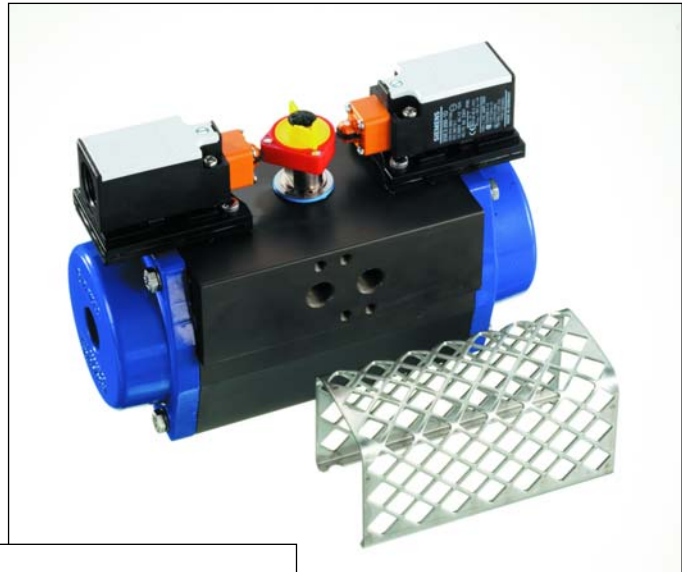


Signal Devices Open Mounted

Signal devices are used to report and control the actuators position. Switches and sensors with different design and electrical variables and connections are mounted directly onto the actuator.

Mechanical and proximity switches can be used.

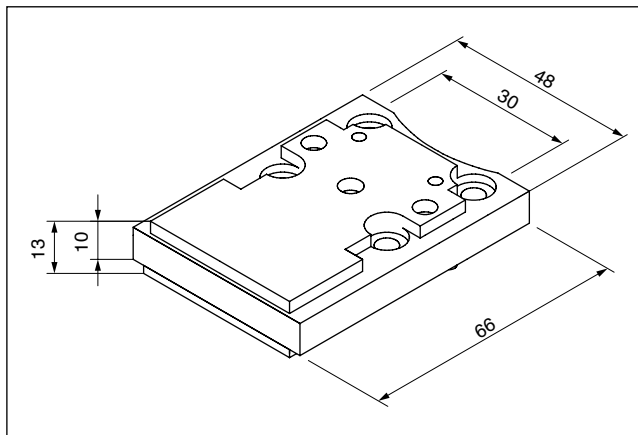


Depending on the constructions open mounted signal devices can also be used in Ex- areas.

Universal Plate For Direct Mounting

The universal plate with its unique construction-kit-system easily solves your monitoring problems. The mounting of a complete switch unit is really easy, and can individually be assembled for all monitoring applications and requirements.

The universal plate is used as a carrier for switches, sensors, terminal blocks and protection cages when you are directly mounting onto an actuator according to VDI/VDE3845 and DIN/EN50 047.



Ordering information

Universal plate

UNIPL KPL

with screw socket
Universalplate

ADVANTAGES

- universal mounting on all actuators acc. VDI/VDE 3845
- Adaptation in height by easily stacking the plates
- Dimension of drills acc. DIN/EN 50 047

Switching Cam System

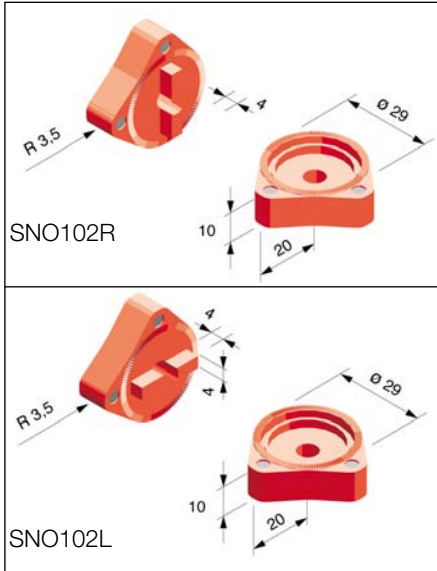
The different types of switching cams are made of an abrasion-free, fibreglass reinforced material. They can be used with mechanical position switches or proximity switches.

- ADVANTAGES**
- reliable operation of the switches by direct fixing to the shaft (according to VDI/VDE 3845)
 - free stacking and adjustable to 3°
 - metal inserts allow the use of inductive proximity sensors
 - cams are adjustable to any height of the switches by serrated distance sleeves

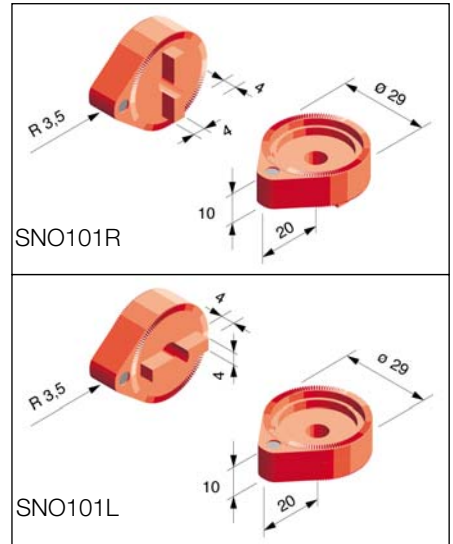


Standard Switching Cams

The standard switching cams allow the use of mechanical and inductive limit switches. They can be combined in any configuration and be used with right or left turning valves.

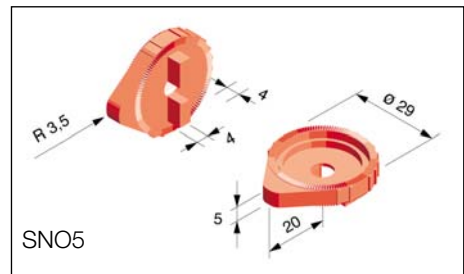
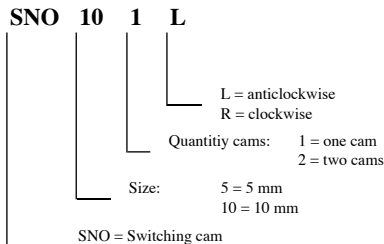


Standard switching cams with 1 or 2 cams



Ordering information

Switching Cams



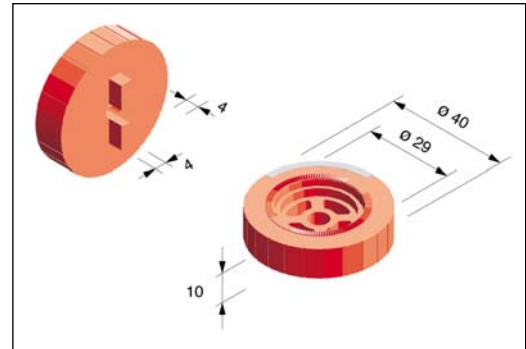
The 5 mm - switching cam for smallest dimensions is designed only for mechanical operation.

Switching Cams

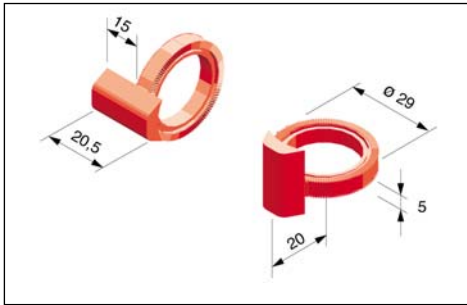
The SNO10PB is a dampening switch cam that is 10 mm high. It allows the use of proximity sensors with the end positions “damped” or “undamped”. The round shape of these cams decreases the risk of injuries when used in unshielded constructions.

ADVANTAGES

- 90° metal inserts allow the attenuation of the sensor over the whole travel distance of the actuator shaft,
- can be combined in any configuration with the standard cam.



Order Code: SNO10PB



Order Code: SNOU

The SNOU is the most universal cam as it covers an angle from 0° to 360° for mechanical as well as inductive applications. It is delivered in a kit with two cams and a centering aid.

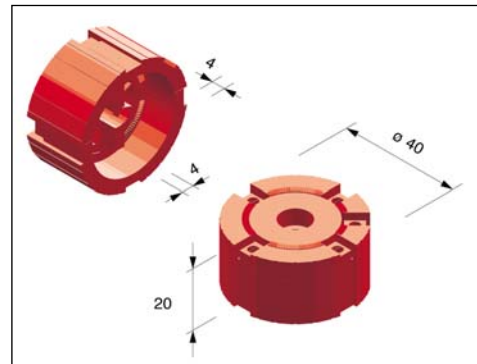
ADVANTAGES

- 5 mm wide metal inserts guarantee the dampening of inductive sensors,
- can be combined in any configuration with the standard cam.

The STELAZPB is a special switch cam for dampening double sensors. The free area at the bottom provides small dimensions with direct assembly onto the valve actuator

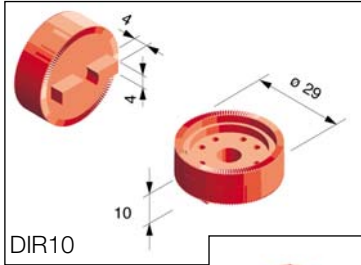
ADVANTAGES

- secure assembly through specified switching points,
- can be combined in any configuration with the standard cam.



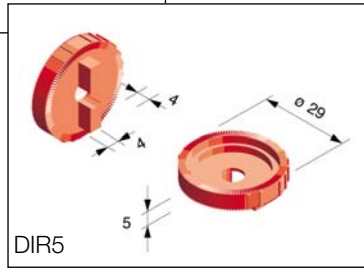
Order Code: STELAZPBKPL

Spacer Rings

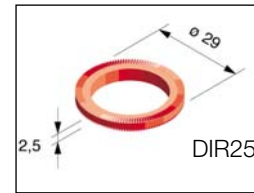


DIR10

Spacer rings adapt switching cams to the different actuator sizes



DIR5



DIR25

Ordering information

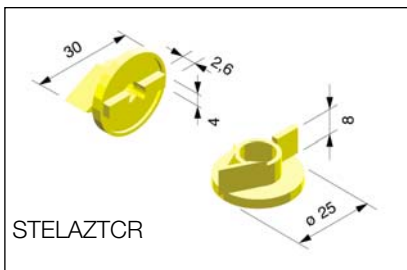
Spacer rings

DIR 25

Stapelmaß: 25 = 2,5 mm
5 = 5 mm
10 = 10 mm

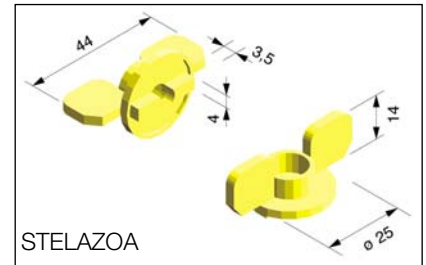
DIR = Distanzring

The position indicator made of yellow synthetics is designed for easy recognition. It allows for quick and easy verification of actuator position.



STELAZTCR

Position Indicator



STELAZOA

Ordering information

Position indicators

DIR 25

Dimension : 25 = 2,5 mm
5 = 5 mm
10 = 10 mm

DIR = spacer ring

ADVANTAGES

- the "blade" with the biggest possible display,
- the "arrow" with its small dimensions for displaying the flow direction.

ET-KIT

Mechanically operated signal devices

open design

The ET-Kit with position switches converts the mechanical end positions of pneumatic actuators into electrical signals.

The most common use of the mechanical position switch is in mechanical engineering and in general industry.

The ET-Kit with its protective cover conforms to the applicable protection regulations of the EC.

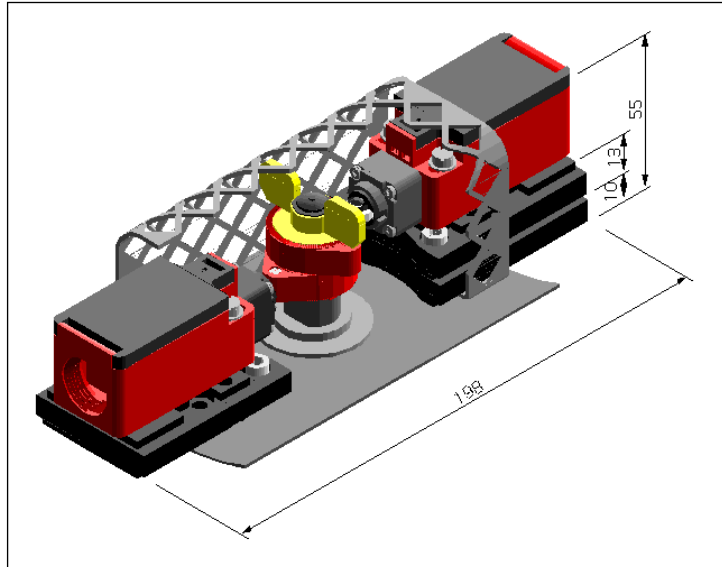
By choosing between different cams it is possible to change switching points from „fix“ to „variable“



ADVANTAGES

- economies of scale achieved through standardised dimensions and large production runs,
- universal use through the UNI-sandwich-mounting-system,
- the stainless steel cover provides the necessary protection against touching.

Mechanically operated signal devices open mounted



TECHNICAL DATA :

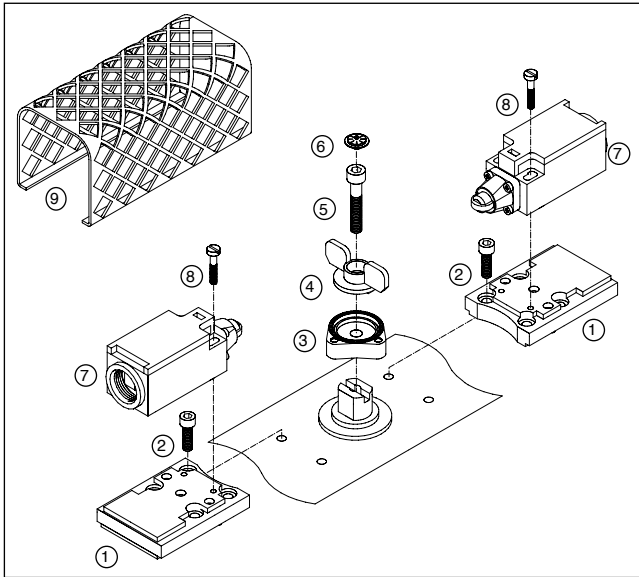
| | | | |
|--|---|---|---|
| Manufacturer: | Bernstein | Schmersal | Siemens |
| Type: | I88 - SU1Z RIWK | ZR 236 - 11 z | 3 SE 3 200 - 1D |
| Housing: | reinforced fibreglass thermoplaste self extinguishing | reinforced fibreglass thermoplaste self extinguishing | reinforced fibreglass thermoplaste self extinguishing |
| Protection class acc. to IEC 529 / DIN 40 050 : | IP 65 | IP 67 | IP 65 |
| Contact: | Silver | Silver | Silver |
| Switching function: | Change over | Change over | Change over |
| Mechanical life: | 10 x 10 ⁶ operations | 20 x 10 ⁶ operations | 20 x 10 ⁶ operations |
| Nominated isolation voltage: | 500 V AC | 500 V AC | 500 V AC |
| Nominated current | 24 V AC : 10 A | 10 A | 10 A |
| 24 V DC : | 10 A | 10 A | 10 A |
| 220 V AC : | 4 A | 4 A | 6 A |
| Switching precision: | 1° | 1° | 1° |
| Cable gland: | PG 11 | PG 13.5 | PG 13.5 |
| Temperature range: | - 30 to + 80 °C | - 30 to + 80 °C | - 30 to + 85 °C |

The position switches are potential free so that they can be operated with different voltages and ensure safe signal polling through separate switches.



Display "CLOSED" - fixed

Display "OPEN" - fixed



The ET-Kit, assembled with the switch cam SNO102, displays fixed end positions 0° and 90°.

It combines easy assembly with minimal components and is provided for left as well as right turning actuators. The flexible set system allows an adaption to all sizes of actuators according to VDE/VDI 3845.

| Pos. | Pcs. | Description | Material |
|------|------|--------------------------|----------|
| 1 | 2 | UNI-sandwichplate compl. | PPO |
| 2 | 4 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Switch cam SNO102R | POM, A2 |
| 4 | 1 | Position indicator | PE |
| 5 | 1 | M6 x 20 - DIN 912 | A2 |
| 6 | 1 | Cover cap M6 | PA |
| 7 | 2 | Switch | - |
| 8 | 4 | M4 x 24 - DIN 84 | A2 |
| 9 | 1 | Protection cage | A2 |

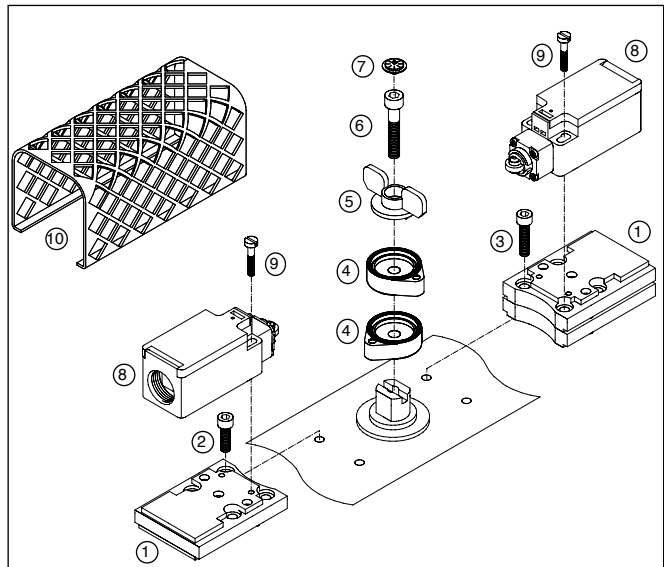
Display „CLOSED” – fixed

Display „OPEN” – variabel

The ET-Kit, assembled with the switch cam SNO101, is fixed for the end positions "CLOSED". The position "OPEN" can be adjusted to the requirements of the application.

This unit provides easy assembly with high flexibility. It is provided for left as well as right turning actuators according to VDE/VDI 3845.

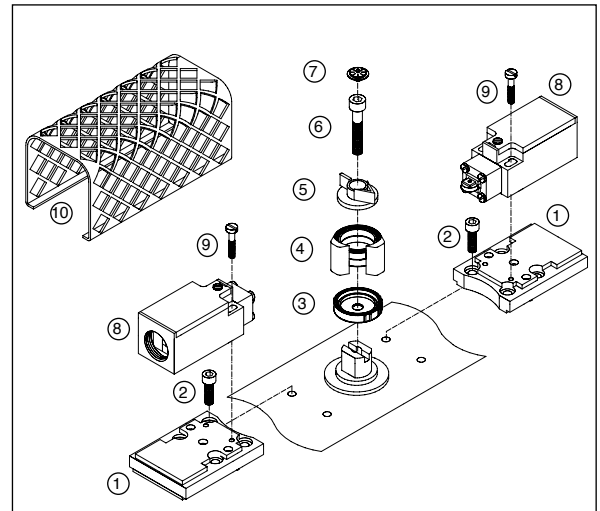
| Pos. | Pcs. | Description | Material |
|------|------|--------------------------|----------|
| 1 | 3 | UNI-sandwichplate compl. | PPO |
| 2 | 2 | M5 x 12 - DIN 912 | A2 |
| 3 | 2 | M5 x 22 - DIN 913 | A2 |
| 4 | 2 | Switch cam SNO101R | POM, A2 |
| 5 | 1 | Position indicator | PE |
| 6 | 1 | M6 x 30 - DIN 912 | A2 |
| 7 | 1 | Abdeckkappe M6 | PA |
| 8 | 2 | Cover cap M6 | - |
| 9 | 4 | M4 x 24 - DIN 84 | A2 |
| 10 | 1 | Protection cage | A2 |



The ET-Kit, assembled with the switch cam SNOU, converts the variable end positions of the actuator into electrical signals. The unit provides easy assembly with high flexibility in the choice of the switching points. It is provided for left as well as right turning actuators according to VDE/VDI 3845.

Display "CLOSED"
 - variable
Display "OPEN"
 - variable

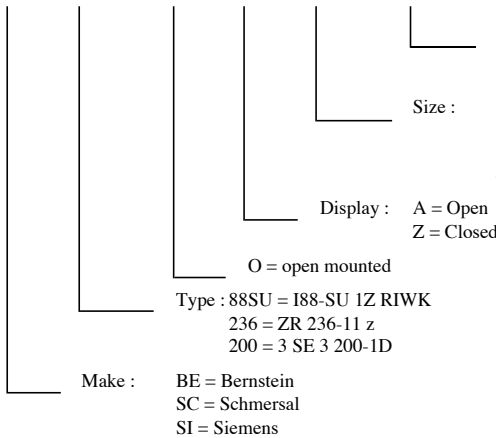
| Pos. | Pcs. | Description | Material |
|------|------|-------------------------|----------|
| 1 | 2 | UNI-sandwichplate comp. | PPO |
| 2 | 4 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Distance ring DIR25 | POM |
| 4 | 1 | Switch can kit SNOU | POM, A2 |
| 5 | 1 | Position indicator | PE |
| 6 | 1 | M6 x 30 - DIN 912 | A2 |
| 7 | 1 | Cover cap M6 | PA |
| 8 | 2 | Switch | - |
| 9 | 4 | M4 x 24 - DIN 84 | A2 |
| 10 | 1 | Protection cage | A2 |



Ordering information

ET-Kit mechanical

BE 88SU O AZ 1 DR



DR = SNO102R (1x) "Closed" fix, "Open" fix
 ER = SNO101R (2x) "Closed" fix, "Open" variable
 UK = SNOUKIT (1x) "Closed" variable, "Open" variable

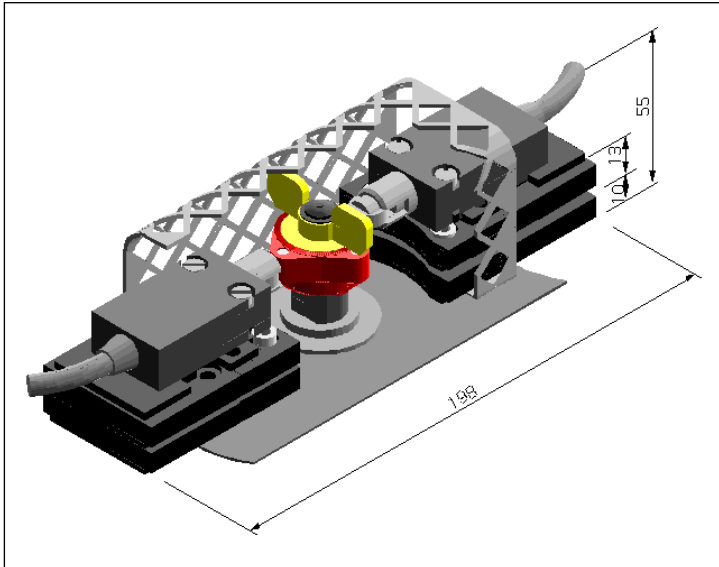
Size : 1 = Size 1
 2 = Size 2
 3 = Size 3
 4 = Size 4

Display : A = Open
 Z = Closed

O = open mounted
 Type : 88SU = I88-SU 1Z RIWK
 236 = ZR 236-11 z
 200 = 3 SE 3 200-1D

Make : BE = Bernstein
 SC = Schmersal
 SI = Siemens

Mechanically Operated EEx d - Signal Devices Open Design



The ET-Kit with mechanical limit switches converts the end positions of the actuator into electrical signals.

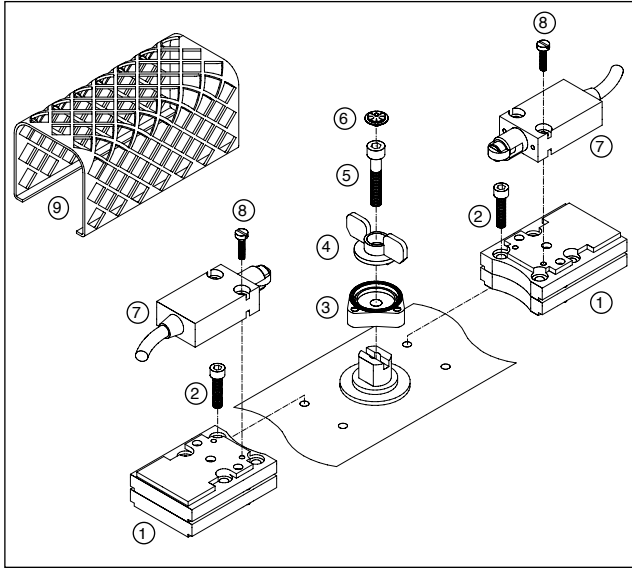
The use of flameproof enclosure switches allows the application in hazardous areas.

ADVANTAGES

- easy assembly through standard dimensions of switches and mounting plates,
- mountable on all VDI/VDE 3845-actuators through a universal-sandwich-mounting-system,
- the stainless steel cover provides the necessary protection against touching.

TECHNICAL DATA :

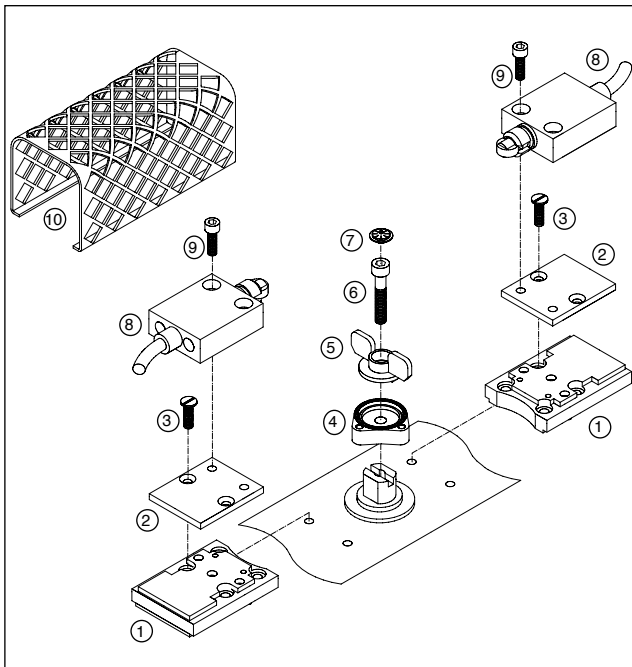
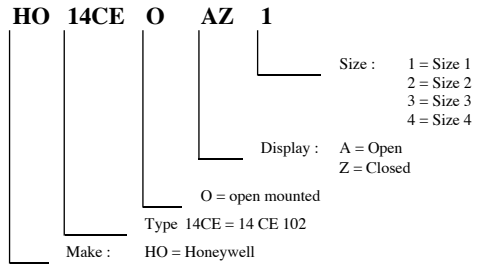
| | | |
|---------------------------|--------------------------------|--------------------------------|
| Manufacturer: | Steute | Honeywell |
| Type: | EX 14 R | 14 CE 102 |
| Housing: | shock resistant | aluminium |
| | thermoplaste | |
| | self extinguishing | completely filled |
| | completely filled | |
| Ingress protection: | IP 67 | IP 65 |
| acc. IEC 529 / DIN 40 050 | | |
| Protection class: | EEx d IIC T6 | EEx d IIC T6 |
| acc. EN 50014 | | |
| Switching function: | 1x NC, 1x NO | 1x change over |
| | forced split up | |
| Mechanical life: | 5 x 10 ⁶ operations | 5 x 10 ⁶ operations |
| Nominated current | 250 V AC : 6 A | 5 A |
| | 220 V DC : 0.2 A | --- |
| | 30 V DC | 5 A |
| Switching precision: | 1° | 1° |
| Provided connection: | Cable end | Cable end |
| Temperature range: | -25 to +75 °C | - 30 to + 80 °C |



| Pos. | Pcs. | Description | Material |
|------|------|------------------------|----------|
| 1 | 2 | UNI-sandwichplate com. | PPO |
| 2 | 2 | Adapterplate | Al |
| 3 | 4 | M5 x 22 - DIN 963 | A2 |
| 4 | 1 | Switch cam SNO102R | POM, A2 |
| 5 | 1 | Position indicator | PE |
| 6 | 1 | M6 x 20 - DIN 912 | A2 |
| 7 | 1 | Cover cap M6 | PA |
| 8 | 2 | Honeywell 14 CE 102 | - |
| 9 | 4 | M5 x 12 - DIN 912 | A2 |
| 10 | 1 | Protection cage | A2 |

Ordering information

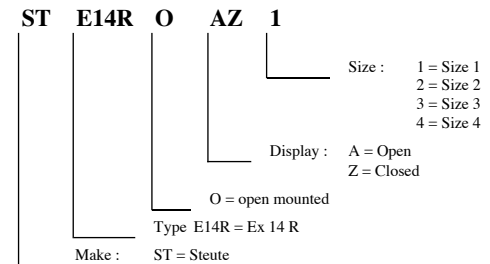
ET-Kit Steute, Ex-areas



| Pos. | Pcs. | Description | Material |
|------|------|--------------------------|----------|
| 1 | 4 | UNI-sandwichplate compl. | PPO |
| 2 | 4 | M5 x 22 - DIN 912 | A2 |
| 3 | 1 | Switch cam SNO102R | POM, A2 |
| 4 | 1 | Position indicator | PE |
| 5 | 1 | M6 x 20 - DIN 912 | A2 |
| 6 | 1 | Cover cap M6 | PA |
| 7 | 2 | Steute Ex 14 R | - |
| 8 | 4 | M4 x 16 - DIN 84 | A2 |
| 9 | 1 | Protection cage | A2 |

Ordering information

ET-Kit Honeywell, Ex-areas



Contact Free Operated Signal Devices Open Design

The ET-Kit with proximity switches converts the end or middle positions of pneumatic actuators into electrical signals. Because of their compact design double inductive proximity switches of different manufacturers are best used in this kit.

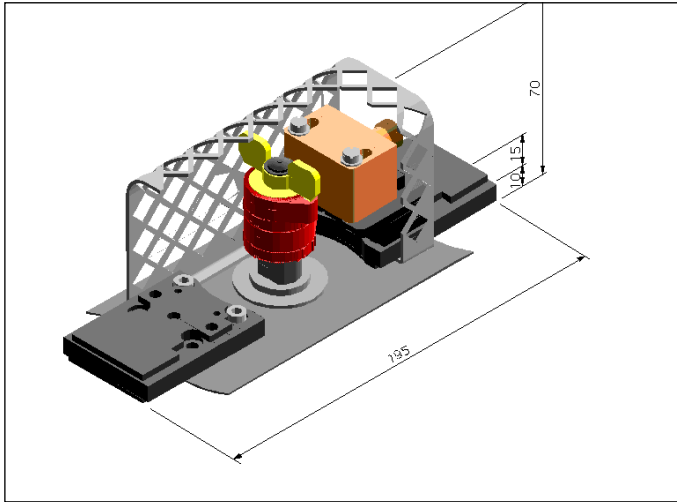
Depending on the type of switch, the signal device is provided with a cable end, a M12-plug connection or an integrated terminal box.

- ADVANTAGES**
- independent adjustment of each switching point in the range from 0° to 360°,
 - the UNI-sandwich-system provides an adaption of the switches to all standard shaft heights,
 - can be mounted universally on all actuators according to VDI/VDE 3845.

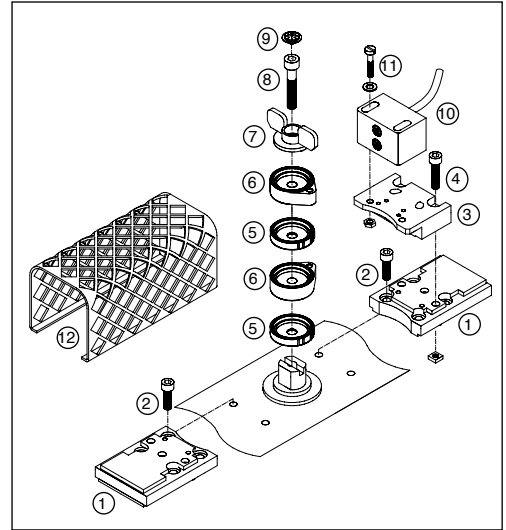


3 - Wire - Double sensor

IFM - Double Proximity Switch IND 3004 DBPKG



Display "CLOSED" - variable
Display "OPEN" - variable



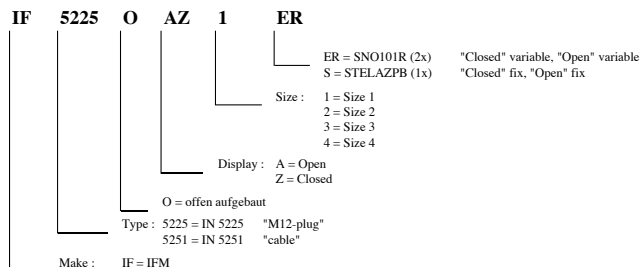
TECHNICAL DATA

Manufacturer: IFM
 Type: IN 5225 IN
 5251
 double initiator IND3004DBPKG/US
 IND3004DBPKG
 inductive, NO- function DC PNP
 Switch distance: 4 mm 4 mm
 Nominated voltage: 10..36 V DC 10..36 V DC
 Max. Current: 250 mA 250 mA
 Voltage drop: < 2.5 V < 2.5 V
 Output: short-circuit proof, reverse polarity protected,
 over-load proof
 Display: LED yellow (2x) LED
 yellow (2x)
 Ingress protection: IP 67 IP 67
 Prov. connection: US-plug connection 2m-cable

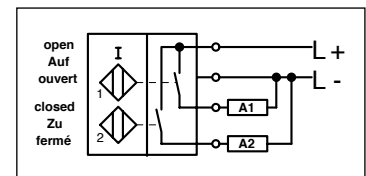


| Pos. | Pcs. | Description | Material |
|------|------|------------------------|----------|
| 1 | 2 | UNI-sandwichplate com. | PPO |
| 2 | 4 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Mounting plate | PPO |
| 4 | 2 | M5 x 16 - DIN 912 | A2 |
| 5 | 2 | Distance ring 5mm | POM |
| 6 | 2 | Switch cam SNO101R | POM, A2 |
| 7 | 1 | Position indicator | PE |
| 8 | 1 | M6 x 40 - DIN 912 | A2 |
| 9 | 1 | Cover cap M6 | PA |
| 10 | 1 | Double sensor IFM | - |
| 11 | 2 | M4 x 30 - DIN 912 | A2 |
| 12 | 1 | Protection cage | A2 |

Ordering information

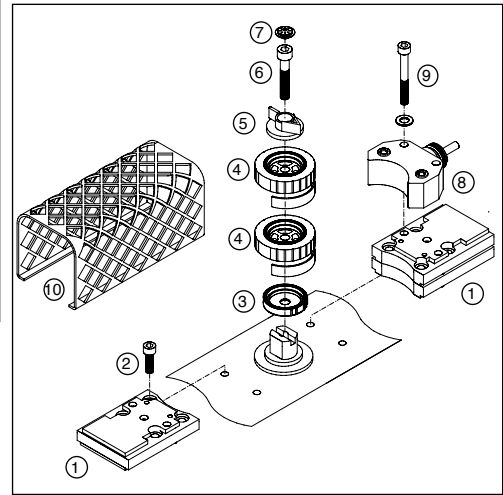
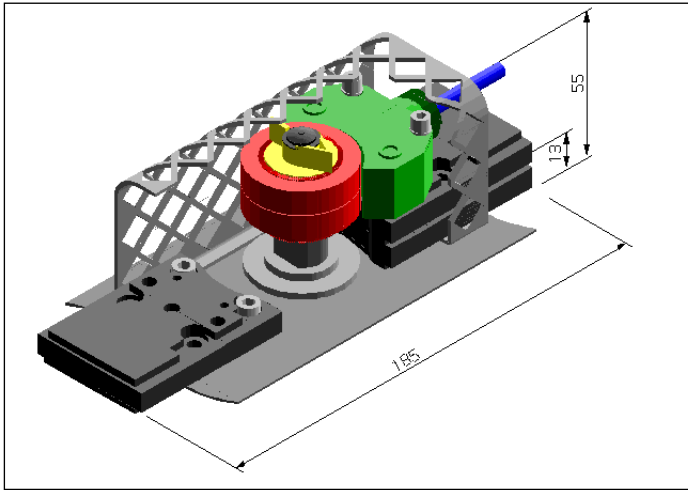


WIRING DIAGRAM



Pepperl + Fuchs - Double Sensor EEx i - Double Sensor NCN3 - F25F - N4

Display „CLOSED” – variabel
Display „OPEN” – variabel



TECHNICAL DATA

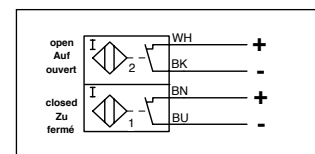
Manufacturer: **Pepperl + Fuchs**
 Type: **NCN3 - F25F - N4 (-V1)**
 Doublesensor induktive, 2-wire
 NC
 NAMUR (DIN 19 234)



Switch distance: 3 mm
 Nom. voltage: 8 V DC
 Cur. consumption: damped ≤ 1 mA
 undamped ≥ 3 mA
 Output: reverse polarity protected, short-circuit proof
 Display: LED yellow (2x)
 Ingress protection: IP 67
 Prov. connection: 5 m cable end or
 M12-plug connection
 Temp. range: -25 ... +100 °C

| Pos. | Pcs. | Description | Material |
|------|------|---------------------------|----------|
| 1 | 3 | UNI-sandwichplatte compl. | PPO |
| 2 | 2 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Distance ring 5mm | POM |
| 4 | 2 | Switch cam SNO10PB | POM, A2 |
| 5 | 1 | Position indicator | PE |
| 6 | 1 | M6 x 35 - DIN 912 | A2 |
| 7 | 1 | Cover cap M6 | PA |
| 8 | 1 | P + F, NCN3 - F25 - N4 | - |
| 9 | 2 | M5 x 50 - DIN 912 | A2 |
| 10 | 1 | Protection cage | A2 |

WIRING DIGRAM 2-wire, NAMUR



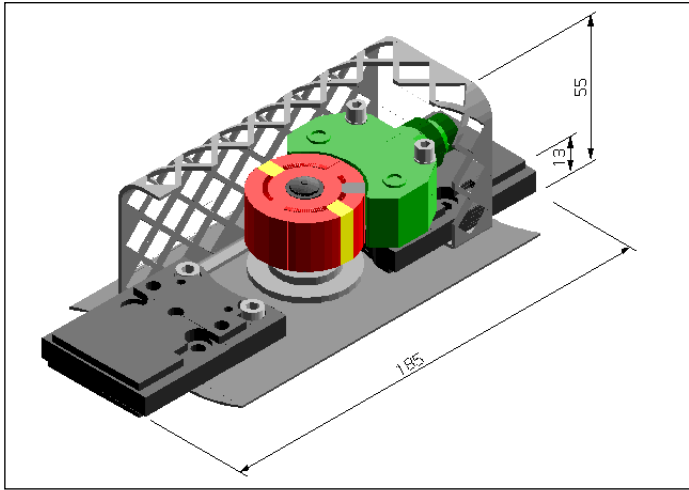
Ordering information

PF F25N O AZ 1 P

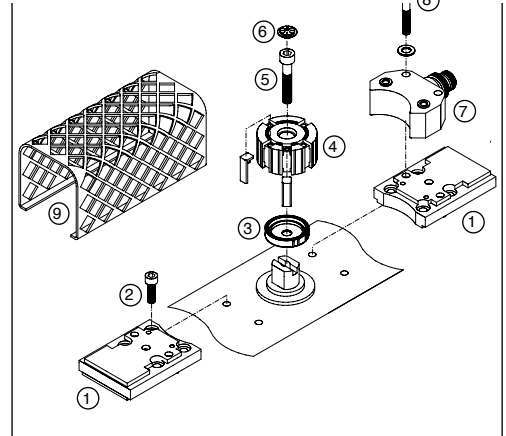
P = SNO10PB (2x) "Closed" variable, "Open" variable
 Size : 1 = Size 1
 2 = Size 2
 3 = Size 3
 4 = Size 4
 Display : A = Open
 Z = Closed
 O = offen aufgebaut
 Type : F25N = NCN3-F25F-N4 "cable"
 F25NV = NCN3-F25F-N4-V1 "M12-plug"
 Make : PF = Pepperl + Fuchs

3 - Wire - Doublesensor

Pepperl + Fuchs – Doublesensor NBN3 – F25F – E8



Display „CLOSED – fixed
Display „OPEN” – fixed



TECHNCAL DATA

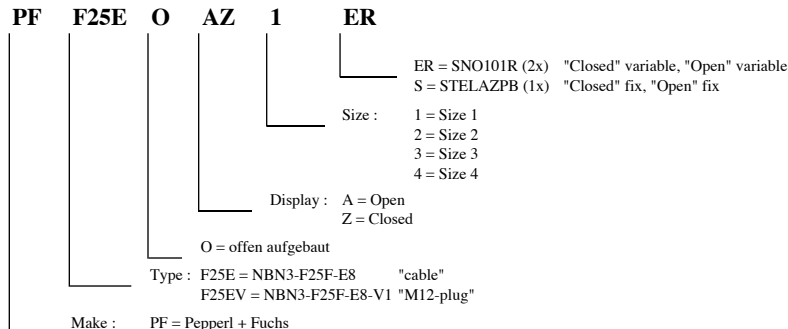
Manufacturer: **Pepperl + Fuchs**
 Type: **NBN3 - F25F - E8 (-V1)**
 Double sensor inductive, 3-wire
 NO
 DC PNP



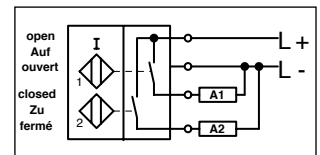
Switch distance: 3 mm
 Nom. voltage: 10..30 V DC
 Cur. consumption: $I_0 \leq 20$ mA
 Output: reverse polarity protected, short-circuit proof
 Display: LED yellow (2x)
 Ingress protection: IP 67
 Prov. connection: 5 m-cable end or
 M12-plug connection
 Temp. range: -25 ... +70 °C

| Pos. | Pcs. | Description | Material |
|------|------|--------------------------|----------|
| 1 | 2 | UNI-sandwichplate compl. | PPO |
| 2 | 2 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Distance ring 5mm | POM |
| 4 | 1 | Switch cam STELAZPB | POM, A2 |
| 5 | 1 | M6 x 25 - DIN 912 | A2 |
| 6 | 1 | Cover cap M6 | PA |
| 7 | 1 | P + F, NBN3 - F25 - E8 | - |
| 8 | 2 | M5 x 40 - DIN 912 | A2 |
| 9 | 1 | Protection cage | A2 |

Ordering Information

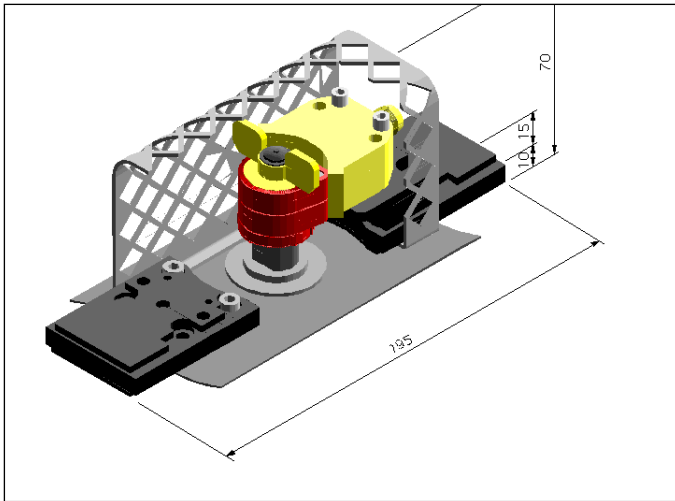


WIRING DIAGRAM 3-wire, PNP



Turck – Doublesensor Ni4-DS20-2AP6X2, Ni4-DS20-2Y0X2

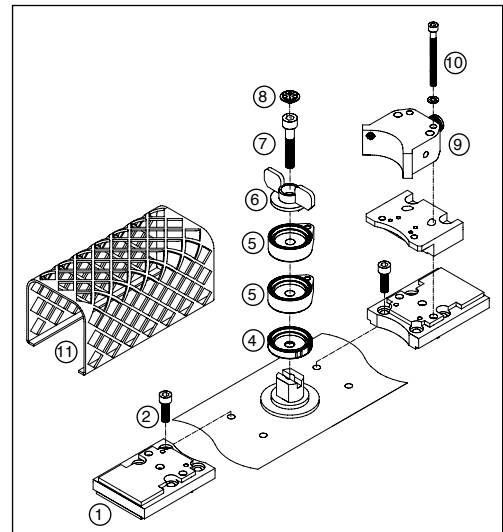
3-wire-Doublesensor EEx i - Doublesensor



TECHNICAL DATA

| | | |
|---------------------|---|--|
| Manufacturer: | Turck | Turck |
| Type: | Ni4-DS20-2AP6X2 double initiator inductive, 3-wire NO, DC PNP | Ni4-DS20-2Y0X2 inductive, 2-wire NC, Namur |
| Switch distance: | 4 mm | 4 mm |
| Nom. voltage: | 10..30 V DC | 8.2 V DC |
| Cur. consumption: | $I_D \leq 200$ mA | damped ≤ 1 mA undamped ≥ 2.2 mA |
| Output: | reverse polarity protected, short-circuit proof | |
| Display: | LED, yellow (2x) | LED, red (2x) |
| Ingress protection: | IP 67 | IP 67 |
| Prov. connection: | 2m - cable end | 2m - cable end |
| Temp. range: | - 25 to + 70 °C | - 25 to + 70 °C |

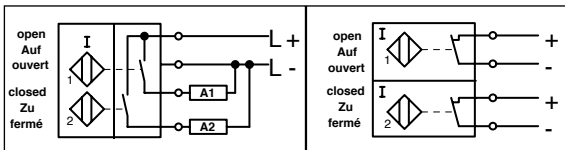
Display „CLOSED” – varia-
bel
Display „OPEN” – variabel



WIRING DIAGRAM

3-wire, PNP

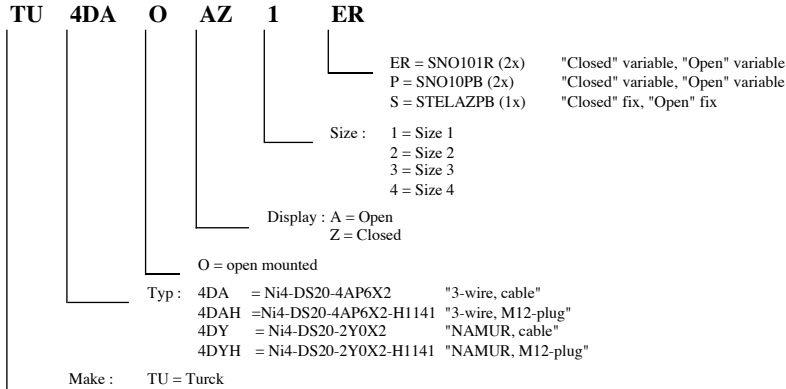
2-wire, NAMUR



| Pos. | Pcs. | Description | Material |
|------|------|--------------------------|----------|
| 1 | 2 | UNI-sandwichplate compl. | PPO |
| 2 | 4 | M5 x 12 - DIN 912 | A2 |
| 3 | 1 | Mounting plate | PPO |
| 4 | 1 | Distance ring 5mm | POM |
| 5 | 2 | Switch cam SNO101R | POM, A2 |
| 6 | 1 | Position indicator | PE |
| 7 | 1 | M6 x 35 - DIN 912 | A2 |
| 8 | 1 | Cover cap M6 | PA |
| 9 | 1 | Double sensor TURCK | - |
| 10 | 2 | M4 x 40 - DIN 912 | A2 |
| 11 | 1 | Protection cage | A2 |

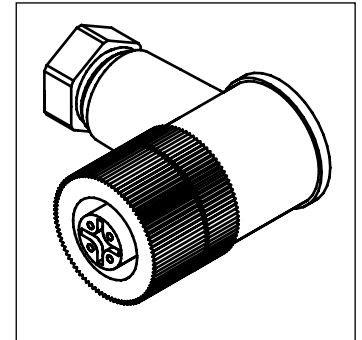
Ordering information

ET-Kit induktive



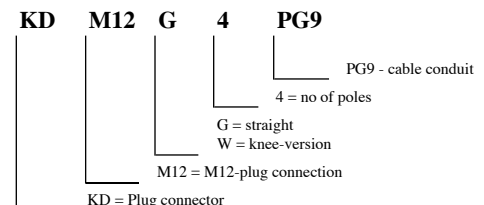
M12-plug connector

For special purposes it may be necessary to have the wiring of the sensors using plug and socket connections. For this reason different sensors are provided with a M12-plug connection. As plugs are accessories they can be configured freely and so be adapted to all different requirements.

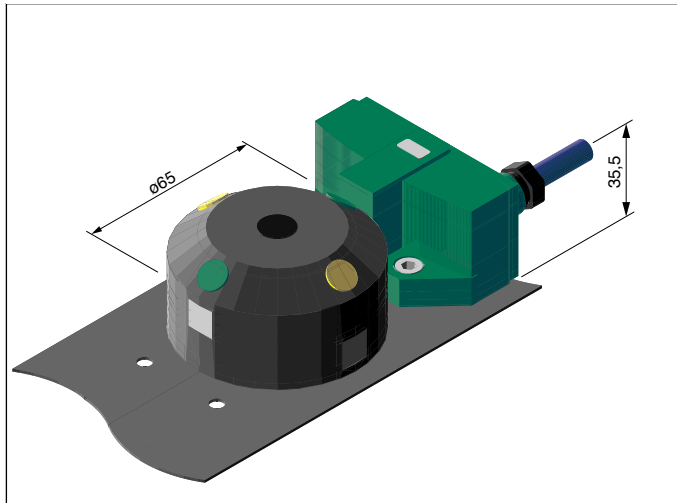


Ordering information

M12-plug connector



Pepperl + Fuchs – Doublesensor Series F31 und F31K



Display „CLOSED” – fixed
Display „OPEN“ - fixed

VORTEILE

- Easy and fast mounting
- Different options for system- and valve control
- Mounting on all Standard flanges due to different cams



Manufacturer: Pepperl + Fuchs
Fuchs
Fuchs

Pepperl +
Pepperl +

Type: NBN3 - F31 - E8
double sensor inductive, 3-wire
NO
DC PNP

NCN3 - F31 - N4
inductive, 2-wire
NC
NAMUR (DIN 19 234)

NCN3-F31-V1-K
AS-Interface
2-wire

Switch distance: 3 mm
Nom. voltage: 10..30 V DC
Cur. consumption: $I_0 \leq 25$ mA

3 mm
8 V DC
dampened ≤ 1 mA
undampened ≥ 3 mA

3 mm
24 V DC
 $I_L = 100$ mA

Output: reverse polarity protected,
short-circuit proof

Display: LED yellow (2x)
Ingress protection: IP 67
Prov. connection: 5m cable

LED yellow (2x)
IP 67
5m cable or
V16-plug

LED yellow, green, red
IP 67
M12-plug

solenoid
connection: 0.5m cable

0.5m cable or
V16-plug

0.5m cable

Temp. range: -25 ... +70 °C

-25 ... +100 °C

-25...+70°C

WIRING DIAGRAM



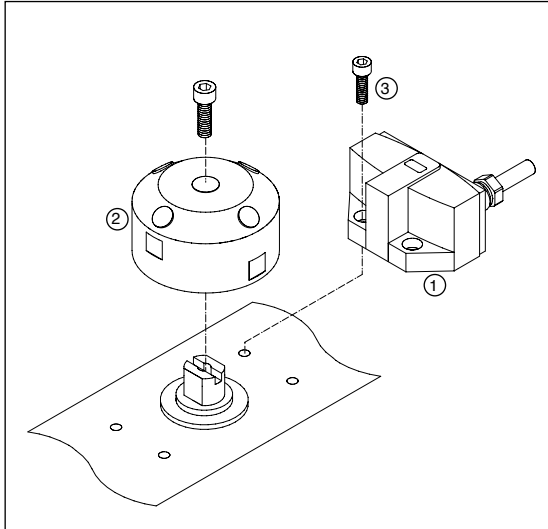
3-Wire, PNP

2-wire, NAMUR

AS-Interface



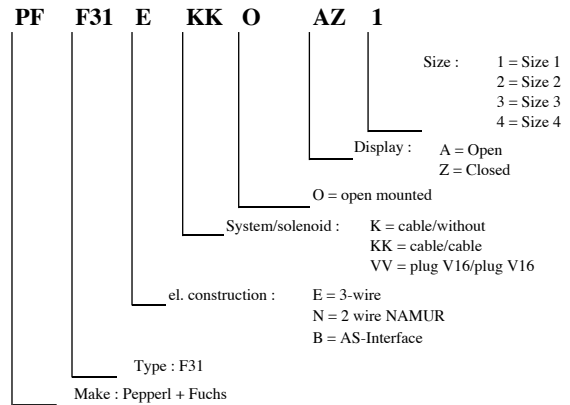
Series F31



| Pos. | Pcs. | Description | Material |
|------|------|-------------------|----------|
| 1 | 1 | P+F, NCN3-F31-... | - |
| 2 | 1 | Cam | - |
| 3 | 2 | M5 x 10 - DIN 912 | A2 |

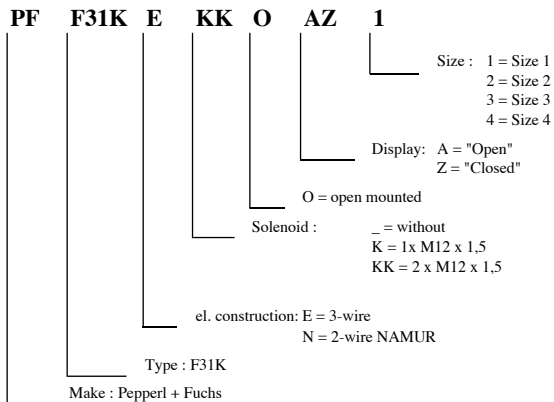
Ordering information

ET-Kit series F31



Ordering information

ET-Kit Series F31K



Series F31K terminal block

