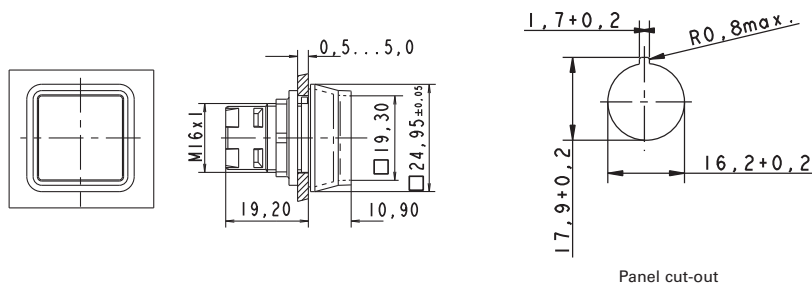
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Pushbutton, protruding collar, square collar

Technical data see page 2 - 9



| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.101/1306  | 1.30.070.601/0000      | 5.49.077.011/1306 |
| yes            | transparent yellow    | 1.30.070.101/1403  | 1.30.070.601/0000      | 5.49.077.011/1403 |
| yes            | transparent green     | 1.30.070.101/1505  | 1.30.070.601/0000      | 5.49.077.011/1505 |
| yes            | transparent blue      | 1.30.070.101/1607  | 1.30.070.601/0000      | 5.49.077.011/1607 |
| yes            | transparent colorless | 1.30.070.101/1002  | 1.30.070.601/0000      | 5.49.077.011/1002 |

The protruding collar offers protection against inadvertent operation and thereby fulfils the safety requirements of various machinery manufacturers.

For the „latching“ function, please use the standard contact block with „latching“ function.

### Accessoires:

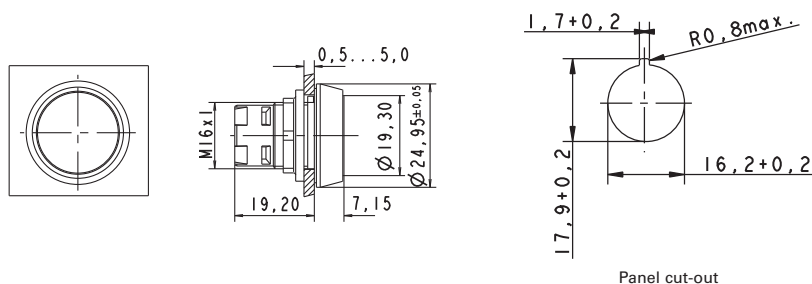
Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80



## RAFIX 16 Pushbutton, flush lens, round collar

Technical data see page 2 - 9



– Table (continued) –  
RAFIX 16 - Pushbutton, flush lens, round collar

| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.021/1306  | 1.30.070.521/0000      | 5.49.259.017/1306 |
| yes            | transparent yellow    | 1.30.070.021/1403  | 1.30.070.521/0000      | 5.49.259.017/1403 |
| yes            | transparent green     | 1.30.070.021/1505  | 1.30.070.521/0000      | 5.49.259.017/1505 |
| yes            | transparent blue      | 1.30.070.021/1607  | 1.30.070.521/0000      | 5.49.259.017/1607 |
| yes            | transparent colorless | 1.30.070.021/1002  | 1.30.070.521/0000      | 5.49.259.017/1002 |
| no             | opaque red            | 1.30.070.271/0300  | 1.30.070.521/0000      | 5.49.259.017/0313 |
| no             | opaque yellow         | 1.30.070.271/0400  | 1.30.070.521/0000      | 5.49.259.017/0410 |
| no             | opaque green          | 1.30.070.271/0500  | 1.30.070.521/0000      | 5.49.259.017/0500 |
| no             | opaque blue           | 1.30.070.271/0600  | 1.30.070.521/0000      | 5.49.259.017/0612 |
| no             | opaque white          | 1.30.070.271/0200  | 1.30.070.521/0000      | 5.49.259.017/0200 |
| no             | opaque black          | 1.30.070.271/0100  | 1.30.070.521/0000      | 5.49.259.017/0104 |

For the „latching“ function, please use the standard contact block with „latching“ function.

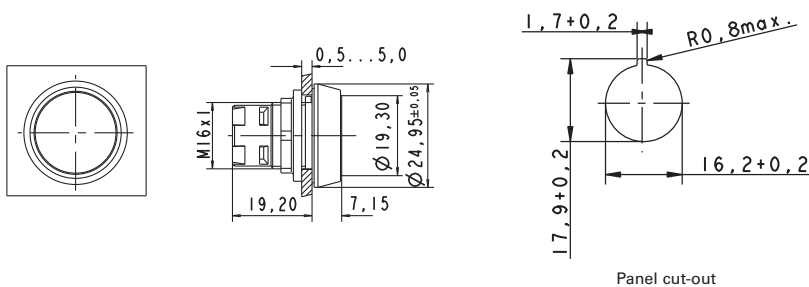
#### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

## RAFIX 16 Pushbutton IP66 with protective cap

Technical data see page 2 - 9



| → Illumination | Color of lens         | Order no. complete | Order no. single parts |      |
|----------------|-----------------------|--------------------|------------------------|------|
|                |                       |                    | Housing                | Lens |
| yes            | transparent red       | 1.30.070.026/1306  | -                      | -    |
| yes            | transparent yellow    | 1.30.070.026/1403  | -                      | -    |
| yes            | transparent green     | 1.30.070.026/1505  | -                      | -    |
| yes            | transparent blue      | 1.30.070.026/1607  | -                      | -    |
| yes            | transparent colorless | 1.30.070.026/1002  | -                      | -    |

# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

## RAFIX 16 - Pushbutton IP66 with protective cap

Pushbutton for use in hostile environments. A transparent protective cap ensures a degree of protection of IP 66 to DIN EN 60529. Operating life: 500,000 operations.

For the „latching“ function, please use the standard contact block with „latching“ function.

### Accessoires:

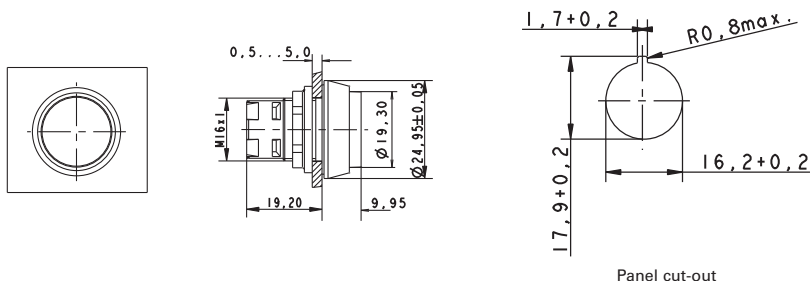
Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80



## RAFIX 16 Pushbutton, protruding lens, round collar

Technical data see page 2 - 9



Panel cut-out

| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.071/1306  | 1.30.070.571/0000      | 5.49.259.018/1306 |
| yes            | transparent yellow    | 1.30.070.071/1403  | 1.30.070.571/0000      | 5.49.259.018/1403 |
| yes            | transparent green     | 1.30.070.071/1505  | 1.30.070.571/0000      | 5.49.259.018/1505 |
| yes            | transparent blue      | 1.30.070.071/1607  | 1.30.070.571/0000      | 5.49.259.018/1607 |
| yes            | transparent colorless | 1.30.070.071/1002  | 1.30.070.571/0000      | 5.49.259.018/1002 |
| no             | opaque red            | 1.30.070.321/0300  | -                      | -                 |
| no             | opaque black          | 1.30.070.321/0100  | -                      | -                 |

For the „latching“ function, please use the standard contact block with „latching“ function.

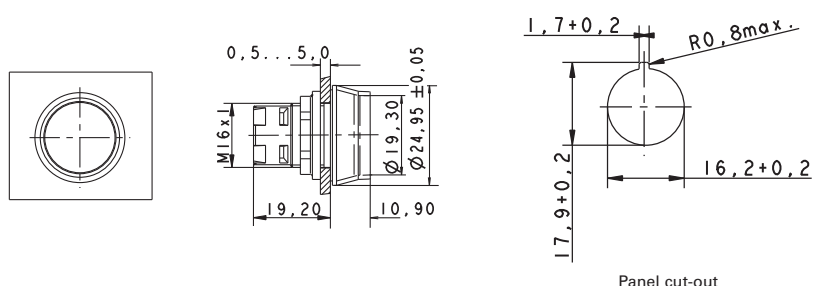
### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

## RAFIX 16 Pushbutton, protruding collar, round collar

Technical data see page 2 - 9



Panel cut-out

| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.121/1306  | 1.30.070.621/0000      | 5.49.259.017/1306 |
| yes            | transparent yellow    | 1.30.070.121/1403  | 1.30.070.621/0000      | 5.49.259.017/1403 |
| yes            | transparent green     | 1.30.070.121/1505  | 1.30.070.621/0000      | 5.49.259.017/1505 |
| yes            | transparent blue      | 1.30.070.121/1607  | 1.30.070.621/0000      | 5.49.259.017/1607 |
| yes            | transparent colorless | 1.30.070.121/1002  | 1.30.070.621/0000      | 5.49.259.017/1002 |

The protruding collar offers protection against inadvertent operation and thereby fulfils the safety requirements of various machine-ry manufacturers.

For the „latching“ function, please use the standard contact block with „latching“ function.

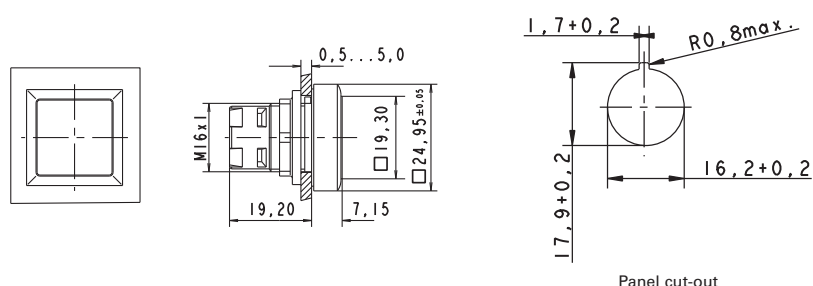
### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

## RAFIX 16 Pushbutton, flush lens, square collar, alignable without gaps

Technical data see page 2 - 9



Panel cut-out



# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

RAFIX 16 - Pushbutton, flush lens, square collar, alignable without gaps

| → Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| yes            | transparent red       | 1.30.070.201/1306  | 1.30.070.701/0000      | 5.49.077.011/1306 |
| yes            | transparent yellow    | 1.30.070.201/1403  | 1.30.070.701/0000      | 5.49.077.011/1403 |
| yes            | transparent green     | 1.30.070.201/1505  | 1.30.070.701/0000      | 5.49.077.011/1505 |
| yes            | transparent blue      | 1.30.070.201/1607  | 1.30.070.701/0000      | 5.49.077.011/1607 |
| yes            | transparent colorless | 1.30.070.201/1002  | 1.30.070.701/0000      | 5.49.077.011/1002 |
| no             | opaque red            | 1.30.070.451/0300  | 1.30.070.701/0000      | 5.49.077.011/0313 |
| no             | opaque yellow         | 1.30.070.451/0400  | 1.30.070.701/0000      | 5.49.077.011/0410 |
| no             | opaque green          | 1.30.070.451/0500  | 1.30.070.701/0000      | 5.49.077.011/0518 |
| no             | opaque blue           | 1.30.070.451/0600  | 1.30.070.701/0000      | 5.49.077.011/0612 |
| no             | opaque white          | 1.30.070.451/0200  | 1.30.070.701/0000      | 5.49.077.011/0200 |
| no             | opaque black          | 1.30.070.451/0100  | 1.30.070.701/0000      | 5.49.077.011/0104 |

For the „latching“ function, please use the standard contact block with „latching“ function.

## Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

Protective cover, suitable for lead seal: 5.05.800.055/0000

RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

## RAFIX 16 Selector switches

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

### Technical Data

#### → General information

|                   |                 |
|-------------------|-----------------|
| Actuator          | handle          |
| Marking of handle | see order block |
| Form of collar    | see order block |

#### → Dimensions

|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | 17.1 mm         |
| Mounting depth    | 44.7 mm         |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

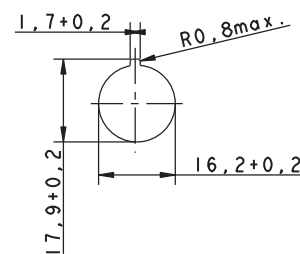
|                     |                            |
|---------------------|----------------------------|
| Mounting            | ring nut                   |
| Contact function    | see order block            |
| Contact arrangement | according to contact block |
| Illumination        | see order block            |
| Rotating angle      | see order block            |

#### → Mechanical characteristics

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

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 30,000                                   |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



Panel cut-out

### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp



C22.2 No.  
14-M91



### Accessories RAFIX 16 - Selector switch

#### → Description

| Description                                    | Photo | Order no.         | Additional accessories see page |
|------------------------------------------------|-------|-------------------|---------------------------------|
| RAFIX - Insulating housing, Ø 16.2 mm          |       | -                 | 2 - 78, 5 - 19                  |
| RAFIX 16 - Contact blocks with gold contacts   |       | -                 | 2 - 62                          |
| RAFIX 16 - Contact blocks with silver contacts |       | -                 | 2 - 67                          |
| Socket W 2 x 4.6d, LED superbright             |       | -                 | 5 - 5                           |
| Fixing spanner for hexagon nut                 |       | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |

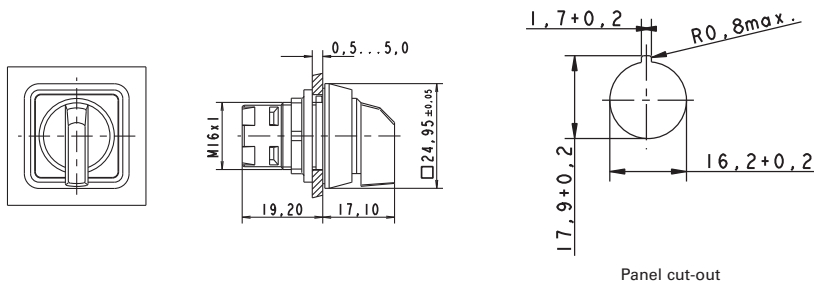
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Selector switch, square collar

Technical data see page 2 - 17



Panel cut-out

| → Illumination | Contact function | Rotating angle  | Marking of handle | Order no.         |
|----------------|------------------|-----------------|-------------------|-------------------|
| yes            | momentary        | 1 x 40°         |                   | 1.30.073.551/2000 |
| yes            | momentary        | 2 x 40°         |                   | 1.30.073.651/2000 |
| yes            | latching         | 1 x 90°, form L |                   | 1.30.073.501/2000 |
| yes            | latching         | 1 x 90°, form V |                   | 1.30.073.601/2000 |
| yes            | latching         | 2 x 60°         |                   | 1.30.073.701/2000 |
| no             | momentary        | 1 x 40°         |                   | 1.30.073.550/0200 |
| no             | momentary        | 2 x 40°         |                   | 1.30.073.650/0200 |
| no             | latching         | 1 x 90°, form L |                   | 1.30.073.500/0200 |
| no             | latching         | 1 x 90°, form V |                   | 1.30.073.600/0200 |
| no             | latching         | 2 x 60°         |                   | 1.30.073.700/0200 |

Only use contact blocks with „momentary“ contact function.

For versions with clockwise and counterclockwise rotation, use universal contact blocks only!

For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

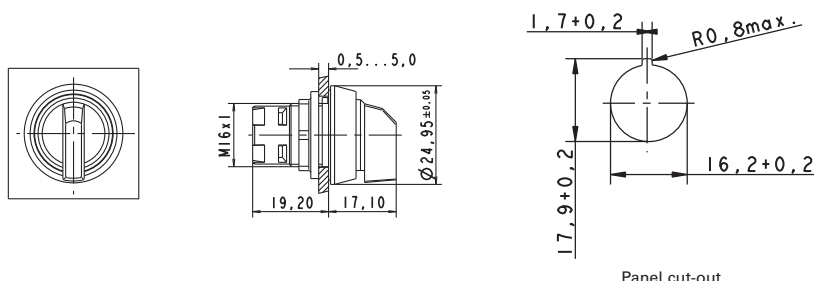
### Accessoires:

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80



## RAFIX 16 Selector switch, round collar

Technical data see page 2 - 17



Panel cut-out

| → Illumination | Contact function | Rotating angle  | Marking of handle | Order no.                           |
|----------------|------------------|-----------------|-------------------|-------------------------------------|
| yes            | momentary        | 1 x 40°         |                   | translucent white 1.30.073.571/2000 |
| yes            | momentary        | 2 x 40°         |                   | translucent white 1.30.073.671/2000 |
| yes            | latching         | 1 x 90°, form L |                   | translucent white 1.30.073.521/2000 |
| yes            | latching         | 1 x 90°, form V |                   | translucent white 1.30.073.621/2000 |
| yes            | latching         | 2 x 60°         |                   | translucent white 1.30.073.721/2000 |
| no             | momentary        | 1 x 40°         |                   | opaque white 1.30.073.570/0200      |
| no             | momentary        | 2 x 40°         |                   | opaque white 1.30.073.670/0200      |
| no             | latching         | 1 x 90°, form L |                   | opaque white 1.30.073.520/0200      |
| no             | latching         | 1 x 90°, form V |                   | opaque white 1.30.073.620/0200      |
| no             | latching         | 2 x 60°         |                   | opaque white 1.30.073.720/0200      |

Only use contact blocks with „momentary“ contact function.

For versions with clockwise and counterclockwise rotation, use universal contact blocks only!

For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

### Accessoires:

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

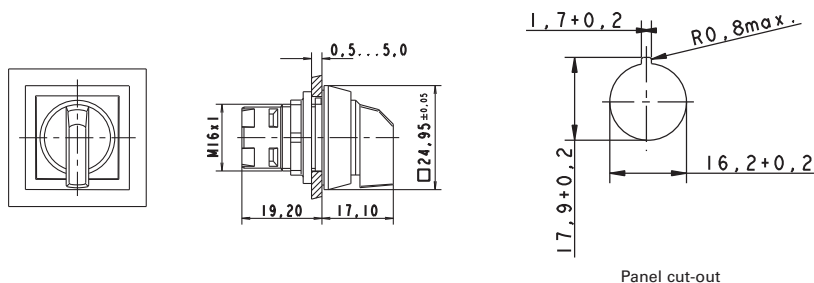
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Selector switch, square collar, alignable without gaps

Technical data see page 2 - 17



Panel cut-out

| → Illumination | Contact function | Rotating angle  | Marking of handle | Order no.                           |
|----------------|------------------|-----------------|-------------------|-------------------------------------|
| yes            | momentary        | 1 x 40°         |                   | translucent white 1.30.073.591/2000 |
| yes            | momentary        | 2 x 40°         |                   | translucent white 1.30.073.691/2000 |
| yes            | latching         | 1 x 90°, form L |                   | translucent white 1.30.073.541/2000 |
| yes            | latching         | 1 x 90°, form V |                   | translucent white 1.30.073.641/2000 |
| yes            | latching         | 2 x 60°         |                   | translucent white 1.30.073.741/2000 |
| no             | momentary        | 1 x 40°         |                   | opaque white 1.30.073.590/0200      |
| no             | momentary        | 2 x 40°         |                   | opaque white 1.30.073.690/0200      |
| no             | latching         | 1 x 90°, form L |                   | opaque white 1.30.073.540/0200      |
| no             | latching         | 1 x 90°, form V |                   | opaque white 1.30.073.640/0200      |
| no             | latching         | 2 x 60°         |                   | opaque white 1.30.073.740/0200      |

Only use contact blocks with „momentary“ contact function.

For versions with clockwise and counterclockwise rotation, use universal contact blocks only!

For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

### Accessoires:

RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

## RAFIX 16 Keylock switches

→ The locking systems we use are created according to DIN EN 1303 by leading lock manufacturers. They are open, mechanical systems that require occasional maintenance of the machinery or plant operator depending on environmental conditions.

### Technical Data

#### → General information

Form of collar see order block

#### → Dimensions

Collar dimensions see order block

Overall height 27.95 mm

Mounting depth 44.7 mm

Mounting hole 16.2 mm

Key grid 25 x 25 mm

#### → Mechanical design

Mounting ring nut

Contact function see order block

Contact arrangement according to contact block

Illumination no

Lock Micromec

Wafers 5

Lock type 001

Number of locking positions 500

Main key on request

Rotating angle see order block

Key removal position see order block

#### → Mechanical characteristics

Torque max. 1.3 Nm

#### → Electrical characteristics

Protection class II

#### → Other specifications

ESD-strength lock / contact 15 kV

ESD strength key/ front panel 8 kV

Operating life (operations) 65,000

Degree of protection from front side IP65 (DIN EN 60529)

Operation temperature min. -25 °C

Ambient temp. operating max. without lamp /LED +70 °C

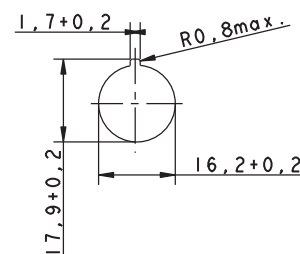
Storage temperature min. -40 °C

Storage temperature max. +85 °C

Environmental resistance acc. to IEC 60068-2-14, -30, -33 and -78

ROHS compliant yes

REACH compliant yes



Panel cut-out

### Approvals



IEC 61058, 25T70



C22.2 No. 14-M91



### Accessories RAFIX 16 - Keylock switch

| → Description                                                                   | Photo                                                                               | Order no. | Additional accessories see page |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|---------------------------------|
| RAFIX - Insulating housing, Ø 16.2 mm                                           |  | -         | 2 - 78, 5 - 19                  |
| RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals |  | -         | 2 - 65                          |

# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

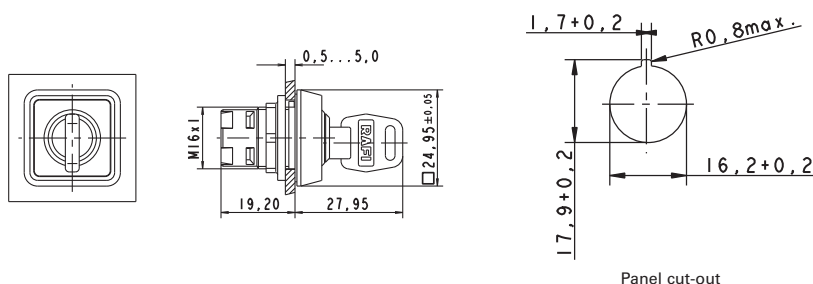
– Table (continued) –  
Accessories RAFIX 16 - Keylock switch

| → Description                                                                     | Photo                                                                             | Order no.         | Additional accessories see page |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------|---------------------------------|
| RAFIX 16 - Universal contact block, gold contacts, with screw terminals           |  | -                 | 2 - 66                          |
| RAFIX 16 - Universal contact block, silver contacts, with quick-connect terminals |  | -                 | 2 - 70                          |
| RAFIX 16 - Universal contact block, silver contacts, with screw terminals         |  | -                 | 2 - 71                          |
| Spare key, (delivery content 1 key)                                               |  | 5.58.007.001/0000 | -                               |
| Spare key, for double action, e.g. 2 x 90° (delivery content 1 key)               |  | 5.58.008.001/0000 | -                               |

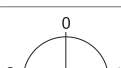


## RAFIX 16 Keylock switch, square collar

Technical data see page 2 - 21



Panel cut-out

| → Contact function | Rotating angle  |                                                                                     | Key removal position | Order no.         |
|--------------------|-----------------|-------------------------------------------------------------------------------------|----------------------|-------------------|
| momentary          | 1 x 40°         |  | 0                    | 1.30.076.501/0000 |
| momentary          | 2 x 40°         |  | 0                    | 1.30.076.701/0000 |
| latching           | 1 x 90°, form L |  | 0                    | 1.30.076.001/0000 |
| latching           | 1 x 90°, form L |  | 0+1                  | 1.30.076.051/0000 |
| latching           | 1 x 90°, form V |  | 0                    | 1.30.076.101/0000 |
| latching           | 1 x 90°, form V |  | 0+1                  | 1.30.076.151/0000 |
| latching           | 2 x 90°         |  | 0                    | 1.30.076.301/0000 |
| latching           | 2 x 90°         |  | 0+1+2                | 1.30.076.401/0000 |

## – Table (continued) –

### RAFIX 16 - Keylock switch, square collar

Only use contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact block only.

Other contact functions on request.

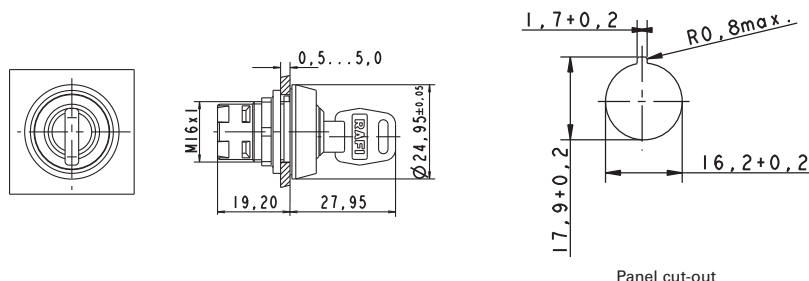
Included: 2 keys

#### Accessoires:

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80

## RAFIX 16 Keylock switch, round collar

Technical data see page 2 - 21



Panel cut-out



2

RAFIX  
16

| → Contact function | Rotating angle  |  | Key removal position | Order no.         |
|--------------------|-----------------|--|----------------------|-------------------|
| momentary          | 1 x 40°         |  | 0                    | 1.30.076.521/0000 |
| momentary          | 2 x 40°         |  | 0                    | 1.30.076.721/0000 |
| latching           | 1 x 90°, form L |  | 0                    | 1.30.076.021/0000 |
| latching           | 1 x 90°, form L |  | 0+1                  | 1.30.076.071/0000 |
| latching           | 1 x 90°, form V |  | 0                    | 1.30.076.121/0000 |
| latching           | 1 x 90°, form V |  | 0+1                  | 1.30.076.171/0000 |
| latching           | 2 x 90°         |  | 0                    | 1.30.076.321/0000 |
| latching           | 2 x 90°         |  | 0+1+2                | 1.30.076.421/0000 |

Only use contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact block only.

Other contact functions on request.

Included: 2 keys

#### Accessoires:

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

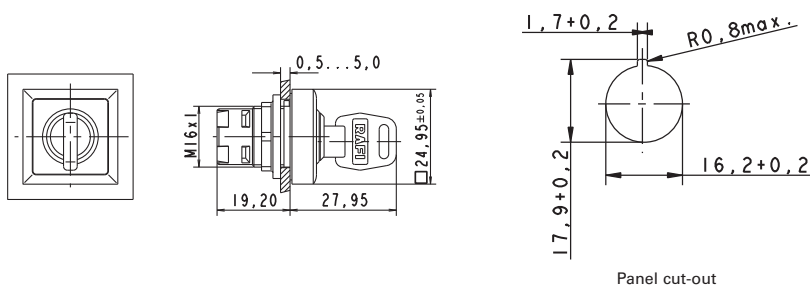
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Keylock switch, square collar, alignable without gaps

Technical data see page 2 - 21



Panel cut-out

| → Contact function | Rotating angle  | Key removal position | Order no. |
|--------------------|-----------------|----------------------|-----------|
| momentary          | 1 x 40°         |                      | 0         |
| momentary          | 2 x 40°         |                      | 0         |
| latching           | 1 x 90°, form L |                      | 0         |
| latching           | 1 x 90°, form L |                      | 0+1       |
| latching           | 1 x 90°, form V |                      | 0         |
| latching           | 1 x 90°, form V |                      | 0+1       |
| latching           | 2 x 90°         |                      | 0         |
| latching           | 2 x 90°         |                      | 0+1+2     |

Only use contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact block only.

Other contact functions on request.

Included: 2 keys

### Accessoires:

RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

## RAFIX 16 Mushroom-headed pushbuttons

### Technical Data

#### → General information

|                   |                 |
|-------------------|-----------------|
| Actuator          | mushroom        |
| Color of mushroom | see order block |
| Form of collar    | see order block |

#### → Dimensions

|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | 12.1 mm         |
| Mounting depth    | 44.7 mm         |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

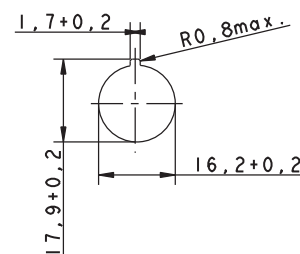
|                     |                            |
|---------------------|----------------------------|
| Mounting            | ring nut                   |
| Contact function    | according to contact block |
| Contact arrangement | according to contact block |
| Illumination        | no                         |

#### → Mechanical characteristics

|                  |        |
|------------------|--------|
| Operating travel | 3 mm   |
| Robustness max.  | 100 Nm |

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 2,000,000                                |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



Panel cut-out

### Approvals



IEC 61058, 25T70



C22.2 No. 14-M91



### Accessories RAFIX 16 - Mushroom-headed pushbutton

| → Description                                    | Photo | Order no.         | Additional accessories see page |
|--------------------------------------------------|-------|-------------------|---------------------------------|
| RAFIX - Insulating housing, Ø 16.2 mm            |       | -                 | 2 - 78, 5 - 19                  |
| RAFIX 16 - Contact blocks with gold contacts     |       | -                 | 2 - 62                          |
| RAFIX 16 - Contact blocks with silver contacts   |       | -                 | 2 - 67                          |
| RAFIX 16 - Label holder, flush, for round collar |       | -                 | 2 - 80                          |
| Fixing spanner for hexagon nut                   |       | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |

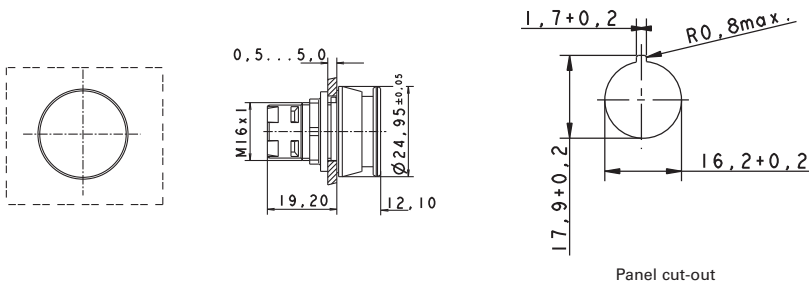
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Mushroom-headed pushbutton, round collar

Technical data see page 2 - 25



| → Illumination | Color of mushroom | Order no.         |
|----------------|-------------------|-------------------|
| no             | opaque red        | 1.30.071.021/0300 |
| no             | opaque black      | 1.30.071.021/0100 |

For the „latching“ function, please use the standard contact block with „latching“ function.



## RAFIX 16 Emergency stop pushbuttons

→ Original operating instructions see Appendix.

### Technical Data

#### → General information

|                   |                 |
|-------------------|-----------------|
| Actuator          | mushroom        |
| Color of mushroom | see order block |
| Form of collar    | see order block |

#### → Dimensions

|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | see order block |
| Mounting depth    | 44.7 mm         |
| Mounting hole     | 16.2 mm         |

#### → Mechanical design

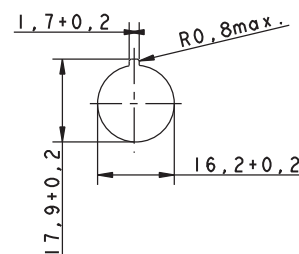
|                     |                                        |
|---------------------|----------------------------------------|
| Mounting            | ring nut                               |
| Contact function    | latching                               |
| Contact arrangement | according to contact block             |
| Illumination        | see order block                        |
| Reset               | counterclockwise or clockwise rotation |

#### → Mechanical characteristics

|                 |                       |
|-----------------|-----------------------|
| Robustness max. | 100 N                 |
| Robustness      | acc. to IEC 60947-5-5 |

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 30,000                                   |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| Corresponding to CE Ma-Dir. 89/392             | yes                                      |
| Dupe-proof acc. to DIN EN ISO 13850            | see order block                          |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



Panel cut-out

### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp



C22.2 No.  
14-M91



### Accessories RAFIX 16 - Emergency stop pushbutton

| → Description                                                                                              | Photo | Order no. | Additional accessories see page |
|------------------------------------------------------------------------------------------------------------|-------|-----------|---------------------------------|
| Emergency stop label, PVC adhesive, Ø 16.3 mm                                                              |       | -         | 2 - 81, 5 - 21                  |
| RAFIX - Insulating housing, Ø 16.2 mm                                                                      |       | -         | 2 - 78, 5 - 19                  |
| RAFIX 16 - Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals |       | -         | 2 - 71                          |
| RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals                            |       | -         | 2 - 65                          |

# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

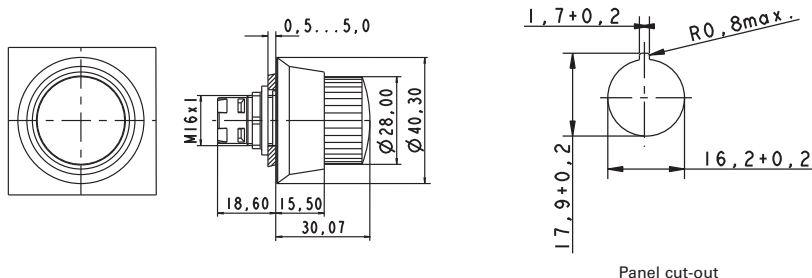
## Accessories RAFIX 16 - Emergency stop pushbutton

| → Description                                                                     | Photo                                                                              | Order no.         | Additional accessories see page |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| RAFIX 16 - Universal contact block, gold contacts, with screw terminals           |   | -                 | 2 - 66                          |
| RAFIX 16 - Universal contact block, silver contacts, with quick-connect terminals |   | -                 | 2 - 70                          |
| RAFIX 16 - Universal contact block, silver contacts, with screw terminals         |   | -                 | 2 - 71                          |
| Fixing spanner for hexagon nut                                                    |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |



## RAFIX 16 Emergency stop pushbutton, round collar, dupe-proof, non-blocking

Technical data see page 2 - 27



| → Illumination | Color of mushroom         | Order no.         |
|----------------|---------------------------|-------------------|
| no             | opaque red, collar yellow | 1.30.074.821/0000 |

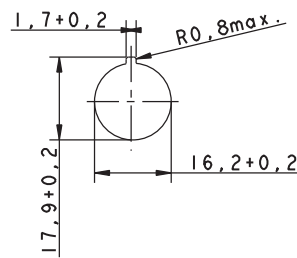
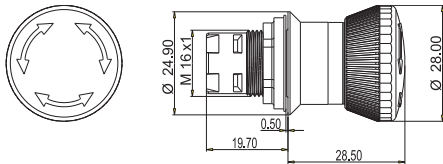
Only use universal contact blocks.

The positively driven mechanical arrangement is dupe-proof to DIN EN ISO 13850.

Special shape prevents blocking: Actuation cannot be interrupted by any jamming objects.

## RAFIX 16 Emergency stop pushbutton, round collar, conical, dupe-proof, non-blocking

Technical data see page 2 - 27



Panel cut-out



| → Illumination | Color of mushroom | Order no.         |
|----------------|-------------------|-------------------|
| no             | opaque red        | 1.30.074.281/0300 |

Only use universal contact blocks.

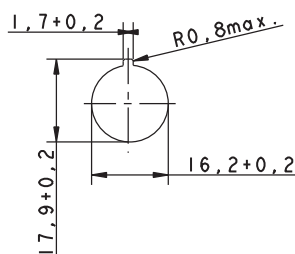
The positively driven mechanical arrangement is dupe-proof to DIN EN ISO 13850.

# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

2

RAFIX  
16



Panel cut-out

## Approvals



IEC 61058, 25T70



C22.2 No.  
14-M91



# RAFIX 16 Toggle switches

## Technical Data

### → General information

Form of collar see order block

### → Dimensions

Collar dimensions see order block  
Overall height 18.4 mm  
Mounting depth 44.7 mm  
Mounting hole 16.2 mm  
Key grid 25 x 25 mm

### → Mechanical design

Mounting ring nut  
Contact function latching  
Contact arrangement according to contact block  
Illumination no

### → Mechanical characteristics

Robustness max. 100 N

### → Other specifications

Degree of protection from front side IP65 (DIN EN 60529)  
Operation temperature min. -25 °C  
Ambient temp. operating max. without lamp /LED +70 °C  
Ambient temp. operating max. with lamp /LED +55 °C  
Storage temperature min. -40 °C  
Storage temperature max. +85 °C  
Environmental resistance acc. to IEC 60068-2-14, -30, -33 and -78  
Operating life (operations) 300,000  
ROHS compliant yes  
REACH compliant yes

## Accessories RAFIX 16 - Toggle switch

### → Description

### Photo

### Order no.

### Additional accessories see page

RAFIX 16 - Standard contact block, 1 NC + 1 NO, momentary, silver contacts, without lamp socket



1.20.122.021/0000

2 - 68

RAFIX 16 - Standard contact block, 1 NC + 1 NO, momentary, gold contacts, without lamp socket



1.20.122.031/0000

2 - 63

RAFIX 16 - Standard contact block, silver contacts, without lamp socket, screw terminals



1.20.122.121/0000

2 - 69

RAFIX 16 - Standard contact block, gold contacts, without lamp socket, screw terminals



1.20.122.131/0000

2 - 64

Label holder, flush, for square collar



5.07.620.004/0000

2 - 80

Fixing spanner for hexagon nut



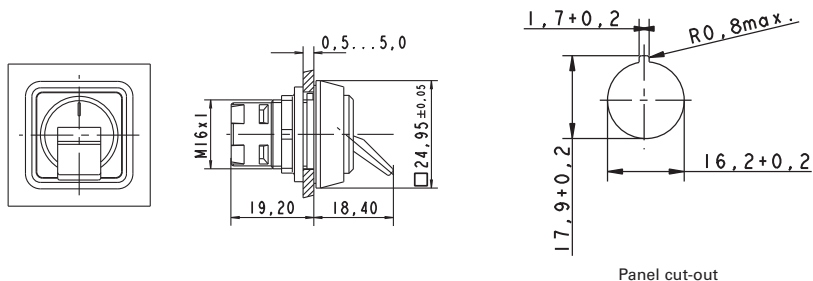
5.58.002.034/0000

2 - 78, 5 - 26

For other contact blocks, refer to the chapter „RAFIX 16 contact blocks“; for additional accessories, refer to the chapter „RAFIX 16 special accessories“.

## RAFIX 16 Toggle switch, square collar

Technical data see page 2 - 30



| → Contact function | Illumination | Order no.         |
|--------------------|--------------|-------------------|
| latching           | no           | 1.30.075.001/0104 |

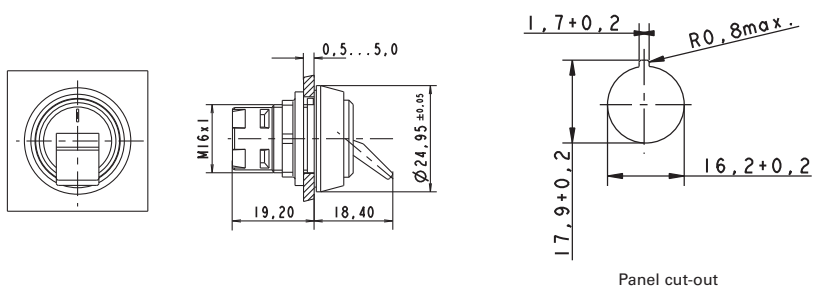
Only use contact blocks with „momentary“ contact function.

2

RAFIX  
16

## RAFIX 16 Toggle switch, round collar

Technical data see page 2 - 30



| → Contact function | Illumination | Order no.         |
|--------------------|--------------|-------------------|
| latching           | no           | 1.30.075.021/0104 |

Only use contact blocks with „momentary“ contact function.

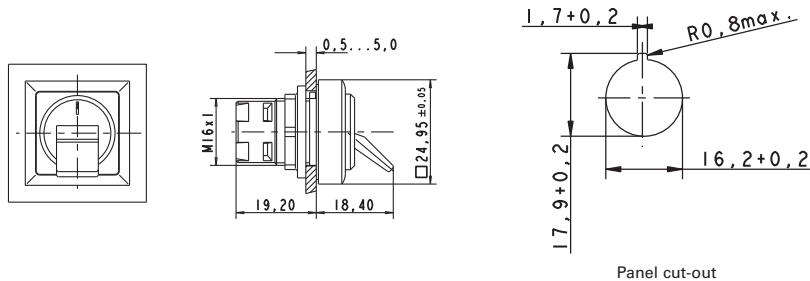
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Toggle switch, square collar, alignable without gaps

Technical data see page 2 - 30



| → Contact function | Illumination | Order no.         |
|--------------------|--------------|-------------------|
| latching           | no           | 1.30.075.041/0104 |

Only use contact blocks with „momentary“ contact function.

2

RAFIX  
16

## RAFIX 16 Potentiometer drives

- To operate potentiometers with a shaft diameter of 6 mm.  
Suitable for potentiometers to DIN 41 450 with a shaft length of 32 mm.  
Potentiometer not included.

### Technical Data

#### → General information

|                 |                 |
|-----------------|-----------------|
| Form of lens    | handle          |
| Color of handle | black           |
| Form of collar  | see order block |

#### → Dimensions

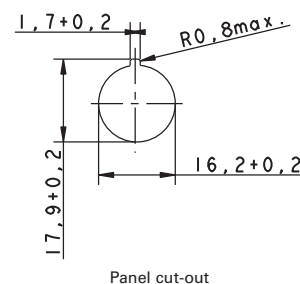
|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | 23.65 mm        |
| Mounting depth    | 19.2 mm         |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

|            |            |
|------------|------------|
| Mounting   | ring nut   |
| Thread nut | M10 x 0,75 |

#### → Other specifications

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Degree of protection from front side | IP65 (DIN EN 60529)                      |
| Operation temperature min.           | -25 °C                                   |
| Ambient temp. operating max.         | +70 °C                                   |
| Storage temperature min.             | -40 °C                                   |
| Storage temperature max.             | +85 °C                                   |
| Environmental resistance             | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                       | yes                                      |
| REACH compliant                      | yes                                      |



Panel cut-out

2

RAFIX  
16

### Accessories RAFIX 16 - Potentiometer drive

#### → Description

#### Photo

#### Order no.

#### Additional accessories see page

Fixing spanner for hexagon nut



5.58.002.034/0000

2 - 78, 5 - 26

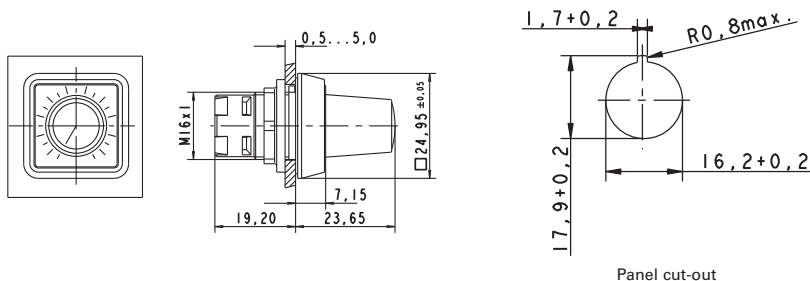
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Potentiometer drive, square collar

Technical data see page 2 - 33



Panel cut-out

| → Form of lens | Form of collar | Color of handle | Order no.         |
|----------------|----------------|-----------------|-------------------|
| handle         | square         | black           | 1.30.077.001/0000 |

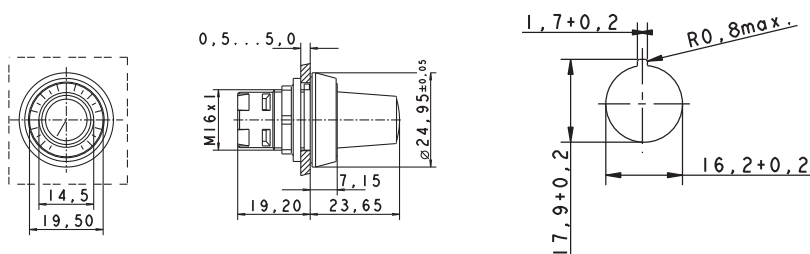
### Accessoires:

RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80



## RAFIX 16 Potentiometer drive, round collar

Technical data see page 2 - 33



Panel cut-out

| → Form of lens | Form of collar | Color of handle | Order no.         |
|----------------|----------------|-----------------|-------------------|
| handle         | round          | black           | 1.30.077.021/0000 |

### Accessoires:

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

2

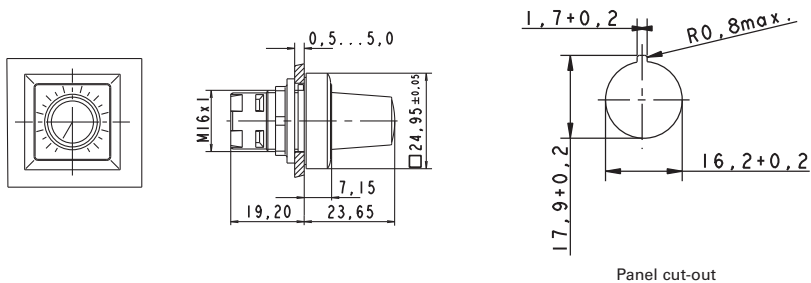
RAFIX  
16



RAFIX 16

Potentiometer drive, square collar,  
alignable without gaps

Technical data see page 2 - 33



| → Form of lens | Form of collar   | Color of handle | Order no.         |
|----------------|------------------|-----------------|-------------------|
| handle         | square alignable | black           | 1.30.077.041/0000 |

Accessoires:  
 RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

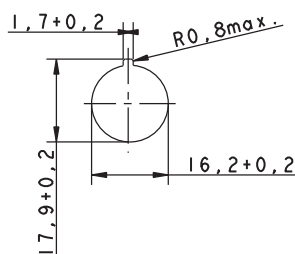


# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS

2

RAFIX  
16



Panel cut-out

## RAFIX 16 Buzzers

### Technical Data

#### → General information

|                |                 |
|----------------|-----------------|
| Form of lens   | flat lens       |
| Color of lens  | opaque black    |
| Form of collar | see order block |
| Sound          | see order block |

#### → Dimensions

|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | 6.95 mm         |
| Mounting depth    | 30.5 mm         |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

|          |          |
|----------|----------|
| Mounting | ring nut |
|----------|----------|

#### → Electrical characteristics

|                      |                 |
|----------------------|-----------------|
| Operating voltage DC | 24 V            |
| Input current        | see order block |

#### → Acoustic characteristics

|                                   |                 |
|-----------------------------------|-----------------|
| Sonic pressure, 1 m distance min. | see order block |
| Sound frequency                   | 2400 - 3100 Hz  |

#### → Other specifications

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Degree of protection from front side | IP65 (DIN EN 60529)                      |
| Operation temperature min.           | -25 °C                                   |
| Ambient temp. operating max.         | +70 °C                                   |
| Storage temperature min.             | -40 °C                                   |
| Storage temperature max.             | +85 °C                                   |
| Environmental resistance             | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                       | yes                                      |
| REACH compliant                      | yes                                      |

### Accessories RAFIX 16 - Buzzer

#### → Description

#### Photo

#### Order no.

#### Additional accessories see page

Fixing spanner for hexagon nut

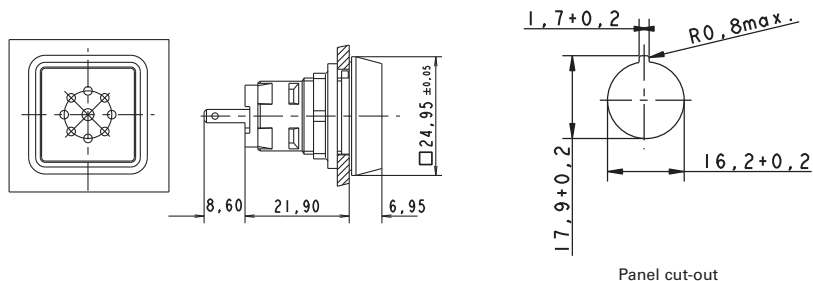


5.58.002.034/0000

2 - 78, 5 - 26

## RAFIX 16 Buzzer, square collar

Technical data see page 2 - 36



| → Operating voltage DC | Input current | Sound          | Sonic pressure, 1 m distance min. | Order no.         |
|------------------------|---------------|----------------|-----------------------------------|-------------------|
| 24 V                   | 25 mA         | continuos beep | 70 dB                             | 1.30.078.001/0100 |

12 V DC available on request.

### Accessoires:

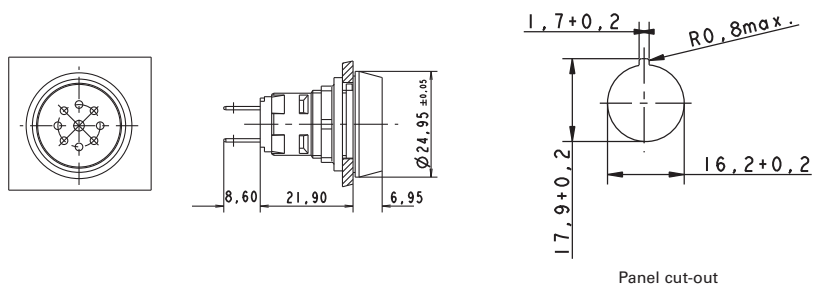
RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80

2

RAFIX  
16

## RAFIX 16 Buzzer, round collar

Technical data see page 2 - 36



| → Operating voltage DC | Input current | Sound          | Sonic pressure, 1 m distance min. | Order no.         |
|------------------------|---------------|----------------|-----------------------------------|-------------------|
| 24 V                   | 25 mA         | continuos beep | 70 dB                             | 1.30.078.021/0100 |

12 V DC available on request.

### Accessoires:

RAFIX 16 - Label holder, flush, for round collar: see page 2 - 80

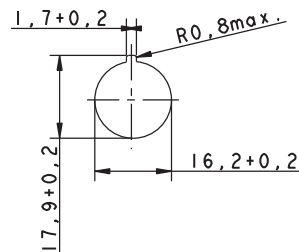
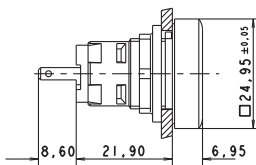
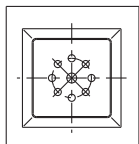
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Buzzer, square collar, alignable without gaps

Technical data see page 2 - 36



Panel cut-out

| → Operating voltage DC | Input current | Sound           | Sonic pressure, 1 m distance min. | Order no.         |
|------------------------|---------------|-----------------|-----------------------------------|-------------------|
| 24 V                   | 25 mA         | continuous beep | 70 dB                             | 1.30.078.041/0100 |

12 V DC available on request.

**Accessoires:**

RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

## RAFIX 16 Signal indicators

### Technical Data

#### → General information

|                |                 |
|----------------|-----------------|
| Form of lens   | see order block |
| Color of lens  | see order block |
| Form of collar | see order block |

#### → Dimensions

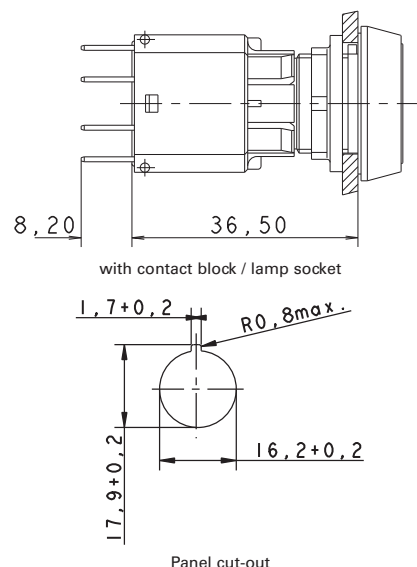
|                   |                 |
|-------------------|-----------------|
| Collar dimensions | see order block |
| Overall height    | see order block |
| Mounting depth    | 30.5 / 44.7 mm  |
| Mounting hole     | 16.2 mm         |
| Key grid          | 25 x 25 mm      |

#### → Mechanical design

|          |          |
|----------|----------|
| Mounting | ring nut |
|----------|----------|

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



### Approvals



IEC 61058, 25T55



C22.2 No.  
14-M91



### Accessories RAFIX 16 - Signal indicator

#### → Description

| Description                           | Photo | Order no.         | Additional accessories see page |
|---------------------------------------|-------|-------------------|---------------------------------|
| RAFIX - Insulating housing, Ø 16.2 mm |       | -                 | 2 - 78, 5 - 19                  |
| RAFIX 16 - Lamp socket                |       | -                 | 2 - 73                          |
| Socket W 2 x 4.6d, LED superbright    |       | -                 | 5 - 5                           |
| Fixing spanner for hexagon nut        |       | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |

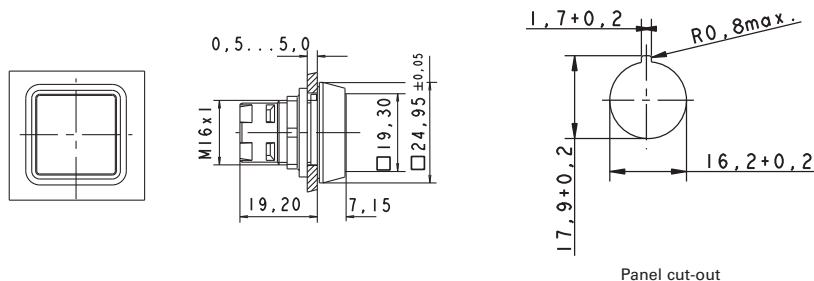
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Signal indicator, square lens

Technical data see page 2 - 39



Panel cut-out

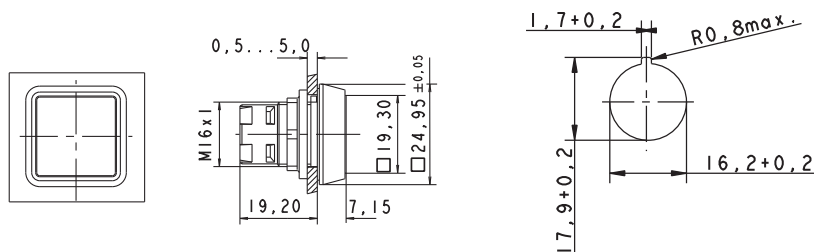
| → Form of lens | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| lens square    | transparent red       | 1.65.124.001/1306  | 1.65.124.101/0000      | 5.49.263.006/1306 |
| lens square    | transparent yellow    | 1.65.124.001/1403  | 1.65.124.101/0000      | 5.49.263.006/1403 |
| lens square    | transparent green     | 1.65.124.001/1505  | 1.65.124.101/0000      | 5.49.263.006/1505 |
| lens square    | transparent blue      | 1.65.124.001/1607  | 1.65.124.101/0000      | 5.49.263.006/1607 |
| lens square    | transparent colorless | 1.65.124.001/1002  | 1.65.124.101/0000      | 5.49.263.006/1002 |

Legending can only be made externally on a label holder.



## RAFIX 16 Signal indicator, square collar, flush lens

Technical data see page 2 - 39



Panel cut-out

| → Form of lens | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| flat lens      | transparent red       | 1.65.124.301/1306  | 1.65.124.401/0000      | 5.49.077.011/1306 |
| flat lens      | transparent yellow    | 1.65.124.301/1403  | 1.65.124.401/0000      | 5.49.077.011/1403 |
| flat lens      | transparent green     | 1.65.124.301/1505  | 1.65.124.401/0000      | 5.49.077.011/1505 |
| flat lens      | transparent blue      | 1.65.124.301/1607  | 1.65.124.401/0000      | 5.49.077.011/1607 |
| flat lens      | transparent colorless | 1.65.124.301/1002  | 1.65.124.401/0000      | 5.49.077.011/1002 |

– Table (continued) –

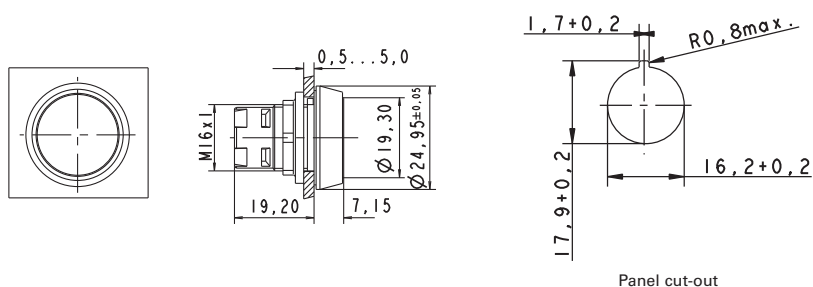
### RAFIX 16 - Signal indicator, square collar, flush lens

#### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

## RAFIX 16 Signal indicator, round lens

Technical data see page 2 - 39



Panel cut-out



2

RAFIX  
16

| → Form of lens | Color of lens         | Order no. complete | Order no. single parts |                   |
|----------------|-----------------------|--------------------|------------------------|-------------------|
|                |                       |                    | Housing                | Lens              |
| lens round     | transparent red       | 1.65.124.021/1306  | 1.65.124.101/0000      | 5.49.263.007/1306 |
| lens round     | transparent yellow    | 1.65.124.021/1403  | 1.65.124.101/0000      | 5.49.263.007/1403 |
| lens round     | transparent green     | 1.65.124.021/1505  | 1.65.124.101/0000      | 5.49.263.007/1505 |
| lens round     | transparent colorless | 1.65.124.021/1002  | 1.65.124.101/0000      | 5.49.263.007/1002 |

Legending can only be made externally on a label holder.

# CONTROL COMPONENTS

RAFIX 16 F - GENERAL INFORMATION

2

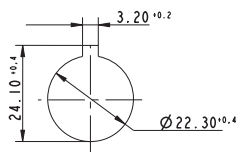
RAFIX  
16



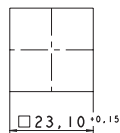
RAFIX 16 is a complete control component series with low profile design.

## Actuators RAFIX 16 F

- Panel cut-out  $\varnothing$  22.3 mm to IEC 60 947-5-1
- Panel cut-out  $\square$  23.1 mm



RAFIX 16 F round



RAFIX 16 F square

- Locating lug.  
The locating lug can be easily removed using a screwdriver.
- Degree of protection IP65 on panel
- Grid spacing 30 x 30 mm, round lens
- Grid spacing 25 x 25 mm, square lens
- Low profile, only 1.7 mm in front of the front panel
- Thickness of front panel 0.5 ... 3.5 mm
- Fixing with hexagon nut
- Fixing torque 1.2 Nm max.

## Contact blocks RAFIX 16

- Contact block standard: for actuators with one-way operation
  - latching function
  - momentary function
- Contact block universal: for E-stop pushbuttons and for actuators with two-way operation, e. g. selector or keylock switches
  - momentary function

### Contact material

- Silver contacts for mains voltage
- Gold contacts for electronic circuits

### Illumination

- LED or wedge base lamp with socket W 2 x 4.6 d

### Shock-resistance according to IEC 600 68-2-27

- Shock amplitude:  $\leq 50$  g
- Shock time: 11 ms
- Shock type: half sinusoidal

### Environment conditions

- acc. to IEC 600 68-2, -14, -30, -33 and -78

### Temperature range

- Operating temperature:
  - non-illuminated: - 25 ... + 70 °C
  - illuminated: - 25 ... + 55 °C
- Storage temperature: - 40 ... + 85 °C





## RAFIX 16 F Pushbuttons

- RAFIX 16 F pushbuttons provide with less than 2 mm height above the front-panel an extremely low-profile design. The versions with square collars can be placed side by side so that a completely closed keyboard survey is possible.

### Technical Data

#### → General information

|                 |                 |
|-----------------|-----------------|
| Form of lens    | see order block |
| Color of lens   | see order block |
| Form of collar  | see order block |
| Color of collar | see order block |

#### → Dimensions

|                                   |                 |
|-----------------------------------|-----------------|
| Collar dimensions                 | see order block |
| Overall height                    | see order block |
| Mounting depth with contact block | 50 mm           |
| Key grid                          | see order block |
| Mounting hole                     | see order block |

#### → Mechanical design

|                  |                       |
|------------------|-----------------------|
| Mounting         | ring nut              |
| Contact function | je nach Schaltelement |
| Illumination     | see order block       |

#### → Mechanical characteristics

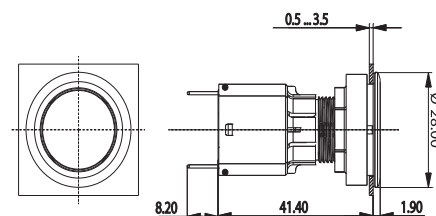
|                 |       |
|-----------------|-------|
| Robustness max. | 100 N |
|-----------------|-------|

#### → Electrical characteristics

|                  |                 |
|------------------|-----------------|
| Protection class | see order block |
|------------------|-----------------|

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 2,000,000                                |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp



in preparation



### Accessories RAFIX 16 F - Pushbutton

| → Description                                  | Photo | Order no.         | Additional accessories see page |
|------------------------------------------------|-------|-------------------|---------------------------------|
| RAFIX 16 - Contact blocks with gold contacts   |       | -                 | 2 - 62                          |
| RAFIX 16 - Contact blocks with silver contacts |       | -                 | 2 - 67                          |
| Socket W 2 x 4.6d, LED superbright             |       | -                 | 5 - 5                           |
| Disassembly tool for LUMOTAST 25, RAFIX 16     |       | 5.05.800.042/0000 | 5 - 27                          |

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

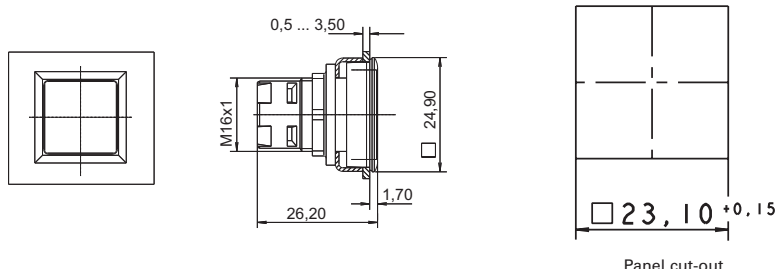
## – Table (continued) – Accessories RAFIX 16 F - Pushbutton

| → Description                  | Photo                                                                              | Order no.         | Additional accessories see page |
|--------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| Fixing spanner for hexagon nut |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |



## RAFIX 16 F Pushbutton, flush lens, square black collar

Technical data see page 2 - 43



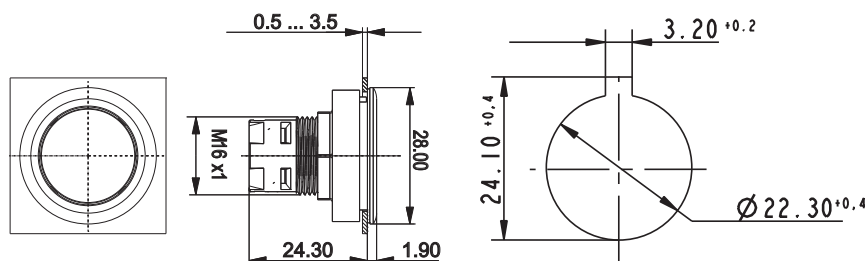
| → Color of collar | Illumination | Color of lens         | Order no. complete | Order no. single parts |                   |
|-------------------|--------------|-----------------------|--------------------|------------------------|-------------------|
|                   |              |                       |                    | Housing                | Lens              |
| black             | yes          | transparent red       | 1.30.090.001/1300  | 1.30.090.501/0000      | 5.49.077.011/1306 |
| black             | yes          | transparent yellow    | 1.30.090.001/1400  | 1.30.090.501/0000      | 5.49.077.011/1403 |
| black             | yes          | transparent green     | 1.30.090.001/1500  | 1.30.090.501/0000      | 5.49.077.011/1505 |
| black             | yes          | transparent blue      | 1.30.090.001/1600  | 1.30.090.501/0000      | 5.49.077.011/1607 |
| black             | yes          | transparent colorless | 1.30.090.001/1000  | 1.30.090.501/0000      | 5.49.077.011/1002 |
| black             | no           | opaque red            | 1.30.090.251/0300  | -                      | -                 |
| black             | no           | opaque yellow         | 1.30.090.251/0400  | -                      | -                 |
| black             | no           | opaque green          | 1.30.090.251/0500  | -                      | -                 |
| black             | no           | opaque blue           | 1.30.090.251/0600  | -                      | -                 |
| black             | no           | opaque white          | 1.30.090.251/0200  | -                      | -                 |
| black             | no           | opaque black          | 1.30.090.251/0100  | -                      | -                 |

### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

## RAFIX 16 F Pushbutton, flush lens, round black collar

Technical data see page 2 - 43



Panel cut-out to IEC 60947-5-1

| → Color of collar | Illumination      | Color of lens         | Order no. complete | Order no. single parts |                   |
|-------------------|-------------------|-----------------------|--------------------|------------------------|-------------------|
|                   |                   |                       |                    | Housing                | Lens              |
| black             | yes               | transparent red       | 1.30.090.011/1300  | 1.30.090.511/0000      | 5.49.259.017/1306 |
| black             | yes               | transparent yellow    | 1.30.090.011/1400  | 1.30.090.511/0000      | 5.49.259.017/1403 |
| black             | yes               | transparent green     | 1.30.090.011/1500  | 1.30.090.511/0000      | 5.49.259.017/1505 |
| black             | yes               | transparent blue      | 1.30.090.011/1600  | 1.30.090.511/0000      | 5.49.259.017/1607 |
| black             | yes               | transparent colorless | 1.30.090.011/1000  | 1.30.090.511/0000      | 5.49.259.017/1002 |
| black             | no                | opaque red            | 1.30.090.261/0300  | -                      | -                 |
| black             | no                | opaque yellow         | 1.30.090.261/0400  | -                      | -                 |
| black             | no                | opaque green          | 1.30.090.261/0500  | -                      | -                 |
| black             | no                | opaque blue           | 1.30.090.261/0600  | -                      | -                 |
| black             | no                | opaque white          | 1.30.090.261/0200  | -                      | -                 |
| black             | no                | opaque black          | 1.30.090.261/0100  | -                      | -                 |
| black             | ring illumination | black                 | 1.30.090.081/0000  | -                      | -                 |

### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

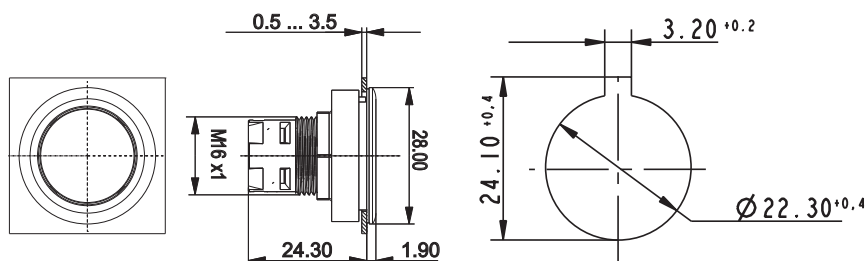
# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 F Pushbutton, flush lens, round metallized collar

Technical data see page 2 - 43



Panel cut-out to IEC 60947-5-1

| → | Color of collar | Illumination      | Color of lens         | Order no. complete | Order no. single parts |      |
|---|-----------------|-------------------|-----------------------|--------------------|------------------------|------|
|   |                 |                   |                       |                    | Housing                | Lens |
|   | silver metallic | yes               | transparent red       | 1.30.090.012/1300  | -                      | -    |
|   | silver metallic | yes               | transparent yellow    | 1.30.090.012/1400  | -                      | -    |
|   | silver metallic | yes               | transparent green     | 1.30.090.012/1500  | -                      | -    |
|   | silver metallic | yes               | transparent blue      | 1.30.090.012/1600  | -                      | -    |
|   | silver metallic | yes               | transparent colorless | 1.30.090.012/1000  | -                      | -    |
|   | silver metallic | no                | opaque red            | 1.30.090.262/0300  | -                      | -    |
|   | silver metallic | no                | opaque yellow         | 1.30.090.262/0400  | -                      | -    |
|   | silver metallic | no                | opaque green          | 1.30.090.262/0500  | -                      | -    |
|   | silver metallic | no                | opaque blue           | 1.30.090.262/0600  | -                      | -    |
|   | silver metallic | no                | opaque white          | 1.30.090.262/0200  | -                      | -    |
|   | silver metallic | no                | opaque black          | 1.30.090.262/0100  | -                      | -    |
|   | silver metallic | ring illumination | silver-grey           | 1.30.090.082/0000  | -                      | -    |

### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

## RAFIX 16 F Selector switches

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

### Technical Data

#### → General information

|                         |                 |
|-------------------------|-----------------|
| Actuator                | handle          |
| Color of handle marking | see order block |
| Form of collar          | see order block |
| Color of collar         | see order block |

#### → Dimensions

|                                   |                 |
|-----------------------------------|-----------------|
| Collar dimensions                 | see order block |
| Overall height                    | 12.1 mm         |
| Mounting depth with contact block | 50 mm           |
| Key grid                          | see order block |
| Mounting hole                     | see order block |

#### → Mechanical design

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

#### → Mechanical characteristics

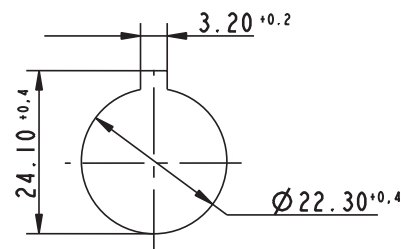
|             |        |
|-------------|--------|
| Torque max. | 1.3 Nm |
|-------------|--------|

#### → Electrical characteristics

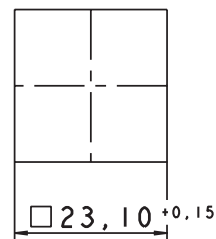
|                  |   |
|------------------|---|
| Protection class | - |
|------------------|---|

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 30.000                                   |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



Panel cut-out to IEC 60947-5-1



Panel cut-out

### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp

in preparation

### Accessories RAFIX 16 F - Selector switch

| Description                                                                                                | Photo | Order no. | Additional accessories see page |
|------------------------------------------------------------------------------------------------------------|-------|-----------|---------------------------------|
| RAFIX 16 - Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals |       | -         | 2 - 71                          |
| RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals                            |       | -         | 2 - 65                          |
| RAFIX 16 - Universal contact block, gold contacts, with screw terminals                                    |       | -         | 2 - 66                          |
| RAFIX 16 - Universal contact block, silver contacts, with quick-connect terminals                          |       | -         | 2 - 70                          |

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

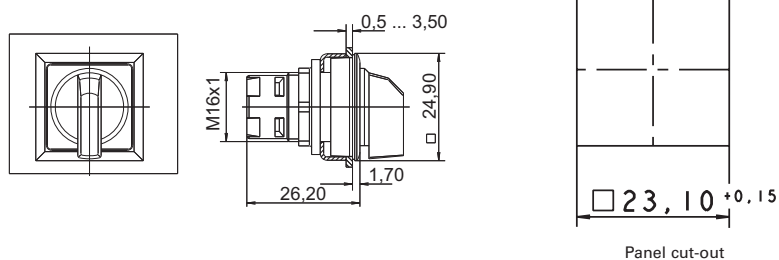
– Table (continued) –  
Accessories RAFIX 16 F - Selector switch

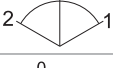
| → Description                                                             | Photo                                                                              | Order no.         | Additional accessories see page |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| RAFIX 16 - Universal contact block, silver contacts, with screw terminals |   | -                 | 2 - 71                          |
| Socket W 2 x 4.6d, LED superbright                                        |   | -                 | 5 - 5                           |
| Fixing spanner for hexagon nut                                            |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |



## RAFIX 16 F Selector switch, square black collar

Technical data see page 2 - 47



| → Color of collar | Illumination | Contact function | Rotating angle  |                                                                                     | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------|-------------------|
| black             | yes          | momentary        | 1 x 40°         |  | translucent white       | 1.30.093.551/2000 |
| black             | yes          | momentary        | 2 x 40°         |  | translucent white       | 1.30.093.651/2000 |
| black             | yes          | latching         | 1 x 90°, form L |  | translucent white       | 1.30.093.501/2000 |
| black             | yes          | latching         | 1 x 90°, form V |  | translucent white       | 1.30.093.601/2000 |
| black             | yes          | latching         | 2 x 60°         |  | translucent white       | 1.30.093.701/2000 |
| black             | no           | momentary        | 1 x 40°         |  | opaque white            | 1.30.093.550/0200 |
| black             | no           | momentary        | 2 x 40°         |  | opaque white            | 1.30.093.650/0200 |
| black             | no           | latching         | 1 x 90°, form L |  | opaque white            | 1.30.093.500/0200 |
| black             | no           | latching         | 1 x 90°, form V |  | opaque white            | 1.30.093.600/0200 |

– Table (continued) –  
RAFIX 16 F - Selector switch, square black collar

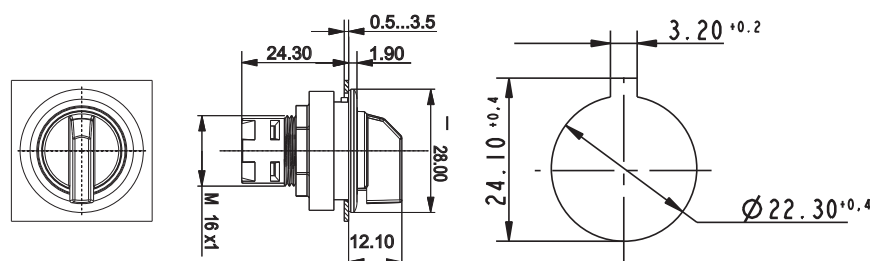
| → Color of collar | Illumination | Contact function | Rotating angle |  | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|----------------|--|-------------------------|-------------------|
| black             | no           | latching         | 2 x 60°        |  | opaque white            | 1.30.093.700/0200 |

Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

## RAFIX 16 F Selector switch, round black collar

Technical data see page 2 - 47



Panel cut-out to IEC 60947-5-1



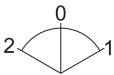
| → Color of collar | Illumination | Contact function | Rotating angle  |  | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|-----------------|--|-------------------------|-------------------|
| black             | yes          | momentary        | 1 x 40°         |  | translucent white       | 1.30.093.561/2000 |
| black             | yes          | momentary        | 2 x 40°         |  | translucent white       | 1.30.093.661/2000 |
| black             | yes          | latching         | 1 x 90°, form L |  | translucent white       | 1.30.093.511/2000 |
| black             | yes          | latching         | 1 x 90°, form V |  | translucent white       | 1.30.093.611/2000 |
| black             | yes          | latching         | 2 x 60°         |  | translucent white       | 1.30.093.711/2000 |
| black             | no           | momentary        | 1 x 40°         |  | opaque white            | 1.30.093.560/0200 |
| black             | no           | momentary        | 2 x 40°         |  | opaque white            | 1.30.093.660/0200 |
| black             | no           | latching         | 1 x 90°, form L |  | opaque white            | 1.30.093.510/0200 |
| black             | no           | latching         | 1 x 90°, form V |  | opaque white            | 1.30.093.610/0200 |

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

## RAFIX 16 F - Selector switch, round black collar

| → Color of collar | Illumination | Contact function | Rotating angle |                                                                                   | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|----------------|-----------------------------------------------------------------------------------|-------------------------|-------------------|
| black             | no           | latching         | 2 x 60°        |  | opaque white            | 1.30.093.710/0200 |

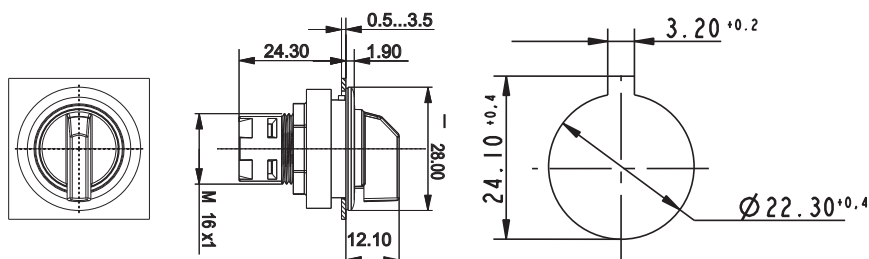
Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

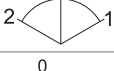


## RAFIX 16 F Selector switch, round metallized collar

Technical data see page 2 - 47



Panel cut-out to IEC 60947-5-1

| → Color of collar | Illumination | Contact function | Rotating angle  |                                                                                     | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------|-------------------|
| silver metallic   | yes          | momentary        | 1 x 40°         |  | translucent white       | 1.30.093.571/2000 |
| silver metallic   | yes          | momentary        | 2 x 40°         |  | translucent white       | 1.30.093.671/2000 |
| silver metallic   | yes          | latching         | 1 x 90°, form L |  | translucent white       | 1.30.093.521/2000 |
| silver metallic   | yes          | latching         | 1 x 90°, form V |  | translucent white       | 1.30.093.621/2000 |
| silver metallic   | yes          | latching         | 2 x 60°         |  | translucent white       | 1.30.093.721/2000 |
| silver metallic   | no           | momentary        | 1 x 40°         |  | opaque white            | 1.30.093.570/0200 |
| silver metallic   | no           | momentary        | 2 x 40°         |  | opaque white            | 1.30.093.670/0200 |
| silver metallic   | no           | latching         | 1 x 90°, form L |  | opaque white            | 1.30.093.520/0200 |
| silver metallic   | no           | latching         | 1 x 90°, form V |  | opaque white            | 1.30.093.620/0200 |

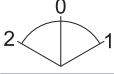


# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

**RAFIX 16 F - Selector switch, round metallized collar**

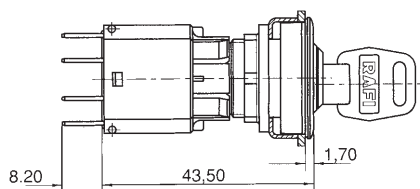
| → Color of collar | Illumination | Contact function | Rotating angle |                                                                                   | Color of handle marking | Order no.         |
|-------------------|--------------|------------------|----------------|-----------------------------------------------------------------------------------|-------------------------|-------------------|
| silver metallic   | no           | latching         | 2 x 60°        |  | opaque white            | 1.30.093.720/0200 |

Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

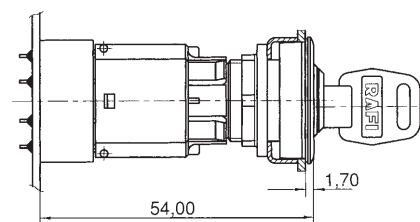
For colored illumination of the handle marking please use contact block with lamp socket and colored LED W 2 x 4,6d (see chapter 5 accessories).

2

RAFIX  
16



operating element and contact block



with PCB plug-in socket

### Approvals



IEC 61058, 25T70



in preparation



# RAFIX 16 F

## Keylock switches

→ The locking systems used in our switches are produced in accordance with DIN EN 1303 by leading lock manufacturers. The locking systems in key switches are open mechanical systems, which require occasional maintenance of the machinery or plant operator, according to the ambient conditions.

### Technical Data

#### → General information

|                |                 |
|----------------|-----------------|
| Form of lens   | flat lens       |
| Color of lens  | opaque black    |
| Form of collar | see order block |
|                | see order block |

#### → Dimensions

|                                   |                 |
|-----------------------------------|-----------------|
| Collar dimensions                 | see order block |
| Overall height                    | 24.10 mm        |
| Mounting depth with contact block | 50 mm           |
| Key grid                          | see order block |
| Mounting hole                     | see order block |

#### → Mechanical design

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

#### → Mechanical characteristics

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

#### → Electrical characteristics

|                  |    |
|------------------|----|
| Protection class | II |
|------------------|----|

#### → Other specifications

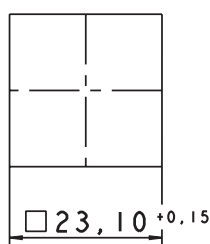
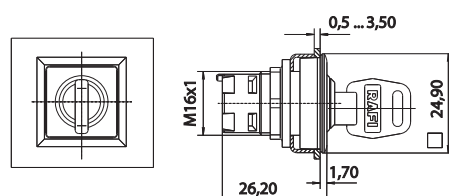
|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 65.000                                   |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | -                                        |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| Ambient temp. operating max.                   | +70 °C                                   |
| ESD-strength lock / contact                    | 15 kV                                    |
| ESD-strength key/ front panel                  | 4 kV                                     |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |

### Accessories RAFIX 16 F - Keylock switch

| → Description                                                                                              | Photo                                                                              | Order no.         | Additional accessories see page |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| RAFIX 16 - Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals |   | -                 | 2 - 71                          |
| RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals                            |   | -                 | 2 - 65                          |
| RAFIX 16 - Universal contact block, gold contacts, with screw terminals                                    |   | -                 | 2 - 66                          |
| RAFIX 16 - Universal contact block, silver contacts, with quick-connect terminals                          |   | -                 | 2 - 70                          |
| RAFIX 16 - Universal contact block, silver contacts, with screw terminals                                  |   | -                 | 2 - 71                          |
| Fixing spanner for hexagon nut                                                                             |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |
| Spare key, (delivery content 1 key)                                                                        |   | 5.58.007.001/0000 | -                               |
| Spare key, for double action, e.g. 2 x 90° (delivery content 1 key)                                        |   | 5.58.008.001/0000 | -                               |

## RAFIX 16 F Keylock switch, square black collar

Technical data see page 2 - 52



Panel cut-out



| → 2130_025 | Contact function | Rotating angle  | Key removal position                                                                      | Order no.         |
|------------|------------------|-----------------|-------------------------------------------------------------------------------------------|-------------------|
| black      | momentary        | 1 x 40°         |  0     | 1.30.096.501/0000 |
| black      | momentary        | 2 x 40°         |  0     | 1.30.096.701/0000 |
| black      | latching         | 1 x 90°, form L |  0 1   | 1.30.096.051/0000 |
| black      | latching         | 1 x 90°, form V |  0 1   | 1.30.096.151/0000 |
| black      | latching         | 2 x 90°         |  0 1 2 | 1.30.096.401/0000 |

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

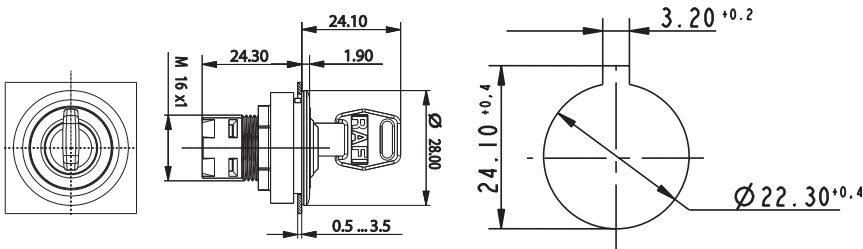
RAFIX 16 F - Keylock switch, square black collar

Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.



## RAFIX 16 F Keylock switch, round black collar

Technical data see page 2 - 52



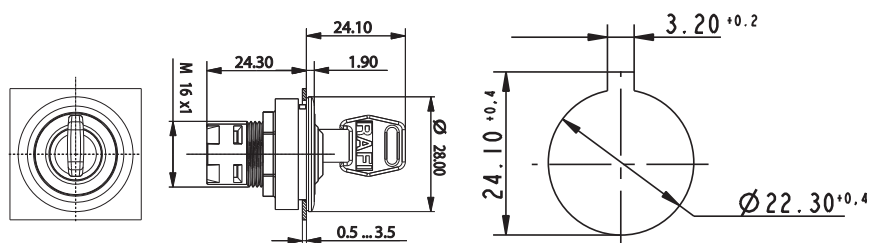
Panel cut-out to IEC 60947-5-1

| → 2130_025 | Contact function | Rotating angle  |  | Key removal position | Order no.         |
|------------|------------------|-----------------|--|----------------------|-------------------|
| black      | momentary        | 1 x 40°         |  | 0                    | 1.30.096.511/0000 |
| black      | momentary        | 2 x 40°         |  | 0                    | 1.30.096.711/0000 |
| black      | latching         | 1 x 90°, form L |  | 0+1                  | 1.30.096.061/0000 |
| black      | latching         | 1 x 90°, form V |  | 0+1                  | 1.30.096.161/0000 |
| black      | latching         | 2 x 90°         |  | 0+1+2                | 1.30.096.411/0000 |

Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

## RAFIX 16 F Keylock switch, round metallized collar

Technical data see page 2 - 52



Panel cut-out to IEC 60947-5-1

| → 2130_025      | Contact function | Rotating angle  |  | Key removal position | Order no.         |
|-----------------|------------------|-----------------|--|----------------------|-------------------|
| silver metallic | momentary        | 1 x 40°         |  | 0                    | 1.30.096.521/0000 |
| silver metallic | momentary        | 2 x 40°         |  | 0                    | 1.30.096.721/0000 |
| silver metallic | latching         | 1 x 90°, form L |  | 0+1                  | 1.30.096.071/0000 |
| silver metallic | latching         | 1 x 90°, form V |  | 0+1                  | 1.30.096.171/0000 |
| silver metallic | latching         | 2 x 90°         |  | 0+1+2                | 1.30.096.421/0000 |

Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

2

RAFIX  
16



## Approvals



IEC 61058, 25T70



in preparation



# RAFIX 16 F Emergency stop pushbuttons

→ Original operating instructions see Appendix

## Technical Data

### → General information

|                   |                       |
|-------------------|-----------------------|
| Actuator          | conical mushroom form |
| Color of mushroom | red, collar yellow    |
| Form of collar    | see order block       |

### → Dimensions

|                                   |                 |
|-----------------------------------|-----------------|
| Collar dimensions                 | see order block |
| Key grid                          | see order block |
| Overall height                    | 24.10 mm        |
| Mounting depth with contact block | 50 mm           |
| Key grid                          | see order block |
| Mounting hole                     | see order block |

### → Mechanical design

|                  |                                        |
|------------------|----------------------------------------|
| Mounting         | ring nut                               |
| Contact function | latching                               |
| Illumination     | no                                     |
| Rest             | clockwise or counterclockwise rotation |

### → Mechanical characteristics

|                 |       |
|-----------------|-------|
| Robustness max. | 100 N |
|-----------------|-------|

### → Electrical characteristics

|                  |                 |
|------------------|-----------------|
| Protection class | see order block |
|------------------|-----------------|

### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | 10.000                                   |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED    | -                                        |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |

## Accessories RAFIX 16 F - Emergency stop pushbutton

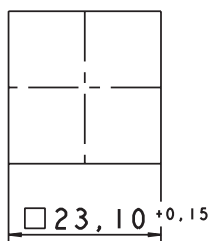
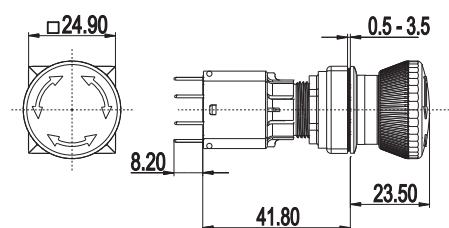
| → Description                                                                                              | Photo                                                                               | Order no. | Additional accessories see page |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|---------------------------------|
| RAFIX 16 - Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals |  | -         | 2 - 71                          |
| RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals                            |  | -         | 2 - 65                          |
| RAFIX 16 - Universal contact block, gold contacts, with screw terminals                                    |  | -         | 2 - 66                          |
| RAFIX 16 - Universal contact block, silver contacts, with quick-connect terminals                          |  | -         | 2 - 70                          |

– Table (continued) –  
Accessories RAFIX 16 F - Emergency stop pushbutton

| → Description                                                             | Photo                                                                              | Order no.         | Additional accessories see page |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|---------------------------------|
| RAFIX 16 - Universal contact block, silver contacts, with screw terminals |   | -                 | 2 - 71                          |
| Fixing spanner for hexagon nut                                            |  | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |

## RAFIX 16 F Emergency stop pushbutton, square collar

Technical data see page 2 - 56



Panel cut-out



| → Contact function | Illumination | Color of mushroom  | Mounting hole  | Order no.         |
|--------------------|--------------|--------------------|----------------|-------------------|
| latching           | no           | red, collar yellow | 23.1 x 23.1 mm | 1.30.094.001/0300 |

Only use universal contact blocks.

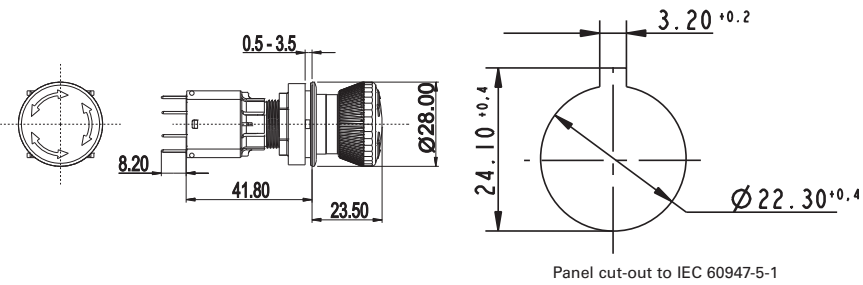
# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 F Emergency stop pushbutton, round collar

Technical data see page 2 - 56



| → | Contact function | Illumination | Color of mushroom  | Mounting hole | Order no.         |
|---|------------------|--------------|--------------------|---------------|-------------------|
|   | latching         | no           | red, collar yellow | Ø 22.3 mm     | 1.30.094.011/0300 |

Only use universal contact blocks.

**Accessoires:**

Emergency stop label, Ø 22.3 mm: see page 2 - 82, 2 - 149, 2 - 264, 5 - 21



## RAFIX 16 F Signal indicators

### Technical Data

#### → General information

|                 |                 |
|-----------------|-----------------|
| Form of lens    | see order block |
| Color of lens   | see order block |
| Form of collar  | see order block |
| Color of collar | see order block |

#### → Dimensions

|                                   |                 |
|-----------------------------------|-----------------|
| Collar dimensions                 | see order block |
| Overall height                    | see order block |
| Mounting depth with contact block | 50 mm           |
| Key grid                          | see order block |
| Mounting hole                     | see order block |

#### → Mechanical design

|                  |          |
|------------------|----------|
| Mounting         | ring nut |
| Contact function | -        |
| Illumination     | yes      |

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Operating life (operations)                    | -                                        |
| Degree of protection from front side           | IP65 (DIN EN 60529)                      |
| Operation temperature min.                     | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED | -                                        |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



### Approvals



IEC 61058, 25T55



in preparation



2

RAFIX  
16

### Accessories RAFIX 16 F - Signal indicator

| → Description                                         | Photo | Order no.         | Additional accessories see page |
|-------------------------------------------------------|-------|-------------------|---------------------------------|
| RAFIX 16 - Lamp socket                                |       | -                 | 2 - 73                          |
| Socket W 2 x 4.6d, LED superbright                    |       | -                 | 5 - 5                           |
| Fixing spanner for hexagon nut                        |       | 5.58.002.034/0000 | 2 - 78, 5 - 26                  |
| Legend insert, blank, use only for transparent lenses |       | 5.70.635.000/2000 | -                               |

For additional accessories, refer to the chapter „RAFIX 16 special accessories“.

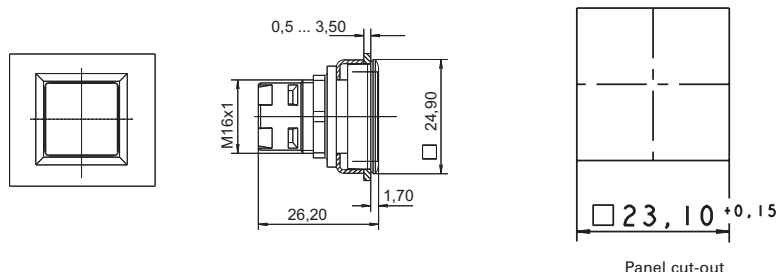
# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 F Signal indicator, flush lens, square black collar

Technical data see page 2 - 59



| → Color of collar | Overall height | Color of lens         | Order no. complete | Order no. single parts |                   |
|-------------------|----------------|-----------------------|--------------------|------------------------|-------------------|
|                   |                |                       |                    | Housing                | Lens              |
| black             | 1.7 mm         | transparent red       | 1.65.126.301/1300  | 1.65.126.401/0000      | 5.49.077.011/1306 |
| black             | 1.7 mm         | transparent yellow    | 1.65.126.301/1400  | 1.65.126.401/0000      | 5.49.077.011/1403 |
| black             | 1.7 mm         | transparent green     | 1.65.126.301/1500  | 1.65.126.401/0000      | 5.49.077.011/1505 |
| black             | 1.7 mm         | transparent blue      | 1.65.126.301/1600  | 1.65.126.401/0000      | 5.49.077.011/1607 |
| black             | 1.7 mm         | transparent colorless | 1.65.126.301/1000  | 1.65.126.401/0000      | 5.49.077.011/1002 |

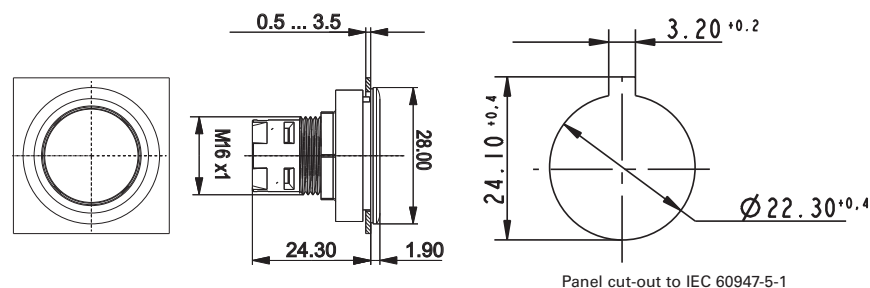
### Accessoires:

Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000



## RAFIX 16 F Signal indicator, flush lens, round black collar

Technical data see page 2 - 59



| → Color of collar | Overall height | Color of lens      | Order no. complete | Order no. single parts |                   |
|-------------------|----------------|--------------------|--------------------|------------------------|-------------------|
|                   |                |                    |                    | Housing                | Lens              |
| black             | 1.9 mm         | transparent red    | 1.65.126.001/1300  | 1.65.126.101/0000      | 5.49.259.017/1306 |
| black             | 1.9 mm         | transparent yellow | 1.65.126.001/1400  | 1.65.126.101/0000      | 5.49.259.017/1403 |
| black             | 1.9 mm         | transparent green  | 1.65.126.001/1500  | 1.65.126.101/0000      | 5.49.259.017/1505 |

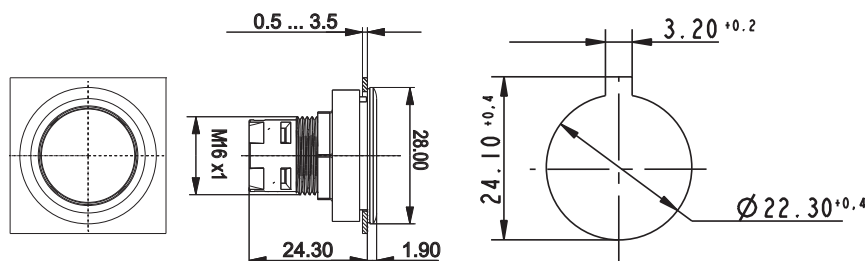
– Table (continued) –

**RAFIX 16 F - Signal indicator, flush lens, round black collar**

| → Color of collar | Overall height | Color of lens         | Order no. complete | Order no. single parts |                   |
|-------------------|----------------|-----------------------|--------------------|------------------------|-------------------|
|                   |                |                       |                    | Housing                | Lens              |
| black             | 1.9 mm         | transparent blue      | 1.65.126.001/1600  | 1.65.126.101/0000      | 5.49.259.017/1607 |
| black             | 1.9 mm         | transparent colorless | 1.65.126.001/1000  | 1.65.126.101/0000      | 5.49.259.017/1002 |

## RAFIX 16 F Signal indicator, flush lens, round metallized collar

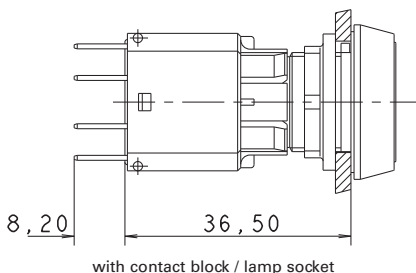
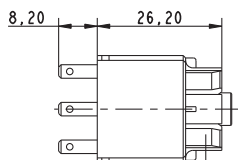
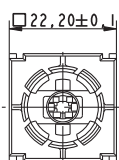
Technical data see page 2 - 59



Panel cut-out to IEC 60947-5-1



| → Color of collar | Overall height | Color of lens         | Order no. complete | Order no. single parts |      |
|-------------------|----------------|-----------------------|--------------------|------------------------|------|
|                   |                |                       |                    | Housing                | Lens |
| silver metallic   | 1.9 mm         | transparent red       | 1.65.126.011/1300  | -                      | -    |
| silver metallic   | 1.9 mm         | transparent yellow    | 1.65.126.011/1400  | -                      | -    |
| silver metallic   | 1.9 mm         | transparent green     | 1.65.126.011/1500  | -                      | -    |
| silver metallic   | 1.9 mm         | transparent blue      | 1.65.126.011/1600  | -                      | -    |
| silver metallic   | 1.9 mm         | transparent colorless | 1.65.126.011/1000  | -                      | -    |



with contact block / lamp socket

# RAFIX 16

## Contact blocks with gold contacts

### Technical Data

#### → Dimensions

|                                            |                 |
|--------------------------------------------|-----------------|
| Size not mounted                           | see order block |
| Mounting depth (with actuator / indicator) | see order block |

#### → Mechanical design

|                     |                                        |
|---------------------|----------------------------------------|
| Mounting            | snap on actuator                       |
| Contact system      | bridge-contact self cleaning           |
| Contact materials   | Au                                     |
| Contact arrangement | see order block                        |
| Contact function    | see order block                        |
| Lamp socket         | see order block                        |
| Terminals           | see order block                        |
| Terminal marking    | according to DIN 50013, X1 = +, X2 = - |
| Operating travel    | 3 mm                                   |
| Robustness          | 100 N                                  |

#### → Mechanical characteristics

|            |                       |
|------------|-----------------------|
| Robustness | acc. to IEC 60947-5-5 |
|------------|-----------------------|

#### → Electrical characteristics

|                                              |           |
|----------------------------------------------|-----------|
| Rated voltage min.                           | 0.02 V    |
| Rated voltage AC/DC max.                     | 35 V      |
| Rated current min.                           | 0.001 A   |
| Rated current max.                           | 0.25 A    |
| Operating life switching element (momentary) | 2,000,000 |
| Contact resistance when new max.             | 50 mΩ     |

#### → Other specifications

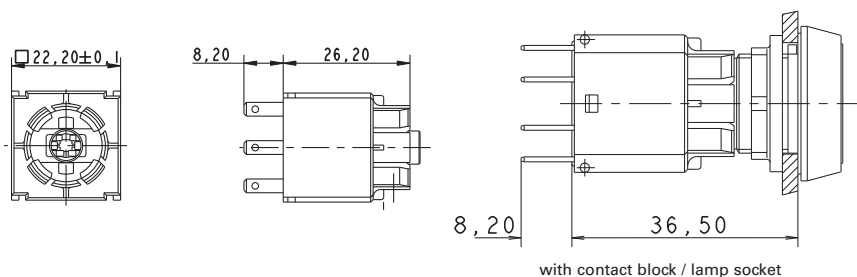
|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| Protection class                                | II                                       |
| Shock resistance acc. to IEC 60068-2-27         | amplitude < 50g, 11ms, half sinusoidal   |
| Operation temperature min.                      | -25 °C                                   |
| Ambient temp. operating max. without lamp /LED  | +70 °C                                   |
| Ambient temp. operating max. with lamp /LED     | +55 °C                                   |
| Storage temperature min.                        | -40 °C                                   |
| Storage temperature max.                        | +85 °C                                   |
| Color code                                      | white bottom                             |
| Environmental resistance                        | acc. to IEC 60068-2-14, -30, -33 and -78 |
| Mechanical operating life latching (operations) | 2,000,000                                |
| Resistance to vibrations acc. to IEC 60068-2-6  | 10 g at 20 ... 500 Hz                    |
| Flame class acc. to UL 94                       | yes                                      |
|                                                 | yes                                      |
| ROHS compliant                                  | yes                                      |
| REACH compliant                                 | yes                                      |

### Accessories RAFIX 16 - Contact blocks with gold contacts

| → Description                      | Photo                                                                             | Order no. | Additional accessories see page |
|------------------------------------|-----------------------------------------------------------------------------------|-----------|---------------------------------|
| Socket W 2 x 4.6d, LED superbright |  | -         | 5 - 5                           |

## RAFIX 16 Standard contact block, gold contacts, with quick-connect terminals

Technical data see page 2 - 62



| → Contact arrangement | Contact function | Lamp socket | Rated voltage AC/DC max. | Rated current max. | Order no.         |
|-----------------------|------------------|-------------|--------------------------|--------------------|-------------------|
| 2 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.012/0000 |
| 2 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.032/0000 |
| 2 NO                  | latching         | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.052/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.013/0000 |
| 2 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.033/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.011/0000 |
| 1 NC + 1 NO           | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.031/0000 |
| 1 NC + 1 NO           | latching         | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.051/0000 |

Standard contact blocks have one common contact chamber and one actuator plunger.

Contact blocks with „latching“ contact function are used as switches. When combined with pushbuttons and mushroom actuators, the switching position is visible, releasing is effected by actuating again.

#### Accessoires:

Female quick-connect terminal DIN 46340-B 2.8-1-MS: see page 2 - 76, 2 - 262, 5 - 27

Multipole connector: see page 2 - 76

PCB plug-in socket: see page 2 - 75

Plug distributor: see page 2 - 76, 5 - 27

Protection against contact: see page 2 - 77

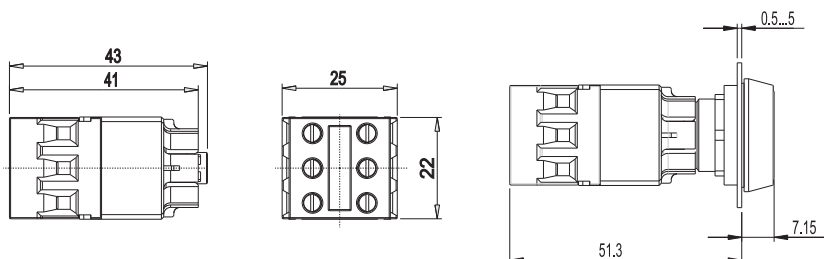
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



## RAFIX 16 Standard contact block, gold contacts, with screw terminals

Technical data see page 2 - 62



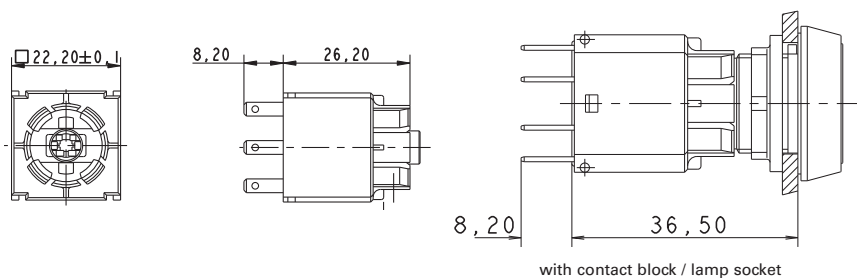
| → Contact arrangement | Contact function | Lamp socket | Rated voltage AC/DC max. | Rated current max. | Order no.         |
|-----------------------|------------------|-------------|--------------------------|--------------------|-------------------|
| 2 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.112/0000 |
| 2 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.132/0000 |
| 2 NO                  | latching         | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.152/0000 |
| 2 NO                  | latching         | -           | 35 V                     | 0.25 A             | 1.20.122.172/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.113/0000 |
| 2 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.133/0000 |
| 2 NC                  | latching         | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.153/0000 |
| 2 NC                  | latching         | -           | 35 V                     | 0.25 A             | 1.20.122.173/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.111/0000 |
| 1 NC + 1 NO           | momentary        | -           | 35 V                     | 0.25 A             | 1.20.122.131/0000 |
| 1 NC + 1 NO           | latching         | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.122.151/0000 |
| 1 NC + 1 NO           | latching         | -           | 35 V                     | 0.25 A             | 1.20.122.171/0000 |

2

RAFIX  
16

### RAFIX 16 Universal contact block, gold contacts, with quick-connect terminals

Technical data see page 2 - 62



| → Contact arrangement | Contact function | Lamp socket | Rated voltage AC/DC max. | Rated current max. | Order no.         |
|-----------------------|------------------|-------------|--------------------------|--------------------|-------------------|
| 1 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.013/0000 |
| 1 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.033/0000 |
| 1 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.032/0000 |
| 2 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.015/0000 |
| 2 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.035/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.014/0000 |
| 2 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.034/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.011/0000 |
| 1 NC + 1 NO           | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.031/0000 |

Universal contact blocks have two separate contact chambers and two actuator plungers for alternating actuation directions. Two different polarities can be switched. The NC contacts are positive opening contacts to IEC 60947-5-1.

#### Accessoires:

Female quick-connect terminal DIN 46340-B 2.8-1-MS: see page 2 - 76, 2 - 262, 5 - 27

Multipole connector: see page 2 - 76

PCB plug-in socket: see page 2 - 75

Plug distributor: see page 2 - 76, 5 - 27

Protection against contact: see page 2 - 77

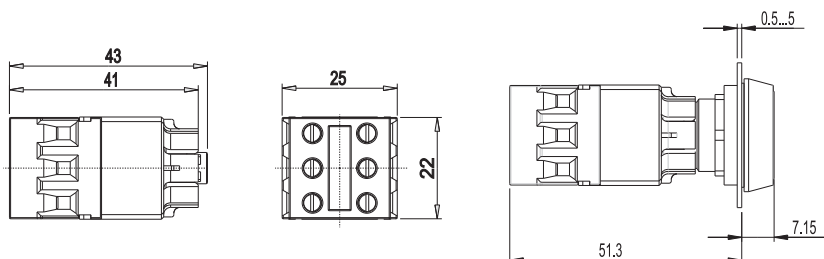
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



## RAFIX 16 Universal contact block, gold contacts, with screw terminals

Technical data see page 2 - 62



| → Contact arrangement | Contact function | Lamp socket | Rated voltage AC/DC max. | Rated current max. | Order no.         |
|-----------------------|------------------|-------------|--------------------------|--------------------|-------------------|
| 1 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.113/0000 |
| 1 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.133/0000 |
| 1 NC                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.112/0000 |
| 1 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.132/0000 |
| 2 NO                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.115/0000 |
| 2 NO                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.135/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.114/0000 |
| 2 NC                  | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.134/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 35 V                     | 0.25 A             | 1.20.123.111/0000 |
| 1 NC + 1 NO           | momentary        | -           | 35 V                     | 0.25 A             | 1.20.123.131/0000 |

Universal contact blocks have two separate contact chambers and two actuator plungers for alternating actuation directions. Two different polarities can be switched. The NC contacts are positive opening contacts to IEC 60947-5-1.

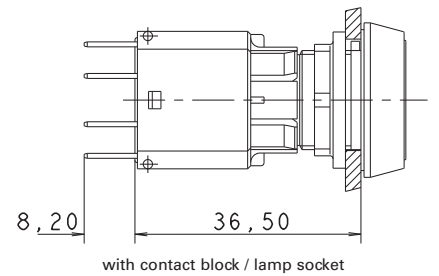
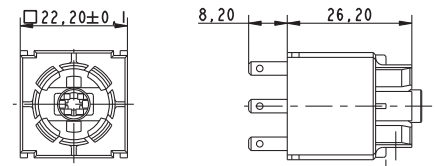


# RAFIX 16

## Contact blocks with silver contacts

### Technical Data

|                                                 |                                                  |
|-------------------------------------------------|--------------------------------------------------|
| <b>→ Dimensions</b>                             |                                                  |
| Size not mounted                                | see order block                                  |
| Mounting depth (with actuator / indicator)      | see order block                                  |
| <b>→ Mechanical design</b>                      |                                                  |
| Mounting                                        | snap on actuator                                 |
| Contact system                                  | bridge-contact self cleaning                     |
| Contact materials                               | Ag                                               |
| Contact arrangement                             | see order block                                  |
| Contact function                                | see order block                                  |
| Lamp socket                                     | see order block                                  |
| Terminals                                       | see order block                                  |
| Terminal marking                                | according to DIN 50013, X1 = +, X2 = -           |
| Operating travel                                | 3 mm                                             |
| Robustness                                      | 100 N                                            |
| <b>→ Mechanical characteristics</b>             |                                                  |
| Robustness                                      | acc. to IEC 60947-5-5                            |
| <b>→ Electrical characteristics</b>             |                                                  |
| Rated insulation voltage acc. to VDE 0110, AC   | 250 V                                            |
| Rated insulation voltage acc. to VDE 0110, DC   | 300 V                                            |
| Ohmic rated current $I_R$                       | 6 A                                              |
| Rated motor current $I_{M\text{ nenn}}$         | 4 A                                              |
| Application category acc. to VDE 0660 Teil 200  | AC 15B 300                                       |
| Application category acc. to VDE 0660 Teil 200  | DC 13Q 300                                       |
| Rated insulation voltage $U_i$ , AC             | 250 V                                            |
| Rated insulation voltage $U_i$ , DC             | 300 V                                            |
| Rated voltage $U_E$ / rated current $I_E$ , AC  | 250 V/1.5 A, 120 V/3.0 A V                       |
| Rated voltage $U_E$ / rated current $I_E$ , DC  | 250 V/0.27 A, 125 V/0.55 A, 60 V/1 A, 24 V/2 A V |
| Thermic rated current $I_{the}$ , AC            | 5 A                                              |
| Thermic rated current $I_{the}$ , DC            | 2.5 A                                            |
| Operating life switching element AC             | 100,000 at 6A, 800,000 at 2A                     |
| Operating life switching element DC             | 250,000 at 220 V/0.2 A, 1,000,000 at 24 V/2 A    |
| Rated power DC                                  | $10 \times I_E$                                  |
| Rated power AC                                  | $1.1 \times I_E$                                 |
| Contact resistance when new max.                | 20 mΩ                                            |
| <b>→ Other specifications</b>                   |                                                  |
| Protection class                                | II                                               |
| Corresponding to EU directive NSR 72/73         | yes                                              |
| Shock resistance acc. to IEC 60068-2-27         | amplitude < 50g, 11ms, half sinusoidal           |
| Operation temperature min.                      | -25 °C                                           |
| Ambient temp. operating max. without lamp /LED  | +70 °C                                           |
| Ambient temp. operating max. with lamp /LED     | +55 °C                                           |
| Storage temperature min.                        | -40 °C                                           |
| Storage temperature max.                        | +85 °C                                           |
| Color code                                      | grey bottom                                      |
| Environmental resistance                        | acc. to IEC 60068-2-14, -30, -33 and -78         |
| Mechanical operating life latching (operations) | 100,000                                          |



### Approvals



IEC 61058, 25T70  
without lamp,  
25T55 with lamp



C22.2 No.  
14-M91



# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS

## – Technical data (continued) –

### RAFIX 16 - Contact blocks with silver contacts

|                                                |                       |
|------------------------------------------------|-----------------------|
| Resistance to vibrations acc. to IEC 60068-2-6 | 10 g at 20 ... 500 Hz |
| Flame class acc. to UL 94                      | V 0                   |
| Hot wire ignition acc. to IEC 60695-2-1        | yes                   |
| ROHS compliant                                 | yes                   |
| REACH compliant                                | yes                   |

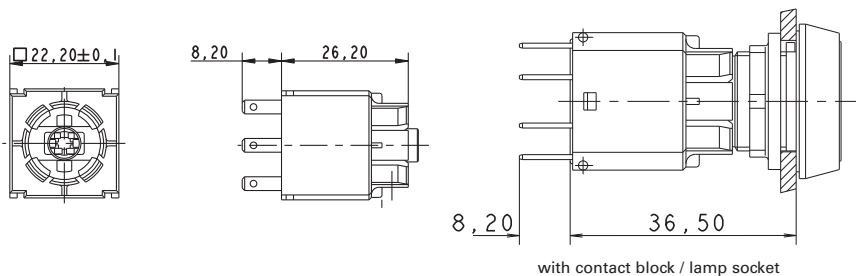
### Accessories RAFIX 16 - Contact blocks with silver contacts

| → Description                      | Photo                                                                             | Order no. | Additional accessories see page |
|------------------------------------|-----------------------------------------------------------------------------------|-----------|---------------------------------|
| Socket W 2 x 4.6d, LED superbright |  | -         | 5 - 5                           |



## RAFIX 16 Standard contact block, silver contacts, with quick-connect terminals

Technical data see page 2 - 67



| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>U <sub>i</sub> , AC | Ohmic rated current I <sub>n</sub> | Order no.         |
|-----------------------|------------------|-------------|-------------------------------------------------|------------------------------------|-------------------|
| 2 NO                  | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.002/0000 |
| 2 NO                  | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.022/0000 |
| 2 NO                  | latching         | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.042/0000 |
| 2 NO                  | latching         | -           | 250 V                                           | 6 A                                | 1.20.122.062/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.003/0000 |
| 2 NC                  | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.023/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.001/0000 |
| 1 NC + 1 NO           | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.021/0000 |
| 1 NC + 1 NO           | latching         | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.041/0000 |
| 1 NC + 1 NO           | latching         | -           | 250 V                                           | 6 A                                | 1.20.122.061/0000 |

– Table (continued) –

### RAFIX 16 - Standard contact block, silver contacts, with quick-connect terminals

Standard contact blocks have one common contact chamber and one actuator plunger.

Contact blocks with „latching“ contact function are used as switches. When combined with pushbuttons and mushroom actuators, the switching position is visible, releasing is effected by actuating again.

#### Accessoires:

Female quick-connect terminal DIN 46340-B 2.8-1-MS: see page 2 - 76, 2 - 262, 5 - 27

Multipole connector: see page 2 - 76

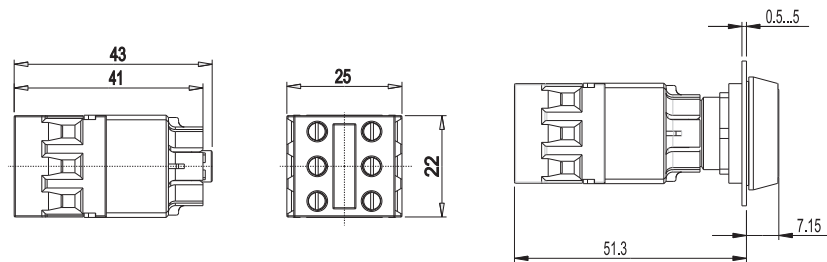
PCB plug-in socket: see page 2 - 75

Plug distributor: see page 2 - 76, 5 - 27

Protection against contact: see page 2 - 77

## RAFIX 16 Standard contact block, silver contacts, with screw terminals

Technical data see page 2 - 67



| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>U <sub>i</sub> , AC | Ohmic rated current I <sub>n</sub> | Order no.         |
|-----------------------|------------------|-------------|-------------------------------------------------|------------------------------------|-------------------|
| 2 NO                  | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.102/0000 |
| 2 NO                  | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.122/0000 |
| 2 NO                  | latching         | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.142/0000 |
| 2 NO                  | latching         | -           | 250 V                                           | 6 A                                | 1.20.122.162/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.103/0000 |
| 2 NC                  | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.123/0000 |
| 2 NC                  | latching         | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.143/0000 |
| 2 NC                  | latching         | -           | 250 V                                           | 6 A                                | 1.20.122.163/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.101/0000 |
| 1 NC + 1 NO           | momentary        | -           | 250 V                                           | 6 A                                | 1.20.122.121/0000 |
| 1 NC + 1 NO           | latching         | W 2 x 4.6d  | 250 V                                           | 6 A                                | 1.20.122.141/0000 |
| 1 NC + 1 NO           | latching         | -           | 250 V                                           | 6 A                                | 1.20.122.161/0000 |

Standard contact blocks have one common contact chamber and one actuator plunger.

Contact blocks with „latching“ contact function are used as switches. When combined with pushbuttons and mushroom actuators, the switching position is visible, releasing is effected by actuating again.

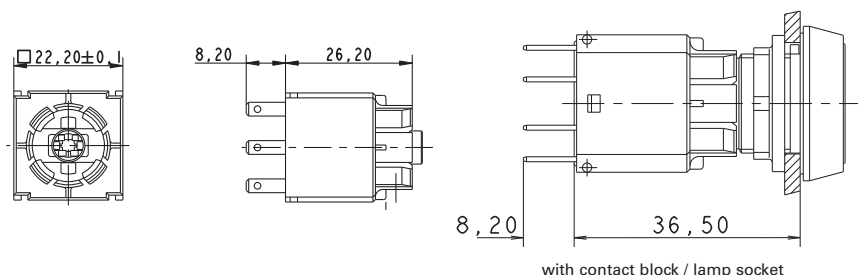
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



## RAFIX 16 Universal contact block, silver contacts, with quick-connect terminals

Technical data see page 2 - 67



with contact block / lamp socket

| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>$U_i$ , AC | Ohmic rated current $I_R$ | Order no.         |
|-----------------------|------------------|-------------|----------------------------------------|---------------------------|-------------------|
| 1 NO                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.003/0000 |
| 1 NO                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.023/0000 |
| 1 NC                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.022/0000 |
| 2 NO                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.005/0000 |
| 2 NO                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.025/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.004/0000 |
| 2 NC                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.024/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.001/0000 |
| 1 NC + 1 NO           | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.021/0000 |

Universal contact blocks have two separate contact chambers and two actuator plungers. This makes it possible to switch two different polarities. The NC contacts are positive opening contacts to IEC 60947-5-1.

### Accessoires:

Female quick-connect terminal DIN 46340-B 2.8-1-MS: see page 2 - 76, 2 - 262, 5 - 27

Multipole connector: see page 2 - 76

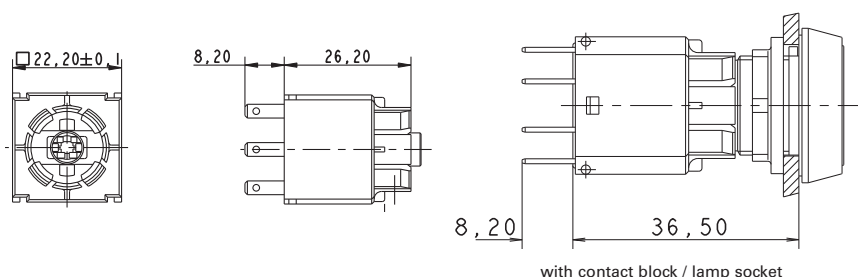
PCB plug-in socket: see page 2 - 75

Plug distributor: see page 2 - 76, 5 - 27

Protection against contact: see page 2 - 77

### RAFIX 16 Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals

Technical data see page 2 - 67



| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>$U_i$ , AC | Ohmic rated current $I_R$ | Order no.         |
|-----------------------|------------------|-------------|----------------------------------------|---------------------------|-------------------|
| 2 NC + 1 NO           | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.921/0000 |

#### Function

The contact block with coupling monitoring detects a accidental separation of the contact block from of the front-side actuator by a contact.

Universal contact blocks have two separate contact chambers and two actuator plungers. This makes it possible to switch two different polarities. The NC contacts are positive opening contacts to IEC 60947-5-1.

#### Accessoires:

Female quick-connect terminal DIN 46340-B 2.8-1-MS: see page 2 - 76, 2 - 262, 5 - 27

Multipole connector: see page 2 - 76

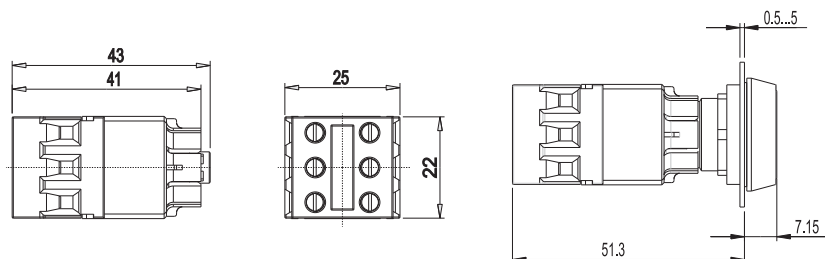
PCB plug-in socket: see page 2 - 75

Plug distributor: see page 2 - 76, 5 - 27

Protection against contact: see page 2 - 77

### RAFIX 16 Universal contact block, silver contacts, with screw terminals

Technical data see page 2 - 67



| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>$U_i$ , AC | Ohmic rated current $I_R$ | Order no.         |
|-----------------------|------------------|-------------|----------------------------------------|---------------------------|-------------------|
| 1 NO                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.103/0000 |

# CONTROL COMPONENTS

## RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS

– Table (continued) –

**RAFIX 16 - Universal contact block, silver contacts, with screw terminals**

| → Contact arrangement | Contact function | Lamp socket | Rated insulation voltage<br>$U_i$ , AC | Ohmic rated current $I_R$ | Order no.         |
|-----------------------|------------------|-------------|----------------------------------------|---------------------------|-------------------|
| 1 NO                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.123/0000 |
| 1 NC                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.102/0000 |
| 1 NC                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.122/0000 |
| 2 NO                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.105/0000 |
| 2 NO                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.125/0000 |
| 2 NC                  | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.104/0000 |
| 2 NC                  | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.124/0000 |
| 1 NC + 1 NO           | momentary        | W 2 x 4.6d  | 250 V                                  | 6 A                       | 1.20.123.101/0000 |
| 1 NC + 1 NO           | momentary        | -           | 250 V                                  | 6 A                       | 1.20.123.121/0000 |

Universal contact blocks have two separate contact chambers and two actuator plungers. This makes it possible to switch two different polarities. The NC contacts are positive opening contacts to IEC 60947-5-1.

2

RAFIX  
16

## RAFIX 16 Lamp sockets

### Technical Data

#### → Dimensions

|                  |                 |
|------------------|-----------------|
| Size not mounted | see order block |
| Mounting depth   | see order block |

#### → Mechanical design

|                  |                              |
|------------------|------------------------------|
| Mounting         | see order block              |
| Lamp socket      | wedge-base W 2 x 4.6d        |
| Terminals        | quick connector 2.8 x 0.8 mm |
| Terminal marking | X1 = anode, X2 = cathode     |

#### → Electrical characteristics

|               |       |
|---------------|-------|
| Rated voltage | 60 V  |
| Rated power   | 1.2 W |

#### → Other specifications

|                                                |                                          |
|------------------------------------------------|------------------------------------------|
| Shock resistance acc. to IEC 60068-2-27        | amplitude < 50g, 11ms, half sinusoidal   |
| Ambient temp. operating min.                   | -25 °C                                   |
| Ambient temp. operating max. with lamp /LED    | +55 °C                                   |
| Storage temperature min.                       | -40 °C                                   |
| Storage temperature max.                       | +85 °C                                   |
| Environmental resistance                       | acc. to IEC 60068-2-14, -30, -33 and -78 |
| Flame class acc. to UL 94                      | V 0                                      |
| Hot wire ignition acc. to IEC 60695-2-1        | yes                                      |
| Resistance to vibrations acc. to IEC 60068-2-6 | 10 g at 20 ... 500 Hz                    |
| ROHS compliant                                 | yes                                      |
| REACH compliant                                | yes                                      |



2

RAFIX  
16

### Approvals



IEC 61058, 25T55



C22.2 No.  
14-M91



### Accessories RAFIX 16 - Lamp socket

#### → Description

| Description                                        | Photo | Order no. | Additional accessories see page |
|----------------------------------------------------|-------|-----------|---------------------------------|
| Female quick-connect terminal DIN 46340-B 2.8-1-MS |       | -         | 2 - 76, 2 - 262, 5 - 27         |
| Multipole connector                                |       | -         | 2 - 76                          |
| PCB plug-in socket                                 |       | -         | 2 - 75                          |
| Plug distributor                                   |       | -         | 2 - 76, 5 - 27                  |
| Protection against contact                         |       | -         | 2 - 77                          |
| RAFIX 16 - Signal indicator                        |       | -         | 2 - 39                          |
| RAFIX 16 F - Signal indicator                      |       | -         | 2 - 59                          |
| Socket W 2 x 4.6d, LED superbright                 |       | -         | 5 - 5                           |

# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS

## – Table (continued) – Accessories RAFX 16 - Lamp socket

| → Description                                    | Photo                                                                             | Order no. | Additional accessories see page |
|--------------------------------------------------|-----------------------------------------------------------------------------------|-----------|---------------------------------|
| Wedge base W 2 x 4.6d, filament lamps, DIN 49846 |  | -         | 5 - 9                           |

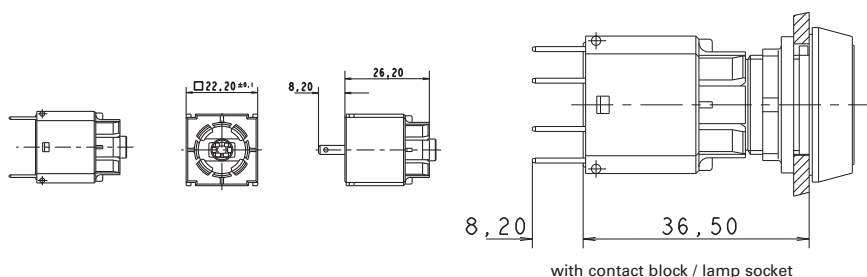
2

RAFIX  
16



## RAFIX 16 Lamp socket W 2 x 4.6 d

Technical data see page 2 - 73



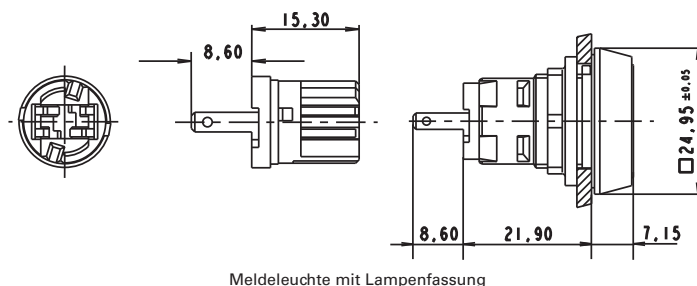
| → Rated voltage | Rated power | Lamp socket           | Mounting                  | Mounting depth | Order no.         |
|-----------------|-------------|-----------------------|---------------------------|----------------|-------------------|
| 60 V            | 1.2 W       | wedge-base W 2 x 4.6d | click on signal indicator | 44.7 mm        | 1.71.212.001/0000 |

A notch on the lamp socket identifies the cathode side.



## RAFIX 16 Lamp socket W 2 x 4.6 d

Technical data see page 2 - 73



| → Rated voltage | Rated power | Lamp socket           | Mounting                   | Mounting depth | Order no.         |
|-----------------|-------------|-----------------------|----------------------------|----------------|-------------------|
| 60 V            | 1.2 W       | wedge-base W 2 x 4.6d | snap into signal indicator | 30.5 mm        | 1.71.212.011/0000 |

A notch on the lamp socket identifies the cathode side.



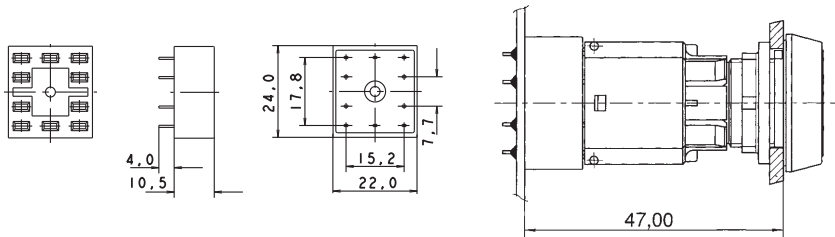
## RAFIX 16 Special accessories



2

RAFIX  
16

### PCB plug-in socket

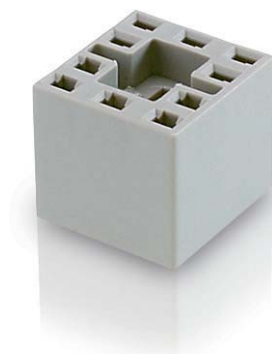


| → Contacts | Contact arrangement     | Order no.         |
|------------|-------------------------|-------------------|
| 10         | universal application   | 5.05.510.644/0000 |
| 6          | 2 NO, lamp socket       | 5.05.510.645/0000 |
| 6          | 2 NC, lamp socket       | 5.05.510.647/0000 |
| 6          | 1 NC, 1 NO, lamp socket | 5.05.510.646/0000 |
| 4          | 2 NC                    | 5.05.510.648/0000 |
| 2          | lamp socket             | 5.05.510.649/0000 |

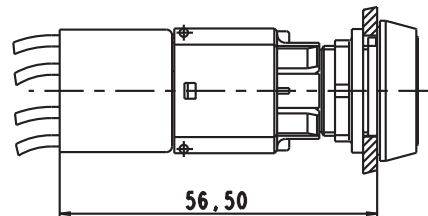
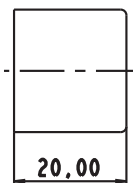
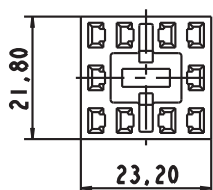
For soldering onto PCBs. The PCB carrying the plug-in sockets is plugged onto the contact blocks/lamp sockets. Additional fixing of the PCB to the contact block is not required. Solder terminals for PCB 3.5 mm long, for 1.3 mm hole.

# CONTROL COMPONENTS

RAFIX 16 - SPECIAL ACCESSORIES



## Multipole connector



2

| → Dimensions        | Mounting depth | Order no.         |
|---------------------|----------------|-------------------|
| 21,8 x 23,2 x 20 mm | 56,5 mm        | 5.05.510.421/0000 |

Makes it possible to simultaneously connect all terminals of a contact block. Can be fitted with 2.8 mm female quick-connect terminals.



## Female quick-connect terminal DIN 46340-B 2.8-1-MS

| → Description                                      | Order no.         |
|----------------------------------------------------|-------------------|
| Female quick-connect terminal DIN 46340-B 2.8-1-MS | 5.37.540.024/8622 |

With latching detent for mating with a multipole connector.

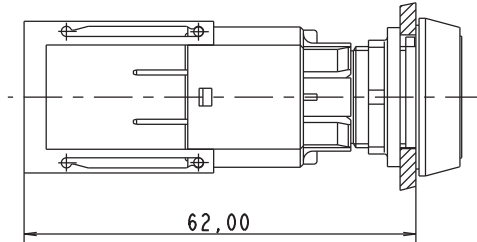


## Plug distributor

| → Description    | Order no.         |
|------------------|-------------------|
| Plug distributor | 5.37.540.029/6000 |

For mounting on the quick-connect terminals of contact blocks. The double number of contacts facilitates loop-through.

## Protection against contact



| → Description              | Order no.         |
|----------------------------|-------------------|
| Protection against contact | 5.55.103.105/0100 |

Assembly sequence: Snap the protection against contact onto the contact block, connect wires to quick-connect terminals of contact block, pull protection against contact over the terminals; this ensures finger-proof condition to VBG 4.

2

RAFIX  
16

## Protective cover, suitable for lead seal, for pushbuttons, alignable without gaps



| → Description                            | Order no.         |
|------------------------------------------|-------------------|
| Protective cover, suitable for lead seal | 5.05.800.055/0000 |

To prevent inadvertent operation. The legend is easily visible even when the cap is closed.

## Fixing spanner for hexagon nut



2

→ Fitting for

Order no.

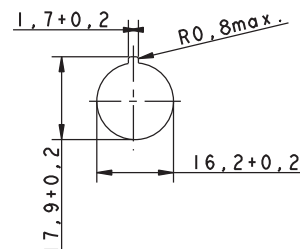
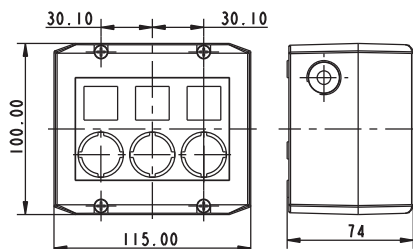
RAFIX 16

5.58.002.034/0000

RAFIX  
16



## RAFIX Insulating housing, Ø 16.2 mm



Panel cut-out

| → Description                                                               | Number of cut-outs | Ø       | Dimensions    | Order no.         |
|-----------------------------------------------------------------------------|--------------------|---------|---------------|-------------------|
| RAFIX - Insulating housing, Ø 16.2 mm, IP65, 1-module, light grey/dark grey | 1                  | 16,2 mm | 100x55x74 mm  | 1.20.810.001/0000 |
| RAFIX - Insulating housing, Ø 16.2 mm, IP65, 1-module, yellow/yellow        | 1                  | 16,2 mm | 100x55x74 mm  | 1.20.810.002/0000 |
| RAFIX - Insulating housing, Ø 16.2 mm, IP65, 2-module, light grey/dark grey | 2                  | 16,2 mm | 100x115x74 mm | 1.20.820.001/0000 |
| RAFIX - Insulating housing, Ø 16.2 mm, IP65, 3-module, light grey/dark grey | 3                  | 16,2 mm | 100x115x74 mm | 1.20.830.001/0000 |
| RAFIX - Insulating housing, Ø 16.2 mm, IP65, 4-module, light grey/dark grey | 4                  | 16,2 mm | 100x145x74 mm | 1.20.840.001/0000 |

– Table (continued) –

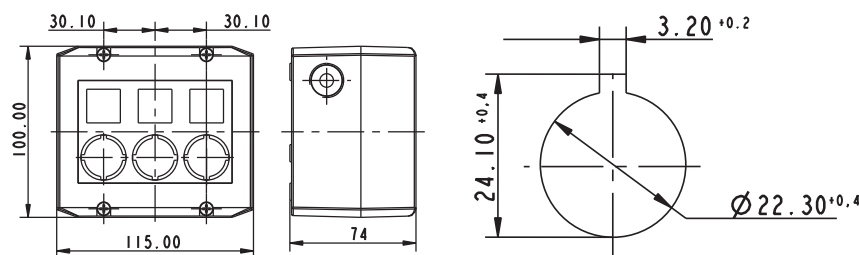
**RAFIX - Insulating housing, Ø 16.2 mm**

- Attractive plastic housing to accommodate up to 4 control components
- 2 cable entries prepared: 1-,2-,3-part: M20x1.5, 4-part: M25x1.5
- Degree of protection IP65 to DIN EN 60529
- All grey housings with overlay, legending possible with legend inserts
- Wall mounting with 2 screws through housing bottom prepared
- Dimensions (feature 1) x 100 mm x 74 mm
- Accessories: 50 pre-perforated legend inserts on a DIN A4 sheet for printing with a PC printer
- Housings with other features, e.g. RAFIX 16 square, on request.

**Accessoires:**

Label sheet for housing (50 foil legend inserts): 5.40.451.283/0000

## RAFIX Insulating housing IP65, Ø 22.3 mm



2

RAFIX  
16

| → Description                                                               | Number of cut-outs | Ø       | Dimensions    | Order no.         |
|-----------------------------------------------------------------------------|--------------------|---------|---------------|-------------------|
| RAFIX - Insulating housing, Ø 22.3 mm, IP65, 1-module, light grey/dark grey | 1                  | 22,3 mm | 100x55x74 mm  | 1.20.810.201/0000 |
| RAFIX - Insulating housing, Ø 22.3 mm, IP65, 1-module, yellow/yellow        | 1                  | 22,3 mm | 100x55x74 mm  | 1.20.810.202/0000 |
| RAFIX - Insulating housing, Ø 22.3 mm, IP65, 2-module, light grey/dark grey | 2                  | 22,3 mm | 100x115x74 mm | 1.20.820.201/0000 |
| RAFIX - Insulating housing, Ø 22.3 mm, IP65, 3-module, light grey/dark grey | 3                  | 22,3 mm | 100x115x74 mm | 1.20.830.201/0000 |
| RAFIX - Insulating housing, Ø 22.3 mm, IP65, 4-module, light grey/dark grey | 4                  | 22,3 mm | 100x145x74 mm | 1.20.840.201/0000 |

- Plastic housing to accommodate up to 4 control components
- 2 cable entries prepared: 1-,2-,3-part: M20x1.5, 4-part: M25x1.5
- Degree of protection IP65 to DIN EN 60529

- All grey housings with overlay, legending possible with legend inserts
- Wall mounting with 2 screws through housing bottom prepared
- Dimensions: (feature 2) x 100 mm x 74 mm
- Accessories: 50 pre-perforated legend inserts on a DIN A4 sheet

**Accessoires:**

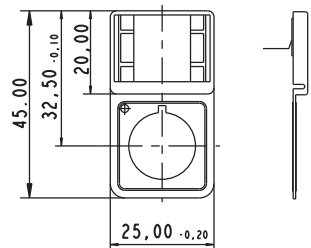
Label sheet for housing (50 foil legend inserts): 5.40.451.283/0000

# CONTROL COMPONENTS

RAFIX 16 - SPECIAL ACCESSORIES



## RAFIX 16 Label holder, flush, for square collar



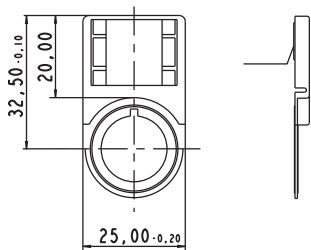
| → Description                          | Order no.         |
|----------------------------------------|-------------------|
| Label holder, flush, for square collar | 5.07.620.004/0000 |

Legending available on request.

**Accessoires:**  
Legend label 23 x 16 for label holder, without legend: 5.73.111.000/0000



## RAFIX 16 Label holder, flush, for round collar

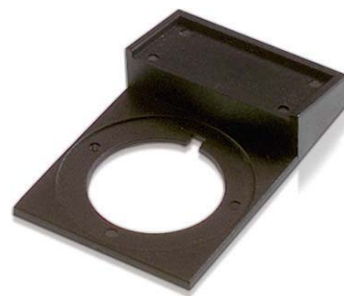
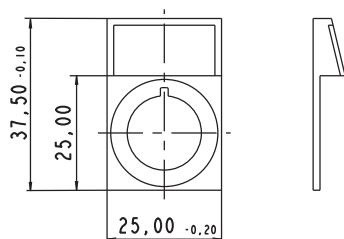


| → Description                         | Order no.         |
|---------------------------------------|-------------------|
| Label holder, flush, for round collar | 5.07.620.006/0000 |

Legending available on request.

**Accessoires:**  
Legend label 23 x 16 for label holder, without legend: 5.73.111.000/0000

## RAFIX 16 Label holder, protruding, for square flush fitting collar



| → Description                                             | Order no.         |
|-----------------------------------------------------------|-------------------|
| Label holder, protruding, for square flush fitting collar | 5.07.620.007/0000 |

Legending available on request.

### Accessoires:

Legend label 22.1 x 11.0 mm, without legend: 5.73.112.000/0000

## Emergency stop label, PVC adhesive, Ø 16.3 mm



| → Dimensions | inside Ø | Label                                                  | Order no.         |
|--------------|----------|--------------------------------------------------------|-------------------|
| Ø 40 mm      | 16.3 mm  | „NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“ | 5.76.204.114/0400 |
| Ø 40 mm      | 16.3 mm  | 4 x „NOT-HALT“                                         | 5.76.204.116/0400 |
| Ø 40 mm      | 16.3 mm  | 4 x „NOT-AUS“                                          | 5.76.204.118/0400 |
| Ø 40 mm      | 16.3 mm  | 4 x „EMERGENCY STOP“                                   | 5.76.204.120/0400 |
| Ø 60 mm      | 16.3 mm  | -                                                      | 5.76.204.400/0400 |
| Ø 60 mm      | 16.3 mm  | 1 x „NOT-AUS“                                          | 5.76.204.401/0400 |
| Ø 60 mm      | 16.3 mm  | 1 x „EMERGENCY STOP“                                   | 5.76.204.403/0400 |
| Ø 60 mm      | 16.3 mm  | „NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“ | 5.76.204.106/0400 |
| Ø 60 mm      | 16.3 mm  | 4 x „NOT-HALT“                                         | 5.76.204.108/0400 |

# CONTROL COMPONENTS

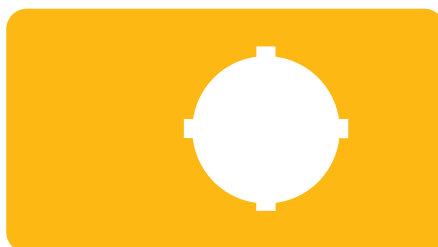
RAFIX 16 - SPECIAL ACCESSORIES

– Table (continued) –

Emergency stop label, PVC adhesive, Ø 16.3 mm

| → Dimensions | inside Ø | Label                | Order no.         |
|--------------|----------|----------------------|-------------------|
| Ø 60 mm      | 16.3 mm  | 4 x „NOT-AUS“        | 5.76.204.110/0400 |
| Ø 60 mm      | 16.3 mm  | 4 x „EMERGENCY STOP“ | 5.76.204.112/0400 |

## Emergency stop label, Ø 22.3 mm



| → Dimensions | inside Ø | Label                                                  | Order no.         |
|--------------|----------|--------------------------------------------------------|-------------------|
| 36 x 64 mm   | 22.3 mm  | -                                                      | 5.76.205.011/0400 |
| Ø 40 mm      | 22.3 mm  | „NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“ | 5.76.204.115/0400 |
| Ø 40 mm      | 22.3 mm  | 4 x „NOT-HALT“                                         | 5.76.204.117/0400 |
| Ø 40 mm      | 22.3 mm  | 4 x „NOT-AUS“                                          | 5.76.204.119/0400 |
| Ø 40 mm      | 22.3 mm  | 4 x „EMERGENCY STOP“                                   | 5.76.204.121/0400 |
| Ø 60 mm      | 22.3 mm  | 1 x „NOT-AUS“                                          | 5.76.207.001/0400 |
| Ø 60 mm      | 22.3 mm  | „EMERGENCY-STOP / ARRET D'URGENCE“                     | 5.76.207.002/0400 |
| Ø 60 mm      | 22.3 mm  | 1 x „NOT-AUS“                                          | 5.76.204.101/0400 |
| Ø 60 mm      | 22.3 mm  | 1 x „ARRET D'URGENCE“                                  | 5.76.204.102/0400 |
| Ø 60 mm      | 22.3 mm  | 1 x „EMERGENCY STOP“                                   | 5.76.204.103/0400 |
| Ø 60 mm      | 22.3 mm  | „NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“ | 5.76.204.107/0400 |
| Ø 60 mm      | 22.3 mm  | 4 x „NOT-HALT“                                         | 5.76.204.109/0400 |
| Ø 60 mm      | 22.3 mm  | 4 x „NOT-AUS“                                          | 5.76.204.111/0400 |
| Ø 60 mm      | 22.3 mm  | 4 x „EMERGENCY STOP“                                   | 5.76.204.113/0400 |

2

RAFIX  
16

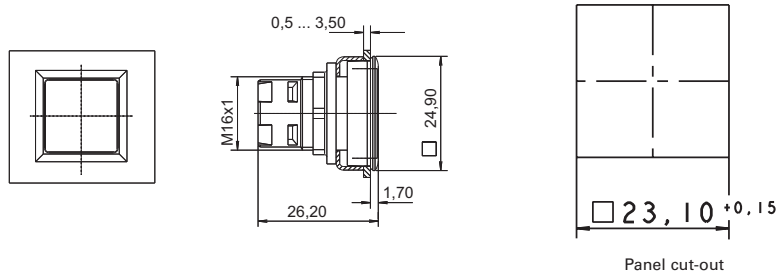


## RAFIX 16 Blanking cap with sealing and threaded ring, Ø 16.2 mm



| → Description                                                                        | Order no.         |
|--------------------------------------------------------------------------------------|-------------------|
| Blanking cap complete with sealing disc and ring nut, square                         | 5.05.800.049/0100 |
| Blanking cap complete with sealing disc and ring nut, round                          | 5.05.800.050/0100 |
| Blanking cap complete with sealing disc and ring nut, square, alignable without gaps | 5.05.800.051/0100 |

## RAFIX 16 F Blanking cap



Panel cut-out

| → Installation dimensions | Dimenions   | Color | Order no.         |
|---------------------------|-------------|-------|-------------------|
| 23,1 x 23,1 mm            | 24,9 x 24,9 | black | 5.05.800.063/0000 |