

dimensions **5 x 4.6 x 18mm**
5 x 6.5 x 27mm
10.2 x 16 x 25mm

T-groove cylinders sensor surface middle area



- ✓ **fully electronic microsensor**
- ✓ **robust metal housing (oscillation-resistant)**
- ✓ **high locking power**
- ✓ **fast mounting**
- ✓ **very short design with built-in amplifier**
- ✓ **LED display (except for +130°C version)**
- ✓ **connection via M8-, M12-connector or cable**
- ✓ **version with PUR or teflon cable**



insertable from above temperature range up to +130°C



description

For many tasks in automation technology, it is necessary to detect movements in pneumatic cylinders and to precisely detect the position of the piston. Available for selection are both fully electronic sensors as well as reed sensors.

Under certain operating conditions, e.g., in the case of strong vibrations, high switching frequencies and high requirements for exact switching points, reed switches have application limits. The lack of short-circuit protection, the high sensitivity in the event of inductive voltage spikes and, in particular, the mechanical wear of the switching contacts are frequent causes of problems in practical use. Due to these shortcomings, industry demanded sensors that guarantee long-term and fault-free operation and thereby avoid machine stoppages and the associated production losses.

For this purpose, **ipf electronic gmbh** offers magnetic cylinder sensors that are used for the position detection of the piston position in pneumatic cylinders. Through the absolute wear-free mode of operation, they ensure maximum operational dependability and reliability.

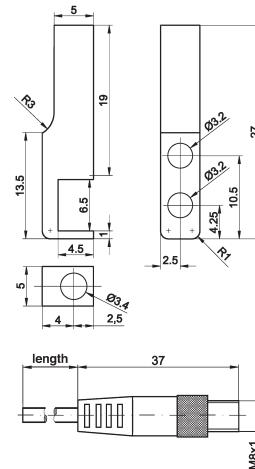
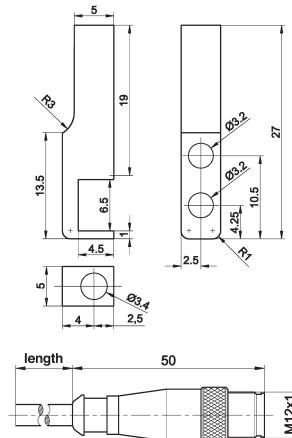
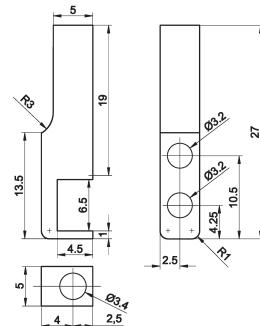
The **electronic cylinder sensors** can be used on all cylinders from leading manufacturers and are directly interchangeable with reed switches that use three-wire system technology.

application examples

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

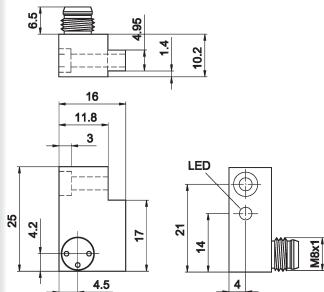
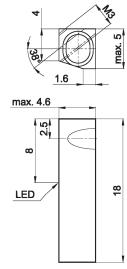
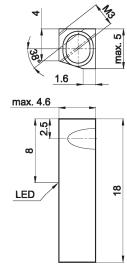
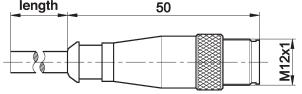
article-no.	MZ0701A2	MZ070122	MZ070172
connection	2m cable	M12-cable connector, 300mm	M8-cable connector, 300mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
article-no.	-	MZ0701E2	MZ0701F2
connection	-	M12-cable connector, 600mm	M8-cable connector, 600mm
operating temperature	-	-25 ... +70°C	-25 ... +70°C
article-no.	-	MZ0701J2	-
connection	-	M12-cable connector, 1000mm	-
operating temperature	-	-25 ... +70°C	-

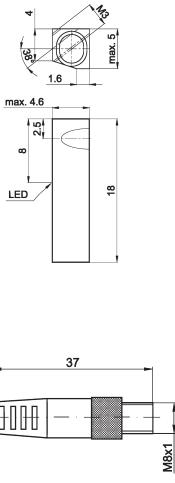
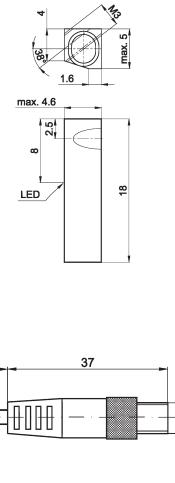
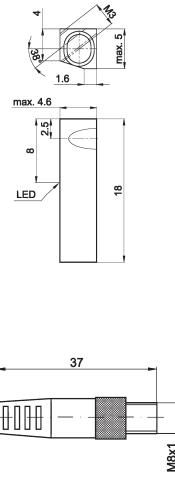
preferred types are shown
in **bold**!



TECHNICAL DATA

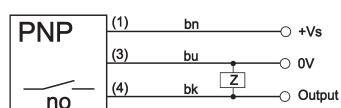
sensor surface (active)	middle area	middle area	middle area
output signal	pnp, no	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	ffi 10mA	ffi 10mA	ffi 10mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
switching hysteresis	typ. 1mm	typ. 1mm	typ. 1mm
repeatability	±0.1mm	±0.1mm	±0.1mm
switching frequency	1kHz	1kHz	1kHz
display (signal)	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
housing material	aluminum	aluminum	aluminum
dimensions	5x6.5x27mm	5x6.5x27mm	5x6.5x27mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	2m cable, PUR, 3-wire	M12-cable connector, PUR, 3-pin	M8-cable connector, PUR, 3-pin
connection accessories	-	e.g. VK200025	e.g. VK200075
mounting accessories	AM000076 positive stop cable clip AM000087	AM000076 positive stop cable clip AM000087	AM000076 positive stop cable clip AM000087

article-no.	MZ070173	MZ0701A6	MZ070126
connection	M8-connector	2m cable	M12-cable connector, 300mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
article-no.	-	-	MZ0701E6
connection	-	-	M12-cable connector, 600mm
operating temperature	-	-	-25 ... +70°C
article-no.	-	-	MZ0701J6
connection	-	-	M12-cable connector, 1000mm
operating temperature	-	-	-25 ... +70°C
preferred types are shown in bold!			
			
			
			
			
TECHNICAL DATA			
sensor surface (active)	middle area	middle area	middle area
output signal	pnp, no	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	ffi 15mA	ffi 15mA	ffi 15mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
switching hysteresis	typ. 1mm	typ. 1mm	typ. 1mm
repeatability	±0.1mm	±0.1mm	±0.1mm
switching frequency	1kHz	1kHz	1kHz
display (signal)	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
housing material	aluminum	aluminum	aluminum
dimensions	10.2x16x25mm	5x4.6x18mm	5x4.6x18mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	M8-connector, 3-pin	cable, 2m, PUR	M12-connector, PUR, 3-pin
connection accessories	e.g. VK200075	-	e.g. VK200025
mounting accessories	-	AM000076 positive stop cable clip AM000087	AM000076 positive stop cable clip AM000087

article-no.	MZ070176	MZ070186	-
connection	M8-cable connector, 300mm	M8-cable connector, 300mm	-
operating temperature	-25 ... +70°C	-25 ... +70°C	-
article-no.	MZ0701F6	-	MZ070156
connection	M8-cable connector, 600mm	-	M8-cable connector, 600mm
operating temperature	-25 ... +70°C	-	-25 ... +130°C (connector max. +100°C)
article-no.	MZ0701K6	-	-
connection	M8-cable connector, 1000mm	-	-
operating temperature	-25 ... +70°C	-	-
preferred types are shown in bold !			
			
			
			
TECHNICAL DATA			
sensor surface (active)	middle area	middle area	middle area
output signal	pnp, no	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	ff 15mA	ff 15mA	ff 15mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
hysteresis	typ. 1mm	typ. 1mm	typ. 1mm
repeatability	±0.1mm	±0.1mm	±0.1mm
switching frequency	1kHz	1kHz	1kHz
display (signal)	yellow LED	yellow LED	-
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
housing material	aluminum	aluminum	aluminum
dimensions	5x4.6x18mm	5x4.6x18mm	5x4.6x18mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +130°C (connector max. +100°C)
degree of protection (EN 60529)	IP67	IP67	IP67
connection	M8-cable connector, PUR, 3-pin	M8-cable connector, teflon, 3-pin	M8-cable connector, teflon, 3-pin
connection accessories	e.g. VK200075	e.g. VK200075	e.g. VK200075
mounting accessories	AM000076 positive stop cable clip AM000087	AM000076 positive stop cable clip AM000087	AM000076 positive stop cable clip AM000087
Caution: The output stage is located in the connector!			

connection

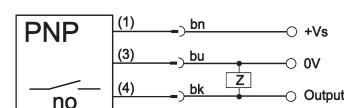
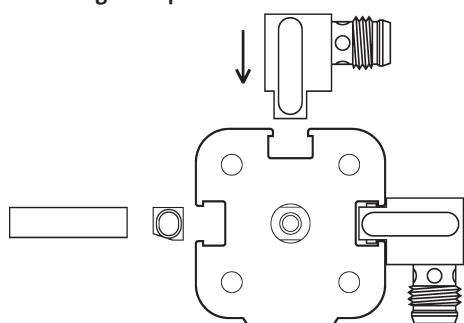
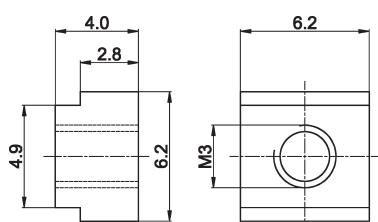
cable device



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

cable connector with rotatable outside thread

connector device

**mounting example****positive stop with clamp fastening AM000076****ACCESSORIES**

article-no.	description	material
AM000076	positive stop for T-groove	zinc
AM000087	cable clip for T-groove	plastic

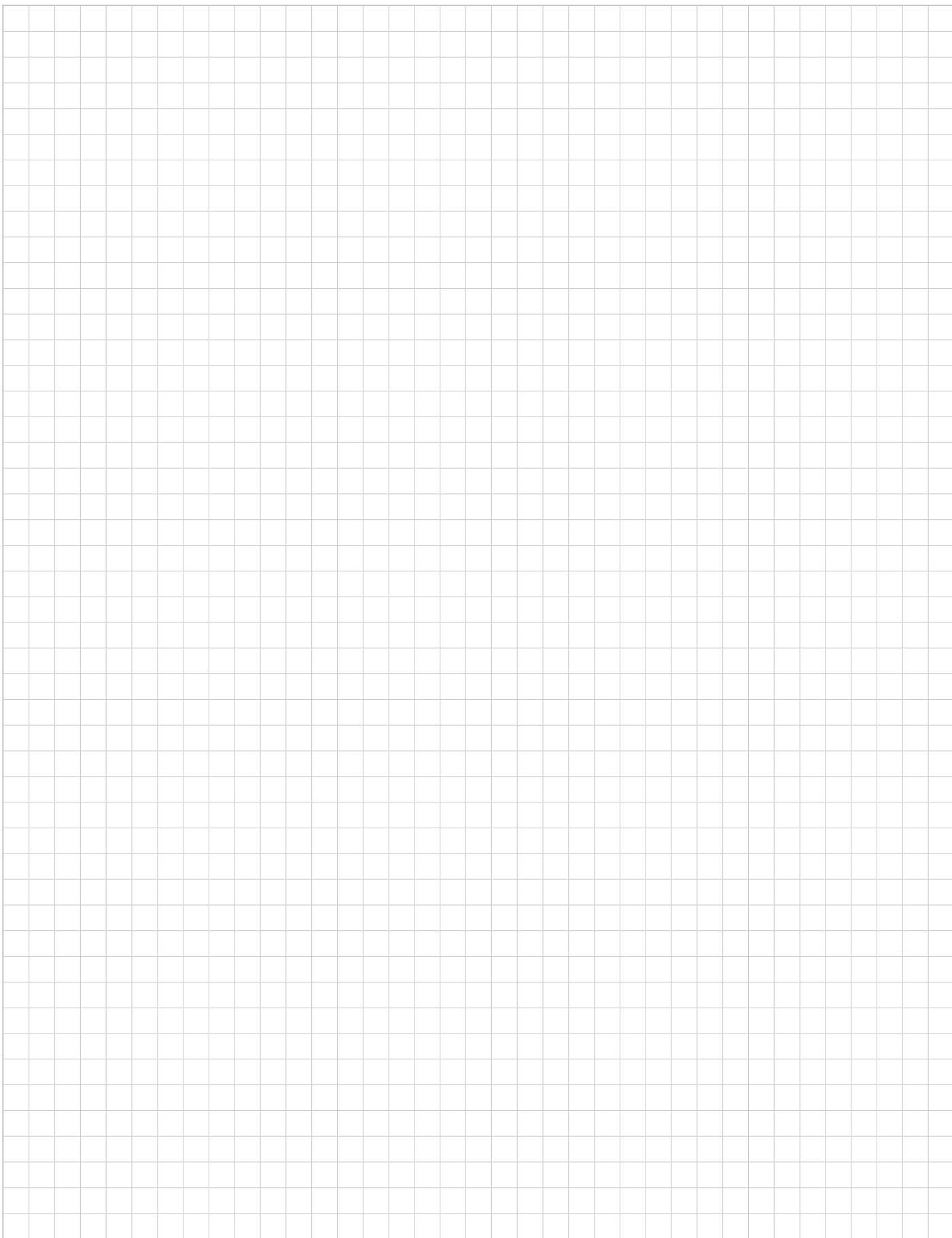
This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

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 (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

NOTES

A large grid of squares, approximately 20 columns by 25 rows, intended for handwritten notes.