



General data

RAFIX 22QR control component range

- For a mounting hole diameter of 22.3 mm to IEC 60947
- 250V/10A max.
- Water-jet proof IP65
- 2 collar shapes
- The lamps of the pushbuttons can also be replaced from the front
- The contact blocks (silver or gold contacts) snap onto the actuators with a coupling
- Screw, cage clamp, quick connect terminals or RJ12 connector
- 3 NC + 3 NO max.

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

RAFIX
22 QR

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Contact blocks marked with different colours for ease of identification in stock and when connecting.

- NC contacts: red
- NO contacts: green
- NC/NO contacts: red/green
- Lamp socket: black
- Silver contacts: basic housing colour is black
- Gold contacts: basic housing colour is grey
- The terminals associated with a contact pair are colour coded on the connection side and marked with the respective contact numbers.

The lamps of pushbuttons and signal lamps can be replaced from the front. This method saves time and increases safety since it eliminates the need for accessing the machine/control station interior and handling live cables for lamp replacement. After unscrewing the front ring, the lens can be removed and the lamp replaced.

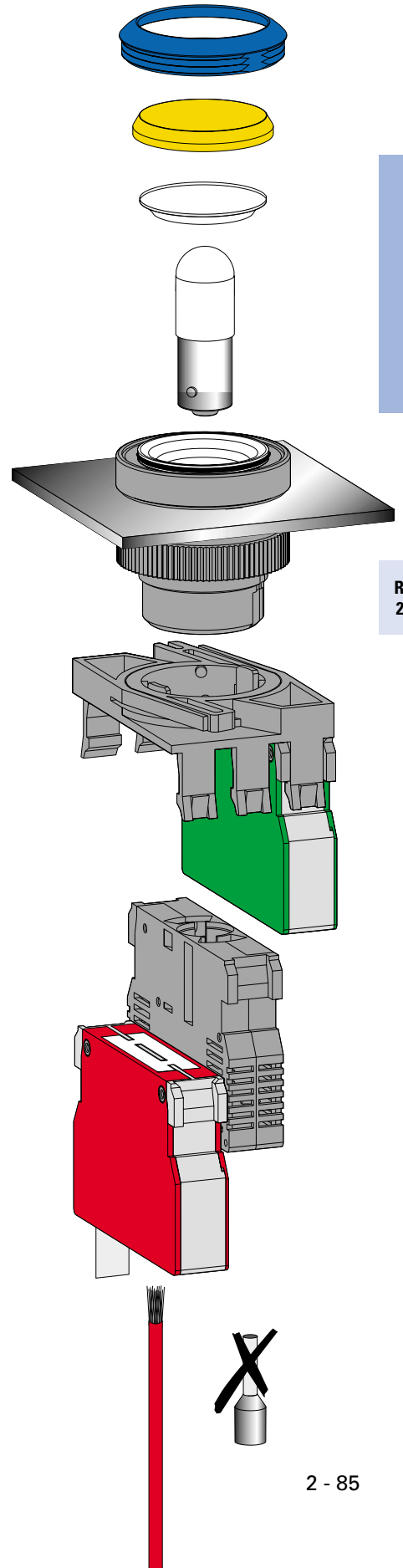


cast-on collar seal

The components feature a removable locating lug. If installed without locating lug, the ring nut with claw can be used. Accurate alignment of the actuator can be achieved behind the front panel. The cast-on collar seal can not get lost nor be twisted during installation and allows single-person assembly: the actuator is held in the mounting hole by the cast-on seal and can then be fixed by screwing from the rear.



First, snap the lamp socket and contact blocks into the coupling. Then snap the assembly on to the actuator. To release it, the bayonet must be pressed (prevents inadvertent releasing at the same time).



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RAFIX
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Terminals

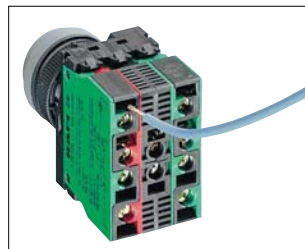
The RAFIX 22 QR contact blocks are available in different connection styles as required for your application:

- **Screw terminals**
The terminals are open and the captive screws are mounted in the terminal recess.
- **Quick connect/solder terminals 6.3 x 0.8 mm**
- **Cage clamp terminals**
Simply insert a screwdriver to open the terminal, insert the cable and remove the screwdriver to close the terminal.
- **RJ 12-terminal**
Just plug in the cable with a RJ 12 connector.

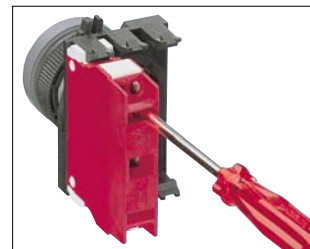
Assembly

Screw terminals

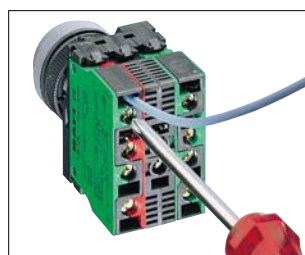
Cage clamp terminals



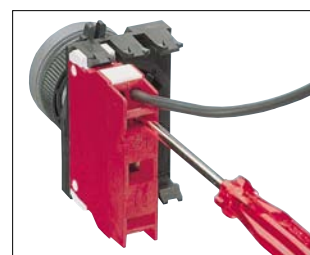
Insert the wire.



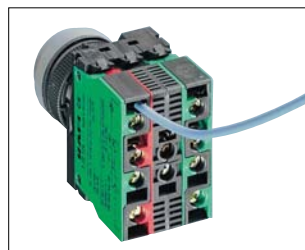
Open the terminal.



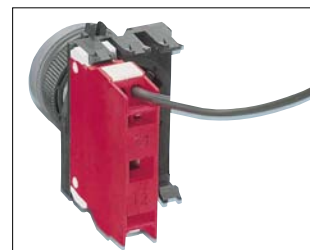
Tighten the screw.



Insert the wire.



Done.



Remove the screwdriver.

2

Your advantage:

This offers your savings in three ways:

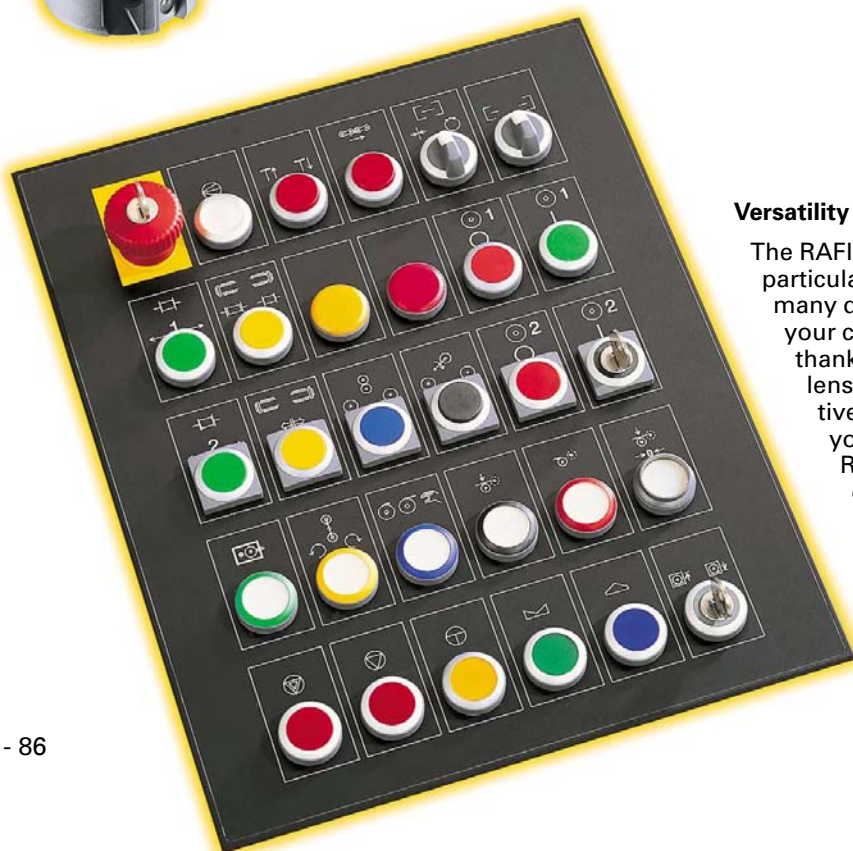
- Drastically reduced assembly time thanks to wire insertion from the rear, i.e. no more bending and lateral insertion of the wires required.
- You save material: No wire end sleeves are required.
- You save the time previously required for mounting the wire end sleeves.

RAFIX
22 QR



Sealed for life against humidity and dirt

The special seal reliably prevents moisture, oil and dust from penetrating to the contact block. In contrast to other sealing types which move up and down the shaft, this special seal is firmly seated on the housing (degree of protection IP 65 to DIN).



Versatility of design for customized panels

The RAFIX 22 QR system does not only have a particularly low profile and is also available in many different versions. Your design options for your customized panels are nearly unlimited thanks to the interchangeable front rings and lenses. In this way you can achieve an attractive design while ensuring safe operation of your equipment at the same time. RAFIX 22 QR components are available either with a round or with a square collar.

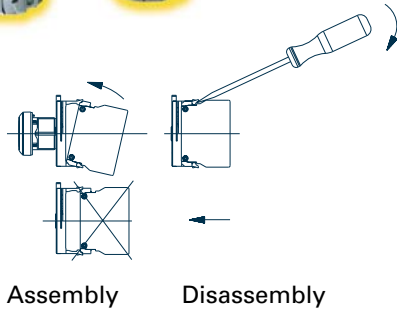
The RAFIX 22 QR control component range meets all the technical requirements and current standards for control units. The system is of modular design. Actuators, contact blocks and lamp sockets can be combined freely. This means that you may

implement modifications of design or configuration even at the last minute. An additional positive effect is the reduction of stockholding costs.



Sequence of assembly/disassembly at screw, cage clamp and quick connect terminals

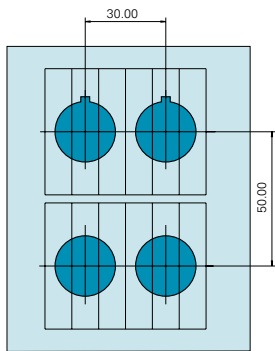
- Fix the actuator in the front panel with the ring nut.
- Snap the individual elements (a maximum three contact blocks or two contact blocks together with a lamp socket) in the coupling. You can install them on any assembling axis.
- Insert the lamp or LED into the lamp socket.
- Snap the coupling with the contact blocks on to the actuator.
- Connect the cables.
- Disassembly is performed in reverse order. To remove the coupling from the actuator, the latch lever must be pressed (by hand or with a screwdriver).



Approvals

Part no.	BG zert.	VDE 0660	10/15	ULc	GL
1.20 124.---	○	○	●	●	○
1.20 125.---	○	○	●	●	○
1.30 243.---	○			●	
1.71 213.---		○	●	●	○
1.71 214.---		○	●	●	○

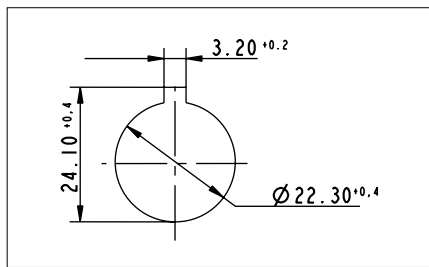
● = approved, ○ = pending



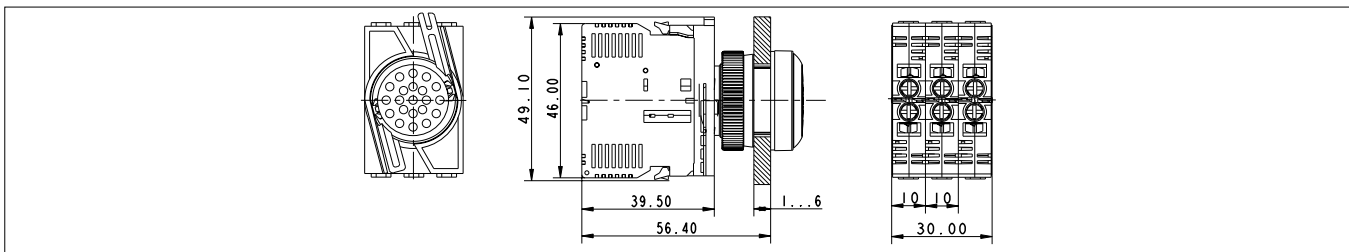
Panel cut-out according to IEC 60947-5-1

All actuators are provided with a locating lug which may be removed using a screwdriver for installation into mounting holes if required.

With a grid spacing of 30 mm horizontally and 50 mm vertically, the collars of the square actuators touch each other. We recommend to use the same grid spacing also for the round collar shapes (IEC 947).



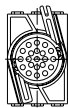
Dimensioned drawing



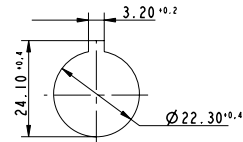
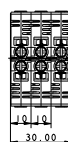
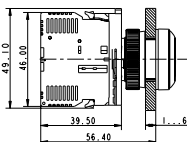
RAFIX 22 QR pushbutton



Pict.: transparent green



with contact block



Panel cut-out to IEC 60947-5-1

Technical data

General information

Form of lens	see order block
Colour of lens	see order block
Colour of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	see order block
Mounting depth with contact block without cable	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
Contact function	see order block
Illuminability	see order block

Mechanical characteristics

Operating travel	4 mm
------------------	------

Operating force max.

approx. 5 N for
1 switching element
100 N

Robustness min.

Other specifications

Operating life
(operations) 1 million momentary/
0.5 million latching

Degree of protection
from front side

IP65

Ambient temp. operating
min.

-25 °C

Ambient temp. operating
max.

+70 °C

Storage temperature min.

-40 °C

Storage temperature max.

+80 °C

Resistance to constant
environment

according to
IEC 600 68-2-3 and 2-30

Resistance at variable
environment

according to
IEC 600 68-2-14 and 2-33

Accessories RAFIX 22 QR pushbutton

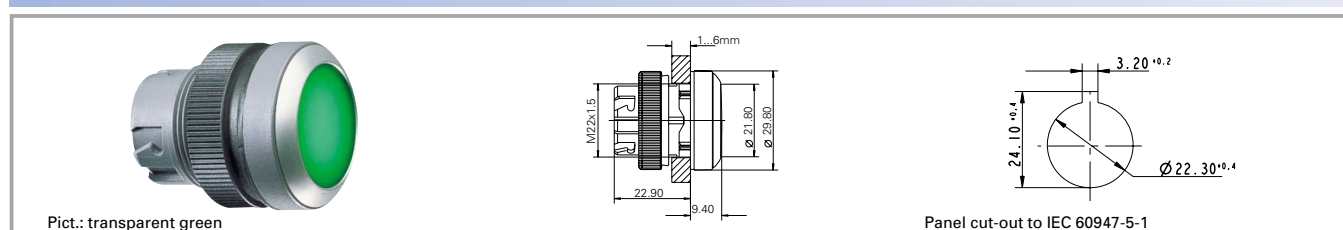
Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 1 NO		1.20.124.002/0000	2 - 126
RAFIX 22 QR contact block with silver contacts, with coupling and lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.027/0000	2 - 127
RAFIX 22 QR contact block with gold contacts, with coupling and lamp socket, screw terminals, 1 NO		1.20.124.122/0000	2 - 131
RAFIX 22 QR contact block with silver contacts, with coupling and lamp socket, cage clamp terminals, 1 NO, 1 NC		1.20.125.025/0000	2 - 127
Contact block with RJ 12 connector, 2 NO, white LED		1.20.128.015/0000	2 - 133
Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V		1.90.060.133/0000	5 - 8
LED BA 9s (MBC/MCC) superbright, white, 24 V		1.90.690.345/0000	5 - 19

Accessories RAFIX 22 QR pushbutton

Description	Photo	Order no.	Page
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 143

For other contact blocks, refer to the chapter „Contact blocks“; for additional accessories, refer to „RAFIX 22 QR special accessories“.

RAFIX 22 QR pushbutton, flush lens, round collar



Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.001/10xx	1.30.240.021/1000	1.30.240.011/10xx	1.30.240.031/1000
yes	transparent red	1.30.240.001/13xx	1.30.240.021/1300	1.30.240.011/13xx	1.30.240.031/1300
yes	transparent yellow	1.30.240.001/14xx	1.30.240.021/1400	1.30.240.011/14xx	1.30.240.031/1400
yes	transparent green	1.30.240.001/15xx	1.30.240.021/1500	1.30.240.011/15xx	1.30.240.031/1500
yes	transparent blue	1.30.240.001/16xx	1.30.240.021/1600	1.30.240.011/16xx	1.30.240.031/1600
no	opaque black	1.30.240.101/01xx	1.30.240.121/0100	1.30.240.111/01xx	1.30.240.131/0100
no	opaque white	1.30.240.101/02xx	1.30.240.121/0200	1.30.240.111/02xx	1.30.240.131/0200
no	opaque red	1.30.240.101/03xx	1.30.240.121/0300	1.30.240.111/03xx	1.30.240.131/0300
no	opaque yellow	1.30.240.101/04xx	1.30.240.121/0400	1.30.240.111/04xx	1.30.240.131/0400
no	opaque green	1.30.240.101/05xx	1.30.240.121/0500	1.30.240.111/05xx	1.30.240.131/0500
no	opaque blue	1.30.240.101/06xx	1.30.240.121/0600	1.30.240.111/06xx	1.30.240.131/0600
no	opaque slate-grey	1.30.240.101/07xx	1.30.240.121/0700	1.30.240.111/07xx	1.30.240.131/0700

Technical data see page 2 - 88

Accessories:

Front ring, plastic with thermoflex protective cap, black: **5.05.004.914/0100**

Front ring, plastic with protective cap, slate grey: 5.05.004.914/0700

Front ring, plastic with thermoflex protective cap, silver grey: 5.05.004.914/0800

Schutzklappe, selbstschließend: 5.05.511.194/0000

Protective cover, latching: 5.05.511.195/0000

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

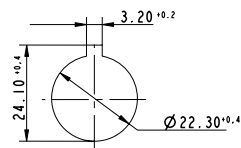
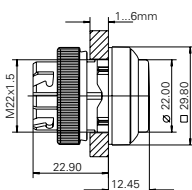
Pushbuttons with plastic front ring and white lens are also available with the following front ring colours: red = 03, yellow = 04, green = 05, blue = 06. Other colour combinations on request.

Order numbers **1.30.240.001/--08**, **1.30.240.011/--08** and **1.30.240.101/--08** (with silver grey plastic front ring) are **stock items**.

RAFIX 22 QR pushbutton, protruding lens, round collar



Pict.: transparent red



Panel cut-out to IEC 60947-5-1

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.201/10xx	1.30.240.221/1000	1.30.240.211/10xx	1.30.240.231/1000
yes	transparent red	1.30.240.201/13xx	1.30.240.221/1300	1.30.240.211/13xx	1.30.240.231/1300
yes	transparent yellow	1.30.240.201/14xx	1.30.240.221/1400	1.30.240.211/14xx	1.30.240.231/1400
yes	transparent green	1.30.240.201/15xx	1.30.240.221/1500	1.30.240.211/15xx	1.30.240.231/1500
yes	transparent blue	1.30.240.201/16xx	1.30.240.221/1600	1.30.240.211/16xx	1.30.240.231/1600
no	opaque black	1.30.240.301/01xx	1.30.240.321/0100	1.30.240.311/01xx	1.30.240.331/0100
no	opaque white	1.30.240.301/02xx	1.30.240.321/0200	1.30.240.311/02xx	1.30.240.331/0200
no	opaque red	1.30.240.301/03xx	1.30.240.321/0300	1.30.240.311/03xx	1.30.240.331/0300
no	opaque yellow	1.30.240.301/04xx	1.30.240.321/0400	1.30.240.311/04xx	1.30.240.331/0400
no	opaque green	1.30.240.301/05xx	1.30.240.321/0500	1.30.240.311/05xx	1.30.240.331/0500
no	opaque blue	1.30.240.301/06xx	1.30.240.321/0600	1.30.240.311/06xx	1.30.240.331/0600
no	opaque slate-grey	1.30.240.301/07xx	1.30.240.321/0700	1.30.240.311/07xx	1.30.240.331/0700

Technical data see page 2 - 88

Accessories:

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

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

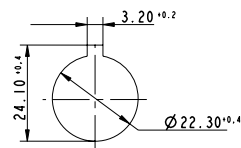
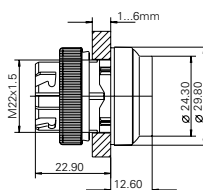
Pushbuttons with plastic front ring and white lens are also available with the following front ring colours: red = 03, yellow = 04, green = 05, blue = 06. Other colour combinations on request.

Order numbers **1.30.240.201/--08** and **1.30.240.211/--08** (with silver grey plastic front ring) are **stock items**.

RAFIX 22 QR pushbutton, protruding front ring, round collar



Pict.: transparent red



Panel cut-out to IEC 60947-5-1

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.401/10xx	1.30.240.421/1000	-	-
yes	transparent red	1.30.240.401/13xx	1.30.240.421/1300	-	-
yes	transparent yellow	1.30.240.401/14xx	1.30.240.421/1400	-	-
yes	transparent green	1.30.240.401/15xx	1.30.240.421/1500	-	-
yes	transparent blue	1.30.240.401/16xx	1.30.240.421/1600	-	-
no	opaque black	1.30.240.501/01xx	1.30.240.521/0100	-	-
no	opaque white	1.30.240.501/02xx	1.30.240.521/0200	-	-
no	opaque red	1.30.240.501/03xx	1.30.240.521/0300	-	-
no	opaque yellow	1.30.240.501/04xx	1.30.240.521/0400	-	-
no	opaque green	1.30.240.501/05xx	1.30.240.521/0500	-	-
no	opaque blue	1.30.240.501/06xx	1.30.240.521/0600	-	-
no	opaque slate-grey	1.30.240.501/07xx	1.30.240.521/0700	-	-

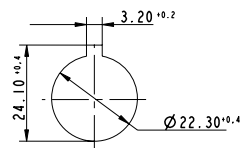
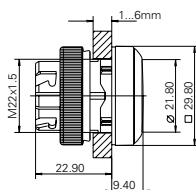
Technical data see page 2 - 88

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

The protruding collar offers protection against inadvertent operation and thereby fulfils the safety requirements of various machinery manufacturers, particularly from the printing industry.

RAFIX 22 QR pushbutton, flush lens, square collar


Pict.: transparent red



Panel cut-out to IEC 60947-5-1

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.051/10xx	1.30.240.071/1000	1.30.240.061/10xx	1.30.240.081/1000
yes	transparent red	1.30.240.051/13xx	1.30.240.071/1300	1.30.240.061/13xx	1.30.240.081/1300
yes	transparent yellow	1.30.240.051/14xx	1.30.240.071/1400	1.30.240.061/14xx	1.30.240.081/1400
yes	transparent green	1.30.240.051/15xx	1.30.240.071/1500	1.30.240.061/15xx	1.30.240.081/1500
yes	transparent blue	1.30.240.051/16xx	1.30.240.071/1600	1.30.240.061/16xx	1.30.240.081/1600
no	opaque black	1.30.240.151/01xx	1.30.240.171/0100	1.30.240.161/01xx	1.30.240.181/0100
no	opaque white	1.30.240.151/02xx	1.30.240.171/0200	1.30.240.161/02xx	1.30.240.181/0200
no	opaque red	1.30.240.151/03xx	1.30.240.171/0300	1.30.240.161/03xx	1.30.240.181/0300
no	opaque yellow	1.30.240.151/04xx	1.30.240.171/0400	1.30.240.161/04xx	1.30.240.181/0400
no	opaque green	1.30.240.151/05xx	1.30.240.171/0500	1.30.240.161/05xx	1.30.240.181/0500
no	opaque blue	1.30.240.151/06xx	1.30.240.171/0600	1.30.240.161/06xx	1.30.240.181/0600
no	opaque slate-grey	1.30.240.151/07xx	1.30.240.171/0700	1.30.240.161/07xx	1.30.240.181/0700

Technical data see page 2 - 88

Accessories:

 Front ring, plastic with thermoflex protective cap, black: **5.05.004.914/0100**

Front ring, plastic with protective cap, slate grey: 5.05.004.914/0700

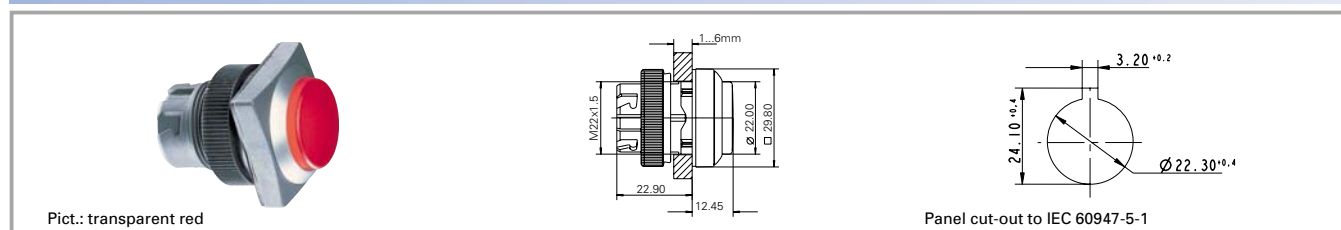
Front ring, plastic with thermoflex protective cap, silver grey: 5.05.004.914/0800

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Pushbuttons with plastic front ring and white lens are also available with the following front ring colours: red = 03, yellow = 04, green = 05, blue = 06. Other colour combinations on request.

 Order numbers **1.30.240.051/--08**, **1.30.240.061/--08** and **1.30.240.151/--08** (with silver grey plastic front ring) are **stock items**.

RAFIX 22 QR pushbutton, protruding lens, square collar



Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.251/10xx	1.30.240.271/1000	1.30.240.261/10xx	1.30.240.281/1000
yes	transparent red	1.30.240.251/13xx	1.30.240.271/1300	1.30.240.261/13xx	1.30.240.281/1300
yes	transparent yellow	1.30.240.251/14xx	1.30.240.271/1400	1.30.240.261/14xx	1.30.240.281/1400
yes	transparent green	1.30.240.251/15xx	1.30.240.271/1500	1.30.240.261/15xx	1.30.240.281/1500
yes	transparent blue	1.30.240.251/16xx	1.30.240.271/1600	1.30.240.261/16xx	1.30.240.281/1600
no	opaque black	1.30.240.351/01xx	1.30.240.371/0100	1.30.240.361/01xx	1.30.240.381/0100
no	opaque white	1.30.240.351/02xx	1.30.240.371/0200	1.30.240.361/02xx	1.30.240.381/0200
no	opaque red	1.30.240.351/03xx	1.30.240.371/0300	1.30.240.361/03xx	1.30.240.381/0300
no	opaque yellow	1.30.240.351/04xx	1.30.240.371/0400	1.30.240.361/04xx	1.30.240.381/0400
no	opaque green	1.30.240.351/05xx	1.30.240.371/0500	1.30.240.361/05xx	1.30.240.381/0500
no	opaque blue	1.30.240.351/06xx	1.30.240.371/0600	1.30.240.361/06xx	1.30.240.381/0600
no	opaque slate-grey	1.30.240.351/07xx	1.30.240.371/0700	1.30.240.361/07xx	1.30.240.381/0700

Technical data see page 2 - 88

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

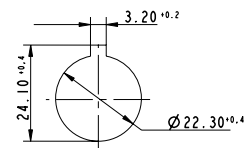
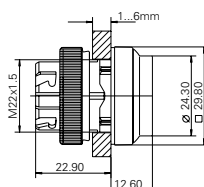
Pushbuttons with plastic front ring and white lens are also available with the following front ring colours: red = 03, yellow = 04, green = 05, blue = 06. Other colour combinations on request.

Order numbers **1.30.240.251/--08** and **1.30.240.261/--08** (with silver grey plastic front ring) are **stock items**.

RAFIX 22 QR pushbutton, protruding front ring, square collar



Pict.: transparent green



Panel cut-out to IEC 60947-5-1

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.451/10xx	1.30.240.471/1000	-	-
yes	transparent red	1.30.240.451/13xx	1.30.240.471/1300	-	-
yes	transparent yellow	1.30.240.451/14xx	1.30.240.471/1400	-	-
yes	transparent green	1.30.240.451/15xx	1.30.240.471/1500	-	-
yes	transparent blue	1.30.240.451/16xx	1.30.240.471/1600	-	-
no	opaque black	1.30.240.551/01xx	1.30.240.571/0100	-	-
no	opaque white	1.30.240.551/02xx	1.30.240.571/0200	-	-
no	opaque red	1.30.240.551/03xx	1.30.240.571/0300	-	-
no	opaque yellow	1.30.240.551/04xx	1.30.240.571/0400	-	-
no	opaque green	1.30.240.551/05xx	1.30.240.571/0500	-	-
no	opaque blue	1.30.240.551/06xx	1.30.240.571/0600	-	-
no	opaque slate-grey	1.30.240.551/07xx	1.30.240.571/0700	-	-

Technical data see page 2 - 88

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

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

RAFIX 22 QR selector switch



2

General data

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

Technical data

General information

Actuator	handle
Marking of handle	white
Colour of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	22.2 mm
Mounting depth with contact block without cable	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
Contact function	see order block
Illuminability	see order block
Rotating angle	see order block

Mechanical characteristics

Operating force max.	approx. 5 N for 1 switching element
Torque max.	2 Nm

Electrical characteristics

Protection class	II
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Other specifications

Operating life	0.5 million
Degree of protection from front side	IP65
Ambient temp. operating min.	-27 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Resistance at variable environment	according to IEC 600 68-2-14 and 2-33

Accessories RAFIX 22 QR selector switch

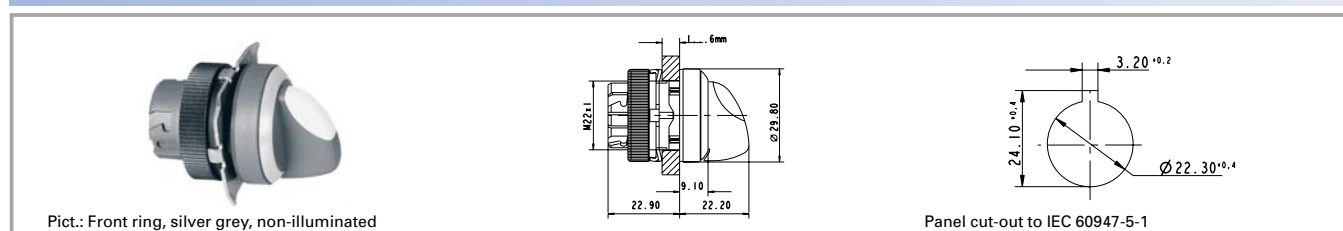
Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.017/0000	2 - 126
RAFIX 22 QR contact block with silver contacts, with coupling and lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.027/0000	2 - 127
RAFIX 22 QR contact block with gold contacts, with coupling and lamp socket, screw terminals, 1 NC + 1 NO, 1 NC + 1 NO		1.20.124.128/0000	2 - 131
Contact block with coupling, gold contacts, RJ 12 connector, 1 NC + 1 NO, white LED		1.20.128.013/0000	2 - 133

Accessories RAFIX 22 QR selector switch

Description	Photo	Order no.	Page
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 143

For other contact blocks, refer to the chapter „Contact blocks“; for additional accessories, refer to „RAFIX 22 QR special accessories“.

RAFIX 22 QR selector switch, round collar, short handle



Illuminability	Contact function	Rotating angle	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
no	momentary	1 x 40°		1.30.242.501/02xx	1.30.242.502/0200
no	momentary	2 x 40°		1.30.242.526/02xx	1.30.242.527/0200
no	latching	1 x 90°, form L		1.30.242.601/02xx	1.30.242.602/0200
no	latching	1 x 90°, form V		1.30.242.701/02xx	1.30.242.702/0200
no	latching	2 x 60°		1.30.242.801/02xx	1.30.242.802/0200
no	latching	2 x 90°		1.30.242.626/02xx	1.30.242.627/0200
yes	momentary	1 x 40°		1.30.242.001/22xx	1.30.242.002/2200
yes	momentary	2 x 40°		1.30.242.026/22xx	1.30.242.027/2200
yes	latching	1 x 90°, form L		1.30.242.101/22xx	1.30.242.102/2200
yes	latching	1 x 90°, form V		1.30.242.201/22xx	1.30.242.202/2200
yes	latching	2 x 60°		1.30.242.301/22xx	1.30.242.302/2200
yes	latching	2 x 90°		1.30.242.126/22xx	1.30.242.127/2200

Technical data see page 2 - 96

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08; other colours on request.

Included: Ring nut with claw.

Other contact versions on request

On keylock switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation. A third contact block arranged in the centre would be actuated with either sense of rotation.

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

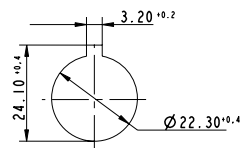
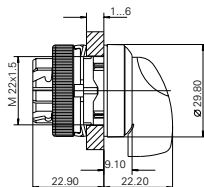
Illuminated: **1.30.252.001/2208**, **1.30.252.026/2208**, **1.30.252.101/2208**, **1.30.252.201/2208**, **1.30.252.301/2208**

Non-illuminated: **1.30.252.501/0208**, **1.30.252.526/0208**, **1.30.252.601/0208**, **1.30.252.701/0208**, **1.30.252.801/0208**

RAFIX 22 QR selector switch, round collar, long handle



Pict.: Front ring, metallized, illuminated



Panel cut-out to IEC 60947-5-1

Illuminability	Contact function	Rotating angle	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
no	momentary	1 x 40°		1.30.242.511/02xx	1.30.242.512/0200
no	momentary	2 x 40°		1.30.242.536/02xx	1.30.242.537/0200
no	latching	1 x 90°, form L		1.30.242.611/02xx	1.30.242.612/0200
no	latching	1 x 90°, form V		1.30.242.711/02xx	1.30.242.712/0200
no	latching	2 x 60°		1.30.242.811/02xx	1.30.242.812/0200
no	latching	2 x 90°		1.30.242.636/02xx	1.30.242.637/0200
yes	momentary	1 x 40°		1.30.242.011/22xx	1.30.242.012/2200
yes	momentary	2 x 40°		1.30.242.036/22xx	1.30.242.037/2200
yes	latching	1 x 90°, form L		1.30.242.111/22xx	1.30.242.112/2200
yes	latching	1 x 90°, form V		1.30.242.211/22xx	1.30.242.212/2200
yes	latching	2 x 60°		1.30.242.311/22xx	1.30.242.312/2200
yes	latching	2 x 90°		1.30.242.136/22xx	1.30.242.137/2200

Technical data see page 2 - 96

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08; other colours on request.

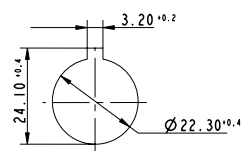
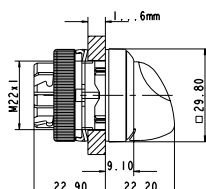
Included: Ring nut with claw.

At selector switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation. A third contact block arranged in the centre would be actuated with either sense of rotation. Other contact versions on request.

RAFIX 22 QR selector switch, square collar, short handle



Pict.: Front ring, red, non-illuminated



Panel cut-out to IEC 60947-5-1

Illuminability	Contact function	Rotating angle	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
no	momentary	1 x 40°		1.30.242.551/02xx	1.30.242.552/0200
no	momentary	2 x 40°		1.30.242.576/02xx	1.30.242.577/0200
no	latching	1 x 90°, form L		1.30.242.651/02xx	1.30.242.652/0200
no	latching	1 x 90°, form V		1.30.242.751/02xx	1.30.242.752/0200
no	latching	2 x 60°		1.30.242.851/02xx	1.30.242.852/0200
no	latching	2 x 90°		1.30.242.676/02xx	1.30.242.677/0200
yes	momentary	1 x 40°		1.30.242.051/22xx	1.30.242.052/2200
yes	momentary	2 x 40°		1.30.242.076/22xx	1.30.242.077/2200
yes	latching	1 x 90°, form L		1.30.242.151/22xx	1.30.242.152/2200
yes	latching	1 x 90°, form V		1.30.242.251/22xx	1.30.242.252/2200
yes	latching	2 x 60°		1.30.242.351/22xx	1.30.242.352/2200
yes	latching	2 x 90°		1.30.242.176/22xx	1.30.242.177/2200

Technical data see page 2 - 96

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08; other colours on request.

Included: Ring nut with claw.

At selector switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation.

A third contact block arranged in the centre would be actuated with either sense of rotation.

Other contact versions on request.

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

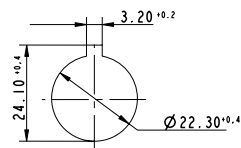
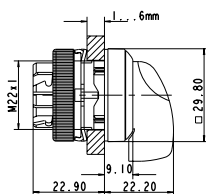
Illuminated: **1.30.242.051/2208, 1.30.242.076/2208, 1.30.242.151/2208, 1.30.242.251/2208, 1.30.242.351/2208**

Non-illuminated: **1.30.242.551/0208, 1.30.242.576/0208, 1.30.242.651/0208, 1.30.242.751/0208, 1.30.242.851/0208**

RAFIX 22 QR selector switch, square collar, long handle



Pict.: Front ring, black, non-illuminated



Panel cut-out to IEC 60947-5-1

Illuminability	Contact function	Rotating angle	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
no	momentary	1 x 40°		1.30.242.561/02xx	1.30.242.562/0200
no	momentary	2 x 40°		1.30.242.586/02xx	1.30.242.587/0200
no	latching	1 x 90°, form L		1.30.242.661/02xx	1.30.242.662/0200
no	latching	1 x 90°, form V		1.30.242.761/02xx	1.30.242.762/0200
no	latching	2 x 60°		1.30.242.861/02xx	1.30.242.862/0200
no	latching	2 x 90°		1.30.242.686/02xx	1.30.242.687/0200
yes	momentary	1 x 40°		1.30.242.061/22xx	1.30.242.062/2200
yes	momentary	2 x 40°		1.30.242.086/22xx	1.30.242.087/2200
yes	latching	1 x 90°, form L		1.30.242.161/22xx	1.30.242.162/2200
yes	latching	1 x 90°, form V		1.30.242.261/22xx	1.30.242.262/2200
yes	latching	2 x 60°		1.30.242.361/22xx	1.30.242.362/2200
yes	latching	2 x 90°		1.30.242.186/22xx	1.30.242.187/2200

Technical data see page 2 - 96

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08; other colours on request.

Included: Ring nut with claw.

At selector switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation. A third contact block arranged in the centre would be actuated with either sense of rotation. Other contact versions on request.

RAFIX 22 QR keylock switch



2

Technical data

General information

Form of lens	see order block
Colour of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	30.6 mm
Mounting depth with contact block without cable	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
Contact function	see order block
Illuminability	no
Lock	Ronis
Wafers	4
Lock type	455
Main key	no
Symmetric key	no
Rotating angle	see order block
Key removal position	see order block

Mechanical characteristics

Operating force max.	approx. 5 N for 1 switching element
Torque max.	2 Nm

Electrical characteristics

Protection class	II
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Other specifications

Operating life	0.3 million momentary / 50000 latching
Degree of protection from front side	IP65
Ambient temp. operating min.	-25 °
Ambient temp. operating max.	+70 °
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Resistance at variable environment	according to IEC 600 68-2-14 and 2-33

RAFIX
22 QR

Accessories RAFIX 22 QR keylock switch

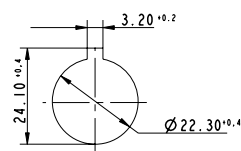
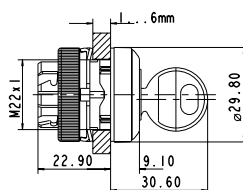
Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.017/0000	2 - 126
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, cage clamp terminals, 1 NO		1.20.125.002/0000	2 - 126
Contact block with coupling, gold contacts, RJ 12 connector, 1 NC + 1 NO, without LED		1.20.128.003/0000	2 - 133
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 143
Spare key for RAFIX 22 QR		5.58.017.001/0000	

For other contact blocks, refer to the chapter „Contact blocks“; for additional accessories, refer to „RAFIX 22 QR special accessories“.

RAFIX 22 QR keylock switch, round collar



Pict.: Front ring, metallized



Panel cut-out to IEC 60947-5-1

Contact function	Rotating angle	Key removal position	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
momentary	1 x 40°	0		1.30.245.001/xxxx	1.30.245.002/0000
momentary	2 x 40°	0		1.30.245.101/xxxx	1.30.245.102/0000
latching	1 x 90°, form L	0		1.30.245.201/xxxx	1.30.245.202/0000
latching	1 x 90°, form L	0+1		1.30.245.221/xxxx	1.30.245.222/0000
latching	1 x 90°, form V	0		1.30.245.301/xxxx	1.30.245.302/0000
latching	1 x 90°, form V	0+1		1.30.245.321/xxxx	1.30.245.322/0000
latching	2 x 60°	0+1+2		1.30.245.731/xxxx	1.30.245.732/0000
latching	2 x 90°	0		1.30.245.401/xxxx	1.30.245.402/0000
latching	2 x 90°	0+1+2		1.30.245.431/xxxx	1.30.245.432/0000

Technical data see page 2 - 102

xxxx = Front ring colour: black = 0100, slate grey = 0700, silver grey = 0800. Other versions on request.

Other versions on request.

Included: Ring nut with claw.

On selector switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation. A third contact block arranged in the centre would be actuated with either sense of rotation.

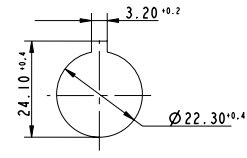
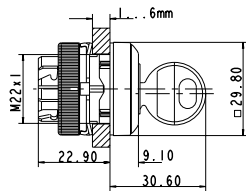
The following keylock switches with silver grey plastic front ring are stock items:

1.30.245.001/0800, 1.30.245.201/0800, 1.30.245.221/0800, 1.30.245.301/0800, 1.30.245.321/0800, 1.30.245.731/0800

RAFIX 22 QR keylock switch, square collar



Pict.: Front ring, metallized



Panel cut-out to IEC 60947-5-1

Contact function	Rotating angle	Key removal position	Rotating angle	Order no.	
				Plastic front ring	Metal front ring
momentary	1 x 40°	0		1.30.245.051/xxxx	1.30.245.052/0000
momentary	2 x 40°	0		1.30.245.151/xxxx	1.30.245.152/0000
latching	1 x 90°, form L	0		1.30.245.251/xxxx	1.30.245.252/0000
latching	1 x 90°, form L	0+1		1.30.245.271/xxxx	1.30.245.272/0000
latching	1 x 90°, form V	0		1.30.245.351/xxxx	1.30.245.352/0000
latching	1 x 90°, form V	0+1		1.30.245.371/xxxx	1.30.245.372/0000
latching	2 x 60°	0+1+2		1.30.245.781/xxxx	1.30.245.782/0000
latching	2 x 90°	0		1.30.245.451/xxxx	1.30.245.452/0000
latching	2 x 90°	0+1+2		1.30.245.481/xxxx	1.30.245.482/0000

Technical data see page 2 - 102

xxxx = Front ring colour: black = 0100, slate grey = 0700, silver grey = 0800. Other versions on request.

Included: Ring nut with claw.

On keylock switches with 3 switching positions (e.g. 2 x 90 degrees), either the left-hand or right-hand contact block is activated, depending on the sense of rotation. A third contact block arranged in the centre would be actuated with either sense of rotation.

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

1.30.245.051/0800, 1.30.245.251/0800, 1.30.245.271/0800, 1.30.245.351/0800, 1.30.245.371/0800, 1.30.245.781/0800

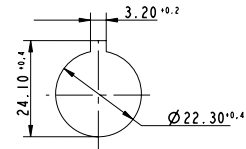
RAFIX 22 QR mushroom-headed pushbutton



Pict.: Front ring, metallized



Front ring, slate grey



Panel cut-out to IEC 60947-5-1

2

Technical data

General information

Actuator	mushroom
Colour of mushroom	see order block
Colour of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	20.10 mm
Mounting depth	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
Contact function	see order block
Illuminability	see order block

Mechanical characteristics

Operating force max.	approx. 5 N for 1 switching element
Robustness min.	100 N

Electrical characteristics

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

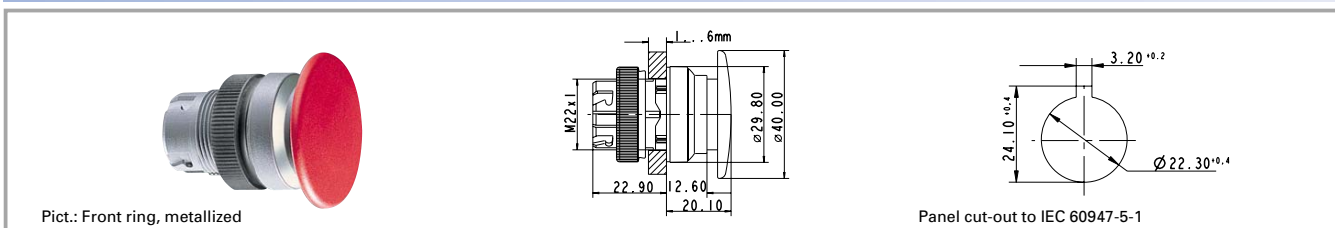
Other specifications

Operating life	1,000,000
Degree of protection from front side	IP65
Storage temperature min.	-40 °C
Storage temperature max.	80 °C
Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Resistance at variable environment	according to IEC 600 68-2-14 and 2-33

Accessories RAFIX 22 QR mushroom-headed pushbutton

Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.017/0000	2 - 126
RAFIX 22 QR contact block with gold contacts, with coupling, without lamp socket, cage clamp terminals, 1 NO		1.20.125.102/0000	2 - 130
Contact block with coupling, gold contacts, RJ 12 connector, 1 NO, without LED		1.20.128.002/0000	2 - 133
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

For other contact blocks, refer to the chapter „Contact blocks“; for additional accessories, refer to „RAFIX 22 QR special accessories“.

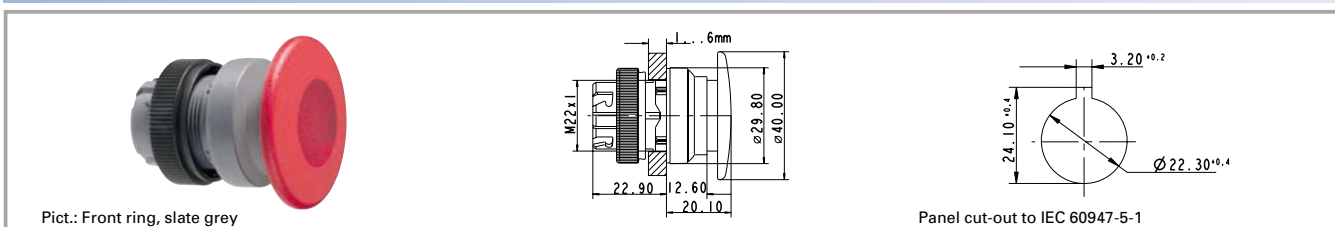
RAFIX 22 QR mushroom-headed pushbutton 40 mm, round collar


Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque black	1.30.246.501/01xx	1.30.246.502/0100	1.30.246.511/01xx	1.30.246.512/0100
no	opaque red	1.30.246.501/03xx	1.30.246.502/0300	1.30.246.511/03xx	1.30.246.512/0300

Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Order number **1.30.246.501/0308** (with silver grey plastic front ring) is a **stock item**.

RAFIX 22 QR mushroom-headed pushbutton 40 mm, illuminated, round collar


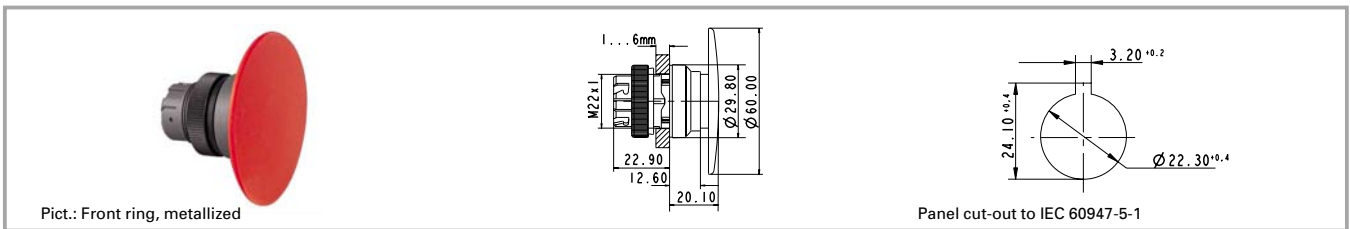
Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	opaque red/ transparent red	1.30.246.001/03xx	1.30.246.002/0300	1.30.246.011/03xx	1.30.246.012/0300

Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Order number **1.30.246.001/0308** (with silver grey plastic front ring) is a **stock item**.

RAFIX 22 QR mushroom-headed pushbutton 60 mm, round collar

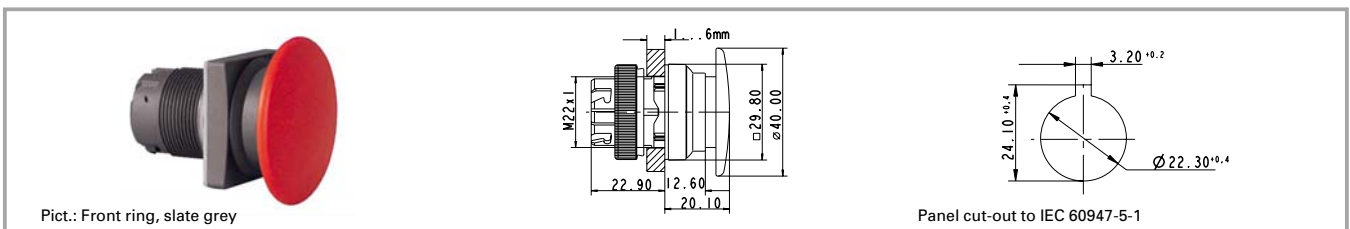


Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque red	1.30.246.601/03xx	1.30.246.602/0300	-	-

Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

RAFIX 22 QR mushroom-headed pushbutton 40 mm, square collar



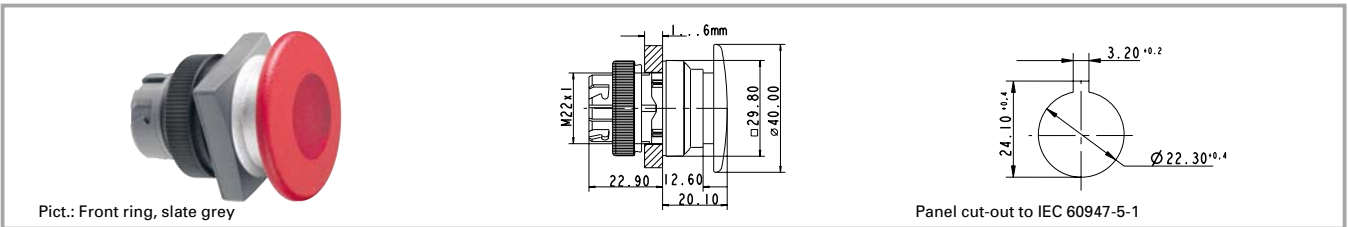
Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque black	1.30.246.551/01xx	1.30.246.552/0100	1.30.246.561/01xx	1.30.246.562/0100
no	opaque red	1.30.246.551/03xx	1.30.246.552/0300	1.30.246.561/03xx	1.30.246.562/0300

Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Order number **1.30.246.551/0308** (with silver grey plastic front ring) is a **stock item**.

RAFIX 22 QR mushroom-headed pushbutton 40 mm, illuminated, square collar



Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	opaque red/ transparent red	1.30.246.051/03xx	1.30.246.052/0300	1.30.246.061/03xx	1.30.246.062/0300

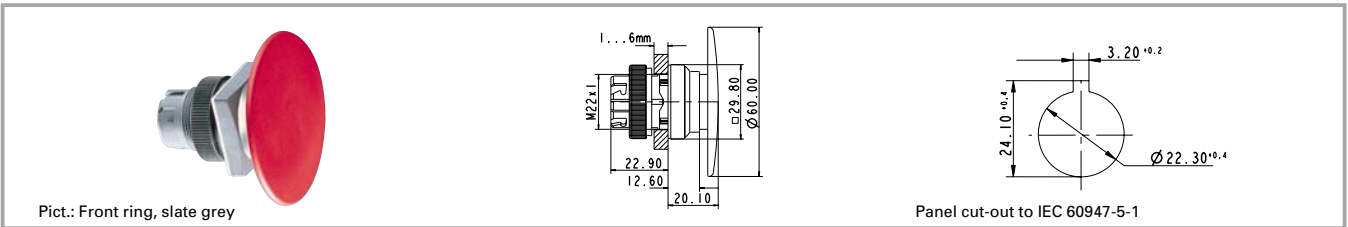
Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Order number **1.30.246.051/0308** (with silver grey plastic front ring) is a **stock item**.

2

RAFIX 22 QR mushroom-headed pushbutton 60 mm, square collar



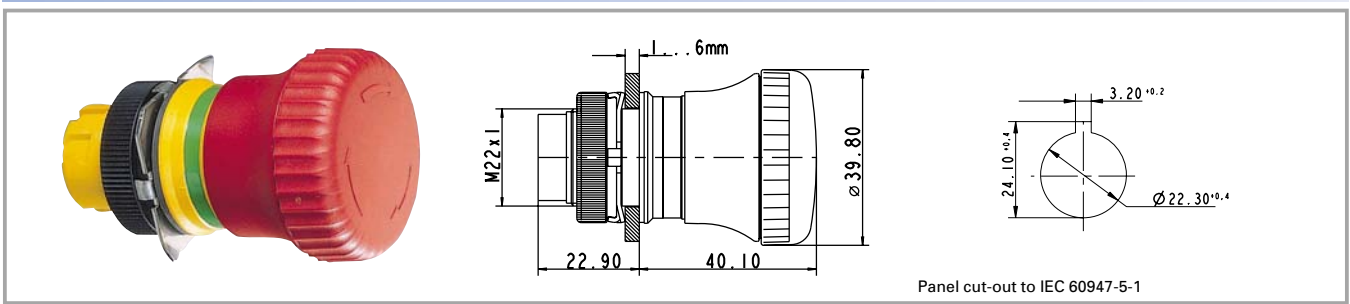
Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque red	1.30.246.651/03xx	1.30.246.652/0300	-	-

Technical data see page 2 - 106

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

RAFIX
22 QR

RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418



2

General data

The emergency stop pushbuttons comply with IEC 60 204, IEC 60 073, IEC 60 947 and VDE 0113 Part 1. They are designed dupe-proof according to EN 418 with a positive mechanical movement sequence. A certain operating force must be exerted at the action point in order to prevent inadvertent operation. The pushbutton latches when pressed. The special shape of the actuator prevents the emergency stop pushbutton from being blocked. This means that the emergency stop process - once initiated - cannot be impeded by any jamming objects.

Technical data

RAFIX
22 QR

General information		Mechanical characteristics	
Actuator	mushroom	Operating force max.	approx. 5 N for 1 switching element
Colour of mushroom	see order block	Robustness min.	100 N
Form of collar	round	Robustness	acc. IEC 60947-5-5
Dimensions		Other specifications	
Overall height	see order block	Operating life	see order block
Mounting depth with contact block without cable	see order block	Degree of protection from front side	see order block
Mounting hole	see order block	Ambient temp. operating min.	-25 °C
Key grid	50 x 30 mm	Ambient temp. operating max.	+70 °C
Diameter of collar	see order block	Storage temperature min.	-40 °C
Mechanical design		Storage temperature max.	+80 °C
Mounting	ring nut	Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Contact function	latching	Resistance at variable environment	according to IEC 600 68-2-14 and 2-33
Illuminability	see order block		
Reset	see order block		

Accessories RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418

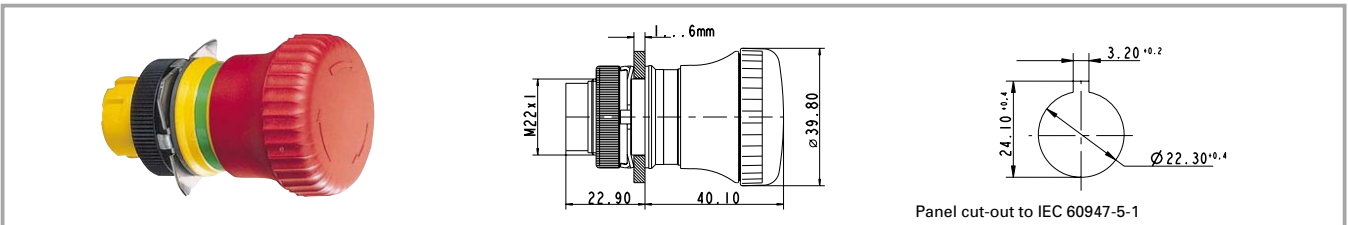
Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 1 NC		1.20.124.001/0000	2 - 126
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, screw terminals, 2 NC		1.20.124.019/0000	2 - 126
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

Accessories RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418

Description	Photo	Order no.	Page
Emergency stop label, yellow, round 60 mm, PVC adhesive, without legend		5.76.204.100/0400	2 - 146
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „NOT-AUS“		5.76.204.101/0400	2 - 146
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „ARRET D'URGENCE“		5.76.204.102/0400	2 - 146
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „EMERGENCY-STOP“		5.76.204.103/0400	2 - 146
Emergency stop label, yellow 36 x 64 mm, PVC adhesive, without legend		5.76.205.011/0400	2 - 146
Emergency stop label, yellow, round 60 mm, rigid PVC, with legend „EMERGENCY-STOP/ARRET D'URGENCE“		5.76.207.002/0400	2 - 146

For other contact blocks, refer to the chapter „Contact blocks“; for additional accessories, refer to „RAFIX 22 QR special accessories“.

RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418

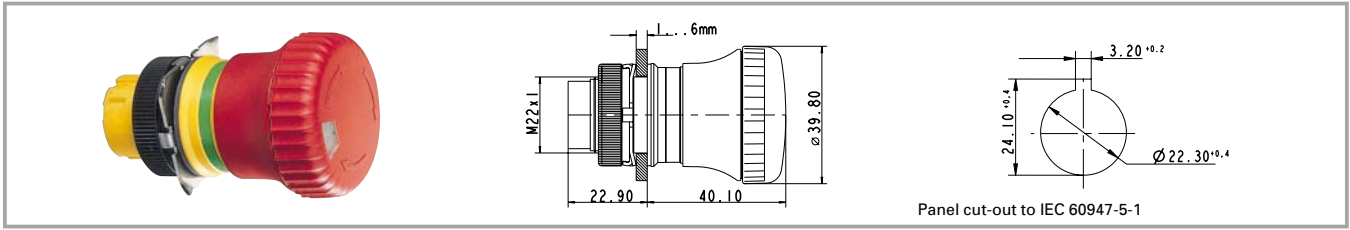


Degree of protection from front side	Reset	Colour of mushroom	Illuminability	Operating life	Order no.
IP65	by clockwise rotation	opaque red	no	100000	1.30.243.501/0300

Technical data see page 2 - 110

Included: Ring nut with claw.
Switching position indication: In the non-operated condition, a green ring is visible on the side.

RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418, with indication to EN 60947-1

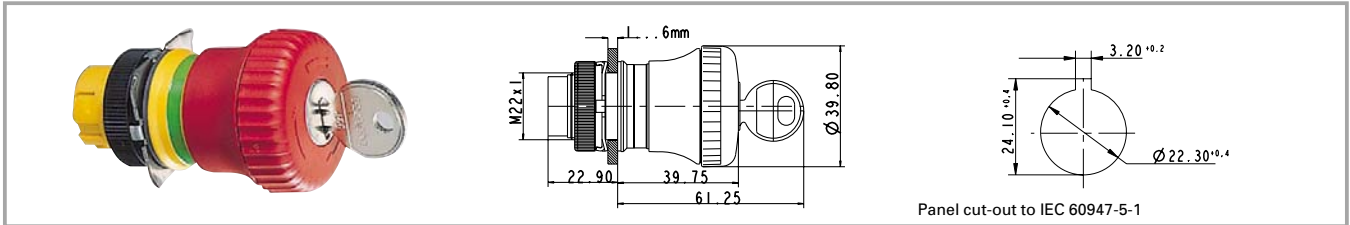


Degree of protection from front side	Reset	Colour of mushroom	Illuminability	Operating life	Order no.
IP65	by clockwise rotation	opaque red	no	100000	1.30.243.601/0300

Technical data see page 2 - 110

Included: Ring nut with claw.
Switching position indication: In the non-operated condition, a green ring is visible on the side.
This switching position is visible in addition from the front; a mechanical indicator integrated into the mushroom head changes from green to red when actuated.

RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418, with keylock



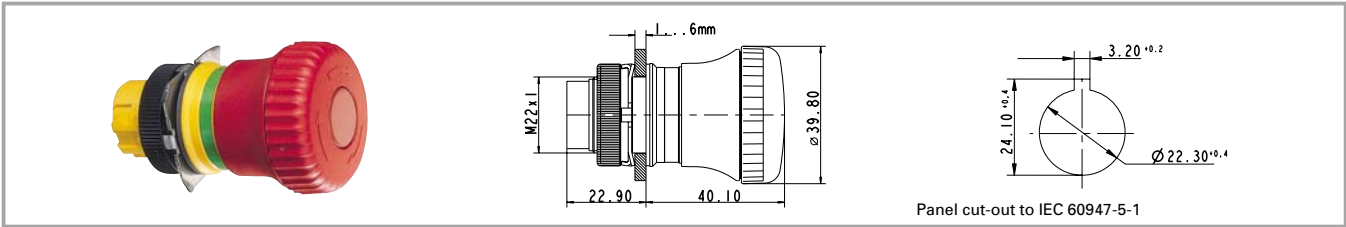
Degree of protection from front side	Reset	Colour of mushroom	Illuminability	Operating life	Order no.
IP40	by clockwise rotation	opaque red	no	50000	1.30.243.701/0300

Technical data see page 2 - 110

Accessories:
Spare key for RAFIX 22 QR: 5.58.017.001/0000

Included: Ring nut with claw, 2 keys.
Switching position indication: In the non-operated condition, a green ring is visible on the side.
Once actuated, the emergency stop pushbutton can only be reset with the key.

RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418, illuminated



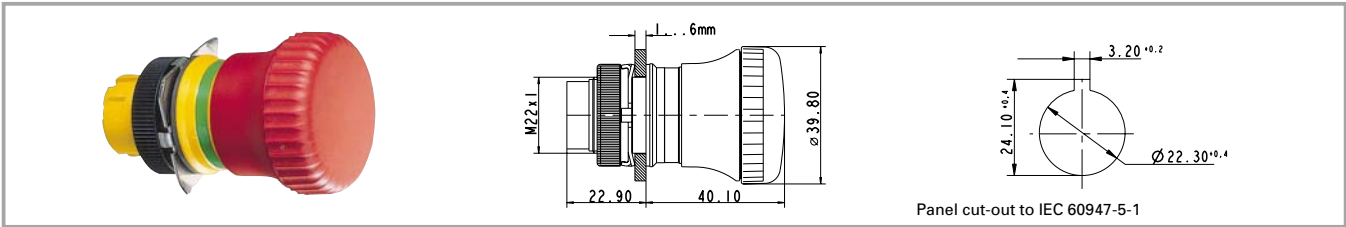
Degree of protection from front side	Reset	Colour of mushroom	Illuminability	Operating life	Order no.
IP65	by clockwise rotation	opaque red/translucent red	yes	100000	1.30.243.001/0300

Technical data see page 2 - 110

Included: Ring nut with claw.

Switching position indication: In the non-operated condition, a green ring is visible on the side.

NEW **RAFIX 22 QR emergency stop pushbutton, dupe-proof to EN 418**



Degree of protection from front side	Reset	Colour of mushroom	Illuminability	Operating life	Order no.
IP65	by pulling	opaque red	no	100000	1.30.243.901/0300

Technical data see page 2 - 110

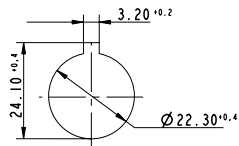
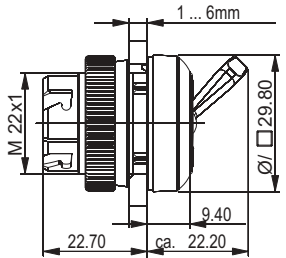
Included: Ring nut with claw.

Switching position indication: In the non-operated condition, a green ring is visible on the side.

RAFIX 22 QR toggle switch



Pict.: Front ring, metallized



Panel cut-out to IEC 60947-5-1

2

Technical data

General information

Form of lens	toggle
Colour of toggle	opaque white
Front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	22 mm
Mounting depth	56.4 mm
Mounting hole	22.3 mm

Mechanical design

Mounting	ring nut
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Dimensions

Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Contact function	latching
Immunity	no

Mechanical characteristics

Robustness min.	100 N
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Electrical characteristics

Protection class	II
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Other specifications

Operating life	100000
Degree of protection	IP54
Storage temperature min.	-40 °C
Storage temperature max.	80 °C
Resistance to constant environment	according to IEC 60068-2-3 and 2-30
Resistance at variable environment	according to IEC 60068-2-14 and 2-33

RAFIX
22 QR

Accessories RAFIX 22 QR toggle switch

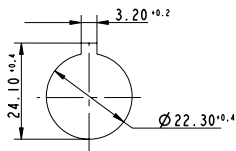
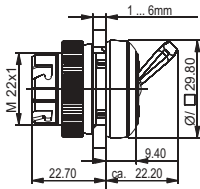
Description	Photo	Order no.	Page
RAFIX 22 QR contact block with gold contacts, with coupling, without lamp socket, screw terminals, 1 NC + 1 NO		1.20.124.117/0000	2 - 130
RAFIX 22 QR contact block with gold contacts, with coupling, without lamp socket, cage clamp terminals, 1 NO		1.20.125.102/0000	2 - 130
Contact block with coupling, gold contacts, RJ 12 connector, 1 NO, without LED		1.20.128.002/0000	2 - 133
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

NEW

RAFIX 22 QR, toggle switch, round collar



Pict.: Front ring, slate grey



Panel cut-out to IEC 60947-5-1

Illuminability	Colour of toggle	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque white	-	-	1.30.247.501/02xx	1.30.247.502/0200

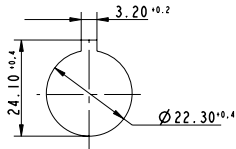
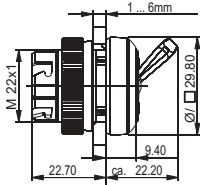
Technical data see page 2 - 114
 xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

NEW

RAFIX 22 QR, toggle switch, square collar



Pict.: Front ring, metallized



Panel cut-out to IEC 60947-5-1

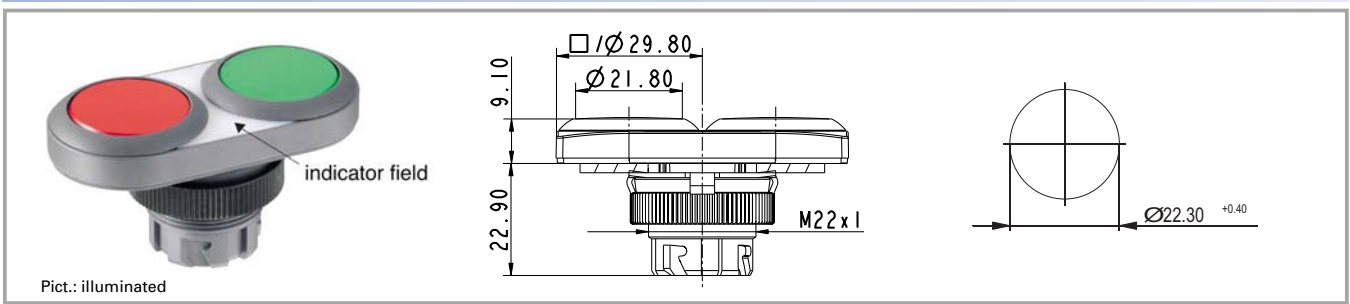
Illuminability	Colour of toggle	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque white	-	-	1.30.247.551/02xx	1.30.247.552/0200

Technical data see page 2 - 114
 xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

2

RAFIX
 22 QR

RAFIX 22 QR twin pushbutton



2

General data

Lens legends are oriented for vertical installation of the twin pushbutton. Only the signal indicator is illuminated on twin pushbuttons prepared for illumination. This area is opaque slate grey on versions which cannot be illuminated.

Technical data

RAFIX
22 QR

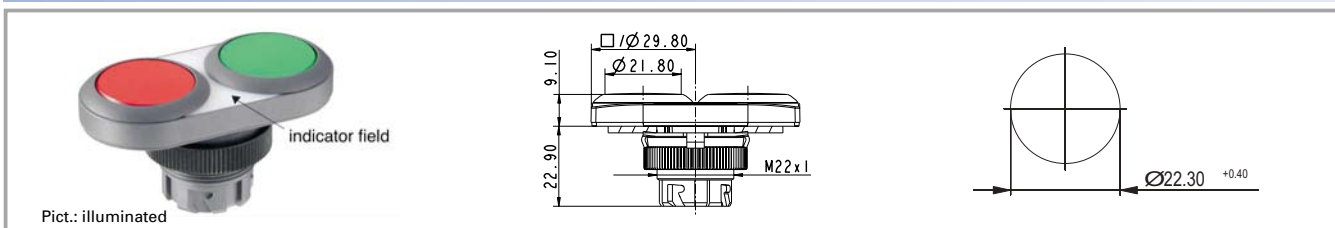
General information		Mechanical characteristics	
Legending	see order block	Operating force max.	approx. 5 N for 1 switching element
Colour of lens	opaque green/opaque red	Robustness min.	100 N
Colout of front ring	see order block		
Form of collar	see order block	Other specifications	
Dimensions		Degree of protection from front side	IP65
Length of collar	59.6 mm	Ambient temp. operating min.	-25 °C
Width of collar	29.8 mm	Ambient temp. operating max.	+70 °C
Overall height	9.1 mm	Storage temperature max.	+80 °C
Mounting depth with contact block without cable	56.4 mm	Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Mounting hole	22.3 mm	Resistance at variable environment	according to IEC 600 68-2-14 and 2-33
Key grid	50 x 30 mm		
Mechanical design			
Mounting	ring nut		
Contact function	momentary		
Illuminability	see order block		

Accessories RAFIX 22 QR twin pushbutton

Description	Photo	Order no.	Page
RAFIX 22 QR contact block with silver contacts, with coupling and lamp socket, screw terminals, 1 NO, 1 NC		1.20.124.025/0000	2 - 127
RAFIX 22 QR contact block with gold contacts, with coupling and lamp socket, cage clamp terminals, 1 NO, 1 NC		1.20.125.125/0000	2 - 131
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

For other contact blocks, refer to the chapter "Contact blocks"; for additional accessories, refer to "RAFIX 22 QR special accessories".

RAFIX 22 QR twin pushbutton, oval collar



Illuminability	Colour of lens	Legending	Order no.	
			Plastic front ring	Metal front ring
yes	opaque green/opaque red	none	1.30.241.001/22xx	1.30.241.021/2200
yes	opaque green/opaque red	red 0, green I	1.30.241.002/22xx	1.30.241.022/2200
no	opaque green/opaque red	none	1.30.241.101/07xx	1.30.241.121/0700
no	opaque green/opaque red	red 0, green I	1.30.241.102/07xx	1.30.241.122/0700

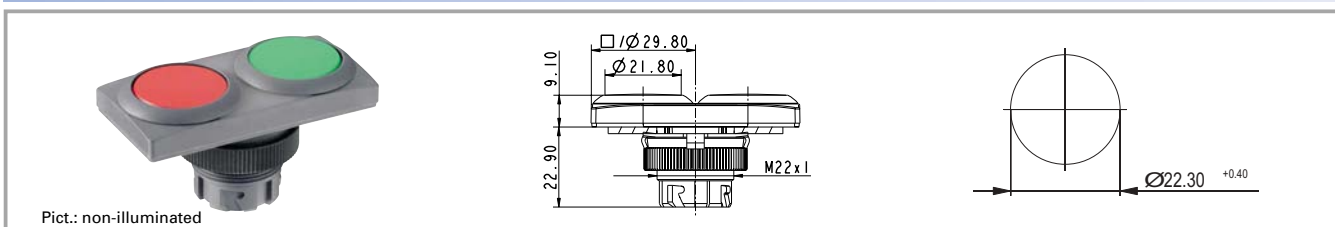
Technical data see page 2 - 116

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Either the left-hand or right-hand contact block is actuated, depending on the button pressed. For illuminated versions the centre position of the coupling is reserved for the lamp socket. A third contact block arranged in the centre would be actuated by either button.

RAFIX
22 QR

RAFIX 22 QR twin pushbutton, rectangular collar



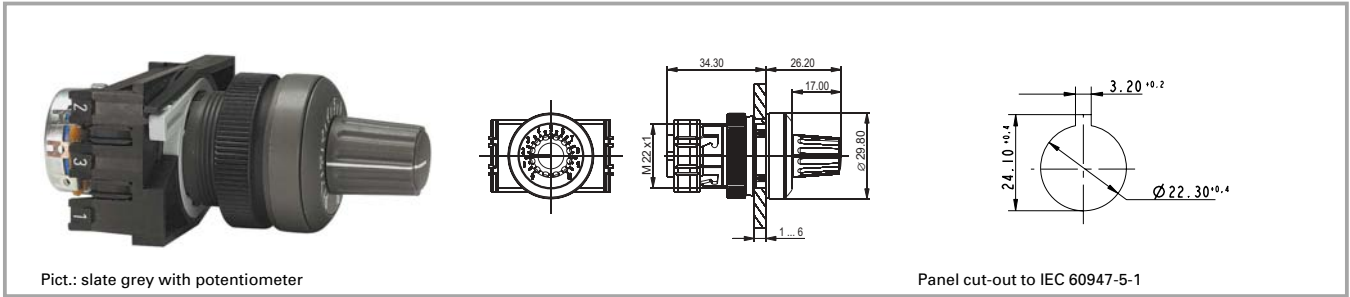
Illuminability	Colour of lens	Legending	Order no.	
			Plastic front ring	Metal front ring
yes	opaque green/opaque red	none	1.30.241.051/22xx	1.30.241.071/2200
yes	opaque green/opaque red	red 0, green I	1.30.241.052/22xx	1.30.241.072/2200
no	opaque green/opaque red	none	1.30.241.151/07xx	1.30.241.171/0700
no	opaque green/opaque red	red 0, green I	1.30.241.152/07xx	1.30.241.172/0700

Technical data see page 2 - 116

xx = Front ring colour: black = 01, slate grey = 07, silver grey = 08

Either the left-hand or right-hand contact block is actuated, depending on the button pressed. For illuminated versions the centre position of the coupling is reserved for the lamp socket. A third contact block arranged in the centre would be actuated by either button.

RAFIX 22 QR potentiometer drive



2

Technical data

General information

Actuator	knob size
Colour of handle	see order block
Front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	26 mm
Mounting depth	according to potentiometer
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
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Mechanical characteristics

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

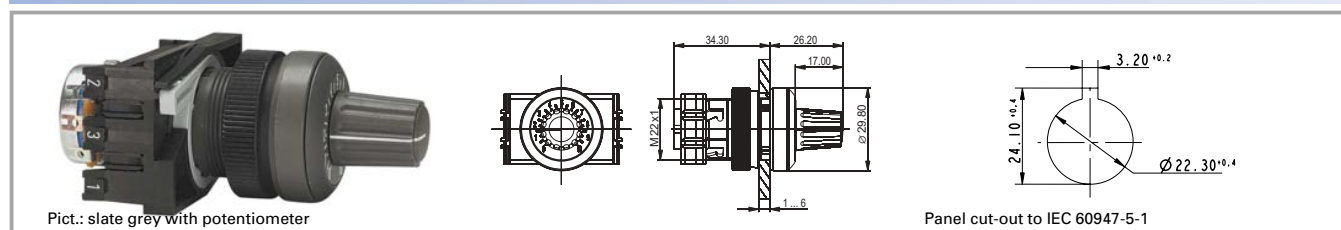
Other specifications

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

Accessories RAFIX 22 QR potentiometer drive

Description	Photo	Order no.	Page
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

RAFIX 22 QR potentiometer drive, round collar



Front ring	Colour of handle	Order no.
metal	opaque slate-grey	1.30.248.051/0000
plastic slate-grey	opaque slate-grey	1.30.248.001/0700
plastic silber	opaque slate-grey	1.30.248.001/0800
metal	opaque black	1.30.248.061/0000
plastic slate-grey	opaque black	1.30.248.011/0700
plastic silber	opaque black	1.30.248.011/0800

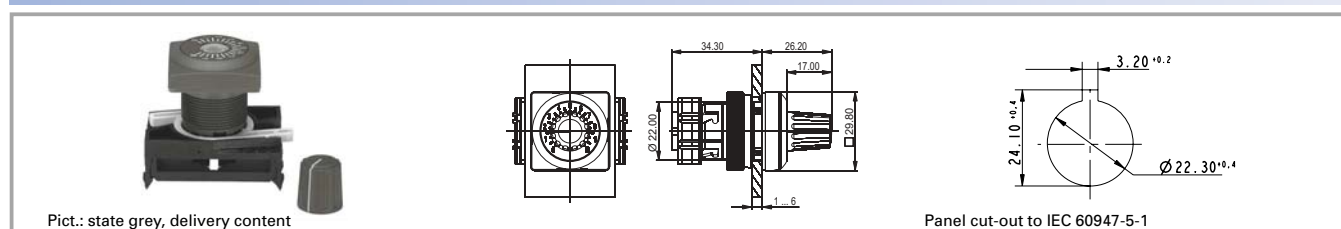
Technical data see page 2 - 118

For potentiometers with 6 mm shaft diameter and 50 mm shaft length. Potentiometer not included.

2

RAFIX
22 QR

RAFIX 22 QR potentiometer drive, square collar

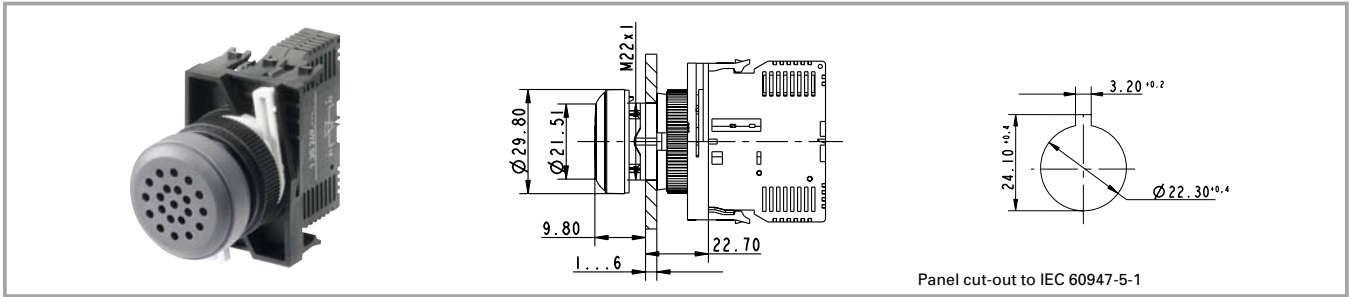


Front ring	Colour of handle	Order no.
metal	opaque slate-grey	1.30.248.071/0000
plastic slate-grey	opaque slate-grey	1.30.248.021/0700
plastic silber	opaque slate-grey	1.30.248.021/0800
metal	opaque black	1.30.248.081/0000
plastic slate-grey	opaque black	1.30.248.031/0700
plastic silber	opaque black	1.30.248.031/0800

Technical data see page 2 - 118

For potentiometers with 6 mm shaft diameter and 50 mm shaft length. Potentiometer not included.

RAFIX 22 QR buzzer



2

Technical data

General information

Form of lens	flat lens
Colour of lens	opaque slate-grey
Form of collar	see order block
Sound	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	9.8 mm
Mounting depth	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

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

Acoustic characteristics

Sonic pressure, 1 m distance min.	see order block
-----------------------------------	-----------------

Electrical characteristics

Operating voltage DC	see order block
Input current	see order block
Sound frequency	see order block

Mechanical characteristics

Robustness min.	100 N
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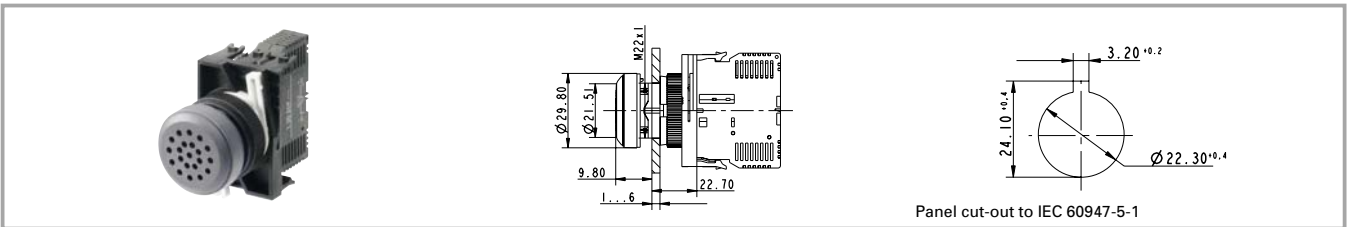
Other specifications

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

Accessories RAFIX 22 QR buzzer

Description	Photo	Order no.	Page
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

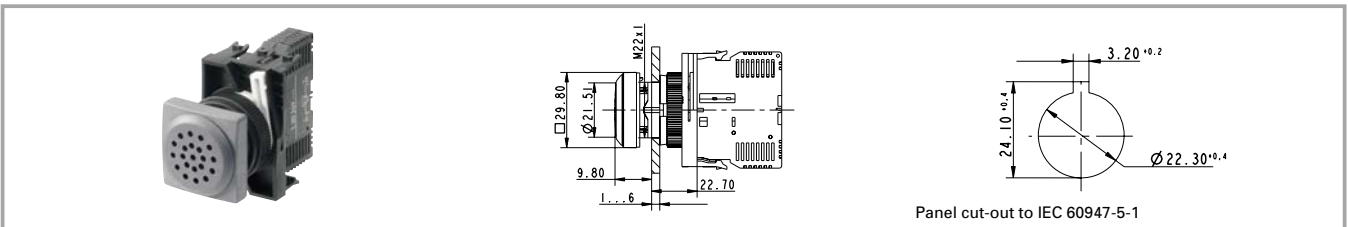
RAFIX 22 QR buzzer, round collar



Operating voltage DC	Input current	Sound	Sonic pressure, 1 m distance min.	Sound frequency	Order no.
12 V	25 mA	continuos beep	70 dB		1.30.249.002/0000
24 V	25 mA	continuos beep	70 dB		1.30.249.001/0000

Technical data see page 2 - 120

RAFIX 22 QR buzzer, square collar



Operating voltage DC	Input current	Sound	Sonic pressure, 1 m distance min.	Sound frequency	Order no.
12 V	25 mA	continuos beep	70 dB		1.30.249.022/0000
24 V	25 mA	continuos beep	70 dB		1.30.249.021/0000

Technical data see page 2 - 120

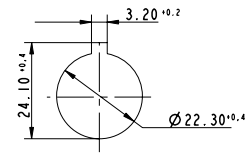
RAFIX 22 QR signal indicator



Pict.: yellow



red



Panel cut-out to IEC 60947-5-1

2

Technical data

General information

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

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	9.4 mm
Mounting depth	56.4 mm
Mounting hole	22.3 mm
Key grid	50 x 30 mm
Diameter of collar	see order block

Mechanical design

Mounting	ring nut
Illuminability	yes

Electrical characteristics

Protection class	II
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Other specifications

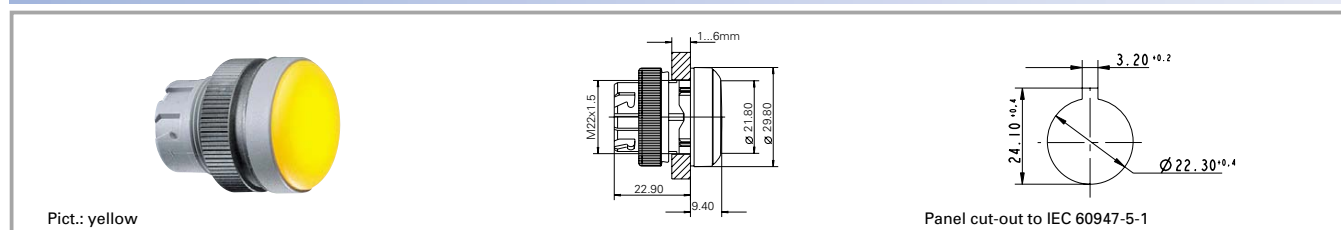
Degree of protection from front side	IP65
Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Resistance at variable environment	according to IEC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

RAFIX
22 QR

Accessories RAFIX 22 QR signal indicator

Description	Photo	Order no.	Page
RAFIX 22 QR lamp socket assembly, screw terminals, with coupling		1.71.213.001/0000	2 - 136
RAFIX 22 QR lamp socket assembly, screw terminals, with coupling, diode and series resistor 130 V		1.71.213.004/0000	2 - 136
RAFIX 22 QR lamp socket assembly, cage clamp terminals, with coupling		1.71.214.001/0000	2 - 136
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23
Legend insert without legend		5.70.803.000/2000	

RAFIX 22 QR signal indicator, round collar

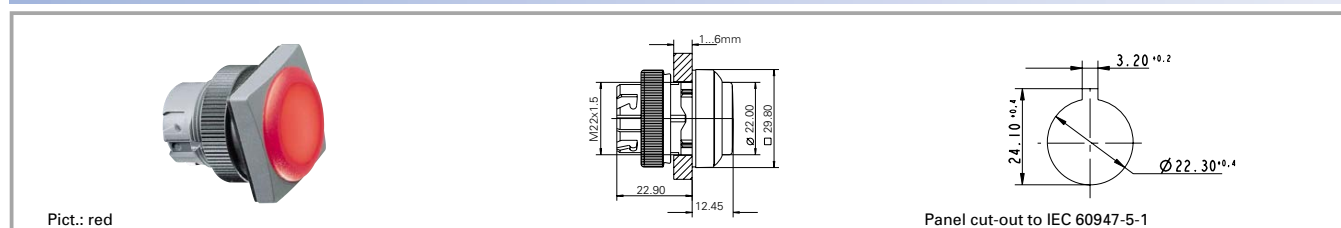


Colour of lens	Form of collar	Order no.
transparent colourless	round	1.74.505.501/1000
transparent red	round	1.74.505.501/1300
transparent yellow	round	1.74.505.501/1400
transparent green	round	1.74.505.501/1500
transparent blue	round	1.74.505.501/1600

Technical data see page 2 - 122

RAFIX
22 QR

RAFIX 22 QR signal indicator, square collar



Colour of lens	Form of collar	Order no.
transparent colourless	square	1.74.505.551/1000
transparent red	square	1.74.505.551/1300
transparent yellow	square	1.74.505.551/1400
transparent green	square	1.74.505.551/1500
transparent blue	square	1.74.505.551/1600

Technical data see page 2 - 122

RAFIX 22 QR contact blocks with silver contacts


Pict.: Silver contacts, 1 NC, cage clamp terminals



Silver contacts, 2 NC, screw terminals



Silver contacts, 1NC+1NO, lamp socket, 1NC+1NO

2

General data

Most of the values specified apply to all terminal versions. Any deviating values specific to the cage clamp or quick-connect version are given in parentheses ().

Technical data
Dimensions

Length	39.5 mm
Width	10 mm
Height	46 mm
Mounting depth without cable	56.4 mm

Mechanical design

Mounting	snap on coupling and actuator
Contact system	bridgecontact self cleaning
Contact materials	Ag
Contact arrangement	see order block
NC contact forcibly actuated acc. to IEC 60947-5-1	yes
Terminals	see order block
Terminal marking	colour encoded
Robustness	100 N
Operating force	approx. 5 N for 1 contact element
Wire range solid wires without wire end sleeves	2 x 0.75 ... 2.5 mm ²
Wire range stranded wires without end sleeves	2 x 1.0 ... 1.5 (2 x 0.08 ... 2.5) mm ²
Stripping length, solid or stranded	8 mm
Wire range with wire end sleeves	2 x 0.75 ... 1.5 mm ²

Electrical characteristics acc. to IEC 60947

Rated insulation voltage AC/DC	400 V
Rated peak voltage	6000 V
Rated operating current I _e AC 12	10 A
Rated operating current I _e AC-15	125 V/10 A, 250 V/6 A, 400 V/3.5 A
Rated operating current I _e DC-13 Q300	24V/2.75A, 60V/1.1A, 125V/0.55A, 250V/0.275A
Degree of pollution	3

Positive opening travel	3 mm
Operating speed	5 ... 1000 mm/s

Electrical characteristics acc. to IEC 61058

Resistive load AC	10 A/250 V; 7,5 A/400 V
Motor load AC	6 A/250 V; 4 A/400 V (5 A/250 V)

Peak input current filament lamp AC	36 A
Peak capacity input current AC	100 A
Protection class	II

Lamp characteristics

Lamp characteristics	BA 9 s
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Other specifications

Operating life at 10 A/250 V AC	500000 (70000)
Switching reliability at 24V/5mA DC	10 x 10 ⁻⁶
Approvals	ENEC, cURus (UL + CSA)
Robustness	acc. IEC 60947-5-5
Corresponding to CE	acc. EU-guideline N 72/73
Shock resistance acc. to IEC 600 68-2-27	50 g at 11 ms, amplitude half sinusoidal
Resistance to vibrations acc. to IEC 600 68-2-6	10 g at 40 ... 500 Hz
Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70°C (+50°C)
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
Resistance to constant environment	IEC 600 68-2-3 and 2-30
Resistance at variable environment	IEC 600 68-2-14 and 2-33

Accessories RAFIX 22 QR contact blocks with silver contacts, screw terminals and cage clamp terminals

Description	Photo	Order no.	Page
Coupling with reference numbers 1-3-2, for contact blocks with single contacts		5.05.510.935/0000	2 - 143
Coupling with reference numbers 1/2-5/6-3/4, for contact blocks with double contacts		5.05.510.936/0000	2 - 143
Marking tag for contact blocks/lamp sockets with screw terminals		5.40.010.131/0000	2 - 145

RAFIX 22 QR contact block with silver contacts



Terminals	Contact arrangement	Contact materials	Lamp characteristics	Order no.
screw terminals	1 NC	Ag		5.00.100.139/0000
screw terminals	1 NO	Ag		5.00.100.140/0000
screw terminals	2 NC	Ag		5.00.100.141/0000
screw terminals	2 NO	Ag		5.00.100.142/0000
screw terminals	1 NC + 1 NO	Ag		5.00.100.143/0000
cage clamp	1 NC	Ag		5.00.100.144/0000
cage clamp	1 NO	Ag		5.00.100.145/0000
solder/quick connector 6.3 x 0.8 mm	1 NC	Ag		5.00.100.194/0000
solder/quick connector 6.3 x 0.8 mm	1 NO	Ag		5.00.100.196/0000

Technical data see page 2 - 124

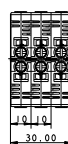
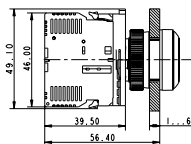
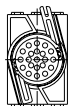
NEW

2

RAFIX
22 QR

RAFIX 22 QR contact block assembly, with coupling, without lamp socket, silver contacts


Pict.: Silver contacts, 1 NO



Terminals	Contact arrangement	Contact materials	Lamp characteristics	Order no.
screw terminals	1 NC	Ag		1.20.124.001/0000
screw terminals	1 NO	Ag		1.20.124.002/0000
screw terminals	1 NC, 1 NC	Ag		1.20.124.003/0000
screw terminals	1 NO , 1 NO	Ag		1.20.124.004/0000
screw terminals	1 NO , 1 NC	Ag		1.20.124.005/0000
screw terminals	1 NC + 1 NO	Ag		1.20.124.017/0000
screw terminals	1 NC + 1 NO , 1 NC + 1 NO	Ag		1.20.124.018/0000
screw terminals	2 NC	Ag		1.20.124.019/0000
screw terminals	2 NO	Ag		1.20.124.020/0000
clamp cage	1 NC	Ag		1.20.125.001/0000
clamp cage	1 NO	Ag		1.20.125.002/0000
clamp cage	1 NC, 1 NC	Ag		1.20.125.003/0000
clamp cage	1 NO , 1 NO	Ag		1.20.125.004/0000
clamp cage	1 NO , 1 NC	Ag		1.20.125.005/0000

Technical data see page 2 - 124

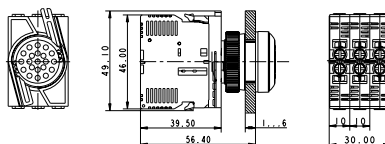
Contact arrangement example (1 NO = 1 normally open contact, 1 NC = 1 normally closed contact)

 1 NO, 1 NC = **Two separate contact blocks** are mounted on the coupling: One with a normally open contact and one with a normally closed contact

 1 NC + 1 NO = **One contact block with double contacts** (1 normally closed and 1 normally open) is mounted on the coupling.

RAFIX 22 QR contact block assembly, with coupling and lamp socket, silver contacts


Pict.: lamp socket



Terminals	Contact arrangement	Contact materials	Lamp characteristics	Order no.
screw terminals	1 NC	Ag	BA 9 s	1.20.124.021/0000
screw terminals	1 NO	Ag	BA 9 s	1.20.124.022/0000
screw terminals	1 NC, 1 NC	Ag	BA 9 s	1.20.124.023/0000
screw terminals	1 NO , 1 NO	Ag	BA 9 s	1.20.124.024/0000
screw terminals	1 NO , 1 NC	Ag	BA 9 s	1.20.124.025/0000
screw terminals	1 NC + 1 NO	Ag	BA 9 s	1.20.124.027/0000
screw terminals	1 NC + 1 NO , 1 NC + 1 NO	Ag	BA 9 s	1.20.124.028/0000
screw terminals	2 NC	Ag	BA 9 s	1.20.124.029/0000
screw terminals	2 NO	Ag	BA 9 s	1.20.124.030/0000
clamp cage	1 NC	Ag	BA 9 s	1.20.125.021/0000
clamp cage	1 NO	Ag	BA 9 s	1.20.125.022/0000
clamp cage	1 NC, 1 NC	Ag	BA 9 s	1.20.125.023/0000
clamp cage	1 NO , 1 NO	Ag	BA 9 s	1.20.125.024/0000
clamp cage	1 NO , 1 NC	Ag	BA 9 s	1.20.125.025/0000

Technical data see page 2 - 124

Accessories:

Filament lamp, BA 9s base (MBC/MCC), 12 - 15 V: **1.90.060.132/0000**
 Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V: **1.90.060.133/0000**
 Filament lamp, BA 9s base (MBC/MCC), 110 - 130 V: **1.90.060.137/0000**
 LED BA 9s (MBC/MCC) superbright, red, 24 V: **1.90.690.341/0000**
 LED BA 9s (MBC/MCC) superbright, green, 24 V: **1.90.690.342/0000**
 LED BA 9s (MBC/MCC) superbright, yellow, 24 V: **1.90.690.343/0000**
 LED BA 9s (MBC/MCC) superbright, blue, 24 V: **1.90.690.344/0000**
 LED BA 9s (MBC/MCC) superbright, white, 24 V: **1.90.690.345/0000**

Contact arrangement example (1 NO = 1 normally open contact, 1 NC = 1 normally closed contact)

1 NO, 1 NC = **Two separate contact blocks** are mounted on the coupling: One with a normally open contact and one with a normally closed contact

1 NC + 1 NO = **One contact block with double contacts** (1 normally closed and 1 normally open) is mounted on the coupling.

BA 9s (MBC/MCC) = Lamp socket snaps onto coupling centre. More technical data see "Lamp sockets".

RAFIX 22 QR contact blocks with gold contacts



Pict.: Gold contacts, 1 NC, screw terminals

Gold contacts, 1 NO, cage clamp terminals

Assembly: Gold contacts, 1NC + 1NO

2

General data

Most of the values specified apply to all terminal and cage clamp terminal versions. Any deviating values specific to the cage clamp or quick connect version are given in parentheses ().

Technical data

Dimensions		Electrical characteristics	
Length	39.5 mm	Operating voltage AC/DC	1 ... 42 V
Width	10 mm	Operating current AC/DC	0,01 ... 100 mA
Height	46 mm	Rated power max.	1W (ohmic load)
Mounting depth without cable	56.4 mm	Lamp characteristics	
Mechanical design		Lamp socket	BA 9 s
Mounting	snap on coupling and actuator	Other specifications	
Contact system	bridgecontact self cleaning	Operating life	1 million at 10 mA/ 24 V DC
Contact materials	Au	Switching reliability at 24V/5mA DC	10 x 10 ⁻⁶
Contact arrangement	see order block	Robustness	acc. IEC 60947-5-5
NC contact forcibly actuated acc. to IEC 60947-5-1	yes	Corresponding to CE	acc. EU-guideline N 72/73
Terminals	see order block	Shock resistance acc. to IEC 600 68-2-27	50 g at 11 ms, amplitude half sinusoidal
Terminal marking	colour encoded	Resistance to vibrations acc. to IEC 600 68-2-6	10 g at 40 ... 500 Hz
Robustness	100 N	Ambient temp. operating min.	-25 °C
Operating force	approx. 5 N for 1 contact element	Ambient temp. operating max.	+70 °C
Wire range solid wires without wire end sleeves	2 x 0,75 ... 2,5 mm ²	Storage temperature min.	-40 °C
Wire range stranded wires without wire end sleeves	2 x 1,0 ... 1,5 mm ²	Storage temperature max.	+80 °C
Stripping length, solid or stranded	8 mm	Resistance to constant environment	IEC 600 68-2-3 and 2-30
Wire range with wire end sleeves	2 x 0,75 ... 1,5 mm ²	Resistance at variable environment	IEC 600 68-2-14 and 2-33

Accessories RAFIX 22 QR contact blocks with gold contacts, screw terminals and cage clamp terminals

Description	Photo	Order no.	Page
Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V		1.90.060.133/0000	5 - 8

Accessories RAFIX 22 QR contact blocks with gold contacts, screw terminals and cage clamp terminals

Description	Photo	Order no.	Page
Neon lamp BA 9s (MBC/MCC), 220 V AC (red)		1.90.560.102/0000	5 - 9
LED BA 9s (MBC/MCC) superbright, white, 24 V		1.90.690.345/0000	5 - 19
Coupling with reference numbers 1-3-2, for contact blocks with single contacts		5.05.510.935/0000	2 - 143
Coupling with reference numbers 1/2-5/6-3/4, for contact blocks with double contacts		5.05.510.936/0000	2 - 143
Marking tag for contact blocks/lamp sockets with screw terminals		5.40.010.131/0000	2 - 145

RAFIX 22 QR contact block with gold contacts

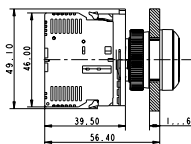
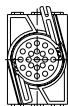


Terminals	Contact arrangement	Contact materials	Lamp socket	Order no.
screw terminals	2 NC	Au		5.00.100.161/0000
screw terminals	2 NO	Au		5.00.100.162/0000
screw terminals	1 NC + 1 NO	Au		5.00.100.163/0000
screw terminals	1 NC	Au		5.00.100.164/0000
screw terminals	1 NO	Au		5.00.100.165/0000
clamp cage	1 NC	Au		5.00.100.159/0000
clamp cage	1 NO	Au		5.00.100.160/0000
solder/quick connector 6.3 x 0.8 mm	1 NC	Au		5.00.100.193/0000
solder/quick connector 6.3 x 0.8 mm	1 NO	Au		5.00.100.195/0000

Technical data see page 2 - 128

NEW

RAFIX 22 QR contact block assembly, with coupling, without lamp socket, gold contacts



Pict.: Gold contacts, 1NC + 1NO

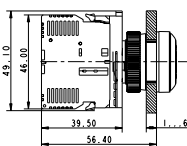
Terminals	Contact arrangement	Contact materials	Lamp socket	Order no.
screw terminals	1 NC	Au		1.20.124.101/0000
screw terminals	1 NO	Au		1.20.124.102/0000
screw terminals	1 NC, 1 NC	Au		1.20.124.103/0000
screw terminals	1 NO , 1 NO	Au		1.20.124.104/0000
screw terminals	1 NO , 1 NC	Au		1.20.124.105/0000
screw terminals	1 NC + 1 NO	Au		1.20.124.117/0000
screw terminals	1 NC + 1 NO , 1 NC + 1 NO	Au		1.20.124.118/0000
screw terminals	2 NC	Au		1.20.124.119/0000
screw terminals	2 NO	Au		1.20.124.120/0000
clamp cage	1 NC	Au		1.20.125.101/0000
clamp cage	1 NO	Au		1.20.125.102/0000
clamp cage	1 NC, 1 NC	Au		1.20.125.103/0000
clamp cage	1 NO , 1 NO	Au		1.20.125.104/0000
clamp cage	1 NO , 1 NC	Au		1.20.125.105/0000

Technical data see page 2 - 128

Contact arrangement example (1 NO = 1 normally open contact, 1 NC = 1 normally closed contact)

1 NO, 1 NC = **Two separate contact blocks** are mounted on the coupling: One with a normally open contact and one with a normally closed contact

1 NC + 1 NO = **One contact block with double contacts** (1 normally closed and 1 normally open) are mounted on the coupling.

RAFIX 22 QR contact block assembly, with coupling and lamp socket, gold contacts


Pict.: Silver contacts, 1NC+1NO, lamp socket, 1NC+1NO

Terminals	Contact arrangement	Contact materials	Lamp socket	Order no.
screw terminals	1 NC	Au	BA 9 s	1.20.124.121/0000
screw terminals	1 NO	Au	BA 9 s	1.20.124.122/0000
screw terminals	1 NC, 1 NC	Au	BA 9 s	1.20.124.123/0000
screw terminals	1 NO , 1 NO	Au	BA 9 s	1.20.124.124/0000
screw terminals	1 NO , 1 NC	Au	BA 9 s	1.20.124.125/0000
screw terminals	1 NC + 1 NO	Au	BA 9 s	1.20.124.127/0000
screw terminals	1 NC + 1 NO , 1 NC + 1 NO	Au	BA 9 s	1.20.124.128/0000
screw terminals	2 NC	Au	BA 9 s	1.20.124.129/0000
screw terminals	2 NO	Au	BA 9 s	1.20.124.130/0000
clamp cage	1 NC	Au	BA 9 s	1.20.125.121/0000
clamp cage	1 NO	Au	BA 9 s	1.20.125.122/0000
clamp cage	1 NC, 1 NC	Au	BA 9 s	1.20.125.123/0000
clamp cage	1 NO , 1 NO	Au	BA 9 s	1.20.125.124/0000
clamp cage	1 NO , 1 NC	Au	BA 9 s	1.20.125.125/0000

Technical data see page 2 - 128

Accessories:

Filament lamp, BA 9s base (MBC/MCC), 12 - 15 V: **1.90.060.132/0000**
 Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V: **1.90.060.133/0000**
 Filament lamp, BA 9s base (MBC/MCC), 110 - 130 V: **1.90.060.137/0000**
 LED BA 9s (MBC/MCC) superbright, red, 24 V: **1.90.690.341/0000**
 LED BA 9s (MBC/MCC) superbright, green, 24 V: **1.90.690.342/0000**
 LED BA 9s (MBC/MCC) superbright, yellow, 24 V: **1.90.690.343/0000**
 LED BA 9s (MBC/MCC) superbright, blue, 24 V: **1.90.690.344/0000**
 LED BA 9s (MBC/MCC) superbright, white, 24 V: **1.90.690.345/0000**

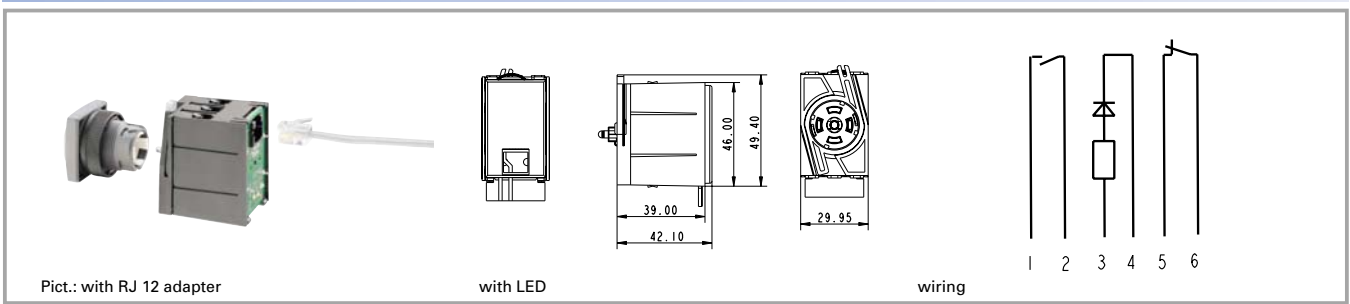
Contact arrangement example (1 NO = 1 normally open contact, 1 NC = 1 normally closed contact)

1 NO, 1 NC = **Two separate contact blocks** are mounted on the coupling: One with a normally open contact and one with a normally closed contact

1 NC + 1 NO = **One contact block with double contacts** (1 normally closed and 1 normally open) is mounted on the coupling.

BA 9s (MBC/MCC) = Lamp socket snaps onto coupling centre. Technical data see "Lamp sockets".

Contact blocks with coupling, gold contacts, RJ 12 connector, integrated LED



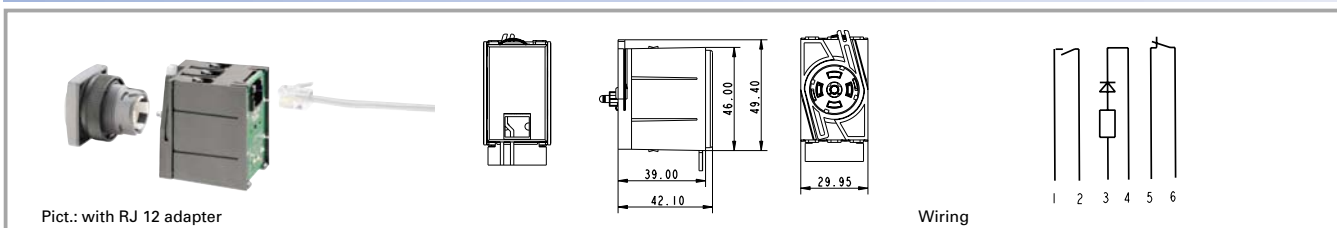
2

Technical data

Dimensions		Other specifications	
Length	49.4 mm	Operating life	1000000 at 50 mA/24 V DC
Width	29.95 mm	Switching reliability at 24V/5mA DC	10 x 10 ⁻⁶
Height	42.1 mm	Ambient temp. operating min.	-25 °C
Mounting depth	62 mm	Ambient temp. operating without LED max.	+70 °C
Mechanical design		Ambient temp. operating with LED max.	+50 °C
Mounting	snap on actuator	Storage temperature min.	-30 °C
Contact system	bridgecontact self cleaning	Storage temperature max.	+80 °C
Contact materials	Au	Integrated LED	see order block
Contact arrangement	see order block	LED colour	see order block
NC contact forcibly actuated acc. to IEC 60947-5-1	yes	Resistance to constant environment	IEC 600 68-2-3 and 2-30
Terminals	RJ-12	Resistance at variable environment	IEC 600 68-2-14 and 2-33
Terminal marking	RJ-12 plug		
Mounting grid	30 x 50		
Robustness	100 N		
Electrical characteristics			
Operating voltage AC/DC	24 V		
Operating current AC/DC	0,01 ... 50 mA		

RAFIX
22 QR

Contact block with coupling, gold contacts, RJ 12 connector, integrated LED



Contact arrangement	Operating voltage AC/DC	Integrated LED	LED colour	Order no.
1 NO	24 V	no		1.20.128.002/0000
1 NO	24 V	yes	white	1.20.128.012/0000
1 NO	24 V	yes	green	1.20.128.042/0000
1 NC + 1 NO	24 V	no		1.20.128.003/0000
1 NC + 1 NO	24 V	yes	white	1.20.128.013/0000
1 NC + 1 NO	24 V	yes	red	1.20.128.023/0000
2 NC	24 V	no		1.20.128.004/0000
2 NC	24 V	yes	white	1.20.128.014/0000
2 NC	24 V	yes	red	1.20.128.024/0000
2 NO	24 V	no		1.20.128.005/0000
2 NO	24 V	yes	white	1.20.128.015/0000
2 NO	24 V	yes	green	1.20.128.045/0000

Technical data see page 2 - 132

Other contact arrangement versions available on request.

RAFIX 22 QR lamp sockets BA 9s (MBC/MCC), screw terminals and cage clamp terminals



2

Technical data

Dimensions		Other specifications	
Length	46 mm	Approvals	see order block
Width	10 mm	Robustness	acc. IEC 60947-5-5
Height	39.5 mm	Shock resistance acc. to IEC 600 68-2-27	50 g at 11 ms, amplitude half sinusoidal
Mounting depth without cable	56.4 mm	Resistance to vibrations acc. to IEC 600 68-2-6	10 g at 40 ... 500 Hz
Mechanical design		Resistance to constant environment	IEC 600 68-2-3 and 2-30
Mounting	snap on coupling and actuator	Resistance at variable environment	IEC 600 68-2-14 and 2-33
Terminals	see order block	Ambient temp. operating min.	-25 °C
Terminal marking	X1 = anode, X2 = cathode	Ambient temp. operating max.	+70 °C
Lamp characteristics		Storage temperature min.	-40 °C
Lamp socket	BA 9 s	Storage temperature max.	+80 °C
Operating voltage AC/DC	see order block	Flame class acc. to UL 94	V 0
Lamp power max.	2 W	Hot wire ignition acc. to IEC 60695-2-1	yes
Lamp voltage	see order block		

Accessories RAFIX 22 QR lamp sockets BA 9s (MBC/MCC), screw terminals and cage clamp terminals

Description	Photo	Order no.	Page
Filament lamp, BA 9s base (MBC/MCC), 12 - 15 V		1.90.060.132/0000	5 - 8
Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V		1.90.060.133/0000	5 - 8
Filament lamp, BA 9s base (MBC/MCC), 110 - 130 V		1.90.060.137/0000	5 - 8
Neon lamp BA 9s (MBC/MCC), 220 V AC (red)		1.90.560.102/0000	5 - 9
LED BA 9s (MBC/MCC) superbright, red, 24 V		1.90.690.341/0000	5 - 19
LED BA 9s (MBC/MCC) superbright, green, 24 V		1.90.690.342/0000	5 - 19
LED BA 9s (MBC/MCC) superbright, yellow, 24 V		1.90.690.343/0000	5 - 19

Accessories RAFIX 22 QR lamp sockets BA 9s (MBC/MCC), screw terminals and cage clamp terminals

Description	Photo	Order no.	Page
LED BA 9s (MBC/MCC) superbright, blue, 24 V		1.90.690.344/0000	5 - 19
LED BA 9s (MBC/MCC) superbright, white, 24 V		1.90.690.345/0000	5 - 19
Coupling with reference numbers 1-3-2, for contact blocks with single contacts		5.05.510.935/0000	2 - 143
Coupling with reference numbers 1/2-5/6-3/4, for contact blocks with double contacts		5.05.510.936/0000	2 - 143
Marking tag for contact blocks/lamp sockets with screw terminals		5.40.010.131/0000	2 - 145

RAFIX 22 QR lamp socket, without coupling



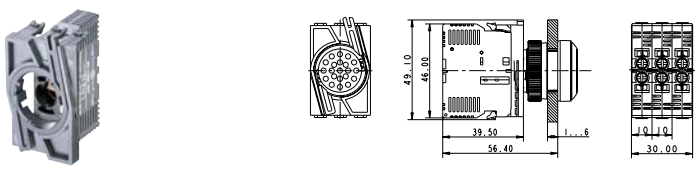
RAFIX
22 QR

Terminals	Diode and resistor	Approvals	Lamp socket	Operating voltage AC/DC	Lamp voltage	Order no.
screw terminals	no	ENEC 10/15; ULc	BA 9 s	6 ... 250 V	6 ... 250 V	5.00.070.074/0000
screw terminals	yes	ENEC 10/15; ULc	BA 9 s	250 V	130 V	5.00.070.080/0000
cage clamp	no	ENEC 10/15; ULc	BA 9 sBA 9 s	6 ... 250 V	6 ... 250 V	5.00.070.078/0000
solder/quick connector 6.3 x 0.8 mm	no	ENEC 10/15; ULc	BA 9 s	6 ... 250 V	6 ... 250 V	5.00.070.087/0000

NEW

Technical data see page 2 - 134

RAFIX 22 QR lamp socket assembly, with coupling



Pict.: Lamp socket with cage clamp terminals

Terminals	Diode and resistor	Approvals	Lamp socket	Operating voltage AC/DC	Lamp voltage	Order no.
screw terminals	no	ENEC 10/15; ULc	BA 9 s	6 ... 250 V	6 ... 250 V	1.71.213.001/0000
screw terminals	yes	ENEC 10/15; ULc	BA 9 s	250 V	130 V	1.71.213.004/0000
clamp cage	no	ENEC 10/15; ULc	BA 9 s	6 ... 250 V	6 ... 250 V	1.71.214.001/0000

Technical data see page 2 - 134

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RAFIX
22 QR

RAFIX 22 QR lamp sockets with integrated LED, screw terminals



2

Technical data

Dimensions		Other specifications	
Length	46 mm	Approvals	ENEC 10/15; ULc
Width	10 mm	Robustness	acc. IEC 60947-5-5
Height	39.5 mm	Shock resistance acc. to IEC 600 68-2-27	50 g at 11 ms, amplitude half sinusoidal
Mounting depth without cable	56.4 mm	Resistance to vibrations acc. to IEC 600 68-2-6	10 g at 40 ... 500 Hz
Mechanical design		Resistance to constant environment	IEC 600 68-2-3 and 2-30
Mounting	snap on coupling and actuator	Resistance at variable environment	IEC 600 68-2-14 and 2-33
Diode and resistor	see order block	Ambient temp. operating min.	-20 °C
LED colour	see order block	Ambient temp. operating max.	+65 °C
Terminals	screw terminals	Storage temperature min.	-40 °C
Terminal marking	X1 = anode, X2 = cathode	Storage temperature max.	+80 °C
Lamp characteristics		Flame class acc. to UL 94	V 0
Operating voltage	see order block	Hot wire ignition acc. to IEC 60695-2-1	yes
Max. current, I _F	see order block		

RAFIX
22 QR

Accessories RAFIX 22 QR lamp sockets with integrated LED, screw terminals

Description	Photo	Order no.	Page
Coupling with reference numbers 1-3-2, for contact blocks with single contacts		5.05.510.935/0000	2 - 143
Coupling with reference numbers 1/2-5/6-3/4, for contact blocks with double contacts		5.05.510.936/0000	2 - 143
Marking tag for contact blocks/lamp sockets with screw terminals		5.40.010.131/0000	2 - 145

RAFIX 22 QR lamp socket with integrated LED, without coupling


Terminals	Diode and resistor	LED colour	Max. current, I _F	Operating voltage	Order no.
screw terminals		white	15 mA	AC/DC 24 V	5.00.070.083/0200
screw terminals		red	15 mA	AC/DC 24 V	5.00.070.083/0300
screw terminals		yellow	15 mA	AC/DC 24 V	5.00.070.083/0400
screw terminals		green	15 mA	AC/DC 24 V	5.00.070.083/0500
screw terminals		blue	15 mA	AC/DC 24 V	5.00.070.083/0600
screw terminals		white	16 mA	AC 115 V	5.00.070.085/0200
screw terminals		red	16 mA	AC 115 V	5.00.070.085/0300
screw terminals		yellow	16 mA	AC 115 V	5.00.070.085/0400
screw terminals		green	16 mA	AC 115 V	5.00.070.085/0500
screw terminals		blue	16 mA	AC 115 V	5.00.070.085/0600
screw terminals		white	16 mA	AC 230 V	5.00.070.086/0200
screw terminals		red	16 mA	AC 230 V	5.00.070.086/0300
screw terminals		yellow	16 mA	AC 230 V	5.00.070.086/0400
screw terminals		green	16 mA	AC 230 V	5.00.070.086/0500
screw terminals		blue	16 mA	AC 230 V	5.00.070.086/0600

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 RAFIX
 22 QR

RAFIX 22 QR special accessories



2

Accessories RAFIX 22 QR special accessories

Description	Photo	Order no.	Page
Fixing spanner for ring nut and front ring		5.05.800.062/0000	5 - 23

Housings for flush pushbuttons



Short text	Feature 1	Feature 2	Order no.
Housings for pushbuttons, round collar, flush lens, momentary			1.30.240.601/0000
Housings for pushbuttons, square collar, flush lens, momentary			1.30.240.602/0000

RAFIX
22 QR

Lenses for flush pushbuttons


Pict.: yellow

Short text	Feature 1	Feature 2	Order no.
Lens, with diffuser	transparent colourless	flat lens	5.04.926.008/1000
Lens, with diffuser	transparent red	flat lens	5.04.926.008/1300
Lens, with diffuser	transparent yellow	flat lens	5.04.926.008/1400
Lens, with diffuser	transparent green	flat lens	5.04.926.008/1500
Lens, with diffuser	transparent blue	flat lens	5.04.926.008/1600
Lens	opaque black	flat lens	5.49.263.019/0100
Lens	opaque white	flat lens	5.49.263.019/0200
Lens	opaque red	flat lens	5.49.263.019/0300
Lens	opaque yellow	flat lens	5.49.263.019/0400
Lens	opaque green	flat lens	5.49.263.019/0500
Lens	opaque blue	flat lens	5.49.263.014/0600
Lens	opaque slate-grey	flat lens	5.49.263.019/0700

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 RAFIX
 22 QR

Front ring



Pict.: metal

Short text	Feature 1	Feature 2	Order no.
Front ring, metal			5.45.638.015/6030
Front ring, plastic, black			5.45.639.020/0100
Front ring, plastic, red			5.45.639.020/0300
Front ring, plastic, yellow			5.45.639.020/0400
Front ring, plastic, green			5.45.639.020/0500
Front ring, plastic, blue			5.45.639.020/0600
Front ring, plastic, slate grey			5.45.639.020/0700
Front ring, plastic, silver grey			5.45.639.020/0800

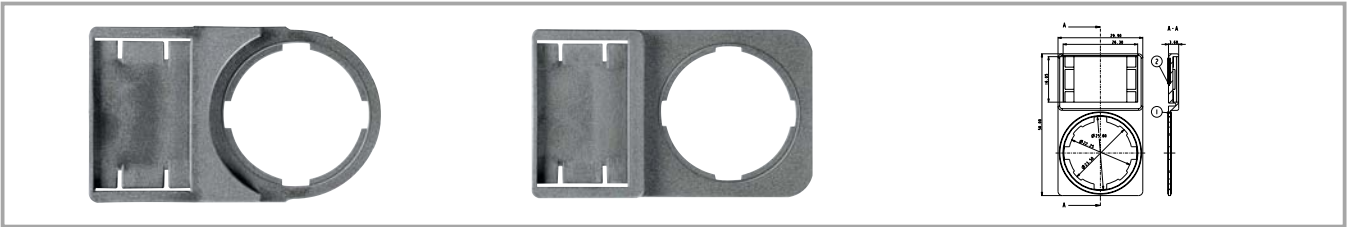
RAFIX 22 QR plastic front ring with thermoflex protective cap



Pict.: slate-grey

Short text	Feature 1	Feature 2	Order no.
Front ring, plastic with protective cap, slate grey	slate-grey		5.05.004.914/0700
Front ring, plastic with thermoflex protective cap, silver grey	silver-grey		5.05.004.914/0800
Front ring, plastic with thermoflex protective cap, black	black		5.05.004.914/0100

Label holder



Short text	Feature 1	Feature 2	Order no.
Label holder, round collar, with adhesive tape and release liner on back 50 x 30 x 3.6 mm			5.07.620.010/0000
Label holder, square collar, with adhesive tape and release liner on back 50 x 30 x 3.6 mm			5.07.620.011/0000

Legend label to clip into label holder 5.07.620.xxx



Short text	Feature 1	Feature 2	Order no.
Label for label holder, without legend, 16 x 28 x 0,9 mm			5.73.110.000/0000

Coupling



Short text	Feature 1	Feature 2	Order no.
Coupling with reference numbers 1-3-2, for contact blocks with single contacts			5.05.510.935/0000
Coupling with reference numbers 1/2-5/6-3/4, for contact blocks with double contacts			5.05.510.936/0000

Blanking cap



Short text	Feature 1	Feature 2	Order no.
Blanking cap IP65, ring nut, square			5.05.800.065/0000
Blanking cap IP65, ring nut, round			5.05.800.064/0000

Ring nut



Short text	Feature 1	Feature 2	Order no.
Ring nut (spare part)			5.24.279.012/0100
Ring nut with claw (spare part)			5.02.420.001/0000

Lamp tester



Short text	Feature 1	Feature 2	Order no.
Lamp tester			5.03.771.678/0000

Protective cover, suitable for pushbuttons with flush lens



Pict.: protective lid



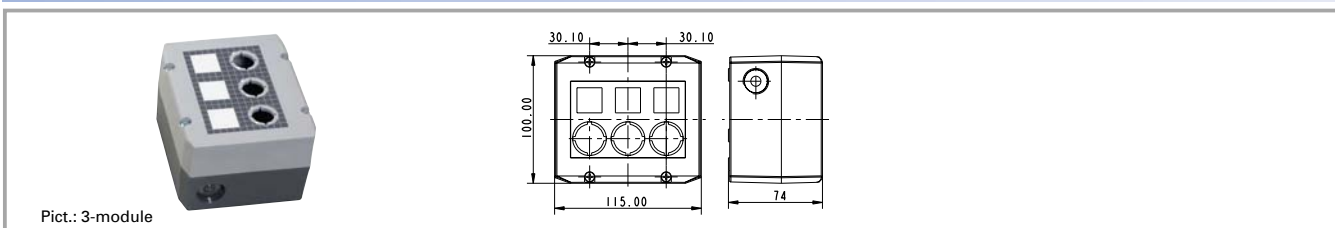
Short text	Feature 1	Feature 2	Order no.
Protective cover, latching			5.05.511.195/0000
Protective cover, auto-closing			5.05.511.194/0000

Marking tag



Short text	Feature 1	Feature 2	Order no.
Marking tag for contact blocks/lamp sockets with screw terminals			5.40.010.131/0000

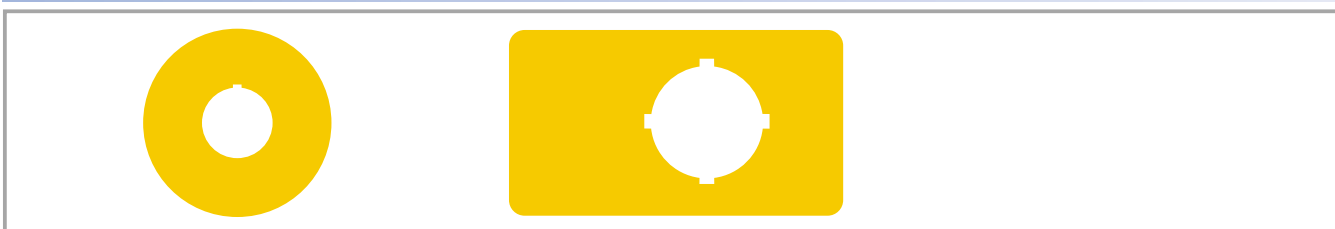
Insulating housing IP65 for RAFX 22 QR



Short text	Feature 1	Feature 2	Order no.
Insulating housing IP65 for 22 QR, 1-module, light grey/dark grey	100 mm	55 mm	1.20.810.201/0000
Insulating housing IP65 for 22 QR, 1-module, yellow/yellow	100 mm	55 mm	1.20.810.202/0000
Insulating housing IP65 for 22 QR, 2-module, light grey/dark grey	100 mm	115 mm	1.20.820.201/0000
Insulating housing IP65 for 22 QR, 3-module, light grey/dark grey	100 mm	115 mm	1.20.830.201/0000
Insulating housing IP65 for 22 QR, 4-module, light grey/dark grey	100 mm	145 mm	1.20.840.201/0000

- 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 IP 65 to DIN
- 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 for printing with a PC printer

Emergency stop label plate



Short text	Feature 1	Feature 2	Order no.
Emergency stop label, yellow, round 60 mm, rigid PVC, with legend „NOT-AUS“		60 mm	5.76.207.001/0400
Emergency stop label, yellow, round 60 mm, rigid PVC, with legend „EMERGENCY-STOP/ARRET D'URGENCE“		60 mm	5.76.207.002/0400
Emergency stop label, yellow, round 60 mm, PVC adhesive, without legend		60 mm	5.76.204.100/0400
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „NOT-AUS“		60 mm	5.76.204.101/0400
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „ARRET D'URGENCE“		60 mm	5.76.204.102/0400
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend „EMERGENCY-STOP“		60 mm	5.76.204.103/0400
Emergency stop label, yellow 36 x 64 mm, PVC adhesive, without legend	64 mm	36 mm	5.76.205.011/0400

Degree of protection: Rigid PVC: IP 40, adhesive foil: IP65.