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



fields of application<br>> Measurement-control-regulation<br>> Electrical engineering<br>> Mechanical and system engineering<br>> Signalling systems<br>> Vehicle construction<br>> Agricultural and forestry machinery<br>> Construction machinery<br>> Handheld terminals<br>> Industrial robots

## 

## description

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

The PCB switching elements are positioned on a PCB shared with other components. These can subsequently be mounted behind the front panel together with the actuators and signal indicators. The switching elements "float" directly underneath the actuators on the PCB behind the front panel and leave plenty of space for other components.
In the center channel of the switching element, there are either light conductors for the use of SMT-LEDs, or 3 mm THT LEDs can be installed for illumination.

PCB mounting depths

- 9.2 mm for RAFIX 22 FS+ and RAFIX 22 FSR
- 15.7 mm for RAFIX 30 FS+:
> 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


## technical data

## > general

Disassembly possible

## Color

Operating temperature, min.
no
dark gray
$-40^{\circ} \mathrm{C}$

| Operating temperature, max. | $85^{\circ} \mathrm{C}$ |  |
| :---: | :---: | :---: |
| Storage temperature, min. | $-40^{\circ} \mathrm{C}$ | direct links |
| Storage temperature, max. | $85^{\circ} \mathrm{C}$ | > RAFI eCatalog |
| 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 | 2.2 g |  |
| Operating life electrical | 1.000.000 ( $10 \mathrm{~mA} / 24 \mathrm{~V}$ 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 $10-500 \mathrm{~Hz}$ |  |
| MOQ order | 30 pcs . |  |
| RoHS compliant | Yes |  |
| REACH compliant | Yes |  |
| > mounting diameters |  |  |
| Outside dimension, length | 17.3 mm |  |
| Outside dimension, width | 17.3 mm |  |
| Outside dimension, height | 16.9 mm |  |
| Mounting depth | 9.2 mm |  |
| > mechanical data |  |  |
| Operating force, max. | 100 N |  |
| Contact function | 1 NO |  |
| Contact system | Bridge contact |  |
| Contact material | Gold |  |
| Fixing | Soldering |  |
| Solderability | Yes |  |
| Terminal on the rear | THT |  |
| > electrical data |  |  |
| Rated insulation voltage | 50 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 |  |

drawings

## System drawing




## System drawing

| Variant | 1NO | 1NC | 2NO | 2NC | $1 \mathrm{NO}+1 \mathrm{NC}$ | Plus 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C ontact A1/A2 <br> Connection designation 1 x | $\begin{gathered} 1 \mathrm{NO} \\ 13-14 \end{gathered}$ | - | $\begin{gathered} 1 \mathrm{NO} \\ 13-14 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NC} \\ 11-12 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NO} \\ 13-14 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NC} \\ 11-12 \end{gathered}$ |
| Connection designation 2 x Contact B1/B2 | - | $\begin{gathered} 1 \mathrm{NC} \\ 21-22 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NO} \\ 23-24 \end{gathered}$ | $\begin{gathered} 1 N C \\ 21-22 \end{gathered}$ | $\begin{gathered} 1 N C \\ 21-22 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NC} \\ 21-22 \end{gathered}$ |
| Contact C 1/C2 <br> Connection designation | $\begin{gathered} \text { LED* } \\ \text { X1-X2 } \end{gathered}$ | $\begin{gathered} \text { LED* } \\ \times 1-\times 2 \end{gathered}$ | $\begin{gathered} \text { LED }^{*} \\ \text { X1-X2 } \end{gathered}$ | $\begin{gathered} \text { LED* } \\ \times 1-\times 2 \end{gathered}$ | $\begin{gathered} \text { LED* } \\ \times 1-\times 2 \end{gathered}$ | $\begin{gathered} 1 \mathrm{NO} \\ 33-34 \end{gathered}$ |
| LED a ssignment when the actuator is illuminated | ${ }_{x 1}^{13} \bigodot^{\infty} 0^{14} x_{2}$ | ${ }_{21}^{1} \overbrace{22}^{\infty}$ | $\left.{ }_{23}^{13} 6_{2}^{13}\right)_{24}^{14} x_{24}^{14}$ | $\left.{ }_{21}^{11} 0_{21}^{\infty}\right)_{22}^{12}$ |  |  |

The contacts are connected according to the following scheme:


