RAFIX FS+ switching element universal PCB, gold, for THT LED, 1 NC + 1 NO

Description

These switching elements have external plungers and can therefore only be combined with pushbuttons, selector switches and key switches.

The PCB switching elements are placed on a common printed circuit board with other components. These can be attached behind the front panel with the actuating components and light indicators. Behind the front panel, the switching elements "float" directly under the actuating components on the PCB, leaving plenty of space for other components.

- **Mounting depths PCB:**
  - 9.2 mm for RAFIX 22 FS+ and RAFIX 22 FSR
  - 15.7 mm for RAFIX 30 FS+

Either short or long light conductors for the use of SMT LEDs (RGB or single color) are integrated in the middle channel of the switching elements. Alternatively, 3 mm THT LEDs can be installed for lighting without light conductors. When using 3 mm THT LEDs without tabs, an additional spacer (5.30.156.101/0100) is required for this purpose.

- **Assembly recommendation:**
  - The orientation of the switching element must be based on the +/- marking on the upper part of the housing.
  - Alternatively, the orientation of the switching elements can be determined by the arrangement and/or color coding of the plungers.

The NC contacts of these switching elements are forcibly separated according to IEC 60947-5-1.

- PCB contact block for RAFIX 22 FS+, RAFIX FSR and RAFIX 30 FS
- Only suitable for pushbuttons, selector and key switches, not for mushroom pushbutton and emergency stop
- Gold contacts (= grey housing)
- Mounting: Soldering on printed circuit board
- Version with light guide for SMT LED, without light guide for THT LED
- marking:
  - normally closed contacts = red plungers
  - normally open contacts = green plungers

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technical data

general

Disassembly possible	no
Color	dark gray
Operating temperature, min.	-40 °C
Operating temperature, max.	85 °C
Storage temperature, min.	-40 °C
Storage temperature, max.	85 °C
illuminated	Yes
Luminous elements	LED
Lamp socket	THT LED
Soldering	Manual / wave
Solder heat resistance according to standard	DIN EN 60068-2-20
Packaging unit	30 pcs.
Net weight	1.9 g
Operating life electrical	1.000.000 (10mA / 24V DC) cycles
B10 electrical	1.300.000 (10mA / 24V DC) cycles
Environment resistance	IEC 60068-2-14 IEC 60068-2-30 IEC 60068-2-33 IEC 60068-2-78
Shock resistance according to standard IEC 60068-2-27	15 g at 11 ms amplitude semi-sinusoidal
Vibration resistance according to standard IEC 60068-2-6	5 g at 10 - 500 Hz
Protection class	II
Minimum order quantity (MOQ)	30 pcs.
Pollution degree acc. to DIN EN 61010-1	Pollution degree 3
RoHS compliant	Yes
REACH compliant	Yes
Country of origin	DE

mounting diameters

Outside dimension, length	16.73 mm
Outside dimension, width	16.73 mm
Outside dimension, height	16.85 mm
Mounting depth	9.2 mm

mechanical data

Terminal on the rear	THT
Fixing	Soldering
Operating force, max.	100 N
Contact function	1 NC + 1 NO
Contact system	Bridge contact
Contact material	Gold
Solderability	Yes

direct links

RAFI eCatalog

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- **electrical data**

Rated insulation voltage	250 V
Rated surge voltage	500 V
Rated voltage, min.	0.02 V
Rated voltage, max.	35 V
Rated current, min.	0.001 A
Rated current, max.	0.1 A
Rated power, max.	0.25 W
Categories of use	AC-15 DC-13
Kind of short circuit protective device	max. 0.5 A, min. 250 V AC / 400 V DC, min. 1.5 kA, IEC 60127-1, IEC 60127-2
Conditional short circuit current	1,000 A

- **Specifications according to IEC 60947-5-1**

Rated surge voltage	500 V

- **Specifications according to UL 60947**

Operating temperature, max. to UL/TÜV	70 °C
Operating temperature, min. to UL/TÜV	-20 °C

Use according to UL:

RAFIX control devices are defined at RAFI as modular elements, consisting of an actuating element, if necessary a coupling and an individual contact or lighting unit.

Actuating elements (such as pushbuttons, emergency stop actuators, etc.) have the intended tactility, reset and function only when assembled with the appropriate switching elements.

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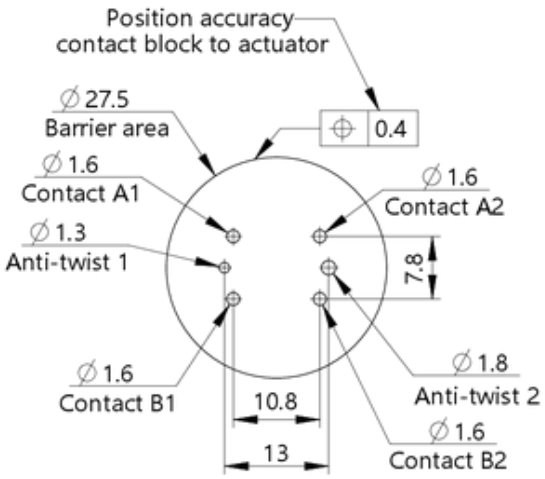
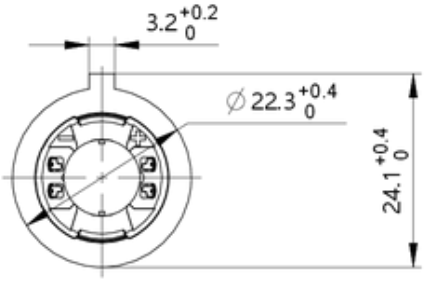
drawings

PCB drawing





Connection drawing

Variant	1NO	1NC	2NO	2NC	1NO + 1NC	Plus 1
Contact A1/A2 Connection designation	1NO 13 - 14	-	1NO 13 - 14	1NC 11 - 12	1NO 13 - 14	1NC 11 - 12
Contact B1/B2 Connection designation	-	1NC 21 - 22	1NO 23 - 24	1NC 21 - 22	1NC 21 - 22	1NC 21 - 22
Contact C1/C2 Connection designation	LED* X1 - X2	LED* X1 - X2	LED* X1 - X2	LED* X1 - X2	LED* X1 - X2	LED* X1 - X2
Wiring diagram						
Contact D1/D2 Connection designation	-	-	-	-	-	1NO 33 - 34

* Only if required

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