



## RAFIX 16

---

### RAFIX 16 control component range

- Panel cut-out acc. to IEC 60947:  $\varnothing$  16,2 mm /  $\varnothing$  22,3 mm /  $\square$  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

2

RAFIX  
16

## 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

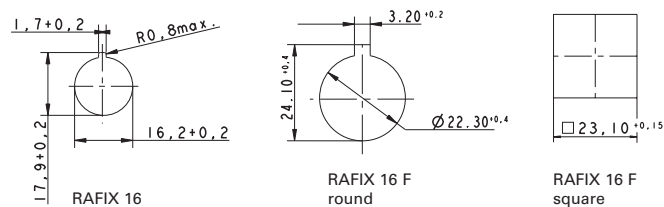
RAFIX 16 is a complete control component series and enables you to design attractive control panels with a minimum of space requirements and at the same time sufficiently large actuating areas.



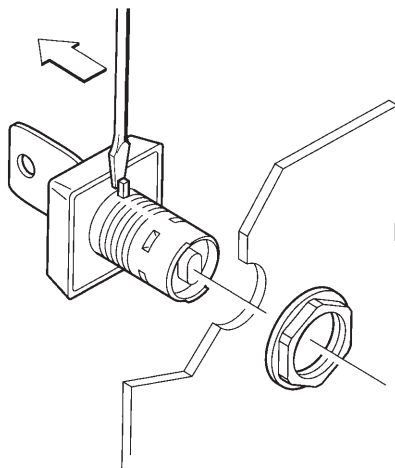
RAFIX 16 F, round

## 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

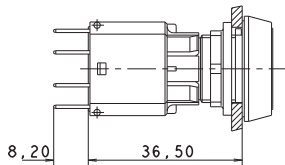
### Temperature range

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

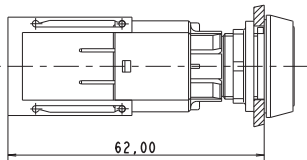
## Dimensional Drawings

Actuator with contact block resp. signal indicator with lamp socket

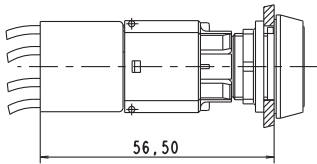
Contact block with quick-connect terminals and RAFIX 16 pushbutton



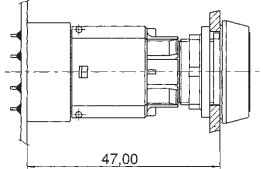
... with protection cage



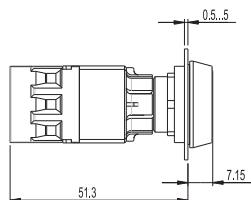
... with multipole connector



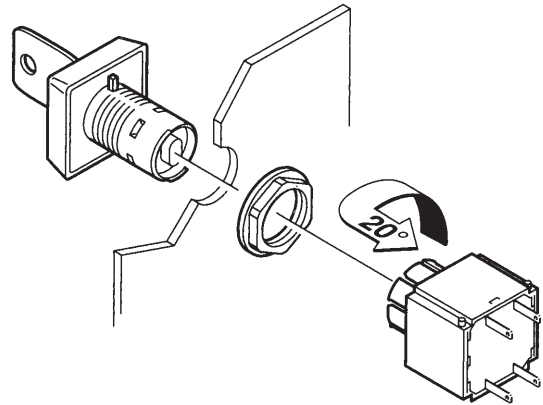
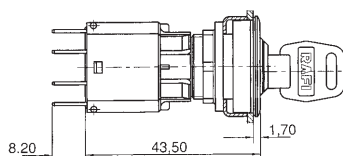
... with PCB plug-in socket



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.

# CONTROL COMPONENTS

RAFIX 16 - GENERAL INFORMATION

## Legending

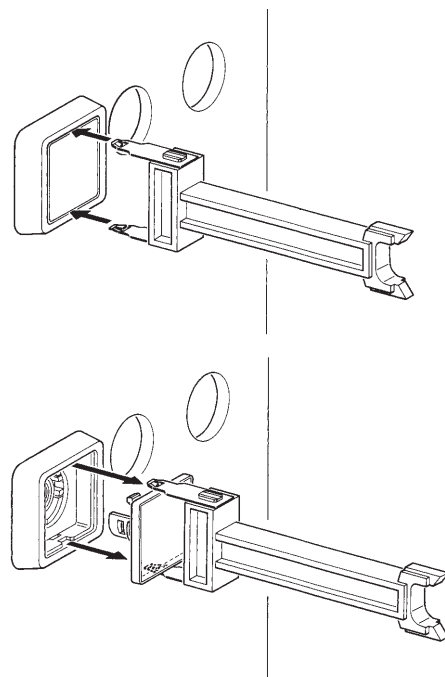
- **Label holders**  
All elements can be labelled using a **separate label holder**. The label holder is mounted together with the actuator/signal indicator.
- **Non-illuminated pushbuttons and mushroom-headed pushbuttons**  
Can be **printed** or laser engraved.
- **Legend inserts**  
All illuminated 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.

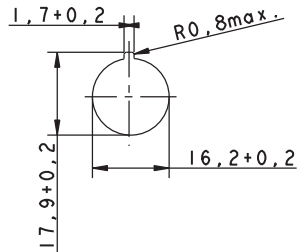


Lamp replacement from front

2

RAFIX  
16

# RAFIX 16 Pushbuttons



Panel cut-out



### 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

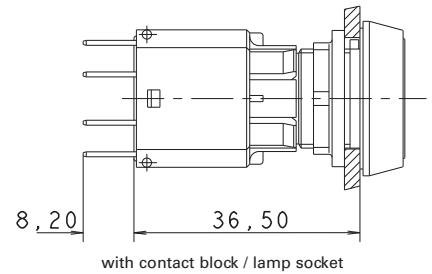
Mounting	ring nut, max. 1.2 Nm
Contact function	according to contact block
Contact arrangement	according to contact block
Illumination	see order block

#### → 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

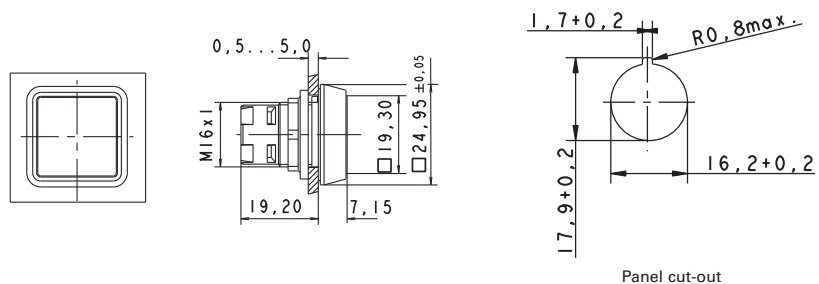
– Table (continued) –  
Accessories RAFIX 16 - Pushbutton

→ 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:**

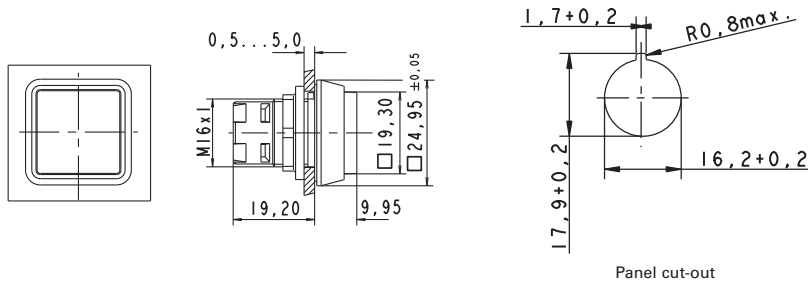
Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

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



2

→ 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

RAFIX  
16

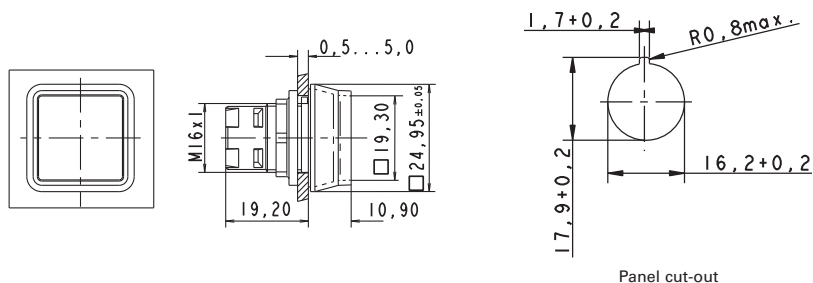
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Pushbutton, protruding collar, 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	1.30.070.101/1306	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:

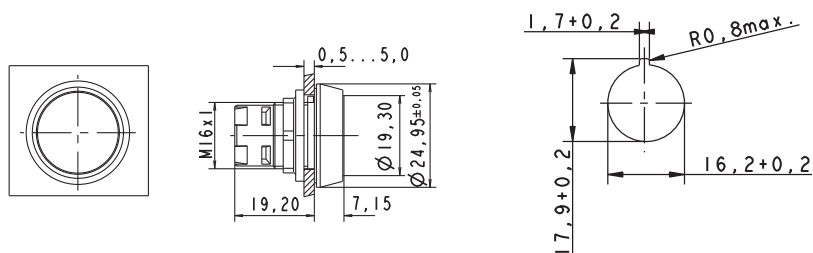
Legend insert, blank, use only for transparent lenses: 5.70.635.000/2000

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



Panel cut-out

– 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

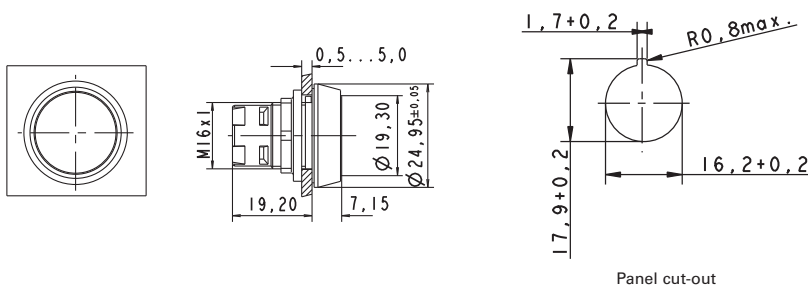
For the „latching“ function, please use the standard contact block with „latching“ function.

**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:

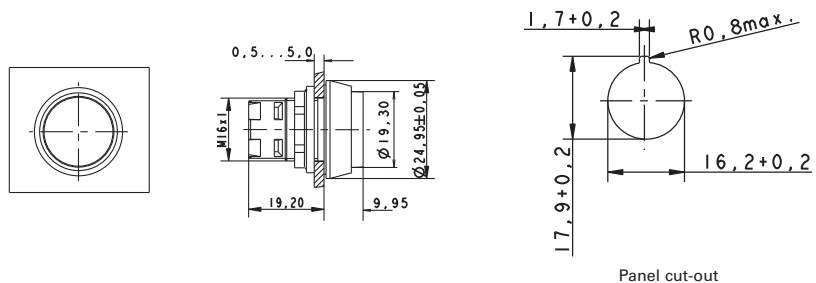
Legend insert, blank, use only for transparent lenses: 5.70.637.000/2000

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.

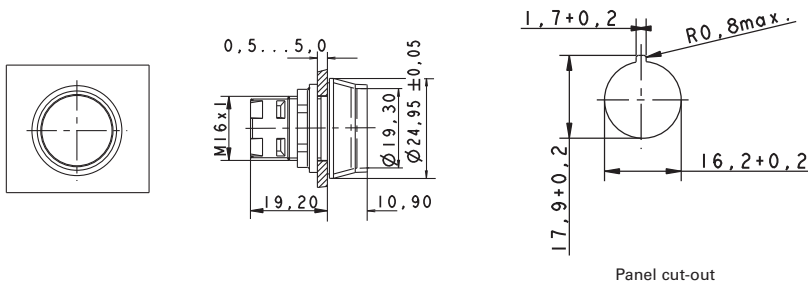
### Accessoires:

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 machinery manufacturers.

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

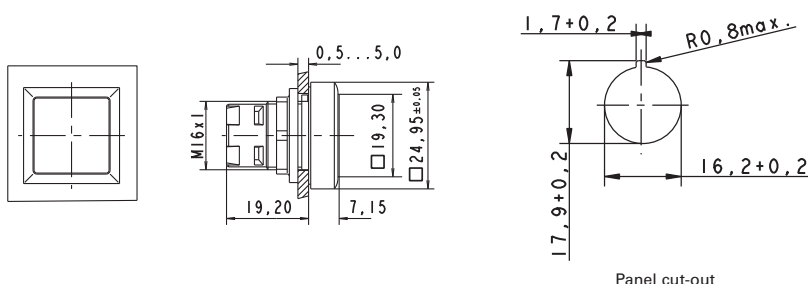
**Accessoires:**

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

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

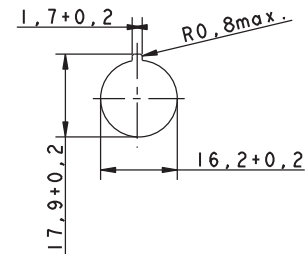
Mounting	ring nut
Contact function	see order block
Contact arrangement	according to contact block
Illumination	see order block
Rotating angle	see order block

#### → 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	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

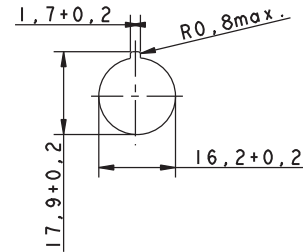
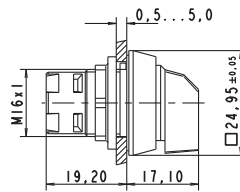
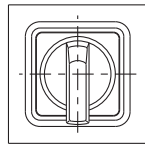
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Selector switch, square collar

Technical data see page 2 - 17



Panel cut-out

2

RAFIX  
16

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

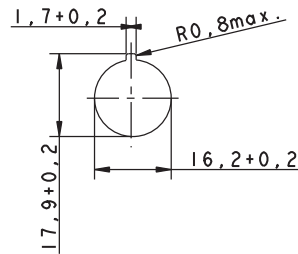
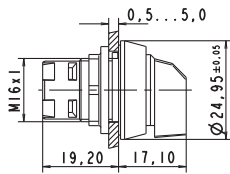
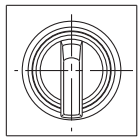
**Accessoires:**

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

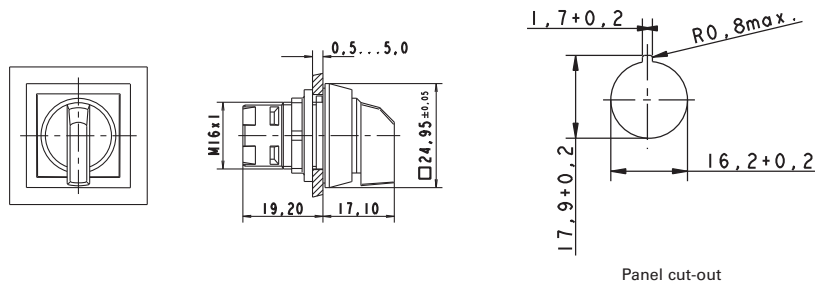
# CONTROL COMPONENTS

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

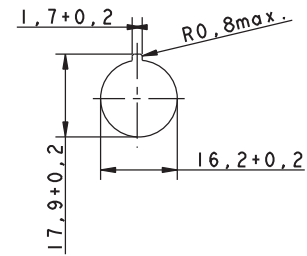
Torque max. 1.3 Nm

#### → 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

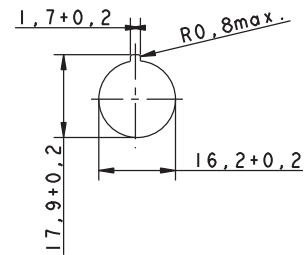
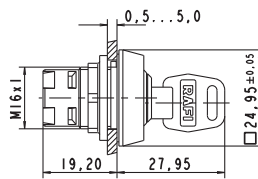
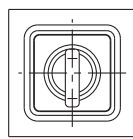
**- Table (continued) -  
Accessories RAFIX 16 - Keylock switch**

→ 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	-







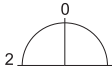



## RAFIX 16 Keylock switch, square collar

Technical data see page 2 - 21



Panel cut-out

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

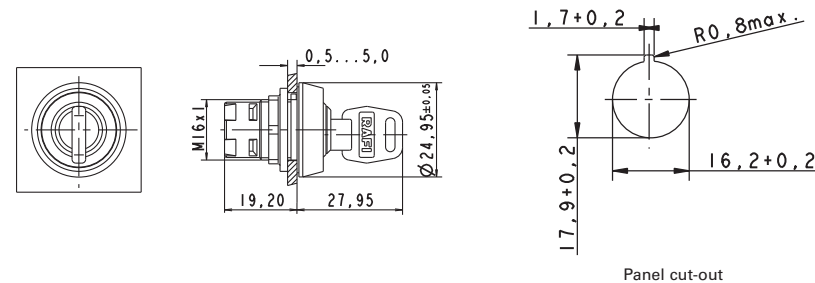
Included: 2 keys

**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



→ 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

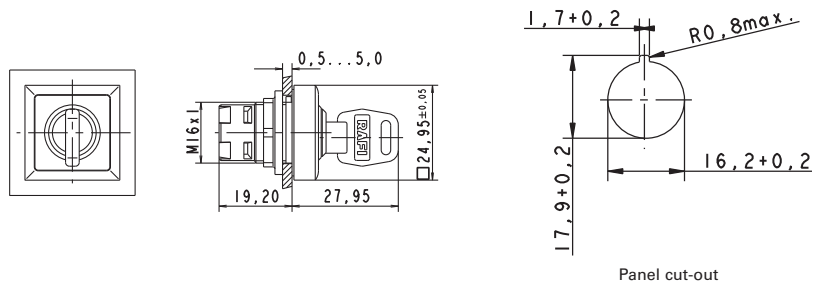
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



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

Technical data see page 2 - 21



2

RAFIX  
16

→ Contact function	Rotating angle	Key removal position	Order no.
momentary	1 x 40°		130.076.541/0000
momentary	2 x 40°		130.076.741/0000
latching	1 x 90°, form L		130.076.041/0000
latching	1 x 90°, form L		130.076.091/0000
latching	1 x 90°, form V		130.076.141/0000
latching	1 x 90°, form V		130.076.191/0000
latching	2 x 90°		130.076.341/0000
latching	2 x 90°		130.076.441/0000

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, 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

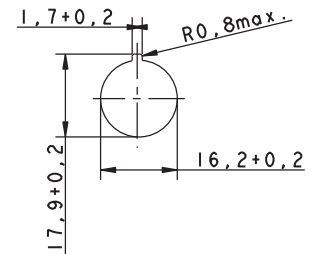
Mounting	ring nut
Contact function	according to contact block
Contact arrangement	according to contact block
Illumination	no

#### → 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

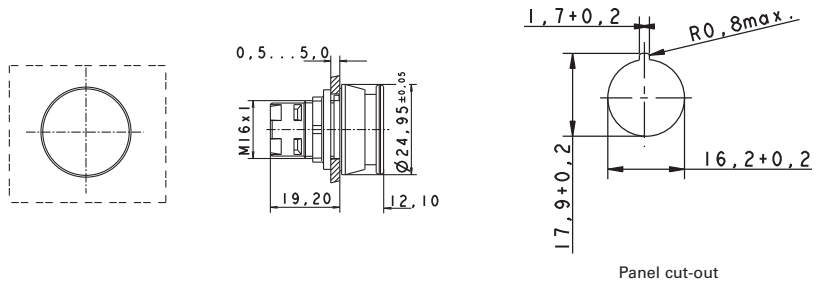
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Mushroom-headed pushbutton, round collar

Technical data see page 2 - 25



Panel cut-out

→ 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.

2

RAFIX  
16



## 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

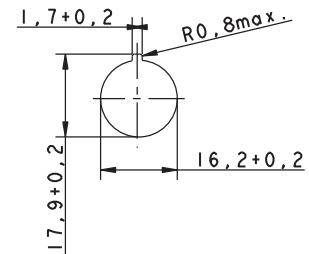
Mounting	ring nut
Contact function	latching
Contact arrangement	according to contact block
Illumination	see order block
Reset	counterclockwise or clockwise rotation

#### → 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

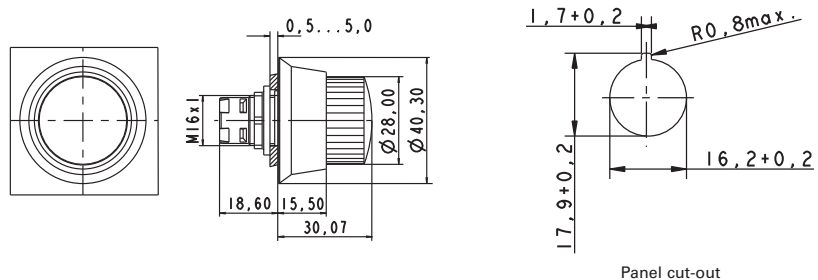
**– Table (continued) –  
Accessories RAFIX 16 - Emergency stop pushbutton**

→ 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

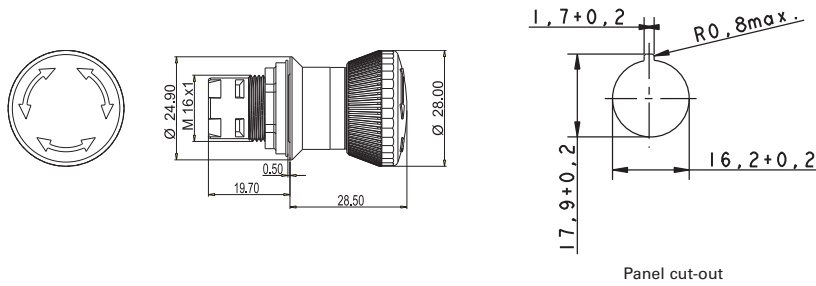
Only use universal contact blocks.

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



2

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

RAFIX  
16

Only use universal contact blocks.

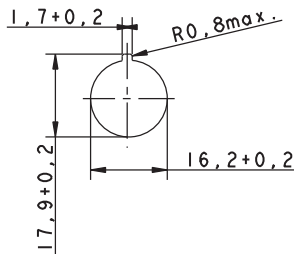
The positively driven mechanical arrangement is dupe-proof to DIN EN ISO 13850.

# 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



5.07620.004/0000

2 - 80

Fixing spanner for hexagon nut



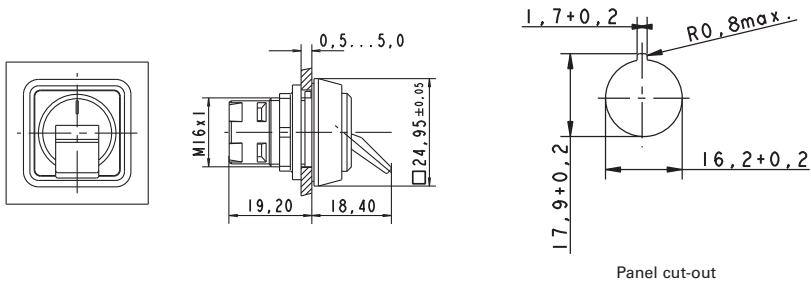
5.58.002.034/0000

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

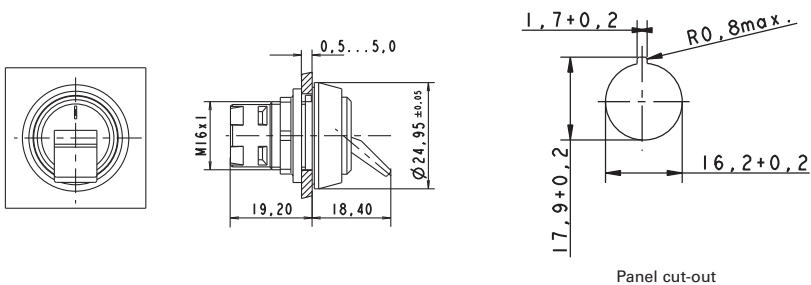


→ Contact function	Illumination	Order no.
latching	no	1.30.075.001/0104

Only use contact blocks with „momentary“ contact function.

### 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.

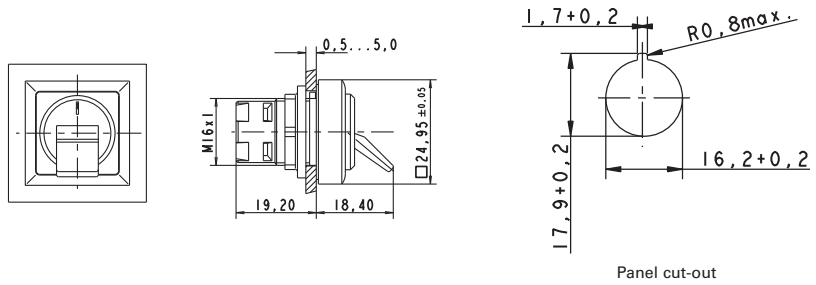
# CONTROL COMPONENTS

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

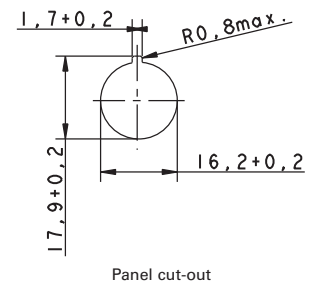
Collar dimensions	see order block
Overall height	23.65 mm
Mounting depth	19.2 mm
Mounting hole	16.2 mm
Key grid	25 x 25 mm

#### → 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



### 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

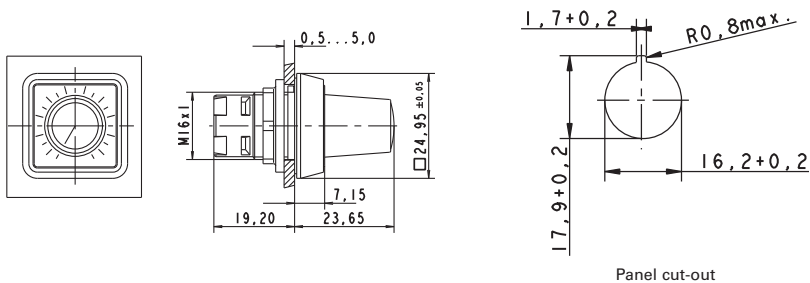
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Potentiometer drive, square collar

Technical data see page 2 - 33



2

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

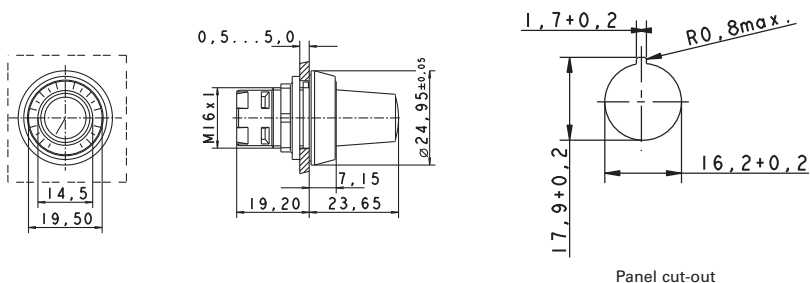
RAFIX  
16

**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



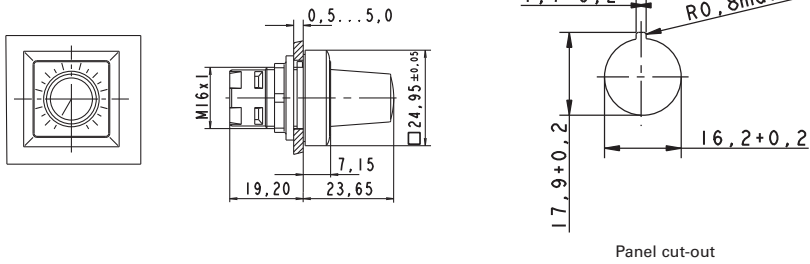
→ Form of lens	Form of collar	Color of handle	Order no.
handle	round	black	1.30.077.021/0000

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



## 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:**

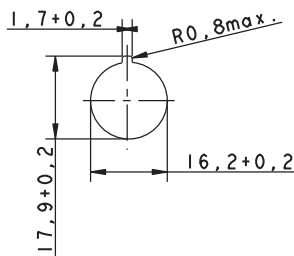
RAFIX 16 - Label holder, protruding, for square flush fitting collar: see page 2 - 81

# 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

Fixing spanner for hexagon nut

#### Photo



#### Order no.

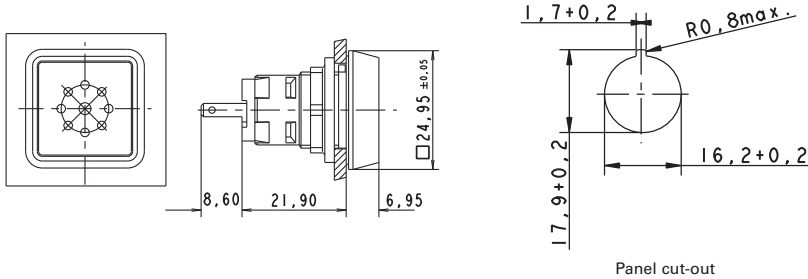
5.58.002.034/0000

#### Additional accessories see page

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	continuous beep	70 dB	1.30.078.001/0100

12 V DC available on request.

**Accessoires:**

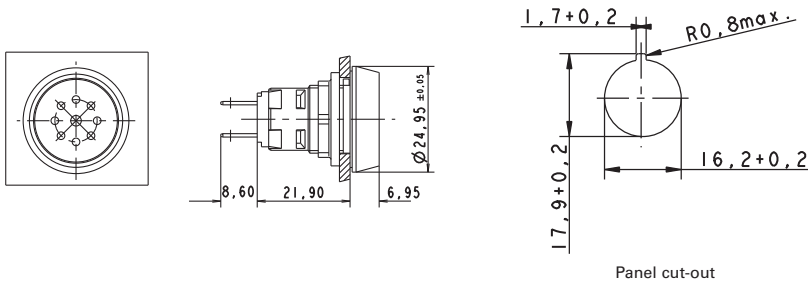
RAFIX 16 - Label holder, flush, for square collar: see page 2 - 80

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	continuous 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

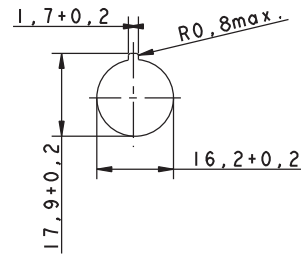
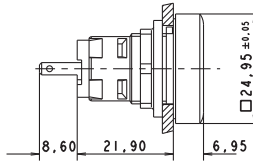
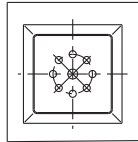
# CONTROL COMPONENTS

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

2

RAFIX  
16

## 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

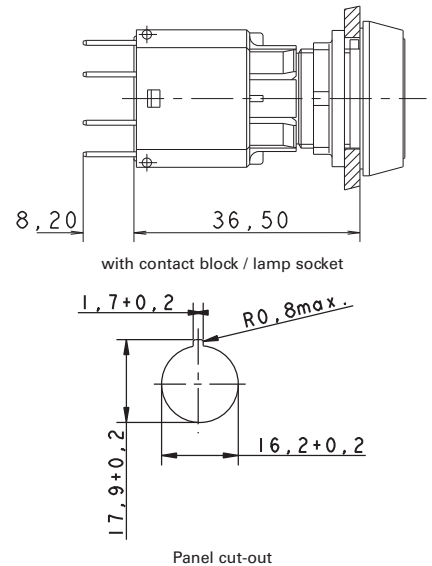
Collar dimensions	see order block
Overall height	see order block
Mounting depth	30.5 / 44.7 mm
Mounting hole	16.2 mm
Key grid	25 x 25 mm

#### → 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

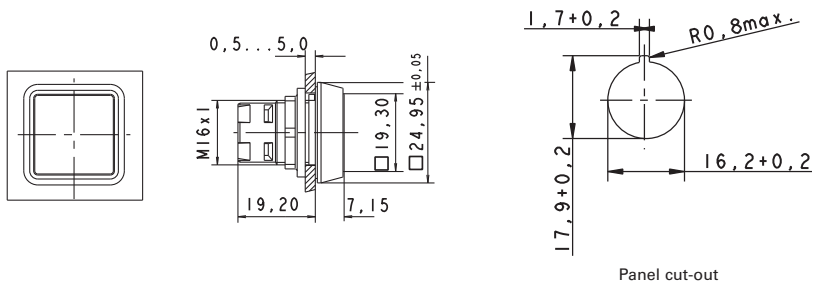
# CONTROL COMPONENTS

RAFIX 16 - ACTUATORS AND SIGNAL INDICATORS



## RAFIX 16 Signal indicator, square lens

Technical data see page 2 - 39



2

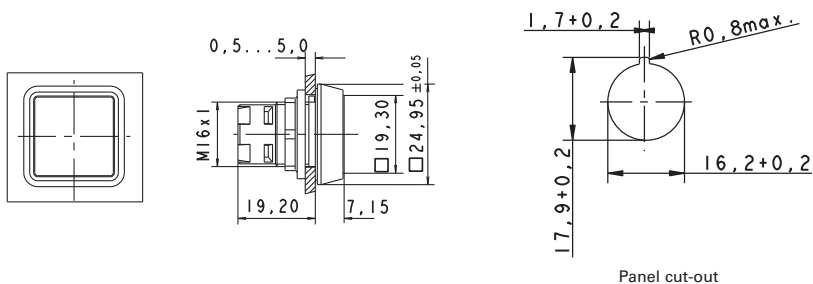
→ Form of lens	Color of lens	Order no. complete	Order no. single parts	
			Housing	Lens
lens square	transparent red	1.65.124.001/1306	1.65.124.101/0000	5.49.263.006/1306
lens square	transparent yellow	1.65.124.001/1403	1.65.124.101/0000	5.49.263.006/1403
lens square	transparent green	1.65.124.001/1505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



→ 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) –

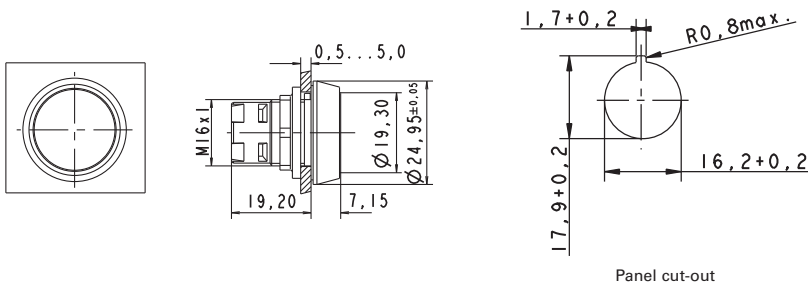
### RAFIX 16 - Signal indicator, square collar, flush lens

**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



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

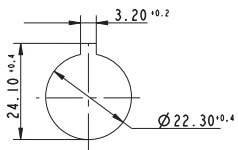
RAFIX 16 F - GENERAL INFORMATION



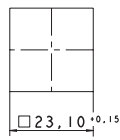
RAFIX 16 is a complete control component series with low profile design.

## 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

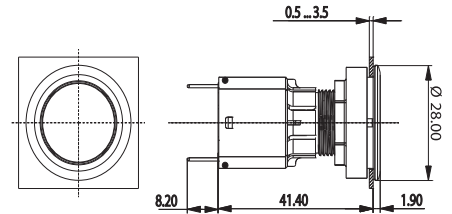
Robustness max.	100 N
-----------------	-------

#### → 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



2

RAFIX  
16

### 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

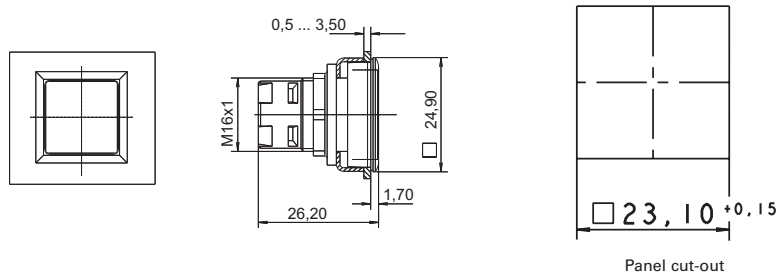
– Table (continued) –  
Accessories RAFIX 16 F - Pushbutton

→ 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



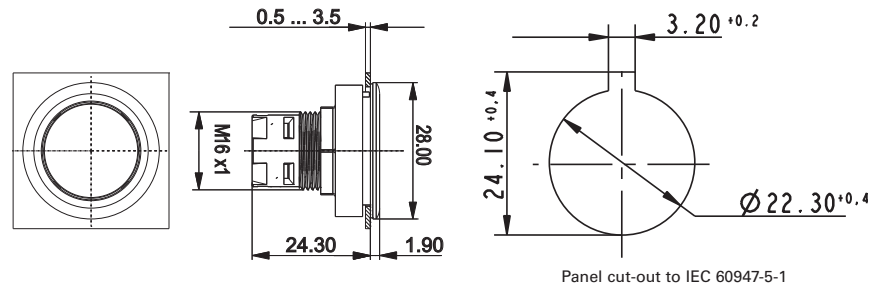
→ Color of collar	Illumination	Color of lens	Order no. complete	Order no. single parts	
				Housing	Lens
black	yes	transparent red	1.30.090.001/1300	1.30.090.501/0000	5.49.077.011/1306
black	yes	transparent yellow	1.30.090.001/1400	1.30.090.501/0000	5.49.077.011/1403
black	yes	transparent green	1.30.090.001/1500	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



2

→ 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

RAFIX  
16

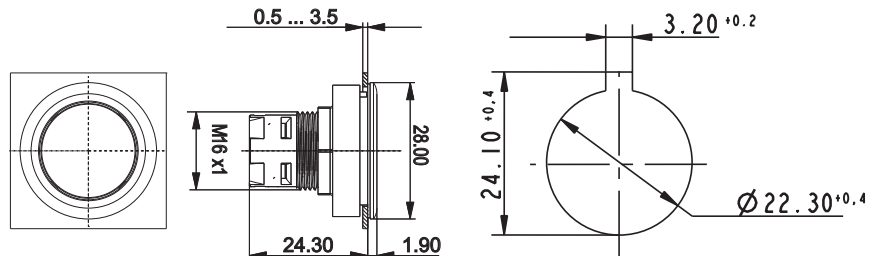
# CONTROL COMPONENTS

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

2

RAFIX  
16

## 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

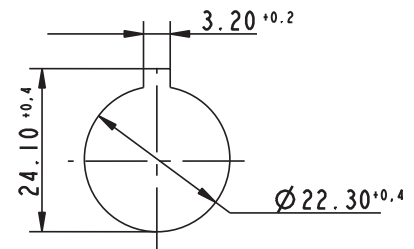
Torque max.	1.3 Nm
-------------	--------

#### → Electrical characteristics

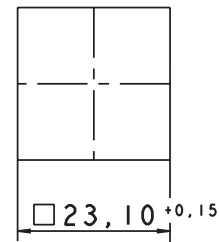
Protection class	-
------------------	---

#### → 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

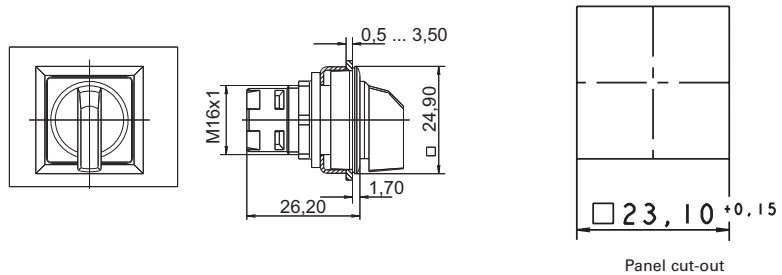
– Table (continued) –  
Accessories RAFIX 16 F - Selector switch





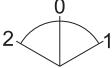




→ Description	Photo	Order no.	Additional accessories see page
RAFIX 16 - Universal contact block, silver contacts, with screw terminals		-	2 - 71
Socket W 2 x 4.6d, LED superbright		-	5 - 5
Fixing spanner for hexagon nut		5.58.002.034/0000	2 - 78, 5 - 26



## RAFIX 16 F Selector switch, square black collar

Technical data see page 2 - 47

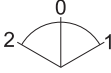


→ Color of collar	Illumination	Contact function	Rotating angle		Color of handle marking	Order no.
black	yes	momentary	1 x 40°		translucent white	1.30.093.551/2000
black	yes	momentary	2 x 40°		translucent white	1.30.093.651/2000
black	yes	latching	1 x 90°, form L		translucent white	1.30.093.501/2000
black	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

2

RAFIX  
16

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

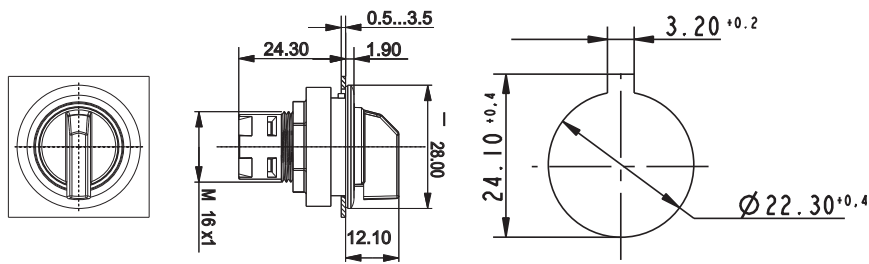
→ Color of collar	Illumination	Contact function	Rotating angle		Color of handle marking	Order no.
black	no	latching	2 x 60°		opaque white	1.30.093.700/0200

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).





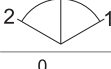




## RAFIX 16 F Selector switch, round black collar

Technical data see page 2 - 47



Panel cut-out to IEC 60947-5-1

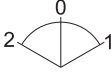


→ Color of collar	Illumination	Contact function	Rotating angle		Color of handle marking	Order no.
black	yes	momentary	1 x 40°		translucent white	1.30.093.561/2000
black	yes	momentary	2 x 40°		translucent white	1.30.093.661/2000
black	yes	latching	1 x 90°, form L		translucent white	1.30.093.511/2000
black	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

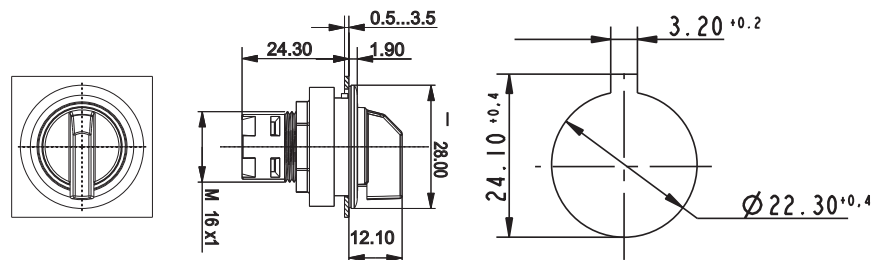
Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

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).





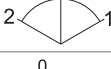






## RAFIX 16 F Selector switch, round metallized collar

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

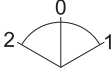


# CONTROL COMPONENTS

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

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS



## 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

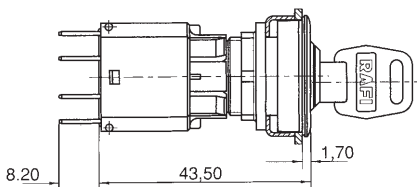
Protection class	II
------------------	----

#### → Other specifications

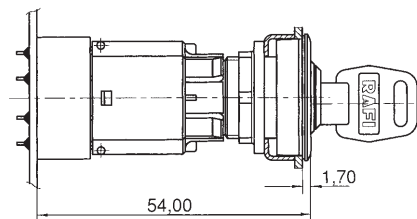
Operating life (operations)	65.000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating max. with lamp /LED	-
Storage temperature min.	-40 °C
Storage temperature max.	+85 °C
Environmental 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

2

RAFIX  
16



operating element and contact block



with PCB plug-in socket

### Approvals



IEC 61058, 25T70



in preparation

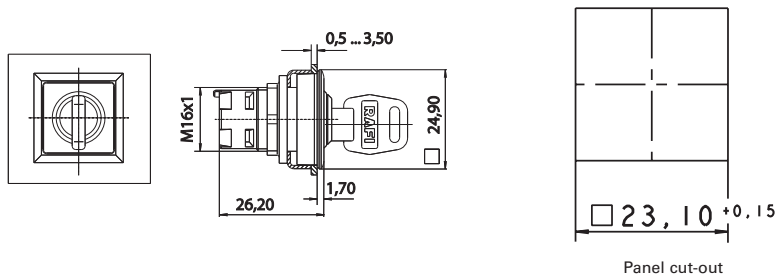


### Accessories RAFIX 16 F - Keylock switch

→ 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



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

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS

– Table (continued) –

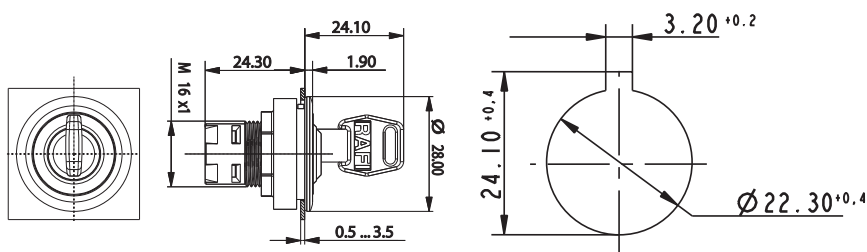
## RAFIX 16 F - Keylock switch, square black collar

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

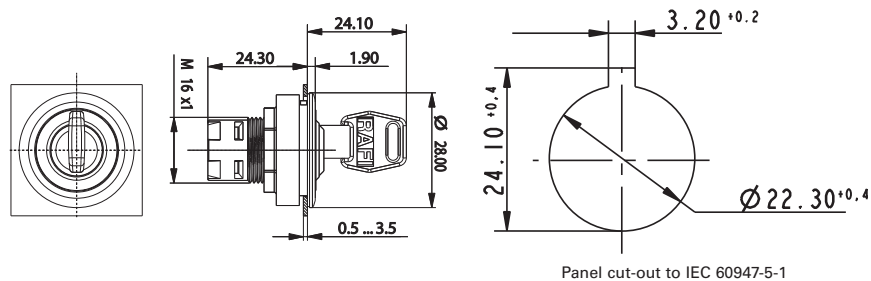
Only use RAFIX 16 contact blocks with „momentary“ contact function. For versions with clockwise and counterclockwise rotation, use universal contact blocks only.

2

RAFIX  
16

## RAFIX 16 F Keylock switch, round metallized collar

Technical data see page 2 - 52



2

→ 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.

RAFIX  
16

# CONTROL COMPONENTS

RAFIX 16 F - ACTUATORS AND SIGNAL INDICATORS



## 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

### Approvals



IEC 61058, 25T70



in preparation



2

RAFIX  
16

### Accessories RAFIX 16 F - Emergency stop pushbutton

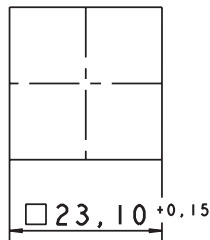
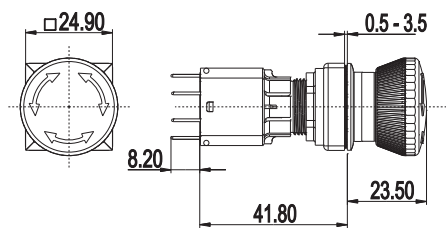
→ Description	Photo	Order no.	Additional accessories see page
RAFIX 16 - Universal contact block with coupling monitoring, silver contacts, with quick-connect terminals		-	2 - 71
RAFIX 16 - Universal contact block, gold contacts, with quick-connect terminals		-	2 - 65
RAFIX 16 - Universal contact block,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

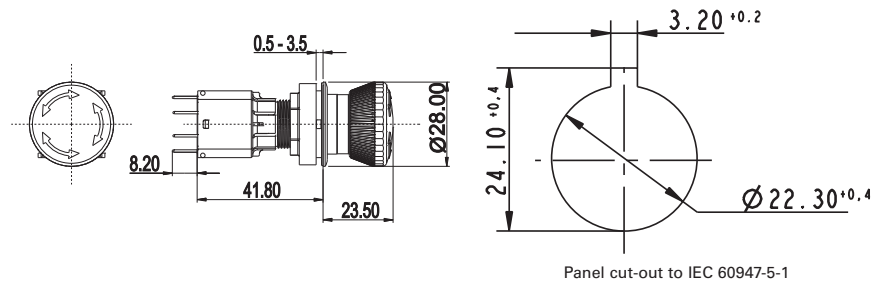
# CONTROL COMPONENTS

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

2

RAFIX  
16



## 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“

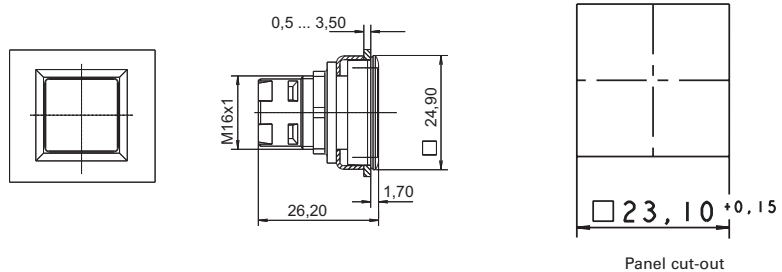
# CONTROL COMPONENTS

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

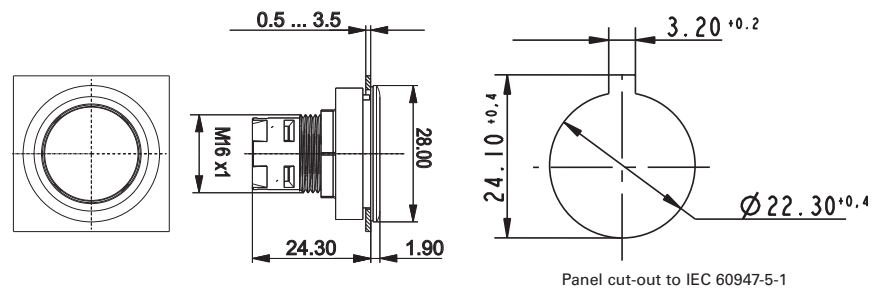
### Accessoires:

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

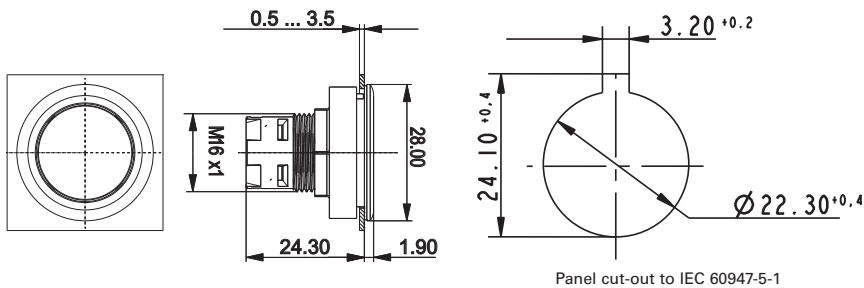
– Table (continued) –

**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



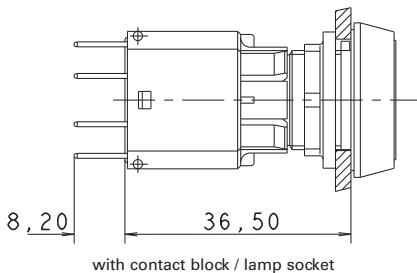
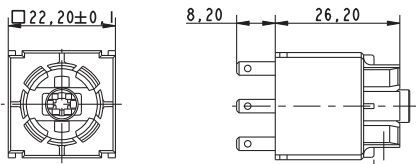
→ Color of collar	Overall height	Color of lens	Order no. complete	Order no. single parts	
				Housing	Lens
silver metallic	1.9 mm	transparent red	1.65.126.011/1300	-	-
silver metallic	1.9 mm	transparent yellow	1.65.126.011/1400	-	-
silver metallic	1.9 mm	transparent green	1.65.126.011/1500	-	-
silver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

# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS

2

RAFIX  
16



## 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

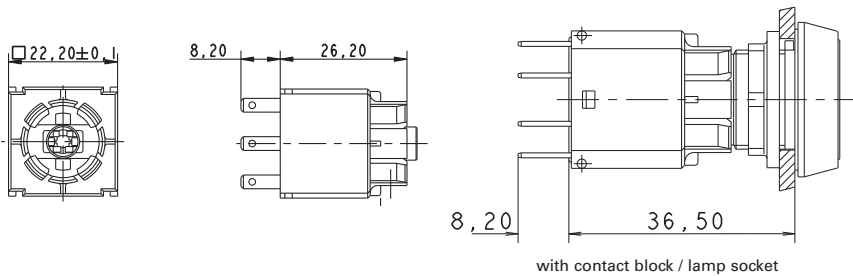
Protection class	II
Shock resistance acc. to IEC 60068-2-27	amplitude < 50g, 11ms, half sinusoidal
Operation temperature min.	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating max. with lamp /LED	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+85 °C
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

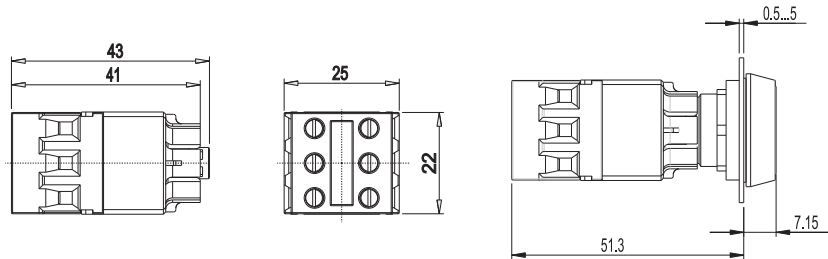
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



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

Technical data see page 2 - 62



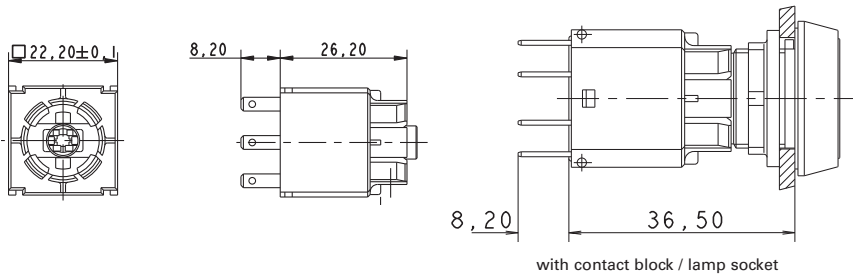
2

RAFIX  
16

→ 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

### 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

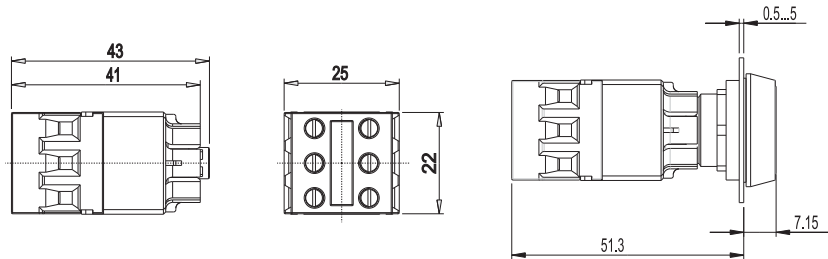
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



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

Technical data see page 2 - 62



2

RAFIX  
16

→ 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.

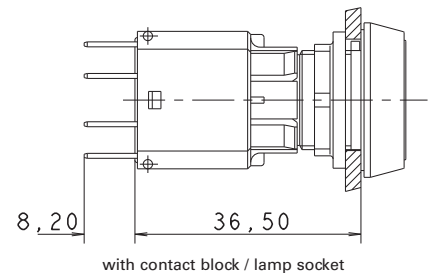
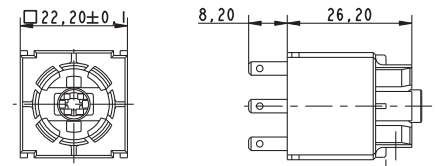


# RAFIX 16

## 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



with contact block / lamp socket

### 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

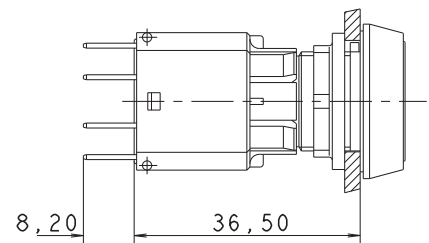
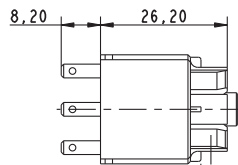
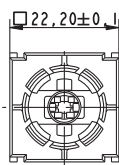
2

RAFIX  
16



## RAFIX 16 Standard 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 $U_i$ , AC	Ohmic rated current $I_R$	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

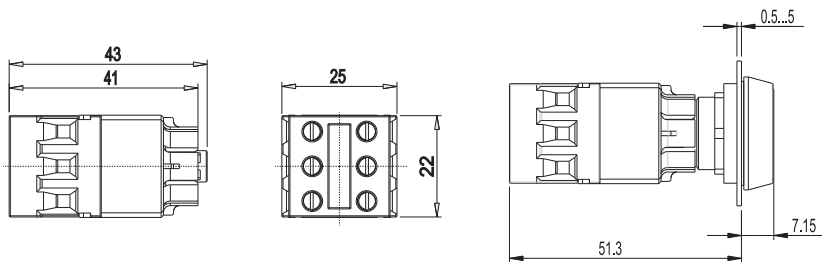
PCB plug-in socket: see page 2 - 75

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 $U_i$ , AC	Ohmic rated current $I_n$	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.

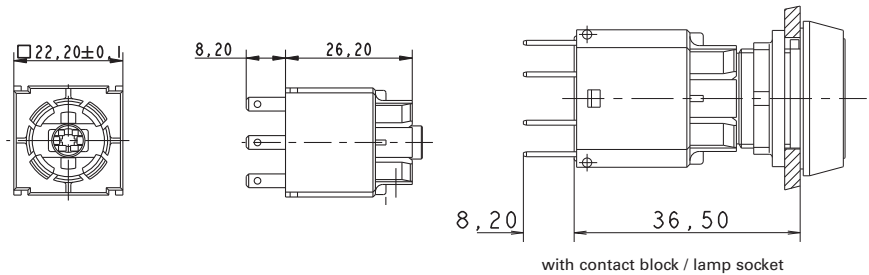
# CONTROL COMPONENTS

RAFIX 16 - CONTACT BLOCKS AND INDICATOR ELEMENTS



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

Technical data see page 2 - 67



→ Contact arrangement	Contact function	Lamp socket	Rated insulation voltage $U_i$ , 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

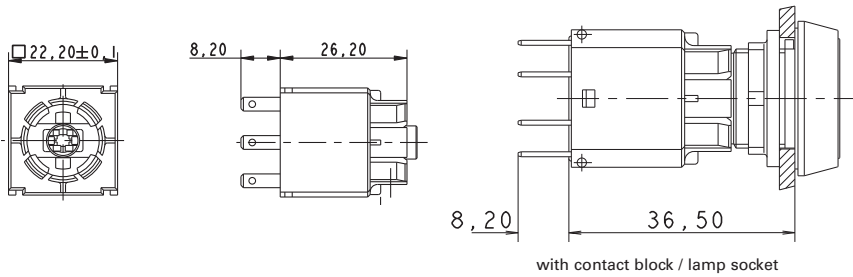
PCB plug-in socket: see page 2 - 75

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 $U_i, AC$	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

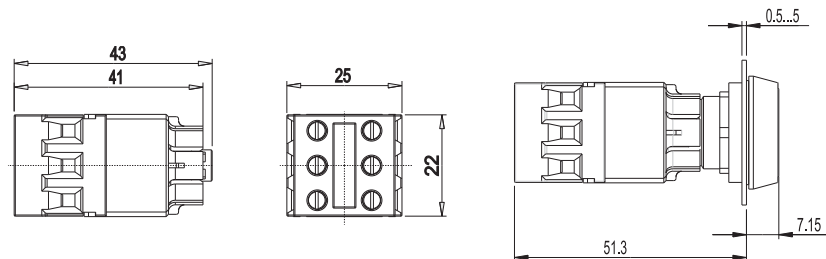
PCB plug-in socket: see page 2 - 75

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 $U_i, AC$	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 $U_i$ , 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	1.20.123.104/0000
2 NO	momentary	-	250 V	6 A	1.20.123.124/0000
2 NC	momentary	W 2 x 4.6d	250 V	6 A	1.20.123.105/0000
2 NC	momentary	-	250 V	6 A	1.20.123.125/0000
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

<b>→ Dimensions</b>	
Size not mounted	see order block
Mounting depth	see order block
<b>→ Mechanical design</b>	
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
<b>→ Electrical characteristics</b>	
Rated voltage	60 V
Rated power	1.2 W
<b>→ Other specifications</b>	
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



### Approvals



IEC 61058, 25T55



C22.2 No. 14-M91



### Accessories RAFIX 16 - Lamp socket

→ 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 RAFIX 16 - Lamp socket

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

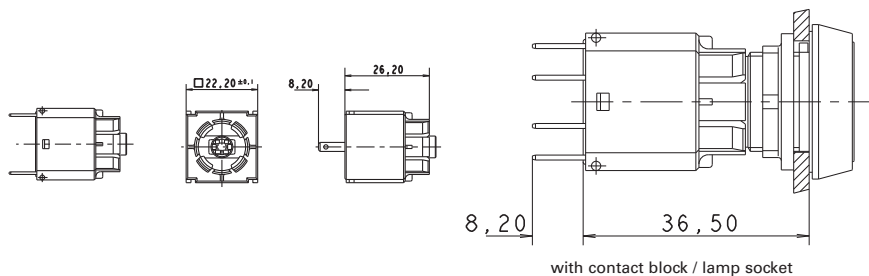
2

RAFIX  
16



## RAFIX 16 Lamp socket W 2 x 4.6 d

Technical data see page 2 - 73



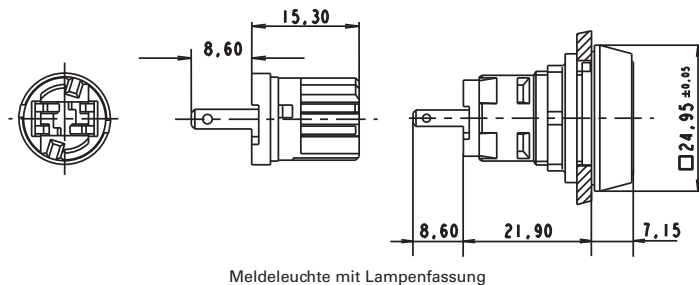
→ Rated voltage	Rated power	Lamp socket	Mounting	Mounting depth	Order no.
60 V	1.2 W	wedge-base W 2 x 4.6d	click on signal indicator	44.7 mm	1.71.212.001/0000

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.



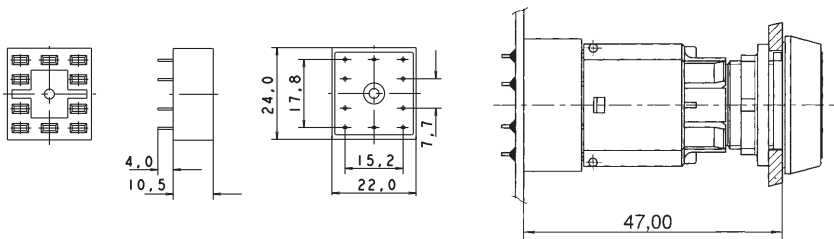
## RAFIX 16 Special accessories



2

RAFIX  
16

### PCB plug-in socket

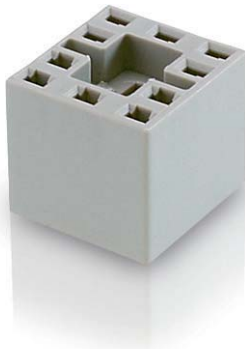


→ Contacts	Contact arrangement	Order no.
10	universal application	5.05.510.644/0000
6	2 NO, lamp socket	5.05.510.645/0000
6	2 NC, lamp socket	5.05.510.647/0000
6	1 NC, 1 NO, lamp socket	5.05.510.646/0000
4	2 NC	5.05.510.648/0000
2	lamp socket	5.05.510.649/0000

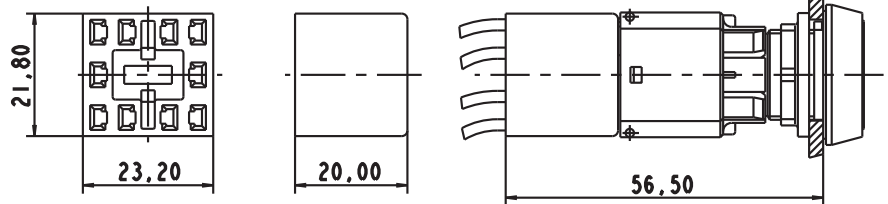
For soldering onto PCBs. The PCB carrying the plug-in sockets is plugged onto the contact blocks/lamp sockets. Additional fixing of the PCB to the contact block is not required. Solder terminals for PCB 3.5 mm long, for 1.3 mm hole.

# CONTROL COMPONENTS

RAFIX 16 - SPECIAL ACCESSORIES



## Multipole connector



→ 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

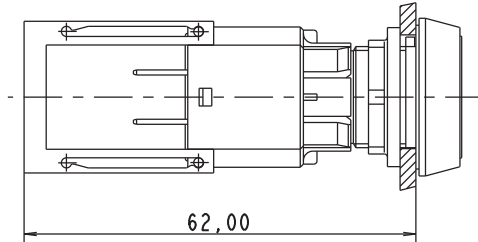
→ Description	Order no.
Plug distributor	5.37.540.029/6000

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

2

RAFIX  
16

## 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.

## 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.

# CONTROL COMPONENTS

RAFIX 16 - SPECIAL ACCESSORIES

## Fixing spanner for hexagon nut



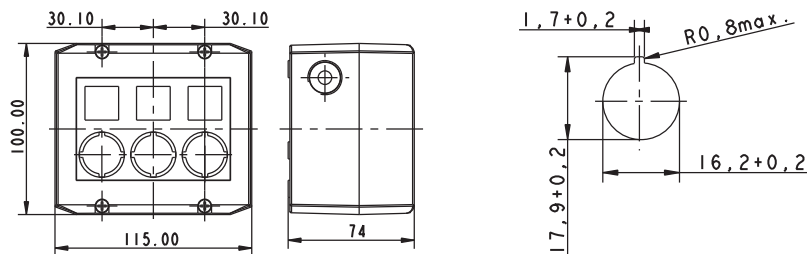
2

→ 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) –

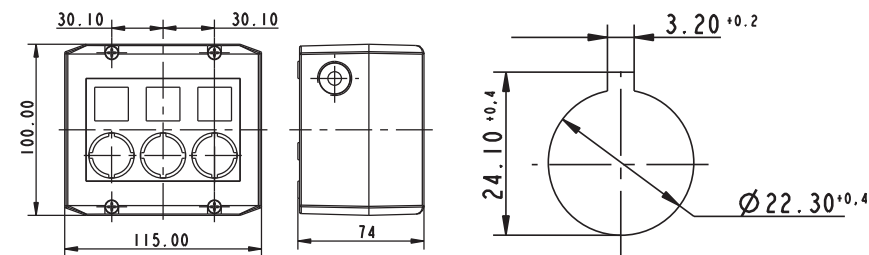
## RAFIX - Insulating housing, Ø 16.2 mm

- 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



Panel cut-out to IEC 60947-5-1



→ 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:

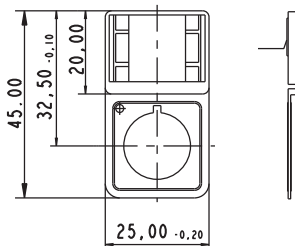
Label sheet for housing (50 foil legend inserts): 5.40.451.283/0000

# CONTROL COMPONENTS

RAFIX 16 - SPECIAL ACCESSORIES



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



2

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

Legending available on request.

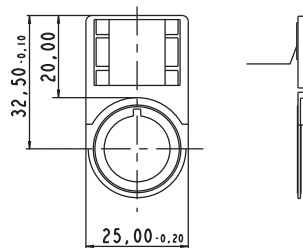
**Accessoires:**

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

RAFIX  
16



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



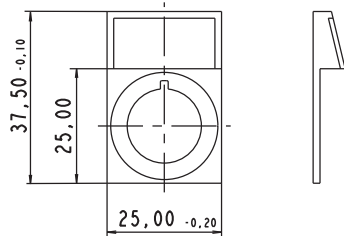
→ Description	Order no.
Label holder, flush, for round collar	5.07.620.006/0000

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

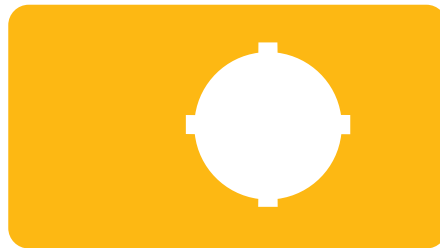
# CONTROL COMPONENTS

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

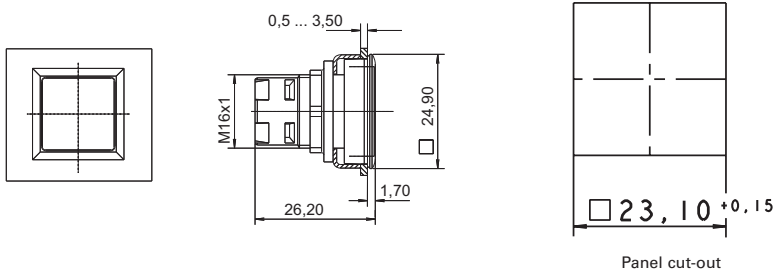


## RAFIX 16 Blanking cap with sealing and threaded ring, Ø 16.2 mm



→ 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



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