GET IN
TOUCH

RAFIX
22 FS⁺

New products

RAFI

RAFIX 22 FS+

Control components of the future

The RAFIX 22 FS+ series is setting new standards in the world of control components. Extremely flat construction and functional aesthetic design are essential in an increas-ingly design-oriented industrial environment. The wide variety and variability of the actuators give your designer complete freedom: round or square collar types, radiant colours and homogenous illumination of the large actuat-ing areas are among the basic features. Combined with the various front rings, they ensure that you can create a panel with a truly distinctive design. For example, a defined colour can be consistently assigned to a specific command. In addition, the large number of colour options available for the front rings enables easy customisation to suit the corporate design of different OEMs.

Fast

The fastest connection type for every application: with a printed circuit board or directly with quick-connect terminals.

- A printed circuit board is the best and fastest solution, starting with medium quantities. Moreover, PCB contact blocks can be ideally combined with displays, tactile switches and other electronics on a common printed circuit board.
- Alternatively, QC contact blocks can be easily snapped into the actuators without tools. Male quick-connect terminals are used directly for wiring in a conventional manner. The fast and inexpensive version, ideal wherever PCBs are not cost-effective.

+ PLUS

RAFIX 22 FS+ has additional benefits for you:

- Various actuators and contact block options – a complete series
- Variable thanks to round or square operating elements
- Variable thanks to gold contacts from 5 V or silver contacts up to 250 V
- Short-travel adapter for short-travel actuation (1 mm switching travel) with perceptible key click
- Variable design thanks to various front ring colours
- Variable illumination, compatible with 3 mm THT LEDs or SMT LEDs

SLIM

Now it's a snap to slim the design of your control systems thanks to the low mounting depth.

- Designs with PCB contact blocks feature a distance between the front panel and printed circuit board of only 9.2 mm; the same applies to contact blocks with silver contacts for the mains voltage. That's as slim as it gets.
- Also when fitted with QC contact blocks, RAFIX 22 FS+ panels are unbeatably flat. Requiring only 27 mm of space behind the front panel, they provide tremendous design scope for inspiring control panels.

RAFIX 22 FS+ Pushbuttons FLEXLAB

→ The RAFIX 22 FS+ FLEXLAB pushbutton allows individual control component labeling. A DIN A4 label sheet with pre-cut labels which fits in customary office laser printers is available for this option. After the legend inserts are printed, they be detached from the sheet and inserted into the colored lens using the fine stop tabs.

Technical Data

→ **General information**

Form of lens	flat lens
Color of lens	see order block
Color of front ring	see order block
Form of collar	see order block

→ **Dimensions**

Dimensions of collar	see order block
Overall height	9.85 mm
Mounting depth	PCB 9.2 mm, QC 27 mm
Mounting hole	22.3 mm
Key grid	30 x 30 mm

→ **Mechanical design**

Mounting	ring nut
Contact function	see order block
Illuminability	yes
Torque for nut ring	1.2 Nm

→ **Mechanical characteristics**

Operating travel	4 mm
Robustness max.	100 N

→ **Other specifications**

Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Operating life	1,000,000 momentary / 500,000 latching
B10	1,300,000 momentary / 650,000 latching
Degree of protection from front side	IP65 (DIN EN 60529)
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Salt spray	IEC 600 68-2-11
ROHS compliant	yes
REACH compliant	yes

$\varnothing\ 22.30^{+0.40}_{0}$

$3.20^{+0.20}_{0}$

$24.10^{+0.40}_{0}$
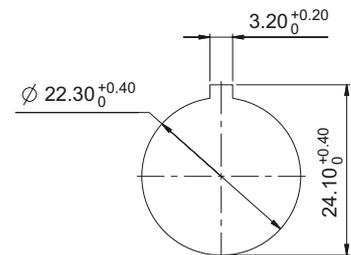
Panel cut-out to IEC 60947-5-1

Approvals

Accessories RAFIX 22 FS⁺ - Pushbuttons FLEXLAB

➔ Description	Photo	Order no.	Additional acces- sories see page
RAFIX FS - Contact block PCB gold, Universal		-	-
RAFIX FS - Contact block PCB gold, Universal, with light conductor		-	-
RAFIX FS - Contact block PCB silver, Universal		-	-
RAFIX FS - Contact block PCB silver, Universal, with light conductor		-	-
RAFIX FS - Contact block QC gold, Universal, with light conductor		-	-
RAFIX FS - Contact block QC silver, Universal, with light conductor		-	-
Fixing spanner for ring nut		5.05.800.062/0000	-

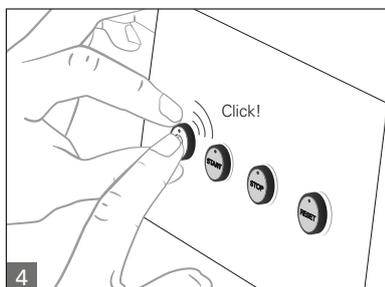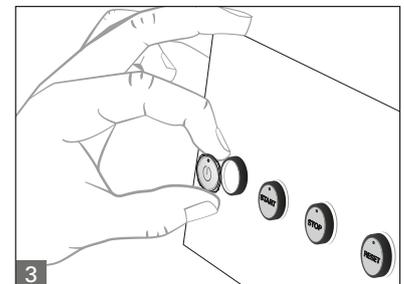# RAFI FLEXLAB
MONTAGEANLEITUNG | ASSEMBLY INSTRUCTIONS | 安装说明
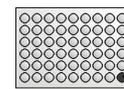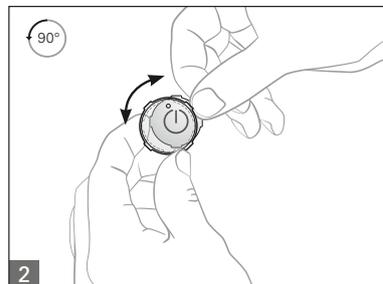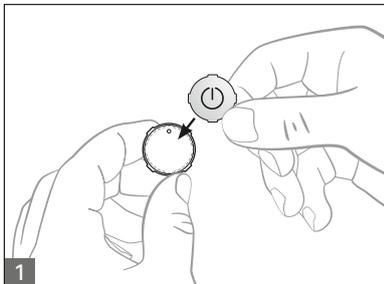
Beschriftungsbogen
Labeling sheet
标签板
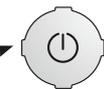
Schrifteinlage
Legend Insert
符号插片

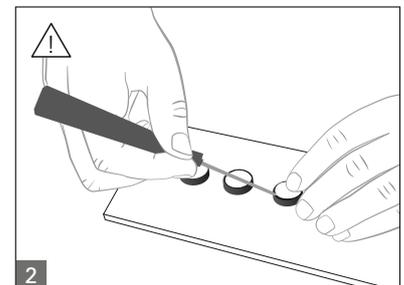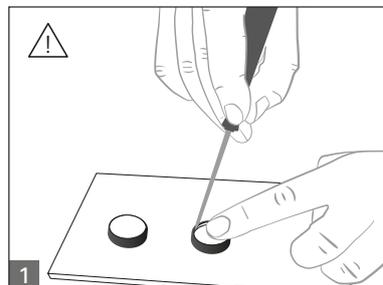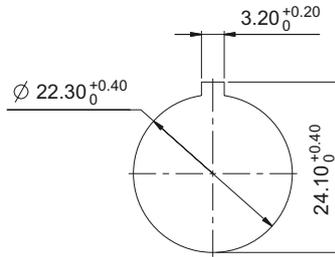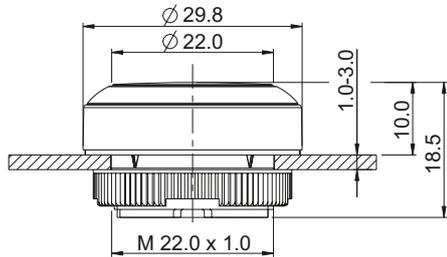Farbblende
Color lens
灯罩

MONTAGE   ASSEMBLY   安装

DEMONTAGE   DISASSEMBLY   拆除

RAFIX 22 FS+
Pushbutton FLEXLAB, round collar

Technical data see page 3

Panel cut-out to IEC 60947-5-1

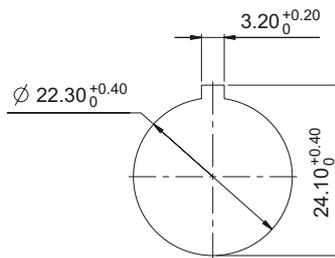| →	Order no. momentary		Order no. latching	
	Plastic front ring	**Metallized front ring**	**Plastic front ring**	**Metallized front ring**
	1.30.270.901/22xx	1.30.270.921/2200	1.30.270.911/22xx	1.30.270.931/2200

xx = Front ring color: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate gray = 07, silver gray = 08

Accessoires:
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, colorless: 5.49.263.062/1000
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, red: 5.49.263.062/1300
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, yellow: 5.49.263.062/1400
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, green: 5.49.263.062/1500
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, blue: 5.49.263.062/1600
DIN A4 label sheet with 6x9 lenses in total utility: 5.70.800.200/0000

RAFIX 22 FS+
Pushbutton FLEXLAB,
square collar

Technical data see page 3

Panel cut-out to IEC 60947-5-1

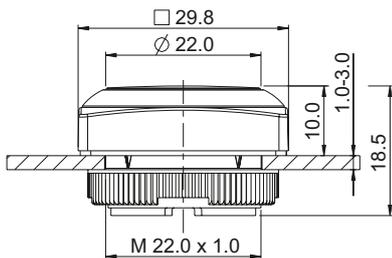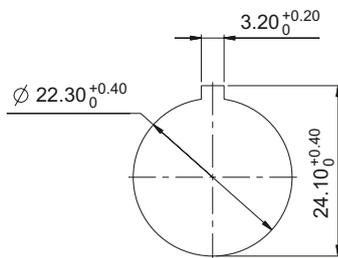| →	Form of collar	Order no. momentary		Order no. latching	
		Plastic front ring	**Metallized front ring**	**Plastic front ring**	**Metallized front ring**
	square	1.30.270.951/22xx	1.30.270.971/2200	1.30.270.961/22xx	1.30.270.981/2200

xx = Front ring color: black = 01, red = 03, yellow = 04, green = 05, blue = 06, slate gray = 07, silver gray = 08

Accessoires:
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, colorless: 5.49.263.062/1000
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, red: 5.49.263.062/1300
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, yellow: 5.49.263.062/1400
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, green: 5.49.263.062/1500
Colored lens for RAFIX FS+ Pushbuttons FLEXLAB, blue: 5.49.263.062/1600
DIN A4 label sheet with 6x9 lenses in total utility: 5.70.800.200/0000

RAFIX 22 FS+ Keylock switches compact

→ The locking systems we use are created according to DIN EN 1303 by leading lock manufacturers. They are open, mechanical systems that require occasional maintenance by the operator depending on the ambient conditions.

$\varnothing\ 22.30^{+0.40}_{0}$

$3.20^{+0.20}_{0}$

$24.10^{+0.40}_{0}$

Panel cut-out to IEC 60947-5-1

Approvals

TÜV SÜD

IEC 60947-5-x, 60904, 60073

UL 508

CCC S

Technical Data

→ **General information**

Color of front ring	see order block
Form of collar	see order block

→ **Dimensions**

Dimensions of collar	see order block
Overall height	44.1 mm
Mounting depth	PCB 9.2 mm, QC 27 mm
Mounting hole	22.3 mm
Key grid	30 x 30 mm

→ **Mechanical design**

Mounting	ring nut
Contact function	see order block
Illuminability	see order block
Wafers	5
Lock type	001
Main key	on request
Rotating angle	see order block
Key removal position	see order block
Torque for nut ring	1.2 Nm

→ **Mechanical characteristics**

Torque max.	1.3 Nm

→ **Other specifications**

Operating life	300,000 momentary / 50,000 latching / 30,000 with key removal
B10	400,000 momentary / 65,000 latching / 40,000 with key removal
Degree of protection from front side	IP65 (DIN EN 60529)
Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
ESD-strength lock / contact	15 kV
ESD-strength key / front panel	15 kV
Salt spray	IEC 600 68-2-11
ROHS compliant	yes
REACH compliant	yes

Accessories RAFIX 22 FS+ - Keylock switches compact

→ Description	Photo	Order no.	Additional accessories see page
RAFIX FS - Contact block PCB gold, Universal		-	-

– Table (continued) –
Accessories RAFIX 22 FS⁺ - Keylock switches compact

→ Description	Photo	Order no.	Additional accessories see page
RAFIX FS - Contact block PCB silver, Universal		-	-
RAFIX FS - Contact block QC gold, Universal, with light conductor		-	-
RAFIX FS - Contact block QC silver, Universal, with light conductor		-	-
Fixing spanner for ring nut		5.05.800.062/0000	-
RAFIX FS - Protective cap for keylock switch		5.55.105.454/0111	-
Spare key, for single action, e.g. 1 x 90° (delivery content 1 key)		5.58.018.001/0000	-

RAFIX 22 FS⁺
Keylock switch compact, round collar

Technical data see page 6

$\varnothing$ 22.30$^{+0.40}_{0}$ 3.20$^{+0.20}_{0}$ 24.10$^{+0.40}_{0}$

45.1   20.0   1.0-3.0   M 22.0 x 1.0   Ø 29.8

Panel cut-out to IEC 60947-5-1

→ Contact function	Rotating angle	Key removal position	Order no. Plastic front ring	Metallized front ring
momentary	1 x 40°	0	1.30.275.001/xxxx	1.30.275.002/0000
momentary	2 x 40°	0	1.30.275.101/xxxx	1.30.275.102/0000
latching	1 x 90°, L shape	0+1	1.30.275.221/xxxx	1.30.275.222/0000
latching	1 x 90°, V shape	0+1	1.30.275.321/xxxx	1.30.275.322/0000
latching 1 x 90° and momentary 1 x 40°	1 x 90° and 1 x 40°	0	1.30.275.501/xxxx	1.30.275.502/0000

xxxx = Front ring color: black = 0100, slate grey = 0700, silver grey = 0800
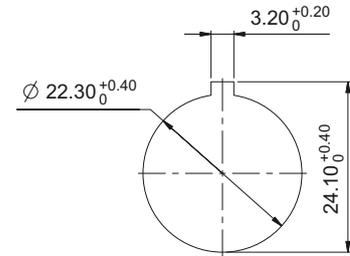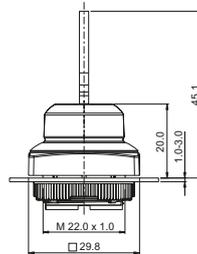
Other lock variants available on request.
Included: 2 keys.

RAFIX 22 FS+
Keylock switch compact, square collar

Technical data see page 6

Panel cut-out to IEC 60947-5-1

Contact function	Rotating angle	Key removal position	Order no. Plastic front ring	Metallized front ring
momentary	1 x 40°	0	1.30.275.051/xxxx	1.30.275.052/0000
momentary	2 x 40°	0	1.30.275.151/xxxx	1.30.275.152/0000
latching	1 x 90°, L shape	0+1	1.30.275.271/xxxx	1.30.275.272/0000
latching	1 x 90°, V shape	0+1	1.30.275.371/xxxx	1.30.275.372/0000
latching 1 x 90° and momentary 1 x 40°	1 x 90° and 1 x 40°	0	1.30.275.551/xxxx	1.30.275.552/0000

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

Other lock variants available on request.
Included: 2 keys.

RAFIX 22 FS+ Emergency stop pushbuttons compact

→ The emergency stop pushbuttons compact comply with IEC 60 204, IEC 60 073, IEC 60 947 and VDE 0113 Part 1.
They are designed dupe-proof according to EN 418 with a positive mechanical movement sequence. A certain operating force must be exerted at the action point in order to prevent inadvertent operation. The pushbutton latches when pressed.

The special shape of the actuator prevents the emergency stop pushbutton from being blocked. This means that the emergency stop process - once initiated - cannot be impeded by any jamming objects.
Only use with E-stop contact blocks.
Original manual see chapter 6, RAFI catalog „Electromechanical Components".
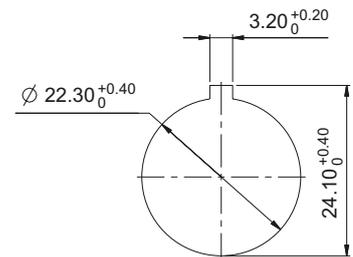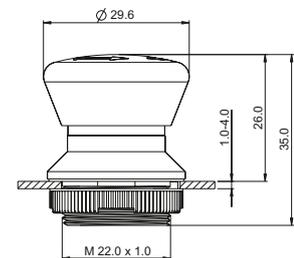
Technical Data

→ **General information**

Form of lens	conical mushroom form
Color of lens	red
Form of collar	round

→ **Dimensions**

Mushroom Diameter	30 mm
Overall height	see order block
Mounting depth	PCB 9.2 mm, QC 27 mm
Mounting hole	22.3 mm
Diameter of collar	see order block

→ **Mechanical design**

Mounting	ring nut
Contact function	latching
Illuminability	see order block
Reset	see order block
Torque for nut ring	1.2 Nm

→ **Mechanical characteristics**

Robustness max.	100 N

→ **Other specifications**

Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Robustness	acc. to IEC 600 68-2-3 und 2-30
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Operating life (operations)	50,000
B10	65,000
Degree of protection from front side	IP65 (DIN EN 60529)
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Salt spray	IEC 600 68-2-11

Ø 29.6
$1.0 {+4.0}$
26.0
35.0
M 22.0 x 1.0

$3.20 _{0}^{+0.20}$
Ø $22.30 _{0}^{+0.40}$
$24.10 _{0}^{+0.40}$

Panel cut-out to IEC 60947-5-1

## Approvals

TÜV SÜD
IEC 60947-5-x, 60904, 60073

UL
UL 508

CCC S

Accessories RAFIX 22 FS+ - Emergency stop pushbuttons compact

➔	Description	Photo	Order no.	Additional accessories see page
	Emergency stop label, Ø 22.3 mm		-	-
	RAFIX FS - Contact block PCB gold, E-Stop		-	-
	RAFIX FS - Contact block PCB gold, E-Stop, with light conductor		-	-
	RAFIX FS - Contact block PCB silver, E-Stop		-	-
	RAFIX FS - Contact block PCB silver, E-Stop, with light conductor		-	-
	RAFIX FS - Contact block QC gold, E-Stop, with light conductor		-	-
	RAFIX FS - Contact block QC silver, E-Stop, with light conductor		-	-
	Fixing spanner for ring nut		5.05.800.062/0000	-

RAFIX 22 FS+
Emergency stop pushbutton compact, reset by rotation

Technical data see page 9
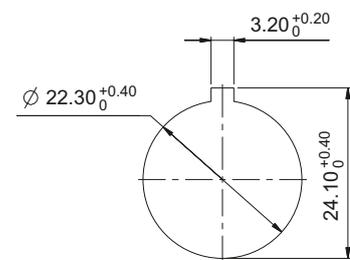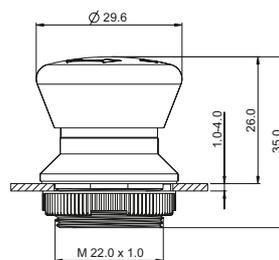
Panel cut-out to IEC 60947-5-1

➔	Reset	Illuminability	Degree of protection from front side	Order no.
	by rotating	yes	IP65 (DIN EN 60529)	1.30.273.311/2300

Only use with E-stop contact blocks

RAFIX FS
Short-travel adapters

→ The short-travel adapter can easily be inserted into a RAFIX 22 FS+ series pushbutton. The tactile properties of the tactile switch become noticeable when the pushbutton is pressed. In addition the small footprint of the MICON 5 enables the placement of diverse LEDs, allowing several light functions.
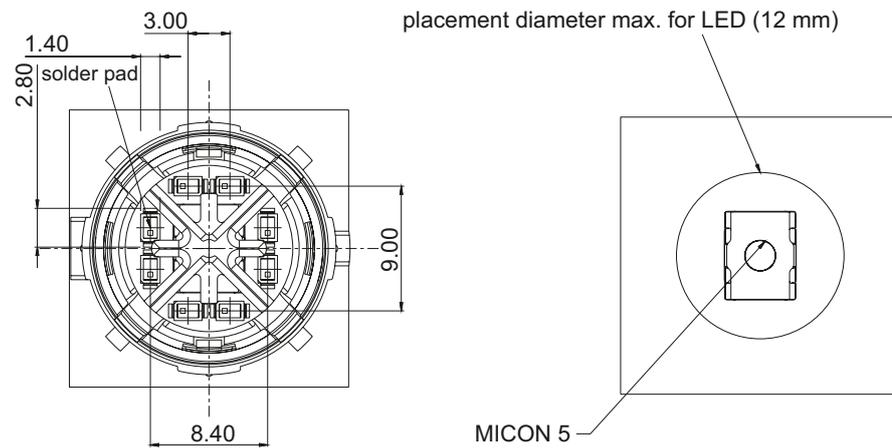
Technical Data

→ **General information**

Operating life	250.000 operations on MICON 5 1.14.002.101/0000

→ **Other specifications**

ROHS compliant	yes
REACH compliant	yes

RAFIX FS
Short-travel adapter

→ **Description** | **Order no.**

Description	Order no.
RAFIX FS - Short-travel adapter on MICON 5	5.05.511.917/0000

RAFI