

## dimensions

**13.5 x 13.5 x 20mm  
11.8 x 4.5 x 16.5mm**

### dovetailed tenon

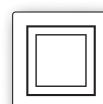
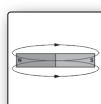
sensor surface

edge area  
middle area

- ✓ easy to mount from above
- ✓ can be used independent of cylinder manufacturer
- ✓ impact- and vibration-resistant
- ✓ operating temperature up to +130°C
- ✓ high switching accuracy with small hysteresis
- ✓ high switching frequency
- ✓ LED display
- ✓ connection with cable and M8-connector



**electronic cylinder switch  
robust metal housing**



### description

On automatic machines, there is often the requirement that a switching signal must be received at certain piston positions of a pneumatic cylinder. Here, magnetic cylinder sensors are used.

These magnetic sensors are used for contactless and wear-free position detection in control technology. They are used everywhere inductive sensors are pushed to their limits.

Compared to inductive sensors, magnetic cylinder sensors offer a considerably higher switching distance yet still have a small design.

Because magnetic fields penetrate all non-magnetizable materials, the sensors are able to detect magnets through, e.g.,

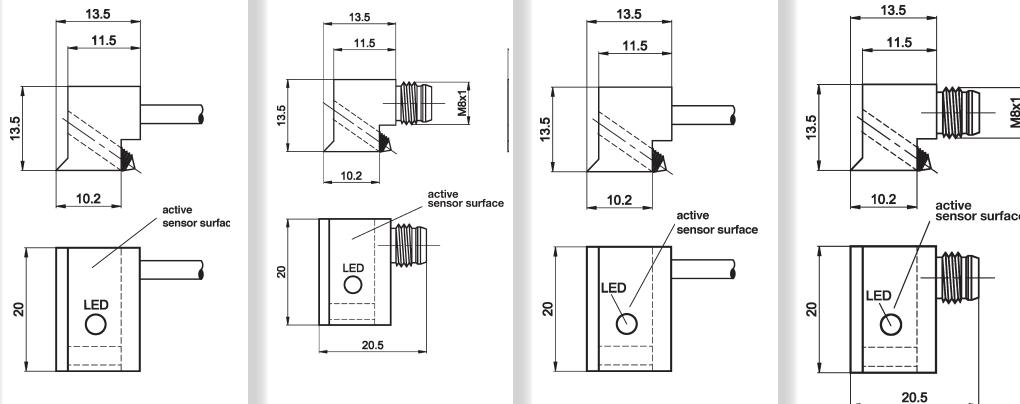
walls made of non-ferrous metal, stainless steel, aluminum, plastic or wood.

The electronic cylinder sensors can be used on all cylinders from leading manufacturers (Bosch, Festo, Norgren Martonair, Numatics) and are directly interchangeable with reed switches that use three-wire system technology.

## application examples

- ▶ position detection of a cylinder piston
- ▶ end position sensing

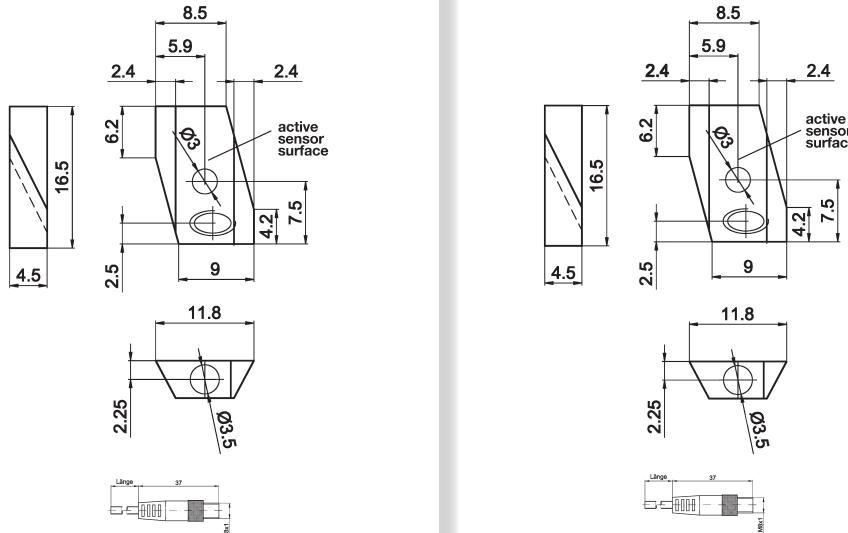
article-no.	MZ150103	MZ150173	MZ150105	MZ150175
sensor surface	edge area	edge area	middle area	middle area
operating temperature	-25 ... +75°C	-25 ... +75°C	-25 ... +75°C	-25 ... +75°C
connection	2m PUR cable	M8-connector	2m PUR cable	M8-connector



### TECHNICAL DATA

sensor surface (active)	edge area	edge area	middle area	middle area
output signal	pnp, no	pnp, no	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 15mA	≤ 15mA	≤ 15mA	≤ 15mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
switching hysteresis	typ. 1mm	typ. 1mm	typ. 1mm	typ. 1mm
repeat accuracy	±0.1mm	±0.1mm	±0.1mm	±0.1mm
switching frequency	1kHz	1kHz	1kHz	1kHz
display (signal)	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
housing material	zinc diecast	zinc diecast	zinc diecast	zinc diecast
dimensions	13.5x13.5x20mm	20.5x13.5x20mm	13.5x13.5x20mm	20.5x13.5x20mm
operating temperature	-25 ... +75°C	-25 ... +75°C	-25 ... +75°C	-25 ... +75°C
degree of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	2m PUR cable, 3-wire	M8-connector, 3-pin	2m PUR cable, 3-wire	M8-connector, 3-pin
connection accessories	-	e.g. VK200075	-	e.g. VK200075

article-no.	MZ150156	MZ150176
sensor surface	middle area	middle area
operating temperature	-25 ... +120°C	-25 ... +75°C
connection	M8-cable connector, teflon cable, length 600mm	M8-cable connector, PUR cable, length 300mm

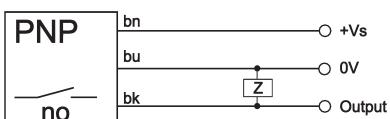


## TECHNICAL DATA

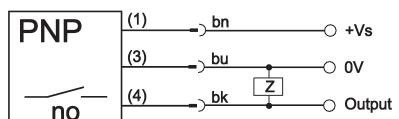
sensor surface (active)	middle area	middle area
output signal	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 15mA	≤ 15mA
output current (max. load)	150mA	150mA
voltage drop (max. load)	2.0V DC	2.0V DC
switching hysteresis	typ. 1mm	typ. 1mm
repeat accuracy	±0.1mm	±0.1mm
switching frequency	1kHz	1kHz
display (signal)	-	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
housing material	aluminum	aluminum
dimensions	11.8x4.5x16.5mm	11.8x4.5x16.5mm
operating temperature	-25 ... +120°C	-25 ... +75°C
degree of protection (EN 60529)	IP67	IP67
connection	M8-cable connector, 3-pin	M8-cable connector, 3-pin
connection accessories	e.g. <b>VK200075</b>	e.g. <b>VK200075</b>

### connection

#### cable device

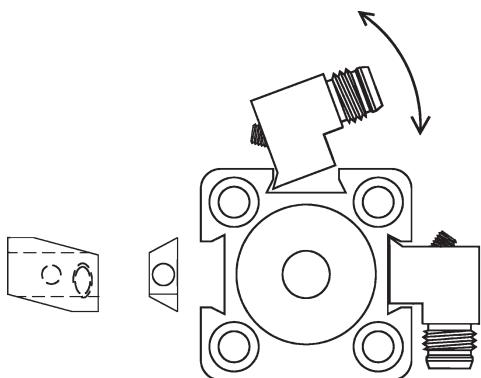


#### connector device



**wire colors:** bn = brown (1), bu = blue (3), bk = black (4)

### mounting



This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX®** "cable sockets" or in the search window on our homepage [www.ipf-electronic.com](http://www.ipf-electronic.com) (using the search term "VK").

**Warning:** Never use these devices in applications where the safety of a person depends on their functionality.

This data sheet as well as your personal contact can be found at [www.ipf-electronic.com](http://www.ipf-electronic.com)