

Magnetic field-sensitive sensors for cylinders

- Inductive sensor for direct attachment
- LED position display
- Plug attachment straight or angled
- Cable attachment 3 m and 5 m long
- Easy to handle

Magnetic field-sensitive sensors are used for contact-free position reporting from the magnetic piston of a pneumatic or hydraulic cylinder.

The position of the piston can be displayed optically by means of an LED and analysed electrically.

Technical data - Sensor Versions TEU005/006		
Version	TEU005	TEU006
Nom. switching field intensity Hn	1.2 kA/m	1.2 kA/m
Functional field intensity	≥ 2 kA/m	≥ 2 kA/m
max. Hysteresis	45 % v. Hn	45 % v. Hn
Ambient temperature	-20 ... +70°C	-20 ... +70°C
max. temperature drift from the switch-on point	0.3 %/°C	0.3 %/°C
Operating voltage DC*	10 ... 30 V	10 ... 30 V
max. Ripple	15 %	15 %
max. Current	200 A	200 A
max. load capacity	1.0 µF	1.0 µF
max. voltage drop	2.5 V	2.5 V
max. switch-on time	0.5 ms	05 ms
Switch-off time	20 ... 50 ms	20 ... 50 ms
max. own current consumption energized/non-energized	12/10 mA	30/10 mA
Electrical connection	Plug connector/Puflex cable	Plug connector
Protection class	IP 67	IP 67
Weight	6 g	6 g

Technical data - Reed contact version TEU007			
Switching line	40 W		
Switching current	max. 2 A		
Response time	2 ms		
Relapse time	0.05 ms		
Service life	108 ... 109 switches		
Ambient temperature	-25 ... +75 °C		
Protection class	IP 67		
Body material	Rigid PVC		
Mounting position	any		
Switching voltage	10 - 30 V/DC	10 - 30 V/DC	12-250 V/UC
Optical display	LED	LED	none
Connection	Cable, 5 m long	Mini connector	Cable, 5 m long
Weight	152 g	5 g	151 g

Ordering chart

Sensor versions TEU005, TEU006

Sensor version	Designation	Item no.
Inductive with LED, plug attachment, TEU005	1	780 110
Inductive with LED, 3 m Puflex cable, TEU005	2	780 111
Inductive with LED, dovetail, universal application, TEU006	4	780 817

Ordering charts

Accessories for sensors TEU005, TEU006

Version	Item no.
Angled plug connector, M8, 3 Meter	780 112
Plug connector, straight, M8, 3 Meter	780 113
Retention bracket for tension band fastening (all sizes)	780 114
Tension band for pistons \varnothing 8 / 10 / 12 / 16 mm	780 115
Tension band for pistons D 20 / 25 mm	780 116
Tension band for pistons D 32 mm	780 117
Tension band for pistons D 40 mm	780 118
Tension band for pistons D 50 mm	780 119
Tension band for pistons D 63 mm	780 120
Tension band for pistons D 80 mm	780 121
Retainer for cylinders with piston diameter 32 ... 100 mm	780 122
Retainer for cylinders with piston diameter 125 mm	784 098

Reed contact for TEU007

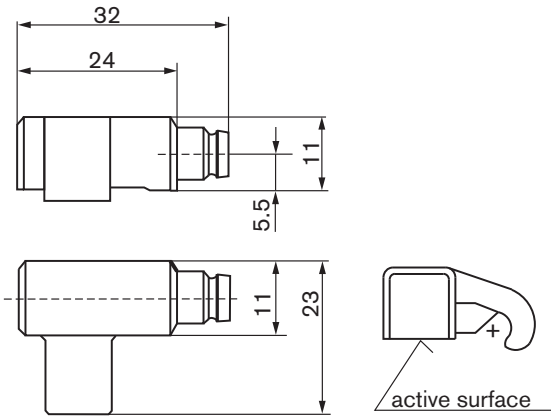
Version	Designation	Item no.
Reed contact with LED, with cable, 5 m long	5	780 969
Reed contact with LED, Mini plug	6	780 970
Reed contact without LED, with cable, 5 m long	7	780 971

Accessories for reed contact TEU007

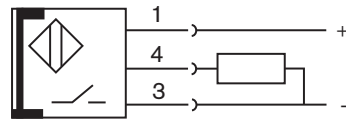
Version	Item no.
Fastening clip for piston, 8 mm	789 714
Fastening clip for piston, 10 mm	789 715
Fastening clip for piston, 12 mm	789 716
Fastening clip for piston, 16 mm	789 717
Fastening clip for piston, 20 mm	789 718
Fastening clip for piston, 25 mm	789 719

Dimensions

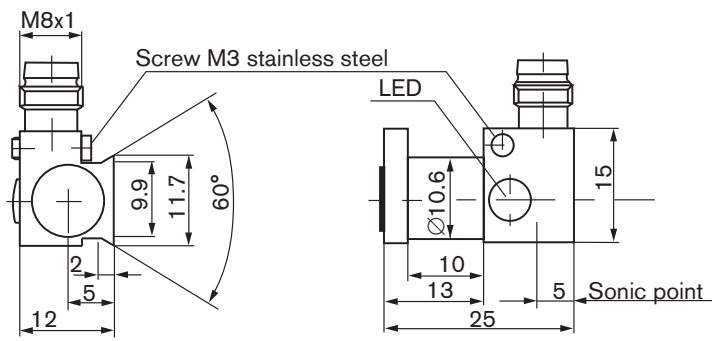
TEU005



Electrical connection for TEU005 and TEU006



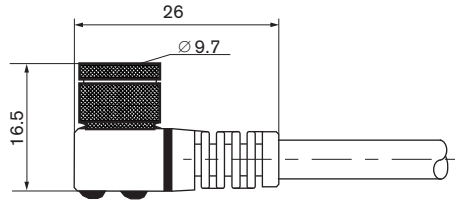
TEU006



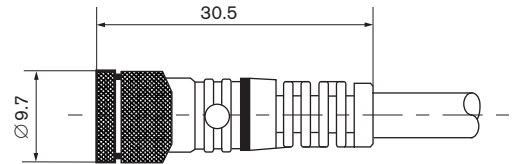
Dimensions for sensor accessories - Fixing elements - [mm]

Plug connector without LED with cable, 3 m long IP 67

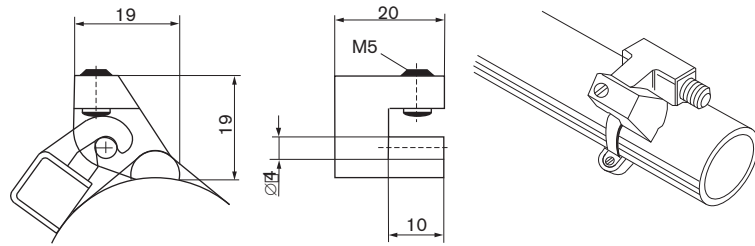
Angled plug connector, M8



Plug connector, straight, M8



Tension band fastening with retention bracket for pneumatic cylinder Type 0044

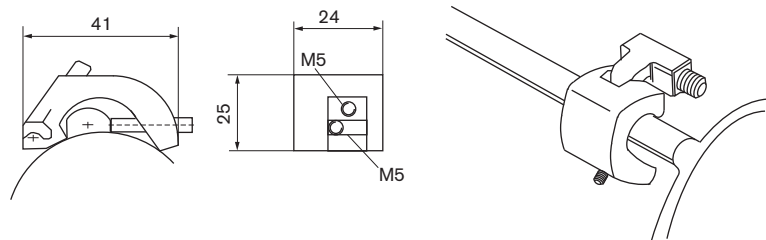


- For pneumatic cylinders without tension anchor
Piston diameter 8 to 80 mm

Required for fastening:

- 1 x retention bracket (for all sizes),
Ident no. 780 114
- 1 x tension band

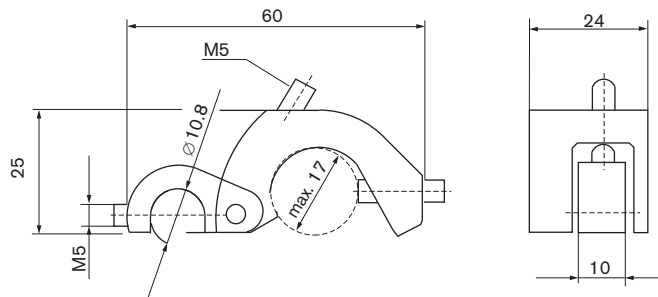
Retainer for pneumatic cylinder Type TZU002



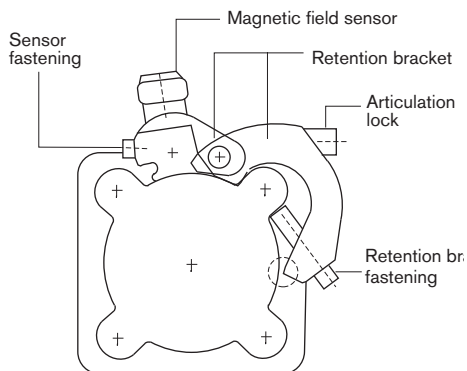
- For pneumatic cylinders with tension anchor
Tension anchor diameter 4.3 to 17 mm

- For pneumatic cylinders with profile
Piston diameter 32 to 100 mm
Profile width 10 to 17 mm

Retainer for pneumatic cylinder Type TZU002

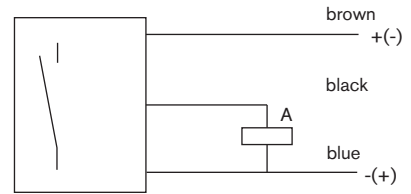
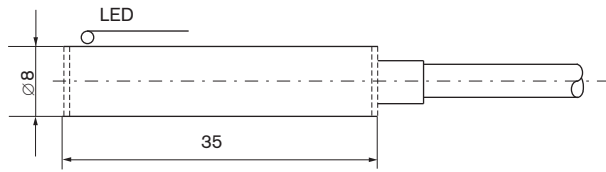


- For pneumatic cylinders with profile
Piston diameter 125 mm
Profile width 4 to 17 mm



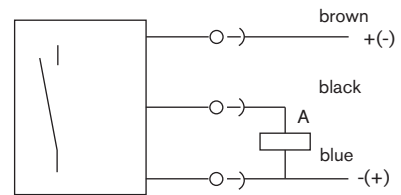
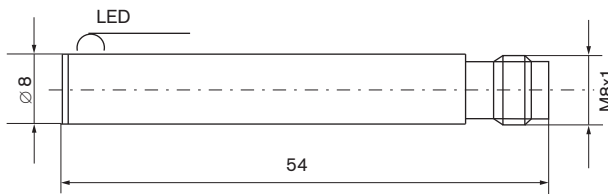
Dimensions for reed contact [mm]

TEU007



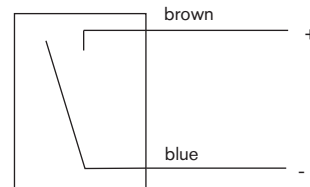
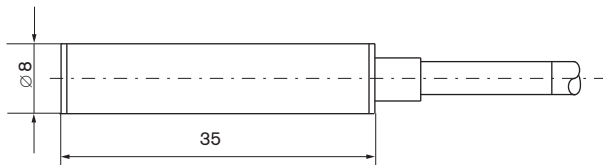
N/O contact

TEU007



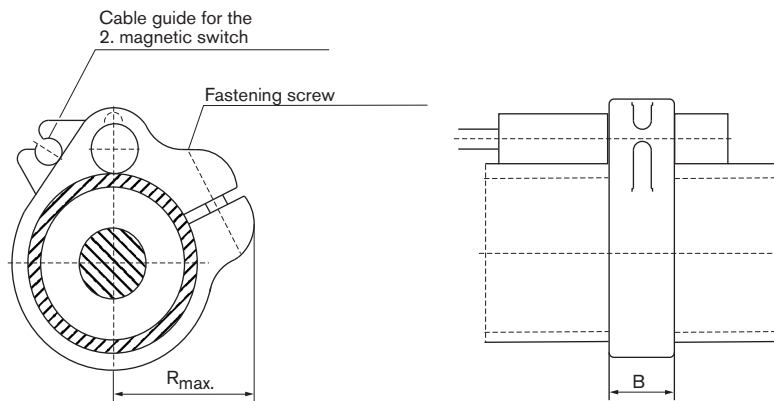
N/O contact

TEU007



N/O contact

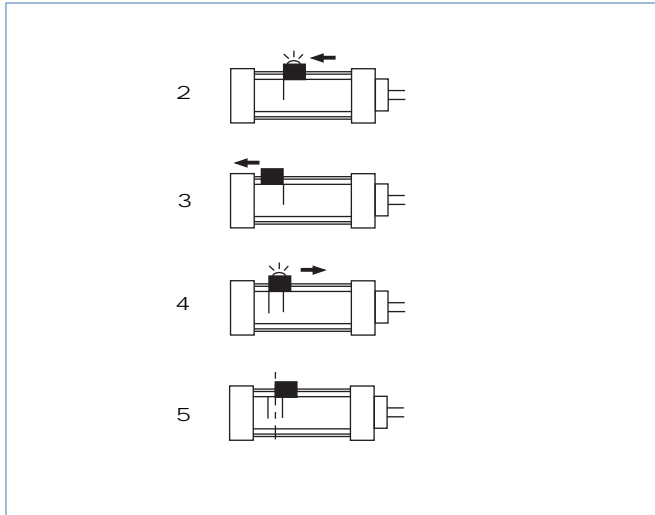
Fastening clip for TEU007



Piston diameter	8/10	12	16	20	25
Rmax	16	18	20	22	24
B	8	8	10	10	10

Mounting Instruction

Adjusting and mounting the magnetic field sensor



1. Move piston to the terminal position.
2. Push attached sensor up to the switch-on point (LED lights up) and mark the front edge of the sensor on the cylinder.
3. Push the sensor further to the switch-off point (LED off).
4. Push sensor back to the 2nd switch-on point and mark the front edge of the sensor on the cylinder.
5. Mount the front edge of the sensor between the two marks.

Traverse routes

Cylinder diameter [mm]	Traverse route* (guide value) [mm]
32	3.6
40	4.1
50	4.8
63	4.9
80	5.1
100	5.9

* Repetition accuracy 0.5 ... 1 mm

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In case of special application conditions,
please consult for advice.

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