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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The New **Control Component** Generation

RAFIX 22QR

Design Award Winner 1999

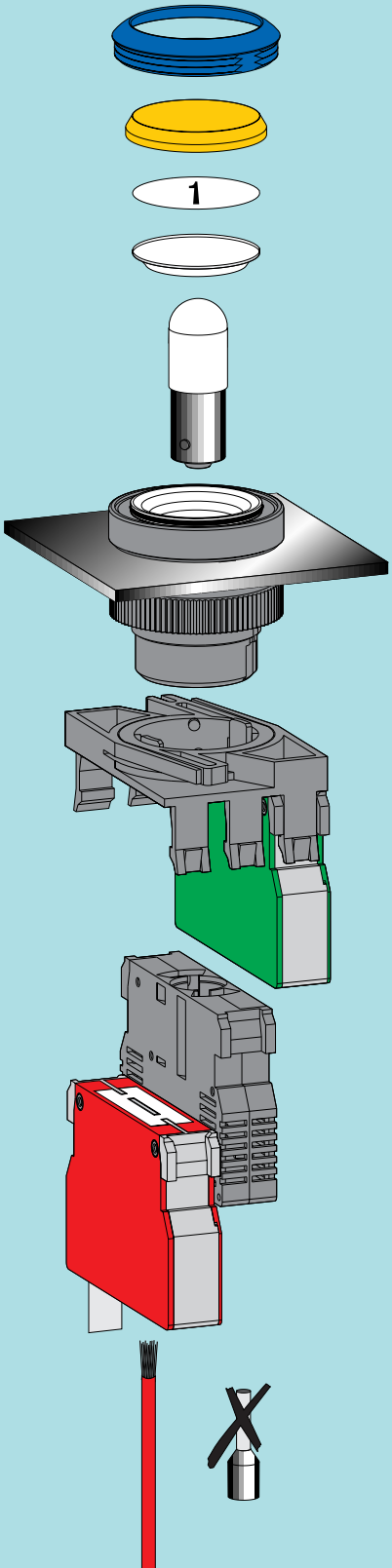
RAFI

RAFIX 22 QR

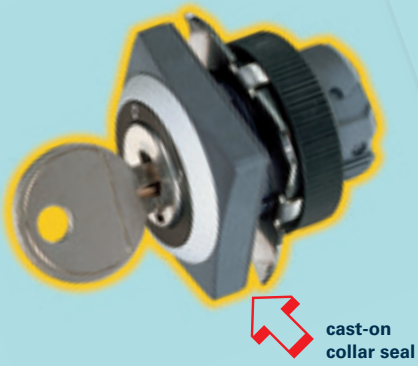
The new 22 mm Control Component Generation made by Rafi

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

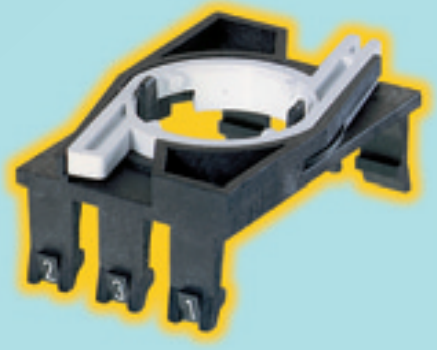
- NC contacts: red
- NO contacts: green
- NC / NO contacts: red / green
- Lamp socket: black
- Silver contacts:
  basic housing colour is black
- Gold contacts:
  basic housing colour is grey
- The terminals associated with a contact pair are colour coded on the connection side and marked with the respective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



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 lever must be pressed (prevents inadvertent releasing at the same time).

Screw terminals or cage clamp terminals

The RAFIX 22 QR contact blocks are available in two 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.

Your advantage:

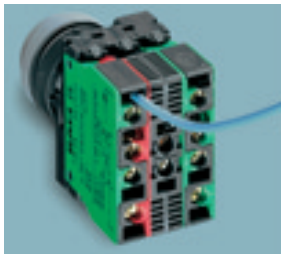
This offers you savings in three ways:

- 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. This is why the RAFIX 22 QR range offers switching reliability throughout the operating life (degree of protection IP 65 to DIN).

Easy assembly of RAFIX 22 QR.

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 as compared to its predecessor and its competitors but 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.

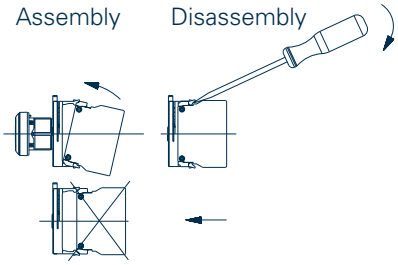
RAFIX 22 QR components are available either with a round or with a square collar. The square version can be mounted in flush fitting rows just like a self-contained pushbutton block. In this way, dirt cannot accumulate between the individual pushbuttons. Your panels will always remain attractive and functionally reliable.

The new RAFIX 22QR control component range meets all the technical requirements and current standards for control gear. All the components have been designed from scratch, with a special view to progressive design and ease of assembly. As a result, we developed a state-of-the-art product with an optimum cost / benefit ratio.

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

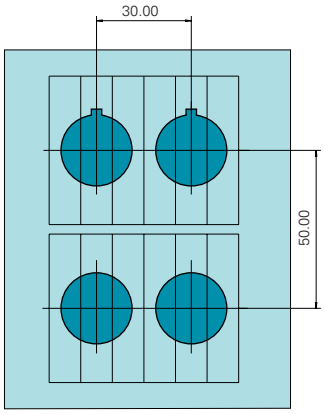
- Fix the actuator in the front panel with the ring nut.
- Snap the individual elements (a maximum three contact blocks or two contact blocks together with a lamp socket) in the coupling. You can install them on any assembling axis.
- Insert the lamp or LED into the lamp socket.
- Snap the coupling with 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

● = Approved, ○ = Approval pend-

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



Panel cut-out according to IEC 947

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).

All dimensions given in this catalogue are in mm!

Preliminary specifications

The specified data apply to contact blocks with either screw terminals or cage clamp terminals.
If these values differ, those values referring to cage clamp terminals are given in square *brackets [ ].*
We reserve the right to implement technical changes without notice.

Overall system (actuator with contact block)

Approvals:	IEC 947, IEC 1058, UL 508, CSA 22.2; corresponding to EU Directive NSR 73/23
CE conformity:	Emergency stop and silver contact blocks meet the requirements of the Machinery Directive 89/392 (statement of conformity available on request)
Ambient temperature, operating:	– 25 ... + 70°C *[– 25 … + 50°C],* with single-Chip-LED: – 25 … + 65°C
Ambient temperature, storage:	– 40 ... + 80°C
Climatic conditions:	IEC 68 Part 2-3 and Part 2-30
Resistance to vibration:	10 g at 40...500 Hz
Shock resistance to IEC 68-2-27:	> 50 g at 11 ms amplitude, half-sinusoidal
Robustness of actuator:	> 100 N
Assembling axis:	Any
Degree of protection on front side of panel:	IP 65 throughout the full operating life

Actuators, operating life specified in no. of operations

Pushbutton:	momentary: > 1 million; latching: > 0.5 million
Selector switch:	momentary: > 0.5 million; latching: > 0.5 million
Keylock switch:	momentary: > 0.3 million; latching: > 50,000
Mushroom-headed pushbutton:	> 1 million
Emergency stop pushbutton:	> 0.1 million
Emergency stop pushbutton with keylock:	> 50,000

Contact blocks with gold contacts / silver contacts

Terminals:	Screw terminals with captive and open terminals or cage clamp. Solid or stranded wires can be connected without wire end sleeves. Up to two conductors with different cross-sections can be connected to each terminal.
Wire range:	2 x 0.75 mm^2 ... 2.5 mm^2 solid wires without wire end sleeves, 2 x 1,0 mm^2…1,5 mm^2 stranded wires without wire end sleeves *[0.08 mm^2…2.5 mm^2]* 2 x 0.75 mm^2 ... 1.5 mm^2 solid or stranded wires with wire end sleeves
Contact system:	Self-cleaning bridge contacts
Contact arrangement:	1 NC, 1 NO, 2 NC, 2 NO, 1 NC + 1 NO, *[1 NC, 1 NO, 1 NC + 1 NO],* floating contacts
NC contact:	Positive opening contact according to IEC 947-5-1
Operating force:	approx. 5 N per contact element

Specific data for contact blocks with gold contacts

Supply voltage:	1...42 V AC / DC
Current rating:	0.01 ... 100 mA AC / DC
Operating life:	> 1 million operations at 10 mA / 24 V DC
Switching reliability at 24 V / 5 mA DC:	10 x 10^{e-6} operations

Specific data for contact blocks with silver contacts

Switching reliability at 24 V/5 mA DC:	10 x 10^{e-6} operations
Operating life:	> 0.5 million operations at 10 A/250 V AC
	[7 x 10^4 at 10 A/250 V AC]
	[2 x 10^5 at 5 A/250 V AC]
	[0,6 x 10^6 at 2 A/250 V AC]

IEC 947, VDE 0660

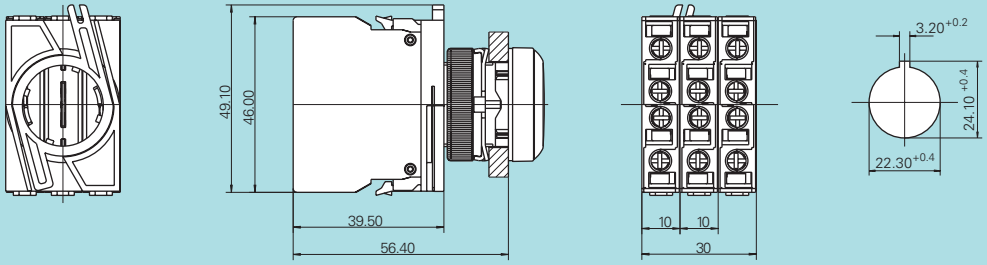
Rated insulation voltage:	400 V AC/DC
Rated peak voltage:	6 kV
Rated operating current Ie	
AC-15:	125 V/10 A; 250 V/6 A; 400 V/3.5 A
DC-13 Q300:	24 V/2.75 A; 60 V/1.1 A; 125 V/0.55 A; 250 V/0.275 A
Degree of pollution:	3
Positive opening travel:	3 mm
Minimum opening force:	20 N
Actuating speed:	5 ... 1000 mm/s
Class of protection:	II

IEC 1058, VDE 0630

Class of protection:	II
Resistive load:	10 A/250 V AC; 7.5 A/400 V AC
Motor load:	6 A *[5 A]*/250 V AC; 4 A/400 V AC
Peak input current, filament lamps:	36 A/250 V AC
Peak input current, capacitive load:	100 A/250 V AC *[–]*

Lamp socket

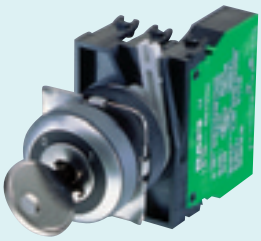
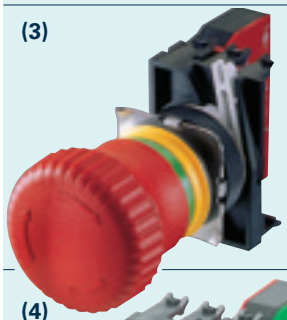
Socket type:	BA9s
Supply voltage:	6...250 V AC/DC
Lamp power:	2 W
Terminal...:	x 1 outward contact (–)
	x 2 middle contact (+)



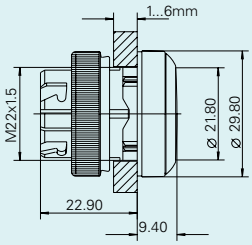
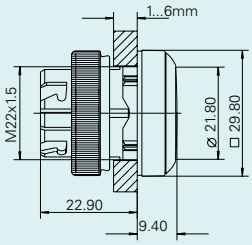
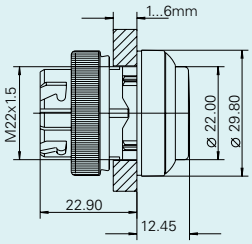
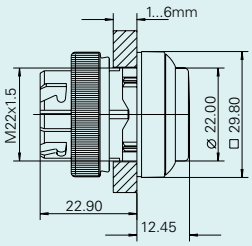
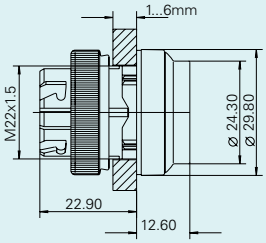
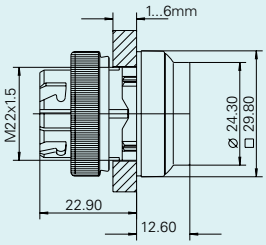
RAFIX 22 QR control component assemblies

	Actuator	Contact block	Order no.	Colour no. (lens colour)
(1)	Pushbutton, flush Momentary function Illuminated Metal front ring (order no. 1.30 240.021)	1 NO + 1 lamp socket (order no. 1.20 124 .022)	9.20 124.001	/1000 (colourless) /1300 (red) /1400 (yellow) /1500 (green) /1600 (blue)
		1 NC + 1 NO + 1 lamp socket (order no. 1.20 124.027)	9.20 124.002	
		1 NC + 1 lamp socket (order no. 1.20 124.021)	9.20 124.003	/1000 (colourless) /1300 (red)
(2)	Pushbutton, protruding Momentary function Illuminated Metal front ring (order no. 1.30 240.221)	1 NO + 1 lamp socket (order no. 1.20 124.022)	9.20 124.004	/1000 (colourless) /1300 (red) /1400 (yellow) /1500 (green) /1600 (blue)
		1 NC + 1 NO + 1 lamp socket (order no. 1.20 124.027)	9.20 124.005	
(3)	Pushbutton, flush Momentary function Non-illuminated Metal front ring (order no. 1.30 240.121)	1 NO contact (order no. 1.20 124.002)	9.20 124.006	/0100 (black) /0200 (white) /0300 (red) /0400 (yellow) /0500 (green) /0600 (blue) /0700 (slate grey)
		1 NC + 1 NO contact (order no. 1.20 124.017)	9.20 124.007	
	As above with legend I (order no. 1.30 240.123)	1 NO contact (order no. 1.20 124.002)	9.20 124.008	/0100 (black) /0500 (green)
(4)	Pushbutton, protruding Momentary function Non-illuminated Metal front ring (order no. 1.30 240.321)	1 NO contact (order no. 1.20 124.002)	9.20 124.010	/0100 (black) /0200 (white) /0300 (red) /0400 (yellow) /0500 (green) /0600 (blue) /0700 (slate grey)
		1 NC + 1 NO contact (order no. 1.20 124.017)	9.20 124.011	
		1 NC contact (order no. 1.20 124.001)	9.20 124.013	
	As above with legend 0 (order no. 1.30 240.322)	1 NC contact (order no. 1.20 124.001)	9.20 124.012	/0200 (white) /0300 (red)

RAFIX 22 QR control component assemblies

	Actuator	Contact block	Order no.	Colour no.
(1)	Selector switch Metallized front ring Non-illuminated (order no. 1.30 242.702) 1 x 90°, latching	1 NO contact (order no. 1.20 124.002)	9.20 124.020	Colour of mark on handle: /0200 (white)
		1 NC + 1 NO (order no. 1.20 124.017)	9.20 124.021	
	Selector switch Metallized front ring Non-illuminated (order no. 1.30 242.802) 2 x 60°, latching	1 NC + 1 NO (order no. 1.20 124.004)	9.20 124.022	
		1 NC + 1 NO, 1 NC + 1 NO (order no. 1.20 124.018)	9.20 124.023	
	Selector switch Metallized front ring Non-illuminated (order no. 1.30 242.527) 2 x 45°, momentary	1 NO + 1 NO (order no. 1.20 124.004)	9.20 124.024	
		1 NC + 1 NO, 1 NC + 1 NO (order no. 1.20 124.018)	9.20 124.025	
(2) 	Keylock switch Key removal position 0 + I Metallized front ring (order no. 1.30 245.322) 1 x 90°, latching	1 NO contact (order no. 1.20 124.002)	9.20 124.040	
		1 NC + 1 NO (order no. 1.20 124.017)	9.20 124.041	
(3) 	Emergency stop pushbutton Latching function Non-illuminated (order no. 1.30 243.501)	1 NC contact (order no. 1.20 124.001)	9.20 124.030	/0300 (red)
		1 NC + 1 NO (order no. 1.20 124.017)	9.20 124.031	
(4)	Mushroom-headed pushbutton Function momentary Non-illuminated Ø 40 mm (order no. 1.30 246.502)	1 NO contact (order no. 1.20 124.002)	9.20 124.050	/0100 (black)
		1 NC + 1 NO (order no. 1.20 124.017)	9.20 124.051	
(5)	Signal indicator (order no. 1.74 505.501)	1 lamp socket (order no. 1.71 213.001)	9.71 213.001	/1000 (colourless) /1300 (red) /1400 (yellow) /1500 (green) /1600 (blue)
		1 lamp socket with diode and resistor (order no. 1.71 213.002)	9.71 213.002	

RAFIX 22 QR pushbuttons, illuminated, metal front ring

	Legending in black letters	Order no. Momentary function	Order no. Latching function	
(1) ○, flush pushbutton				
	None	1.30 240.021 / Colour no.	1.30 240.031 / Colour no.	
	I	1.30 240.023 / Colour no.	–	
(2) □, flush pushbutton				
	None	1.30 240.071 / Colour no.	1.30 240.081 / Colour no.	
	I	1.30 240.073 / Colour no.	–	
(3) ○, protruding pushbutton				
	None	1.30 240.221 / Colour no.	1.30 240.231 / Colour no.	
	0	1.30 240.222 / Colour no.	–	
(4) □, protruding pushbutton				
	None	1.30 240.271 / Colour no.	1.30 240.281 / Colour no.	
	0	1.30 240.272 / Colour no.	–	
(5) ○, protruding collar				
	None	1.30 240.421 / Colour no.	–	
(6) □, protruding collar				
	None	1.30 240.471 / Colour no.	–	

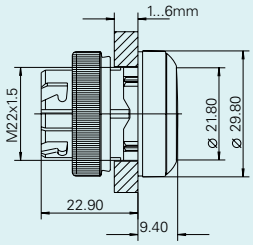
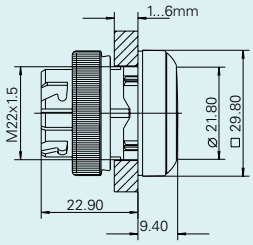
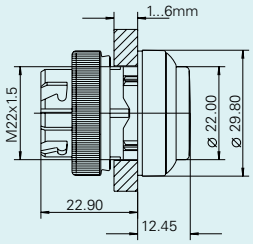
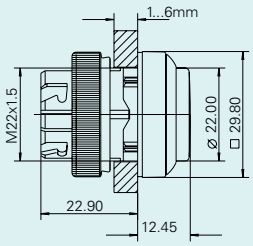
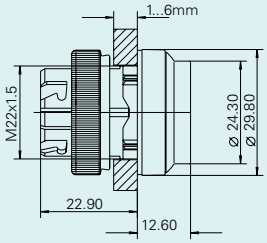
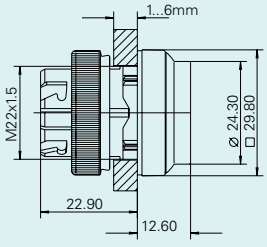
Colour no. for front ring and transparent lens*

Ring \ Lens	colourless	red	yellow	green	blue
metal	/1000	/1300	/1400	/1500	/1600

Ordering example: Flush pushbutton, illuminated, round collar, without legend, momentary, blue lens
Order no. 1.30 240.021/1600

* For your individual colour combination designs, please refer to the "RAFIX 22 QR single parts" chapter for various versions of housings, front rings, lenses and legend inserts.

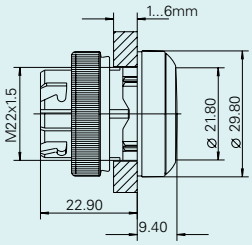
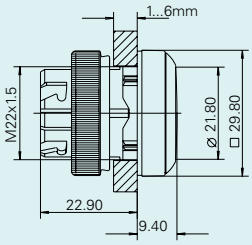
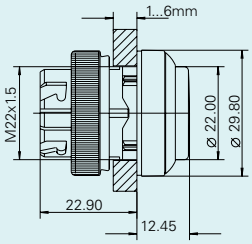
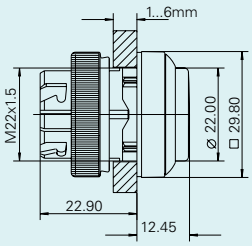
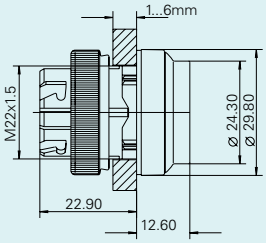
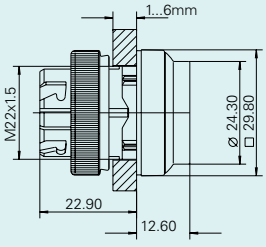
RAFIX 22 QR pushbuttons, illuminated, plastic front ring

	Legending in black letters	Order no. Momentary function	Order no. Latching function	
(1) ○, flush pushbutton				
	None	1.30 240.001 / Colour no.	1.30 240.011 / Colour no.	
	I	1.30 240.003 / Colour no.	–	
(2) □, flush pushbutton				
	None	1.30 240.051 / Colour no.	1.30 240.061 / Colour no.	
	I	1.30 240.053 / Colour no.	–	
(3) ○, protruding pushbutton				
	None	1.30 240.201 / Colour no.	1.30 240.211 / Colour no.	
	0	1.30 240.202 / Colour no.	–	
(4) □, protruding pushbutton				
	None	1.30 240.251 / Colour no.	1.30 240.261 / Colour no.	
	0	1.30 240.252 / Colour no.	–	
(5) ○, protruding collar				
	None	1.30 240.401 / Colour no.	–	
(6) □, protruding collar				
	None	1.30 240.451 / Colour no.	–	

Colour no. for front ring and transparent lens*

Lens \ Ring	black	red	yellow	green	blue	slate grey	silver
colourless	/1001	/1003	/1004	/1005	/1006	/1007	/1008
red	–	–	–	–	–	–	/1308
yellow	–	–	–	–	–	–	/1408
green	–	–	–	–	–	–	/1508
blue	–	–	–	–	–	–	/1608

RAFIX 22 QR pushbuttons, non-illuminated, metal front ring

	Legending in black letters	Order no. Momentary function	Order no. Latching function	
(1) ○, flush pushbutton				
	None	1.30 240.121 / Colour no.	–	
	0	1.30 240.122 / Colour no.	–	
	I	1.30 240.123 / Colour no.	–	
	➔	1.30 240.124 / Colour no.	–	
(2) □, flush pushbutton				
	None	1.30 240.171 / Colour no.	–	
	0	1.30 240.172 / Colour no.	–	
	I	1.30 240.173 / Colour no.	–	
	➔	1.30 240.174 / Colour no.	–	
(3) ○, protruding pushbutton				
	None	1.30 240.321 / Colour no.	1.30 240.331 / Colour no.	
	0	1.30 240.322 / Colour no.	–	
	I	1.30 240.323 / Colour no.	–	
	➔	1.30 240.324 / Colour no.	–	
(4) □, protruding pushbutton				
	None	1.30 240.371 / Colour no.	1.30 240.381 / Colour no.	
	0	1.30 240.372 / Colour no.	–	
	I	1.30 240.373 / Colour no.	–	
	➔	1.30 240.374 / Colour no.	–	
(5) ○, protruding collar				
	None	1.30 240.521 / Colour no.	–	
(6) □, protruding collar				
	None	1.30 240.571 / Colour no.	–	

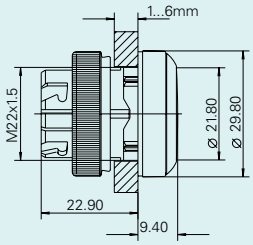
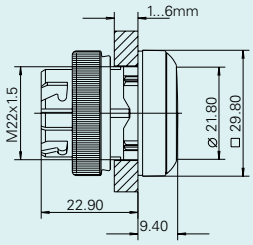
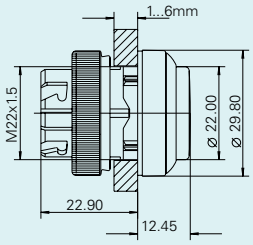
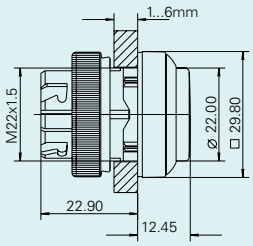
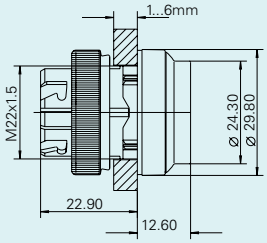
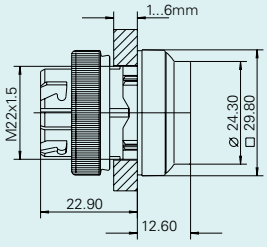
Colour no. for front ring and opaque lens*

Ring \ Lens	black	white	red	yellow	green	blue	slate grey
metal	/0100	/0200	/0300	/0400	/0500	/0600	/0700

Ordering example: Flush pushbutton, non-illuminated, round collar, without legend, momentary, blue lens
Order no. 1.30 240.121/0600

* For your individual colour combination designs, please refer to the "RAFIX 22 QR single parts" chapter for various versions of housings, front rings, lenses and legend inserts.

RAFIX 22 QR pushbuttons, non-illuminated, plastic front ring

	Legending in black letters	Order no. Momentary function	Order no. Latching function	
(1) ○, flush pushbutton				
	None	1.30 240.101 / Colour no.	–	
	0	1.30 240.102 / Colour no.	–	
	I	1.30 240.103 / Colour no.	–	
	→	1.30 240.104 / Colour no.	–	
(2) □, flush pushbutton				
	None	1.30 240.151 / Colour no.	–	
	0	1.30 240.152 / Colour no.	–	
	I	1.30 240.153 / Colour no.	–	
	→	1.30 240.154 / Colour no.	–	
(3) ○, protruding pushbutton				
	None	1.30 240.301 / Colour no.	1.30 240.311 / Colour no.	
	0	1.30 240.302 / Colour no.	–	
	I	1.30 240.303 / Colour no.	–	
	→	1.30 240.304 / Colour no.	–	
(4) □, protruding pushbutton				
	None	1.30 240.351 / Colour no.	1.30 240.361 / Colour no.	
	0	1.30 240.352 / Colour no.	–	
	I	1.30 240.353 / Colour no.	–	
	→	1.30 240.354 / Colour no.	–	
(5) ○, protruding collar				
	None	1.30 240.501 / Colour no.	–	
(6) □, protruding collar				
	None	1.30 240.551 / Colour no.	–	

Colour no. for front ring and opaque lens*

Lens \ Ring	black	red	yellow	green	blue	slate grey	silver
white	/0201	/0203	/0204	/0205	/0206	/0207	/0208
black	–	–	–	–	–	–	/0108
red	–	–	–	–	–	–	/0308
yellow	–	–	–	–	–	–	/0408
green	–	–	–	–	–	–	/0508
blue	–	–	–	–	–	–	/0608
slate grey	–	–	–	–	–	–	/0708

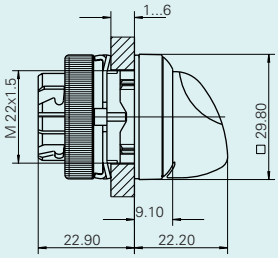
Ordering example: Flush pushbutton, non-illuminated, round collar, without legend, momentary, black front ring: Order no. 1.30 240.101/0201

* For your individual colour combination designs, please refer to the "RAFIX 22 QR single parts" chapter for various versions of housings, front rings, lenses and legend inserts.

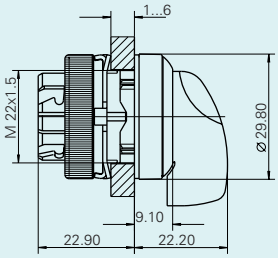
RAFIX 22 QR selector switches, illuminated

Function	Collar shape	Front ring	Order no. Short handle	Order no. Long handle
1 x 45°, momentary	○	Plastic	1.30 242.001	1.30 242.011
	□	Plastic	1.30 242.051	1.30 242.061
	○	Metallized	1.30 242.002	1.30 242.012
	□	Metallized	1.30 242.052	1.30 242.062
2 x 45°, momentary*	○	Plastic	1.30 242.026	1.30 242.036
	□	Plastic	1.30 242.076	1.30 242.086
	○	Metallized	1.30 242.027	1.30 242.037
	□	Metallized	1.30 242.077	1.30 242.087
1 x 90°, latching	○	Plastic	1.30 242.101	1.30 242.111
	□	Plastic	1.30 242.151	1.30 242.161
	○	Metallized	1.30 242.102	1.30 242.112
	□	Metallized	1.30 242.152	1.30 242.162
2 x 90°, latching*	○	Plastic	1.30 242.126	1.30 242.136
	□	Plastic	1.30 242.176	1.30 242.186
	○	Metal	1.30 242.127	1.30 242.137
	□	Metal	1.30 242.177	1.30 242.187
1 x 90°, latching	○	Plastic	1.30 242.201	1.30 242.211
	□	Plastic	1.30 242.251	1.30 242.261
	○	Metallized	1.30 242.202	1.30 242.212
	□	Metallized	1.30 242.252	1.30 242.262
2 x 60°, latching*	○	Plastic	1.30 242.301	1.30 242.311
	□	Plastic	1.30 242.351	1.30 242.361
	○	Metallized	1.30 242.302	1.30 242.312
	□	Metallized	1.30 242.352	1.30 242.362
1 x 90°, latching*	○	Plastic	1.30 242.426	1.30 242.436
1 x 45°, momentary	□	Plastic	1.30 242.476	1.30 242.486
	○	Metallized	1.30 242.427	1.30 242.437
	□	Metallized	1.30 242.477	1.30 242.487

□ **collar, short handle**



○ **collar, long handle**



Ring / Mark	Front ring plastic							Front ring metal
	black	red	yellow	green	blue	slate grey	silver	
white	/2201	/2203	/2204	/2205	/2206	/2207	/2208	/2200
red	–	–	–	–	–	–	–	/2300
yellow	–	–	–	–	–	–	–	/2400
green	–	–	–	–	–	–	–	/2500
blue	–	–	–	–	–	–	–	/2600

Ordering example: Selector switch, illuminated, 1 x 45°, momentary, round collar, black plastic front ring, short handle, white handle mark
Order no. 1.30 242.001/2201

*Please use only two contact blocks on left and right position. A third contact block in the middle position may not be mounted.

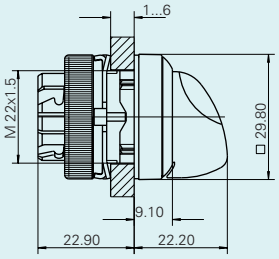
Ring nut with claw included

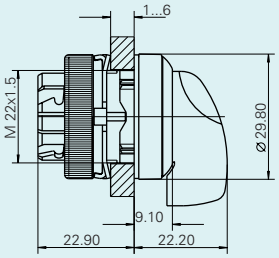
RAFIX 22 QR selector switches, non-illuminated

□ **collar, short handle**

○ **collar, long handle**

Function	Collar shape	Front ring	Order no. Short handle	Order no. Long handle
1x45°, momentary	○	Plastic	1.30 242.501	1.30 242.511
	□	Plastic	1.30 242.551	1.30 242.561
	○	Metallized	1.30 242.502	1.30 242.512
	□	Metallized	1.30 242.552	1.30 242.562
2x45°, momentary*	○	Plastic	1.30 242.526	1.30 242.536
	□	Plastic	1.30 242.576	1.30 242.586
	○	Metallized	1.30 242.527	1.30 242.537
	□	Metallized	1.30 242.577	1.30 242.587
1x90°, latching	○	Plastic	1.30 242.601	1.30 242.611
	□	Plastic	1.30 242.651	1.30 242.661
	○	Metallized	1.30 242.602	1.30 242.612
	□	Metallized	1.30 242.652	1.30 242.662
2x90°, latching*	○	Plastic	1.30 242.626	1.30 242.636
	□	Plastic	1.30 242.676	1.30 242.686
	○	Metallized	1.30 242.627	1.30 242.637
	□	Metallized	1.30 242.677	1.30 242.687
1x90°, latching	○	Plastic	1.30 242.701	1.30 242.711
	□	Plastic	1.30 242.751	1.30 242.761
	○	Metallized	1.30 242.702	1.30 242.712
	□	Metallized	1.30 242.752	1.30 242.762
2x60°, latching*	○	Plastic	1.30 242.801	1.30 242.811
	□	Plastic	1.30 242.851	1.30 242.861
	○	Metallized	1.30 242.802	1.30 242.812
	□	Metallized	1.30 242.852	1.30 242.862
1x90°, latching*	○	Plastic	1.30 242.926	1.30 242.936
1x45°, momentary	□	Plastic	1.30 242.976	1.30 242.986
	○	Metallized	1.30 242.927	1.30 242.937
	□	Metallized	1.30 242.977	1.30 242.987





Colour no. for front ring and opaque handle mark

Ring / Mark	Front ring plastic							Front ring metal
	black	red	yellow	green	blue	slate grey	silver	
white	/0201	/0203	/0204	/0205	/0206	/0207	/0208	/0200
red	–	–	–	–	–	–	–	/0300
yellow	–	–	–	–	–	–	–	/0400
green	–	–	–	–	–	–	–	/0500
blue	–	–	–	–	–	–	–	/0600

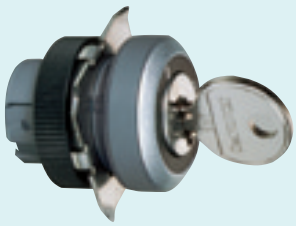
Ordering example: Selector switch, non-illuminated, 1 x 45°, momentary, round collar, black plastic front ring, short handle, white handle mark
Order no. 1.30 242.501/0201

*Please use only two contact blocks on left and right position. A third contact block in the middle position may not be mounted.

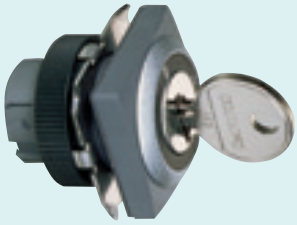
Ring nut with claw included

RAFIX 22 QR keylock switches, metal front ring

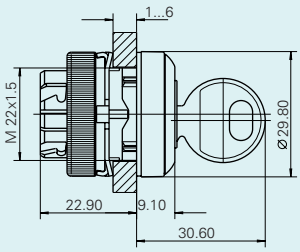
○ **collar**

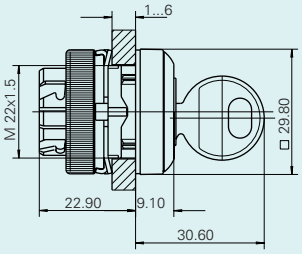


☐ **collar**



Function	Key removal position	Collar shape	Order no.
1 x 45°, momentary	0	○	1.30 245.002
	0	☐	1.30 245.052
2 x 45°, momentary*	0	○	1.30 245.102
	0	☐	1.30 245.152
1 x 90°, latching	0	○	1.30 245.202
	0	☐	1.30 245.252
	I	○	1.30 245.212
	I	☐	1.30 245.262
	0 + I	○	1.30 245.222
	0 + I	☐	1.30 245.272
1 x 90°, latching	0	○	1.30 245.302
	0	☐	1.30 245.352
	I	○	1.30 245.312
	I	☐	1.30 245.362
	0 + I	○	1.30 245.322
	0 + I	☐	1.30 245.372
2 x 90°, latching*	0	○	1.30 245.402
	0	☐	1.30 245.452
	0 + I	○	1.30 245.412
	0 + I	☐	1.30 245.462
	0 + 2	○	1.30 245.422
	0 + 2	☐	1.30 245.472
	0 + I + 2	○	1.30 245.432
	0 + I + 2	☐	1.30 245.482
2 x 60°, latching*	0 + I + 2	○	1.30 245.732
	0 + I + 2	☐	1.30 245.782
1 x 90°, latching* 1 x 45°, momentary	0	○	1.30 245.502
	0	☐	1.30 245.552
	2	○	1.30 245.512
	2	☐	1.30 245.562
	0 + 2	○	1.30 245.522
	0 + 2	☐	1.30 245.572





Lock no. 455, Ronis.
Other lock numbers on request.

Lock characteristics (metal and plastic front ring)

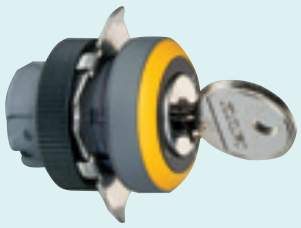
Wafers:	4
No. of lock types:	200
Main key:	No
Group key:	No

*Please use only two contact blocks on left and right position. A third contact block in the middle position may not be mounted.

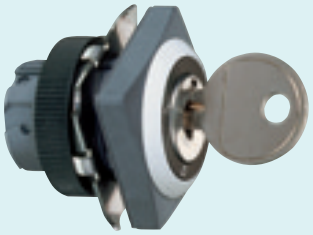
Ring nut with claw and 2 keys included.

RAFIX 22 QR keylock switches, plastic front ring

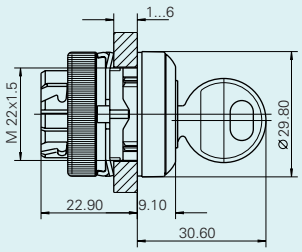
○ **collar**

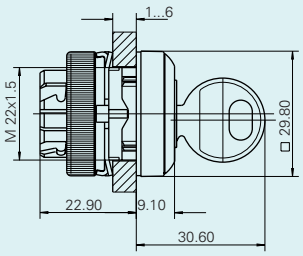


☐ **collar**



Function	Key removal position	Collar shape	Order no.
1 x 45°, momentary	0	○	1.30 245.001
	0	☐	1.30 245.051
2 x 45°, momentary*	0	○	1.30 245.101
	0	☐	1.30 245.151
1 x 90°, latching	0	○	1.30 245.201
	0	☐	1.30 245.251
	I	○	1.30 245.211
	I	☐	1.30 245.261
	0 + I	○	1.30 245.221
	0 + I	☐	1.30 245.271
1 x 90°, latching*	0	○	1.30 245.301
	0	☐	1.30 245.351
	I	○	1.30 245.311
	I	☐	1.30 245.361
	0 + I	○	1.30 245.321
	0 + I	☐	1.30 245.371
2 x 90°, latching*	0	○	1.30 245.401
	0	☐	1.30 245.451
	0 + I	○	1.30 245.411
	0 + I	☐	1.30 245.461
	0 + 2	○	1.30 245.421
	0 + 2	☐	1.30 245.471
	0 + I + 2	○	1.30 245.431
	0 + I + 2	☐	1.30 245.481
2 x 60°, latching*	0 + I + 2	○	1.30 245.731
	0 + I + 2	☐	1.30 245.781
1 x 90°, latching* 1 x 45°, momentary	0	○	1.30 245.501
	0	☐	1.30 245.551
	2	○	1.30 245.511
	2	☐	1.30 245.561
	0 + 2	○	1.30 245.521
	0 + 2	☐	1.30 245.571





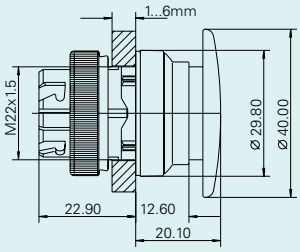
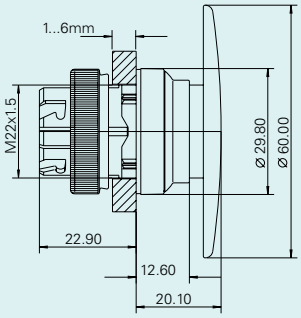
Lock characteristics and delivery contents see page 16.

Colour no. for front ring

Ring	black	red	yellow	green	blue	slate grey	silver
Colour no.	/0100	/0300	/0400	/0500	/0600	/0700	/0800

*Please use only two contact blocks on left and right position.
A third contact block in the middle position may not be mounted.

RAFIX 22 QR mushroom-headed pushbuttons, non-illuminated

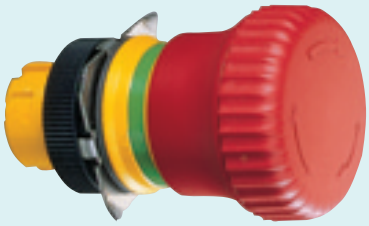
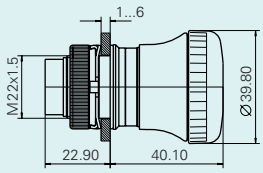
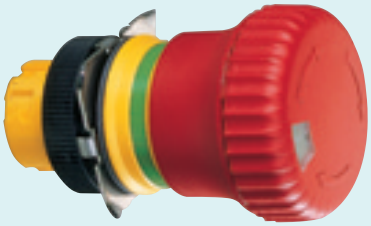
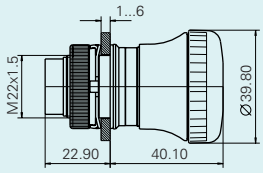
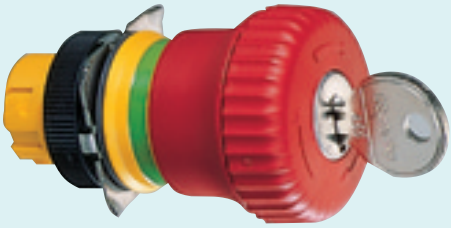
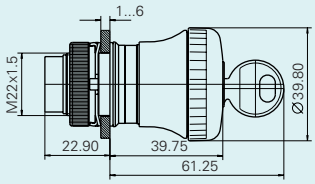
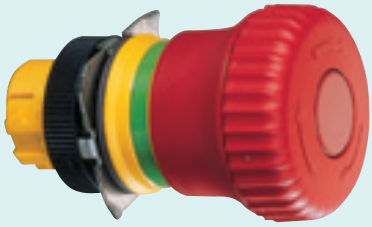
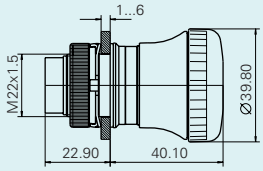
	Collar shape	Front ring	Order no. Momentary function	Order no. Latching function	
○, mushroom head ∅ 40 mm	○	Plastic, silver	1.30 246.501	1.30 246.511	
	○	Metal	1.30 246.502	1.30 246.512	
	□	Plastic, silver	1.30 246.551	1.30 246.561	
	□	Metal	1.30 246.552	1.30 246.562	
□, mushroom head ∅ 60 mm	○	Plastic, silver	1.30 246.601	–	
	○	Metal	1.30 246.602	–	
	□	Plastic, silver	1.30 246.651	–	
	□	Metal	1.30 246.652	–	

Colour no. for front ring and mushroom head

Ring \ Head	black	white	red	yellow	green	blue	slate grey
plastic, silver	/0108	/0208	/0308	/0408	/0508	/0608	/0708
metal	/0100	/0200	/0300	/0400	/0500	/0600	/0700

Ordering example:
Mushroom-headed pushbutton ∅ 40 mm, round collar,
silver plastic front ring, black mushroom head
Order no. 1.30 246.501/0108

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

	Order no. Non-illuminated	Order no. Illuminated	
(1) 	1.30 243.501 /0300	–	
(2) with indicator acc. to EN 81 	1.30 243.601 /0300	–	
(3) with keylock 	1.30 243.701 /0300	–	
(4) beleuchtbar 	–	1.30 243.001 /0300	

Ring nut with claw included, (3): 2 keys included

The emergency stop pushbuttons meet the requirements of DIN EN 60 204, IEC 73, IEC 204, IEC 947, DIN EN 60 947, VDE 0660 Part 200 and VDE 0113 Part 1. They are dupe-proof according to EN 418 thanks to the positive-action mechanical movement sequence. To prevent inadvertent actuation, a certain operating force must be exerted at the action point.

The button latches when being pressed and can be reset by turning to the right or left. Due to the design of the actuating element the emergency stop switch is protected against interlocking, i.e. a started emergency stop process cannot be interrupted by jamming elements.

The green ring below the actuator shows the switching position of the pushbutton – it can not be seen any more when the pushbutton is pressed.

Emergency stop label plates see accessories.

Switching position indication according EN 81

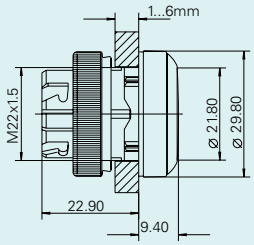
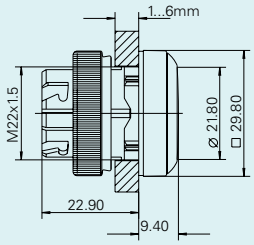
According to this norm the switching position of an emergency stop pushbutton must be visible from the front and from the side.

The Rafi pushbutton (position 2) has a mechanical indicator at the top which changes from green to red, when actuated. The green ring shows the switching position from the side.

not actuated

actuated

RAFIX 22 QR signal indicators

	Order no. Labelling with legend inserts*	Order no. No labelling	
(1) ○ collar	1.74 505.501 / Colour no.	1.74 505.001 / Colour no.	
(2) □ collar	1.74 505.551 / Colour no.	1.74 505.051 / Colour no.	

Colour no. for signal indicators

Version / Lens	colourless transp.	red transparent	yellow transparent	green transparent	blue transparent
For legend inserts	/1000	/1300	/1400	/1500	/1600
No labelling	/2200	/2300	/2400	/2500	/2600

* Please order legend inserts separately;
see accessories page

Ordering example: Signal indicator, round collar,
no labelling, blue
Order no. 1.74 505.001/2600

RAFIX 22 QR lamp sockets with coupling, screw terminals

Version	Switching symbol	Order no.
Lamp socket BA 9 s 250 V / 2 W		1.71 213.001
Lamp socket BA 9 s with diode and series resistor 250 V / 130 V / 2 W		1.71 213.004

RAFIX 22 QR lamp sockets without coupling, screw terminals

Version	Switching symbol	Order no.	Accessory
Lamp socket 250 V / 2 W		5.00 070.074	Coupling 5.05 510.935
Lamp socket with diode and series resistor 250 V / 130 V / 2 W		5.00 070.080	

For lamps and LEDs, refer to accessories page.

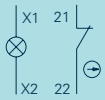
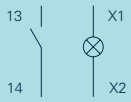
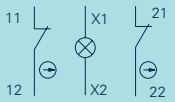
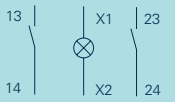
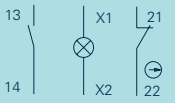
RAFIX 22 QR contact blocks complete with coupling, screw terminals

Example:
1 NO contact, silver, 250 V

Version	Reference no. on coupling 1	3	2	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC contact			●		1.20 124.001	1.20 124.101
1 NO contact	●				1.20 124.002	1.20 124.102
1 NC, 1 NC	●		●		1.20 124.003	1.20 124.103
1 NO, 1 NO	●		●		1.20 124.004	1.20 124.104
1 NO, 1 NC	●		●		1.20 124.005	1.20 124.105

RAFIX 22 QR contact blocks and lamp sockets complete with coupling, screw terminals

Example:
1 NC contact, silver, 250 V,
1 lamp socket

Version	Reference no. on coupling 1	3	2	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC, 1 lamp socket		●	●		1.20 124.021	1.20 124.121
1 NO contact, 1 lamp socket	●	●			1.20 124.022	1.20 124.122
1 NC, 1 NC, 1 lamp socket	●	●	●		1.20 124.023	1.20 124.123
1 NO, 1 NO, 1 lamp socket	●	●	●		1.20 124.024	1.20 124.124
1 NO, 1 NC, 1 lamp socket	●	●	●		1.20 124.025	1.20 124.125

RAFIX 22 QR contact blocks without coupling, screw terminals*

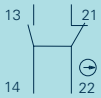
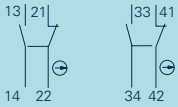
Example:
1 NC contact, silver, 250 V

Version	Switching symbol	Order no. silver 250 V	Order no. gold 42 V	Accessory
1 NC contact		5.00 100.139	5.00 100.164	Coupling 5.05 510.935
1 NO contact		5.00 100.140	5.00 100.165	

* For lamp sockets, see page 21

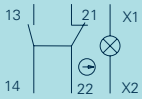
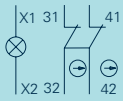
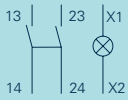
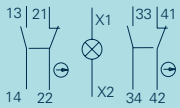
RAFIX 22 QR contact blocks complete with coupling, screw terminals

Example:
1 NC contact + 1 NO contact, gold, 42 V

Version	Reference no. on coupling 1/2	5/6	3/4	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC + 1 NO	●				1.20 124.017	1.20 124.117
2 NC contacts			●		1.20 124.019	1.20 124.119
2 NO contacts	●				1.20 124.020	1.20 124.120
1 NC + 1 NO, 1 NC + 1 NO	●		●		1.20 124.018	1.20 124.118

RAFIX 22 QR contact blocks and lamp sockets complete with coupling, screw terminals

Example:
1 NC contact, 1 NO contact, 1 lamp socket, 1 NC contact, 1 NO contact, silver, 250 V

Version	Reference no. on coupling 1/2	5/6	3/4	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC + 1 NO, 1 lamp socket	●	●			1.20 124.027	1.20 124.127
2 NC contacts, 1 lamp socket		●	●		1.20 124.029	1.20 124.129
2 NO contacts, 1 lamp socket	●	●			1.20 124.030	1.20 124.130
1 NC + 1 NO, 1 NC + NO, 1 lamp socket	●	●	●		1.20 124.028	1.20 124.128

RAFIX 22 QR contact blocks without coupling, screw terminals*

Example:
2 NC contacts, silver, 250 V

Version	Switching symbol	Order no. silver 250 V	Order no. gold 42 V	Accessory
1 NC + 1 NO		5.00 100.143	5.00 100.163	Coupling 5.05 510.936
2 NO contacts		5.00 100.142	5.00 100.162	
2 NC contacts		5.00 100.141	5.00 100.161	

* For lamp sockets, see page 21

RAFIX 22 QR contact blocks complete with coupling, cage clamp terminals

Example:
1 NC contact, gold, 42 V

Version	Reference no. on coupling 1	3	2	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC contact			●	21 / 22	1.20 125.001	1.20 125.101
1 NO contact	●			13 / 14	1.20 125.002	1.20 125.102
1 NC, 1 NC	●		●	11 / 12 ; 21 / 22	1.20 125.003	1.20 125.103
1 NO, 1 NO	●		●	13 / 14 ; 23 / 24	1.20 125.004	1.20 125.104
1 NO, 1 NC	●		●	13 / 14 ; 21 / 22	1.20 125.005	1.20 125.105

RAFIX 22 QR contact blocks and lamp sockets complete with coupling, cage clamp terminals

Example:
1 NC contact, 1 NO contact, 1 lamp socket,
1 NC contact, 1 NO contact, silver, 250 V

Version	Reference no. on coupling 1	3	2	Switching symbol	Order no. silver 250 V	Order no. gold 42 V
1 NC contact, 1 lamp socket BA 9 s		●	●	X1 21 / X2 22	1.20 125.021	1.20 125.121
1 NO contact, 1 lamp socket BA 9 s	●	●		13 / 14 ; X1 / X2	1.20 125.022	1.20 125.122
1 NC, 1 NC, 1 lamp socket	●	●	●	11 / 12 ; X1 / X2 ; 21 / 22	1.20 125.023	1.20 125.123
1 NO, 1 NO, 1 lamp socket	●	●	●	13 / 14 ; X1 / X2 ; 23 / 24	1.20 125.024	1.20 125.124
1 NO, 1 NC, 1 lamp socket	●	●	●	13 / 14 ; X1 / X2 ; 21 / 22	1.20 125.025	1.20 125.125

RAFIX 22 QR contact blocks without coupling, cage clamp terminals

Example:
1 NC contact, silver, 250 V

Version	Switching symbol	Order no. silver 250 V	Order no. gold 42 V	Accessory
1 NC contact	.1 / .2	5.00 100.144	5.00 100.159	Coupling 5.05 510.935
1 NO contact	.3 / .4	5.00 100.145	5.00 100.160	

RAFIX 22 QR lamp sockets complete with coupling, cage clamp terminals

(1)	Version	Switching symbol	Order no.
	Lamp socket BA 9 s 250 V / 2 W		1.71 214.001

RAFIX 22 QR lamp sockets without coupling, cage clamp terminals

(2)	Version	Switching symbol	Order no.	Accessory
	Lamp socket BA 9 s 250 V / 2 W		5.00 070.078	Coupling 5.05 510.935