Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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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 terminals, cage clamp 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.

Content

2

**RAFIX
22 QR**

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

Control components

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.
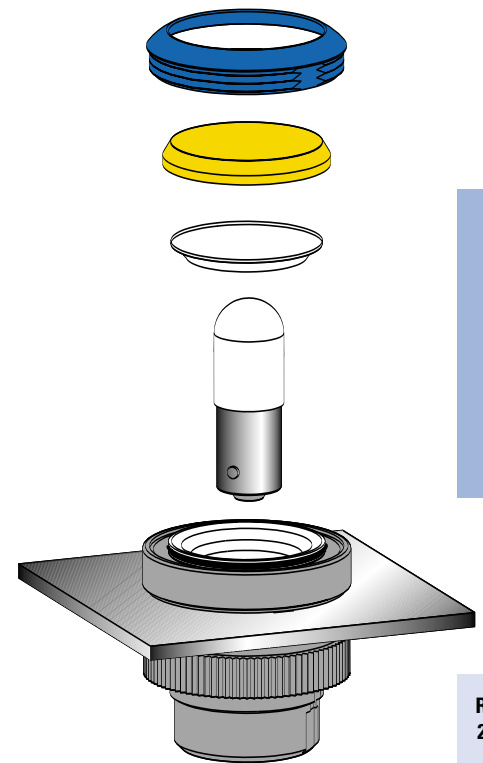
The lamps of pushbuttons and signal lamps can be replaced from the front. This method saves time and increases safety since it eliminates the need for accessing the machine/control station interior and handling live cables for lamp replacement. After unscrewing the front ring, the lens can be removed 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.
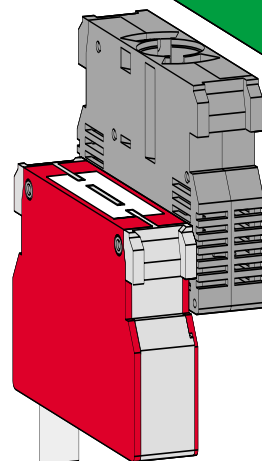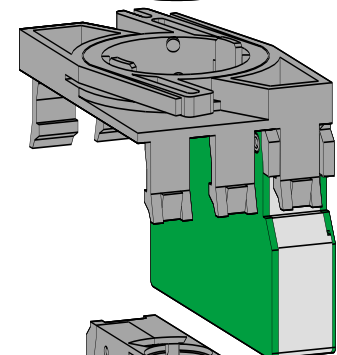
First, snap the lamp socket and contact blocks into the coupling. Then snap the assembly on to the actuator. To release it, the bayonet must be pressed (prevents inadvertent releasing at the same time).

2

RAFIX 22 QR

Control Components
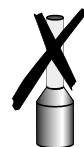
Terminals

Screw terminals, cage clamp or RJ 12
The RAFIX 22 QR contact blocks are available in three different connection styles as required for your application:

Screw terminals
The terminals are open and the captive screws are mounted in the terminal recess.

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. Details see page 25.

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.

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).

Assembly

Screw terminals	Cage clamp terminals
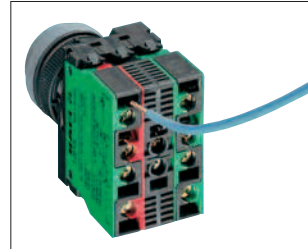
Insert the wire.
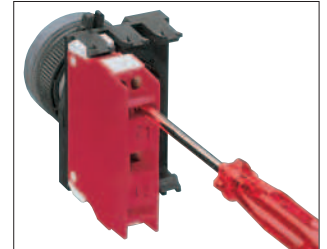
Open the terminal.
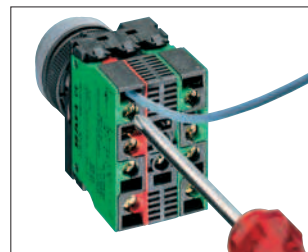
Tighten the screw.
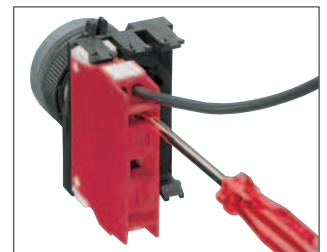
Insert the wire.

Done.

Remove the screwdriver.

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.

Control Components

RAFIX 22 QR

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 terminals and cage clamp 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.

Assembly   Disassembly

2
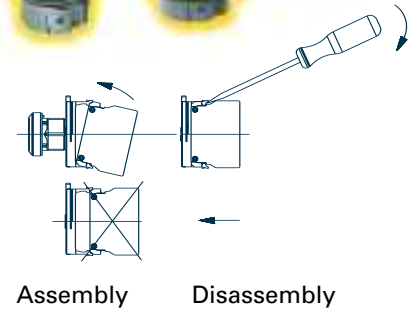
Approvals

● = approved, ○ = pending

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.– – –		○	●	●	○

30.00

50.00
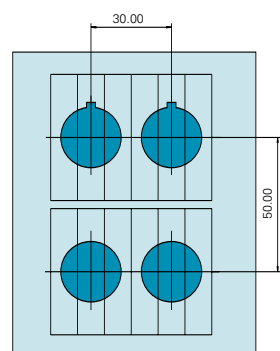
Panel cut-out according to IEC 60947-5-1
All actuators are provided with a locating lug which may be removed using a screwdriver for installation into mounting holes if required.

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

3.20 +0.2

24.10 +0.4

Ø22.30 +0.4

Dimensioned drawing

49.10
46.00

39.50

56.40

1...6

30.00
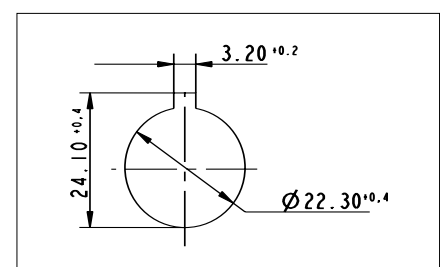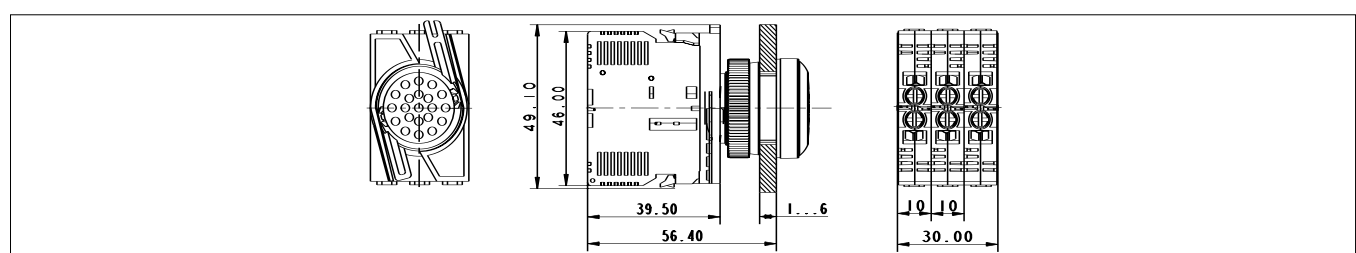
RAFIX 22 QR control component assemblies
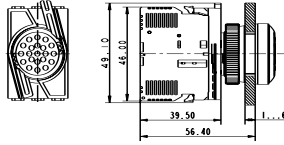
Pict.: 1 NO, lamp socket, red lens | with contact block | panel cut-out acc. to IEC 60947-5-1
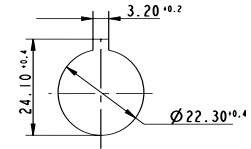
2

Technical data

General information
Form of lens	see order block
Colour of lens	see order block
Colout of front ring	see order block
Form of collar	round

Dimensions
Key grid	50 x 30 mm
Diameter of collar	29.8 mm
Overall height	see order block
Mounting depth	56.4 mm
Mounting hole	22.3 mm

Mechanical design
Mounting	ring nut
Contact function	see order block
Illuminability	see order block
Contact arrangement	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
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
Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Approvals	ENEC 10/15, ULC

Accessories RAFIX 22 QR control component assemblies

Description	Photo	Order no.	Page
Filament lamp, BA 9s base (MBC/MCC), 24 - 30 V		**1.90.060.133/0000**	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, white, 24 V		**1.90.690.345/0000**	5 - 20
Fixing spanner for ring nut and front ring		**5.05.800.062/0000**	5 - 25
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 157

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

Control components

RAFIX 22 QR assembly: Pushbutton, round, illuminated, flush lens, metallized front ring and silver contact block
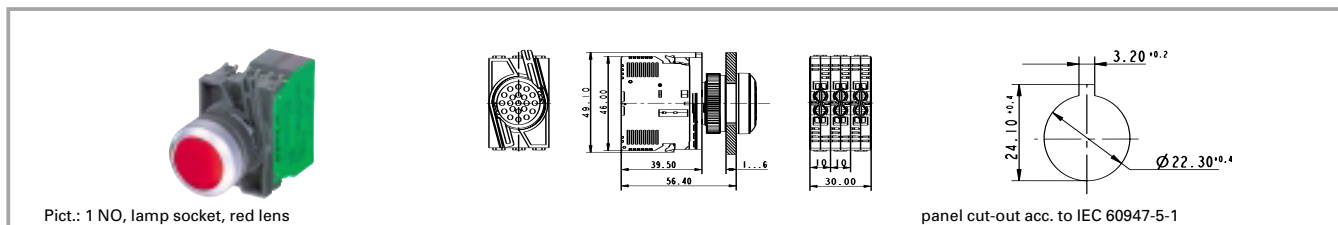
Pict.: 1 NO, lamp socket, red lens

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

Contact arrangement	Contact function	Colour of lens	Order no. complete	Order no. single parts	
				Contact block	Actuator
1 NO	momentary	transparent colourless	9.20.124.001/1000	1.20.124.022/0000	**1.30.240.021/1000**
1 NO	momentary	transparent red	9.20.124.001/1300	1.20.124.022/0000	**1.30.240.021/1300**
1 NO	momentary	transparent yellow	9.20.124.001/1400	1.20.124.022/0000	**1.30.240.021/1400**
1 NO	momentary	transparent green	9.20.124.001/1500	1.20.124.022/0000	**1.30.240.021/1500**
1 NO	momentary	transparent blue	9.20.124.001/1600	1.20.124.022/0000	**1.30.240.021/1600**

Technical data see page 2 - 98

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**
Legend insert without legend: **5.70.800.000/2000**

RAFIX 22 QR assembly: Emergency stop Twist to Reset pushbutton and silver contact block

Pict.: Emergency stop + 1NC

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

Contact arrangement	Contact function	Colour of lens	Order no. complete	Order no. single parts	
				Contact block	Actuator
1 NC	latching	opaque red	9.20.124.030/0300	**1.20.124.001/0000**	1.30.243.501/0300
1 NC + 1 NO	latching	opaque red	9.20.124.031/0300	**1.20.124.017/0000**	1.30.243.501/0300

Technical data see page 2 - 98

Accessories:
Emergency stop label, yellow, round 60 mm, PVC adhesive, with legend "NOT-AUS": 5.76.204.101/0400
Emergency stop label, yellow, round 60 mm, rigid PVC, with legend "EMERGENCY-STOP/ARRET D'URGENCE": 5.76.207.002/0400

RAFIX 22 QR assembly: Signal indicator and lamp socket

Pict.: Signal indicator, yellow lens
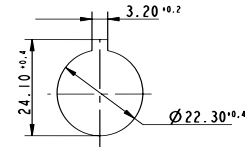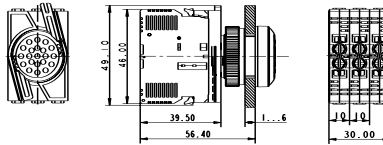
panel cut-out acc. to IEC 60947-5-1

Contact arrangement	Contact function	Colour of lens	Order no. complete	Order no. single parts	
				Contact block	**Actuator**
		transparent colourless	9.71.213.001/1000	**1.71.213.001/0000**	**1.74.505.501/1000**
		transparent red	9.71.213.001/1300	**1.71.213.001/0000**	**1.74.505.501/1300**
		transparent yellow	9.71.213.001/1400	**1.71.213.001/0000**	**1.74.505.501/1400**
		transparent green	9.71.213.001/1500	**1.71.213.001/0000**	**1.74.505.501/1500**
		transparent blue	9.71.213.001/1600	**1.71.213.001/0000**	**1.74.505.501/1600**

Technical data see page 2 - 98

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**
Legend insert without legend: 5.70.803.000/2000

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

RAFIX 22 QR pushbutton

Pict.: green | with contact block | panel cut-out acc. to IEC 60947-5-1

Technical data

General information

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

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	see order block
Mounting depth 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
Robustness min.	100 N

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 - 140
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 - 141
RAFIX 22 QR contact block with gold contacts, with coupling and lamp socket, screw terminals, 1 NO		1.20.124.122/0000	2 - 145
RAFIX 22 QR contact block with silver contacts, with coupling and lamp socket, cage clamp terminals, 1 NO, 1		**1.20.125.025/0000**	2 - 141
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 - 20

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

Control components

Accessories RAFIX 22 QR pushbutton

Description	Photo	Order no.	Page
Fixing spanner for ring nut and front ring		**5.05.800.062/0000**	5 - 25
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 157

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
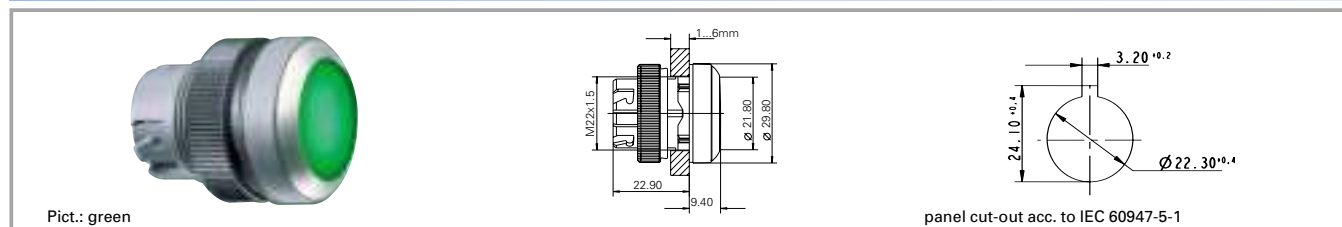
Pict.: green

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

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.001/10xx	**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 - 102

Accessories:
Front ring, plastic with protective cap, slate grey: 5.05.004.914/0700
Protective cover, auto-closing: 5.05.511.194/0000
Protective cover, latching: 5.05.511.195/0000
Legend insert without legend: 5.70.800.000/2000

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

Control components

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

RAFIX 22 QR pushbutton, protruding lens, round collar
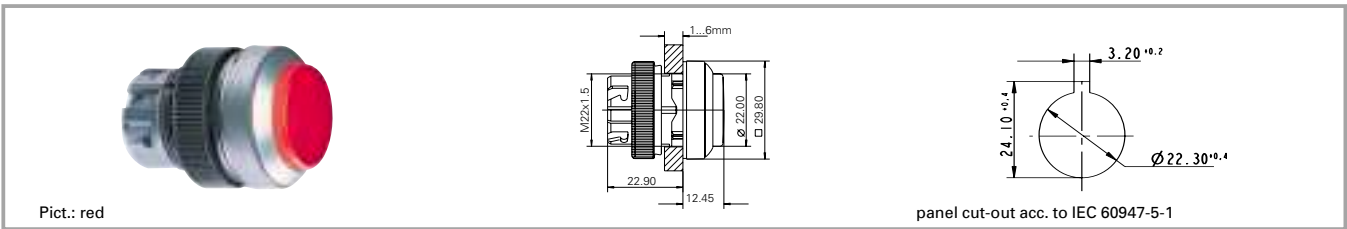
Pict.: red

1...6mm
M22x1.5
22.90
12.45
Ø 22.00
□ 29.80

3.20 +0.2
24.10 +0.4
Ø 22.30 +0.4

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

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.201/10xx	**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 - 102

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**.

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

Control components

RAFIX 22 QR pushbutton, protruding front ring, round collar
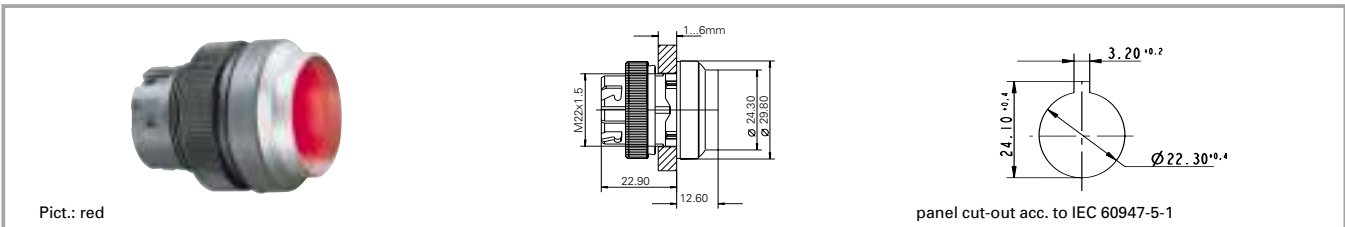
Pict.: red

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

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	**Metallized front ring**	**Plastic front ring**	**Metallized front ring**
yes	transparent white	1.30.240.401/10xx	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 - 102

Accessories:
Legend insert without legend: 5.70.800.000/2000

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.: red

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

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	**Metallized front ring**	**Plastic front ring**	**Metallized front ring**
yes	transparent white	1.30.240.051/10xx	**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 - 102

Accessories:
Front ring, plastic with protective cap, slate grey: 5.05.004.914/0700
Legend insert without legend: 5.70.800.000/2000

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

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

Control components

RAFIX 22 QR pushbutton, protruding lens, square collar
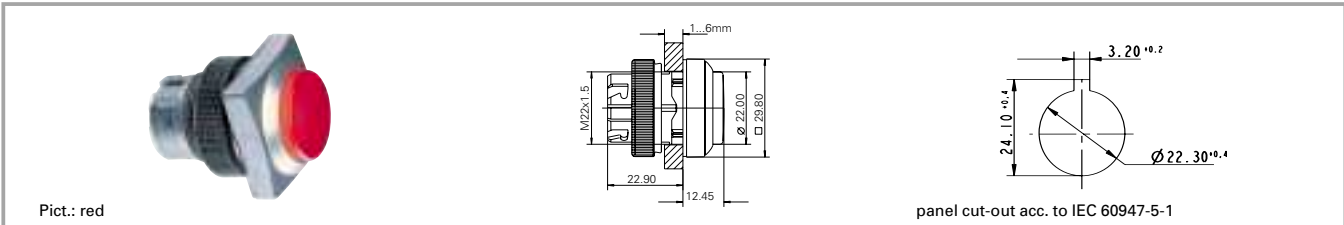
Pict.: red

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

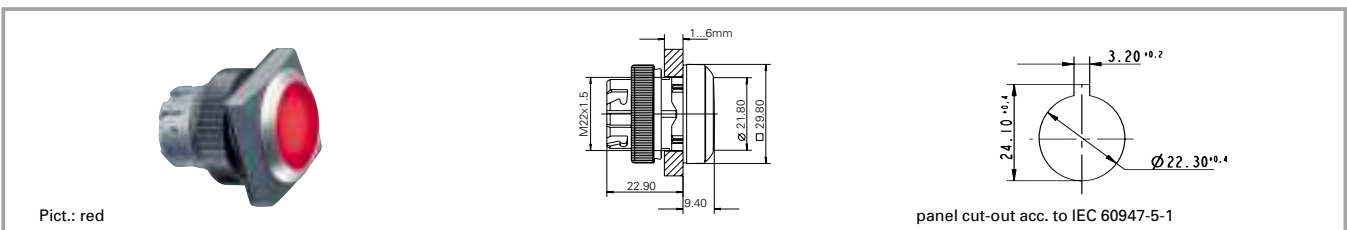| Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.251/10xx	**1.30.240.271/1000**	1.30.240.261/10xx	**1.30.240.281/1000**
yes	transparent red	1.30.240.251/13xx	**1.30.240.271/1300**	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

2

Technical data see page 2 - 102

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 **1.30.240.251/—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
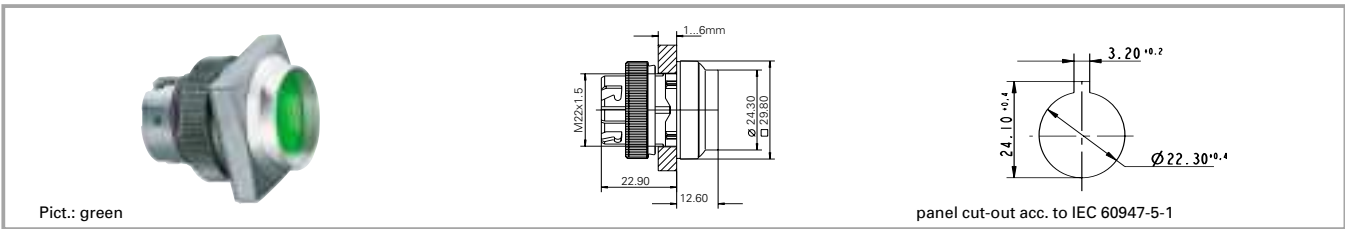
Pict.: green

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

Illuminability	Colour of lens	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
yes	transparent white	1.30.240.451/10xx	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 - 102

Accessories:
Legend insert without legend: 5.70.800.000/2000

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.

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

Control components

RAFIX 22 QR selector switch

Front ring, metallized, illuminated

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

General data

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

Technical data

General information

Form of handle	see order block
Colour of lens	white
Colout of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	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

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		**1.20.124.017/0000**	2 - 140
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 - 141
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 - 145
Contact block with coupling, gold contacts, RJ 12 connector, 1 NC + 1 NO, white LED		1.20.128.013/0000	2 - 147

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

Control components

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 - 157

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
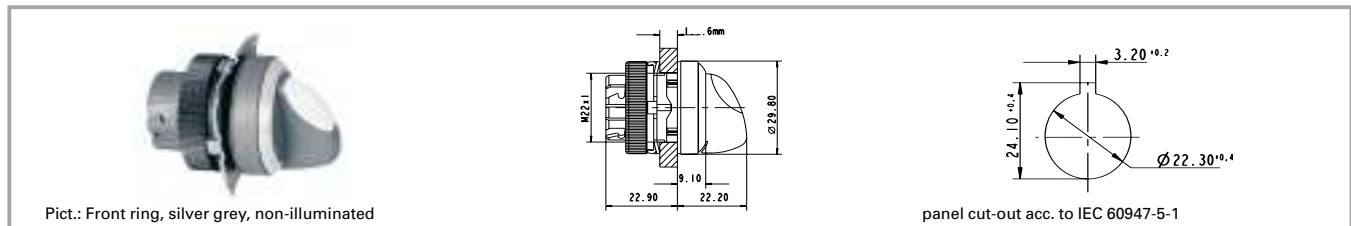
Pict.: Front ring, silver grey, non-illuminated

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

Illuminability	Contact function	Rotating angle	Drehwinkel	Order no.	
				Plastic front ring	Metal front ring
yes	momentary	1 x 40°		1.30.242.001/22xx	**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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.426/22xx	1.30.242.427/2200
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
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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.926/02xx	1.30.242.927/0200
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

Technical data see page 2 - 110

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

Control components

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

2

RAFIX 22 QR selector switch, round collar, long handle

Pict.: Front ring, metallized, illuminated
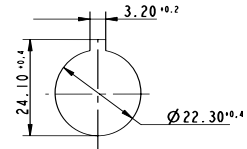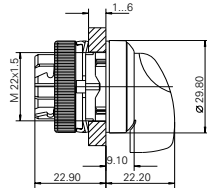
panel cut-out acc. to IEC 60947-5-1

Illuminability	Contact function	Rotating angle	Drehwinkel	Order no.	
				Plastic front ring	Metal front ring
yes	momentary	1 x 40°		1.30.242.011/22xx	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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.436/22xx	1.30.242.437/2200
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
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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.936/02xx	1.30.242.937/0200
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

Technical data see page 2 - 110

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

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

Control components

RAFIX 22 QR selector switch, square collar, short handle

Pict.: Front ring, non-illuminated

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

Illuminability	Contact function	Rotating angle	Drehwinkel	Order no.	
				Plastic front ring	**Metal front ring**
yes	momentary	1 x 40°		1.30.242.051/22xx	**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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.476/22xx	1.30.242.477/2200
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
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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.976/02xx	1.30.242.977/0200
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

Technical data see page 2 - 110

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

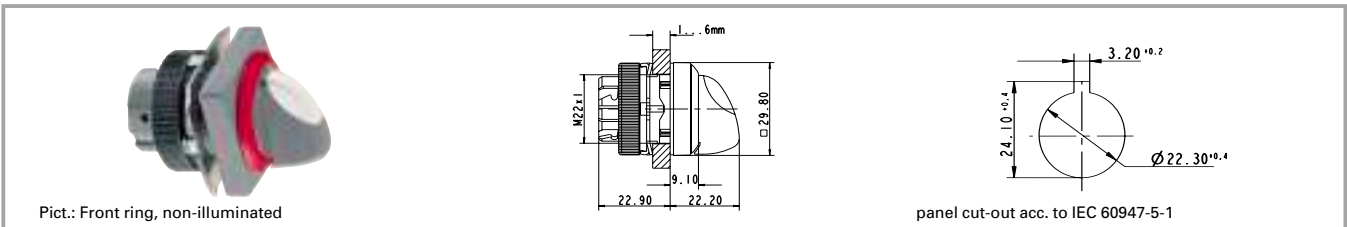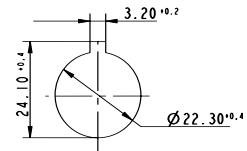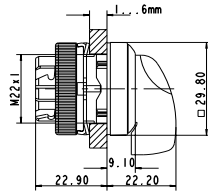Pict.: Front ring, black, non-illuminated

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

Illuminability	Contact function	Rotating angle	Drehwinkel	Order no.	
				Plastic front ring	Metal front ring
yes	momentary	1 x 40°		1.30.242.061/22xx	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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.486/22xx	1.30.242.487/2200
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
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° and momentary 1 x 40°	1 x 90° and 1 x 40°		1.30.242.986/02xx	1.30.242.987/0200
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

Technical data see page 2 - 110

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

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

Control components

RAFIX 22 QR keylock switch

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

Technical data

General information

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

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	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

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

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		**1.20.124.017/0000**	2 - 140
RAFIX 22 QR contact block with silver contacts, with coupling, without lamp socket, cage clamp terminals, 1		**1.20.125.002/0000**	2 - 140
Contact block with coupling, gold contacts, RJ 12 connector, 1 NC + 1 NO, without LED		1.20.128.003/0000	2 - 147
Label holder, round collar, with adhesive tape and release liner on back		5.07.620.010/0000	2 - 157
Spare key for RAFIX 22 QR		5.58.017.001/0000	

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

Control components

RAFIX 22 QR keylock switch, round collar
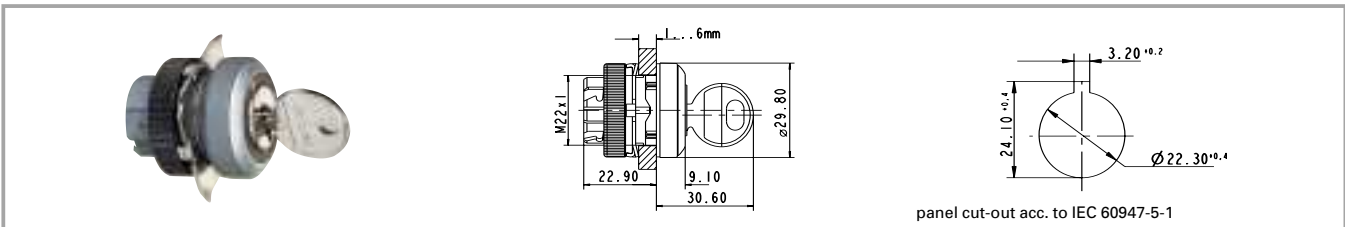
panel cut-out acc. to IEC 60947-5-1

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° and momentary 1 x 40°	1 x 90° and 1 x 40°	0		1.30.245.501/xxxx	1.30.245.502/0000
latching 1 x 90° and momentary 1 x 40°	1 x 90° and 1 x 40°	0+2		1.30.245.521/xxxx	1.30.245.522/0000
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 - 116

xxxx = Front ring colour: black = 0100, slate grey = 0700, silver grey = 0800.

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

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

RAFIX 22 QR keylock switch, square collar
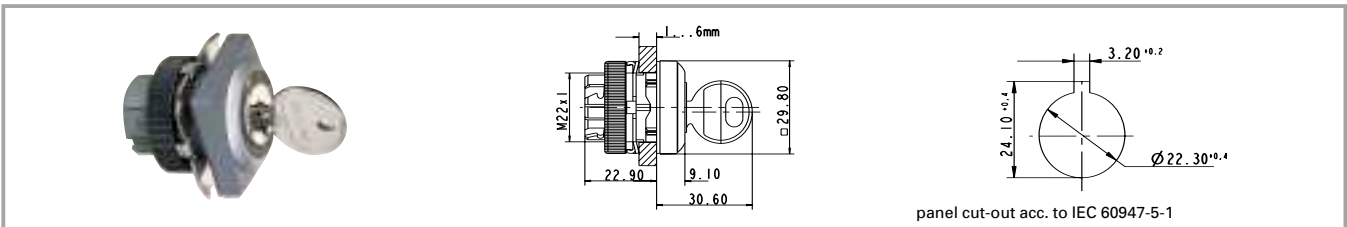
panel cut-out acc. to IEC 60947-5-1

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° and momentary 1 x 40°	1 x 90° and 1 x 40°	0		1.30.245.551/xxxx	1.30.245.552/0000
latching 1 x 90° and momentary 1 x 40°	1 x 90° and 1 x 40°	0+2		1.30.245.571/xxxx	1.30.245.572/0000
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 - 116

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

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

Control components

RAFIX 22 QR mushroom-headed pushbutton

Pict.: Front ring, metallized

Front ring, slate grey

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

Technical data

General information

Form of lens	mushroom formed
Colour of mushroom	see order block
Colout of front ring	see order block
Form of collar	see order block

Dimensions

Length of collar	see order block
Width of collar	see order block
Overall height	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	1000000
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		**1.20.124.017/0000**	2 - 140
RAFIX 22 QR contact block with gold contacts, with coupling, without lamp socket, cage clamp terminals, 1		1.20.125.102/0000	2 - 144
Contact block with coupling, gold contacts, RJ 12 connector, 1 NO, without LED		1.20.128.002/0000	2 - 147
Fixing spanner for ring nut and front ring		**5.05.800.062/0000**	5 - 25

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

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

RAFIX 22 QR mushroom-headed pushbutton 40 mm, round collar
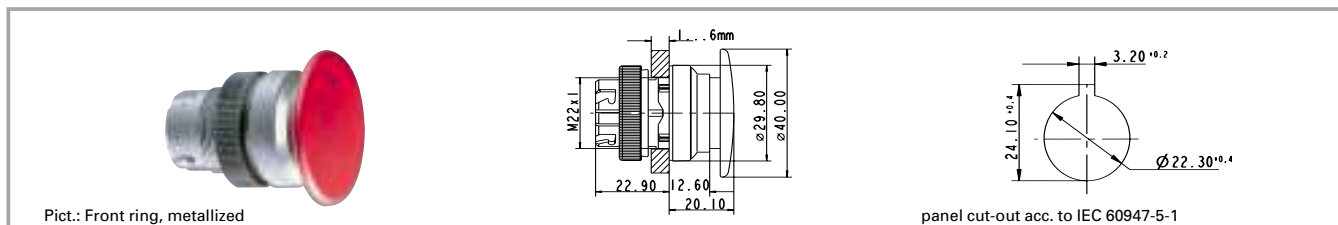
Pict.: Front ring, metallized

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

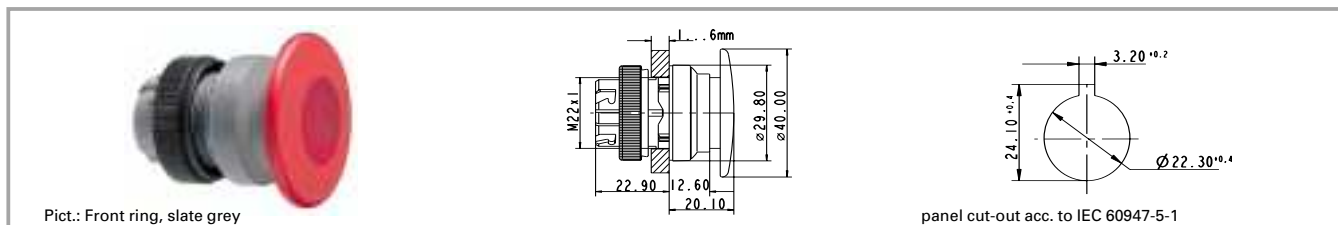| Illuminability	Colour of mushroom	Order no. momentary		Order no. latching	
		Plastic front ring	Metallized front ring	Plastic front ring	Metallized front ring
no	opaque black	1.30.246.501/01xx	1.30.246.502/0100	1.30.246.511/01xx	1.30.246.512/0100
no	opaque red	1.30.246.501/03xx	1.30.246.502/0300	1.30.246.511/03xx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

Technical data see page 2 - 120

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

Pict.: Front ring, slate grey

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

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 - 120

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**.