Contact blocks with quick-connect terminals

2

System
RAFI offers contact blocks with quick-connect terminals for the tried and tested RAFIX 22 FS actuators.
The contact block snaps into the actuator with a gentle >>>click<<< and is thereby fitted permanently.
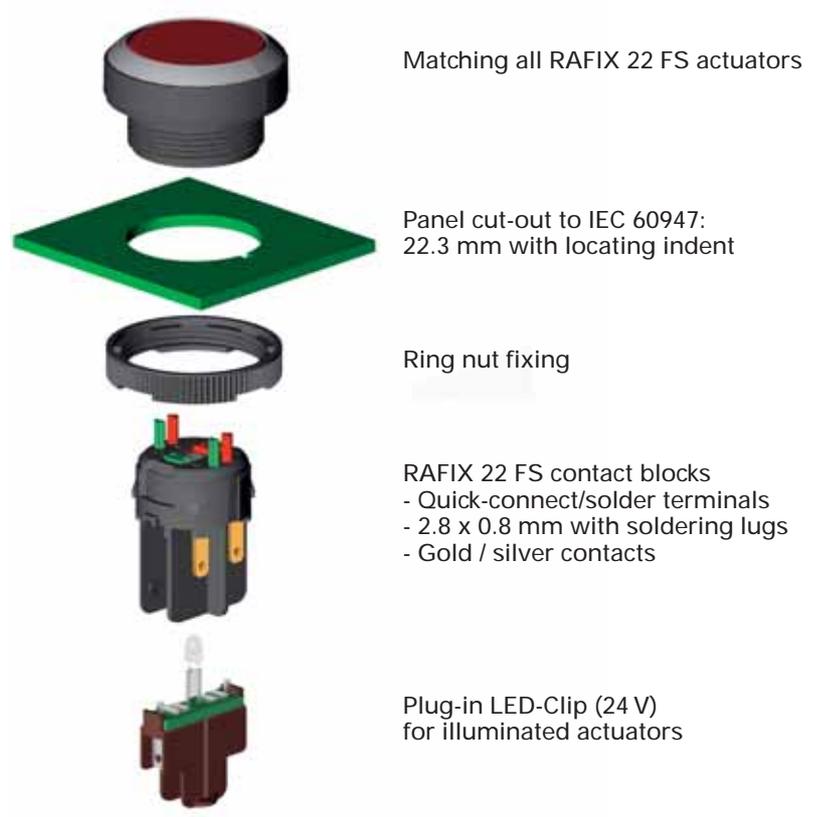
Concept
For those applications where designing a PCB layout is too expensive or not possible at all, a new option has been made available by complementing the series. Catch noses provided on the new contact block snap precisely into the actuator. The screw neck of the actuator is provided with indents safeguarding a reliable union.
The contacts of the contact block are easily connected by conventional quick-connect terminals on the rear end. A fin arranged at the centre of the contact block with quick-connect terminals helps to ensure good insulation. It serves as a guide for the additional LED-Clip at the same time if illumination is desired.
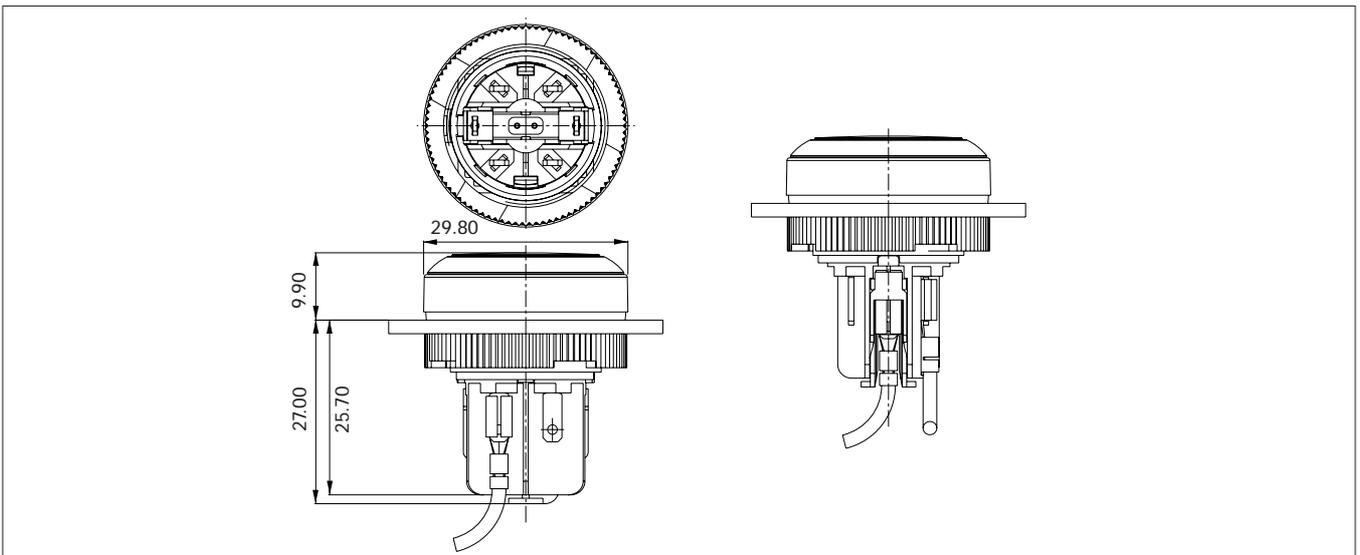The new contact blocks with quick-connect terminals makes the RAFIX 22 FS series complete and perfect. Any external control components can be integrated into the system *very easily* and *without needing any tools* and you save space, effort and material.

**RAFIX
22 FS**

Design

Matching all RAFIX 22 FS actuators

Panel cut-out to IEC 60947:
22.3 mm with locating indent

Ring nut fixing

RAFIX 22 FS contact blocks
- Quick-connect/solder terminals
- 2.8 x 0.8 mm with soldering lugs
- Gold / silver contacts

Plug-in LED-Clip (24 V)
for illuminated actuators

Reliable assembly method

29.80

9.90

27.00

25.70

Essential features

- Depth behind panel only 27 mm including LED-Clip and cable lugs

- Quick-connect/solder terminals 2.8 x 0.8 mm

- The contact block engages permanently with the actuator only at the time of final assembly

- Compatible with all RAFIX 22 FS actuators: Pushbuttons, selector switches, keylock switches, emergency stop buttons and signal indicators, with all advantages this series offers:
  - Large actuating and indicating areas
  - Round or square collar shape
  - Panel cut-out to IEC 60947: 22.3 mm with locating indent
  - Degree of protection IP 65 (water-jet proof)

- Protection against contact for quick-connect terminals and cable lugs: Short-circuit proof even when the connection cables are under tensile strain

- Gold contacts for 100% reliable switching of low voltage (min. 5 V / 1 mA) or

- Silver contacts (max. 250 V/4 A) for mains voltage

- Contact arrangements: 1 NC, 1 NO, 2 NC, 2 NO, 1 NC + 1 NO

- Illumination with replaceable superbright LED-Clips in various LED colours, with quick-connect terminals 2.8 x 0.8 mm

- Actuators / contact blocks, signal indicators / lamp sockets and LED-Clips are stocked separately and only assembled at final assembly. This ensures utmost flexibility and most economic stockkeeping for this product range.

RAFIX 22 FS, Contact blocks with quick-connect terminals, gold contacts

Pict.: Universal, Au-contact, 2 NC

Pict.: Emergency stop, Au-contact, 1 NC + 1 NO

2

General data

The contact blocks are inserted into the actuators and latch there permanently. Emergency stop pushbuttons require special contact blocks which you can recognise by the plungers being in the interior. In addition, the emergency stop contact blocks and actuators feature two assembly guides which prevent rotation during assembly. We recommend to choose the LED colour in the same colour as the lens of the actuator in order to ensure satisfactory illumination.

Technical data

**RAFIX
22 FS**

General information		**Other specifications**	
Lamp	LED-Clip	Operating life	1 million at 10 mA/24 V DC
		Switching reliability at	
Dimensions		24V/5mA DC	10×10^{-6}
Diameter	17.3 mm	Approvals acc. to IEC	60947-5-1/-5, 60204, 60073
Recommended key grid	30 mm	Approvals, other	cURus (UL + CSA)
Mounting depth	27 mm	Ambient temp. operating min.	-25 °C
		Ambient temp. operating max.	+70 °C
Mechanical design		Storage temperature min.	-40 °C
Mounting	soldering in PCB	Storage temperature max.	+80 °C
Contact system	bridgecontact self cleaning	Colour of plunger	see order block
		Robustness	acc. to IEC 60947-5-5
Contact materials	Au		(TÜV)
Contact arrangement	see order block		
NC contact		Shock resistance acc. to	
forcibly actuated acc. to		IEC 600 68-2-27	15 g bei 11 ms amplitude half sinusoidal
IEC 947-5-1	yes		
Terminals	quick-connect/solder terminals 2.8 x 0.8 mm	Resistance to vibrations acc. to IEC 600 68-2-6	5 g at 10 ... 500 Hz
Robustness	100 N	Resistance to constant environment	IEC 600 68-2-3 und 2-30
		Restistance at variable environment	IEC 600 68-2-14 und 2-33
Electrice characteristics acc. to IEC 60947, AC-15, DC-13		Salt spray	IEC 600 68-2-11
Operating voltage min.	5 V		
Operating current min.	1 mA	Colour of housing	grey
Rated power max.	250 mW		

NEW

RAFI
SOLUTIONS WITH PASSION

2

Typical accessories RAFIX 22 FS contact blocks

Discription	Photo	Order no.	Additional accessories see page
LED-Clip, LED red		5.05.511.359/0300	38
LED-Clip, LED blue		5.05.511.359/0600	38
LED-Clip, LED green		5.05.511.359/0500	38
LED-Clip, LED white		5.05.511.359/0200	38
LED-Clip, LED yellow		5.05.511.359/0400	38

For additional accessories, refer to the chapter "RAFIX 22 FS special accessories".

RAFIX 22 FS contact blocks with quick-connect terminals

Pict.: Universal, Au-contact, 2 NC   Pict.: Universal, Au-contact, 2 NO   Pict.: Universal, Au-contact, 1 NC + 1 NO   Pict.: Emergency stop, Au-contact, 2 NC

RAFIX 22 FS

Contact arrangement	Type	Colour of housing	Colour of plunger	Order no.
1 NC	Universal	grey	red	**1.20.126.101/0000**
1 NO	Universal	grey	green	**1.20.126.102/0000**
1 NC + 1 NO	Universal	grey	red and green	**1.20.126.103/0000**
2 NC	Universal	grey	red	**1.20.126.104/0000**
2 NO	Universal	grey	green	**1.20.126.105/0000**
1 NC	Emergency stop	grey	red	**1.20.126.501/0000**
1 NC + 1 NO	Emergency stop	grey	yellow	**1.20.126.503/0000**
2 NC	Emergency stop	grey	red	**1.20.126.504/0000**

Caution: Emergency stop contact blocks can only be used with emergency stop pushbuttons. Universal contact blocks are not suitable for emergency stop pushbuttons.

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

RAFIX 22 FS contact blocks with silver contacts

Pict.: Universal, Ag-contact, 2 NC

Pict.: Emergency stop, Ag-contact, 1 NC + 1 NO

2

General data

The contact blocks are inserted into the actuators and latch there permanently. Emergency stop pushbuttons require special contact blocks which you can recognise by the plungers being in the interior. In addition, the emergency stop contact blocks and actuators feature two assembly guides which prevent rotation during assembly. We recommend to choose the LED colour in the same colour as the lens of the actuator in order to ensure satisfactory illumination.
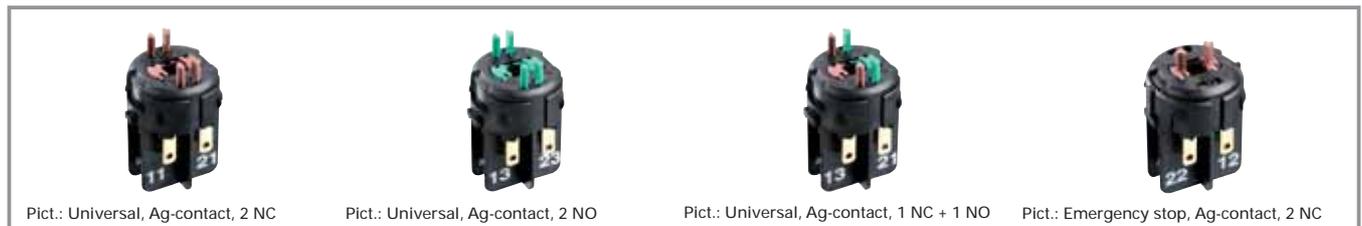
Technical data

General information

Lamp	LED-Clip

Dimensions

Diameter	17.3 mm
Recommended key grid	30 mm
Mounting depth	27 mm

Mechanical design

Mounting	soldering in PCB Betätigungselement
Contact system	bridgecontact self cleaning
Contact materials	Ag
Contact arrangement	see order block
NC contact forcibly actuated acc. to IEC 60947-5-1	yes
Terminals	quick-connect/solder terminals 2.8 x 0.8 mm
Robustness	100 N

Electrice characteristics acc. to IEC 60947, AC-15, DC-13

Rated insulation voltage AC/DC	250 V
Rated peak voltage	2,500 V
Rated operating current I_E, AC15 B300	3 A/120 V; 1,5 A/240 V; Ithe: 5 A
Rated operating current I_E, DC13 Q300	550 mA/120 V; 270 mA/240 V; Ithe: 2,5 A

Other specifications

Operating life at 250V / 1A	1,000,000
Operating life at 250V / 2A	100,000
Operating life at 250V / 4A	30,000

Switching reliability at 24V/5mA DC	10×10^{-6}
Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Colour of plunger	see order block
Approvals acc. to IEC	60947-5-1/-5, 60204, 60073
Approvals, other pending:	cURus (UL + CSA)
Marine approvals	on request
Robustness	acc. to IEC 60947-5-5 (TÜV)
Shock resistance acc. to IEC 600 68-2-27	15 g at 11 ms, amplitude half sinusoidal
Resistance to vibrations acc. to IEC 600 68-2-6	5 g bei 0 ... 500 Hz
Konstantklimafestigkeit	IEC 600 68-2-3 und 2-30
Wechselklimafestigkeit	IEC 600 68-2-14 und 2-33
Salznebel	IEC 600 68-2-11
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 695-2-1	yes
Colour of housing	black

NEW

RAFI
SOLUTIONS WITH PASSION

Typical accessories RAFIX 22 FS contact blocks

Bezeichnung	Photo	Order no.	Additional accessories see page
LED-Clip, LED red		5.05.511.359/0300	38
LED-Clip, LED blue		5.05.511.359/0600	38
LED-Clip, LED green		5.05.511.359/0500	38
LED-Clip, LED white		5.05.511.359/0200	38
LED-Clip, LED yellow		5.05.511.359/0400	38

For additional accessories, refer to the chapter "RAFIX 22 FS special accessories".

2

RAFIX 22 FS contact blocks with quick-connect terminals, silver contacts

Pict.: Universal, Ag-contact, 2 NC	Pict.: Universal, Ag-contact, 2 NO	Pict.: Universal, Ag-contact, 1 NC + 1 NO	Pict.: Emergency stop, Ag-contact, 2 NC

RAFIX
22 FS

Contact arrangement	Type	Colour of housing	Colour of plunger	Order no.
1 NC	Universal	black	red	**1.20.126.301/0000**
1 NO	Universal	black	green	**1.20.126.302/0000**
1 NC + 1 NO	Universal	black	red and green	**1.20.126.303/0000**
2 NC	Universal	black	red	**1.20.126.304/0000**
2 NO	Universal	black	green	**1.20.126.305/0000**
1 NC	Emercency stop	black	red	**1.20.126.701/0000**
1 NC + 1 NO	Emercency stop	black	yellow	**1.20.126.703/0000**
2 NC	Emercency stop	black	red	**1.20.126.704/0000**

Caution: Emergency stop contact blocks can only be used with emergency stop pushbuttons. Universal contact blocks are not suitable for emergency stop pushbuttons.

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