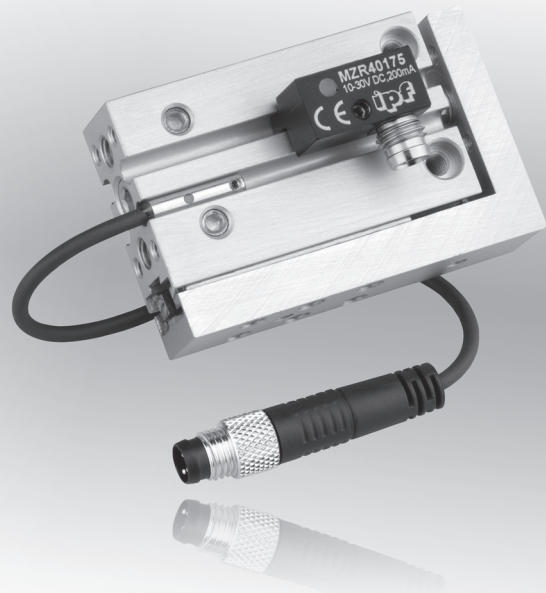


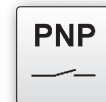
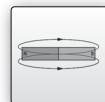
design 10 x 16 x 19.5mm
Ø3.6 x 20.5mm
Ø4.0 x 20.5mm

C-groove cylinder sensor surface middle area

- ✓ temperature range up to +130°C
- ✓ wear-free and shock resistant because of fully electronic operation
- ✓ robust metal housing
- ✓ high locking power
- ✓ fast mounting
- ✓ very short design
- ✓ LED-display, except for +130°C design
- ✓ connection with cable, M8-connector, M8- or M12-cable connector



cylinder sensors for 4mm round groove for festo or SMC cylinders



description

With automatic machines there is often the requirement to detect the motional processes within pneumatic and hydraulic cylinders and to detect exact piston positions. For this, magnetic cylinder sensors are used.

The electronic cylinder sensors of the **MZR4** series enable contactless position recognition in the control system in a way which avoids wear and tear. They offer a high sensing range and at the same time, have a small design.

As magnetic fields penetrate all non-magnetizable materials, the sensor magnets can for example sense through non-ferrous metal walls, steel walls, aluminium walls, plastic walls or wooden walls.

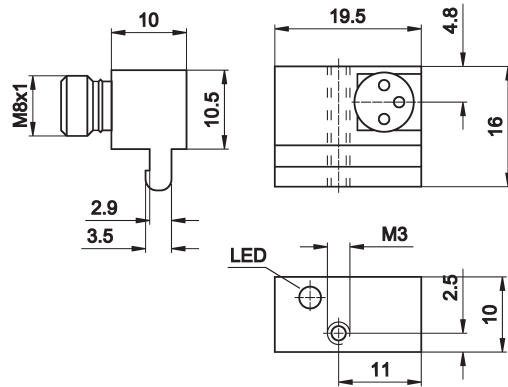
The electronic cylinder sensors can be used on all cylinders made by leading manufacturers and are directly exchangeable against three-wire system technology reed switches. Thanks to an absolute wear-free operation they guarantee highest safety in operation and reliability.

When exchanging cylinder sensors the positive stop **AM000111** is offered in order to keep the same position.

application examples

- ▶ detecting the position of a cylinder piston
- ▶ limit of travel enquiry

article-no.	MZR40175
version	for festo cylinders
temperature	-25 ... +70°C
connection	M8-connector



TECHNICAL DATA

sensor surface (active)	middle area
output signal	pnp, no
operating voltage	10 ... 30V DC
current consumption (w/o load)	≤ 15mA
output current (max. load)	200mA
voltage drop (max. load)	2.0V DC
hysteresis	typical 1mm
repeatability	±0.1mm
sampling frequency	1kHz
display (signal)	yellow LED
short-circuit protection	+
reverse polarity protection	+
housing material	zinc diecast
design	5x6.5x27mm
operating temperature	-25 ... +70°C
system of protection (EN 60529)	IP67
connection	M8-connector, 3-pin
connection accessories	e.g. VK200071 , 2m, angular, PUR
mounting accessories	-

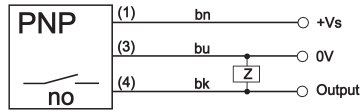
article-no.	MZR40158	MZR401A8
version	for festo cylinders	for festo cylinders
temperature	-25 ... +130°C	-25 ... +70°C
connection	M8-cable connector, teflon, 300mm	2m cable
TECHNICAL DATA		
sensor surface (active)	middle area	middle area
output signal	pnp, no	pnp, no
operating voltage	10 ... 30V DC	10 ... 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
hysteresis	typical 1mm	typical 1mm
repeatability	±0.1mm	±0.1mm
sampling frequency	1kHz	1kHz
display (signal)	-	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
housing material	zinc diecast	stainless steel
design	Ø3.6x20.5mm	Ø3.6x20.5mm
operating temperature	-25 ... +130°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67
connection	M8-cable connector, teflon, 3-pin	2m cable, PUR, 3-wire
connection accessories	e.g. VK200075 , 2m, straight, PUR	-
mounting accessories	adaptor, AM000081 , positive stop AM000111	adaptor, AM000081 , positive stop AM000111

article-no.	MZR40128	MZR40178
version	for festo cylinders	for festo cylinders
temperature	-25 ... +70°C	-25 ... +70°C
connection	M12-cable connector, PUR, 300mm	M8-cable connector, PUR, 300mm
article-no.	MZR401E8	MZR401F8
version	for festo cylinders	for festo cylinders
temperature	-25 ... +70°C	-25 ... +70°C
connection	M12-cable connector, PUR, 600mm	M8-cable connector, PUR, 600mm
article-no.	-	MZR401K8
version	-	for festo cylinders
temperature	-	-25 ... +70°C
connection	-	M8-cable connector, PUR, 1000mm
preferential types are printed bold!		
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)	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC
hysteresis	typical 1mm	typical 1mm
repeatability	±0.1mm	±0.1mm
sampling frequency	1kHz	1kHz
display (signal)	yellow LED	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
housing material	stainless steel	stainless steel
design	Ø3.6x20.5mm	Ø3.6x20.5mm
operating temperature	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67
connection	M12-cable connector, PUR, 3-pin	M8-cable connector, PUR, 3-pin
connection accessories	e.g. VK200025 , 2m, straight, PUR	e.g. VK200075 , 2m, straight, PUR
mounting accessories	adaptor AM000081 , positive stop AM000111	adaptor AM000081 , positive stop AM000111

article-no.	MZR401A9	MZR40129	MZR40179
version	for SMC cylinders	for SMC cylinders	for SMC cylinders
temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
connection	2m PUR cable	M12-cable connector, 300mm	M8-cable connector, 300mm
article-no.	-	MZR401E9	MZR401F9
version	-	for SMC cylinders	for SMC cylinders
temperature	-	-25 ... +70°C	-25 ... +70°C
connection	-	M12-cable connector, 600mm	M8-cable connector, 600mm
preferential types are printed 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)	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	150mA	150mA	150mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
hysteresis	typical 1mm	typical 1mm	typical 1mm
repeatability	±0.1mm	±0.1mm	±0.1mm
sampling frequency	1kHz	1kHz	1kHz
display (signal)	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
housing material	stainless steel	stainless steel	stainless steel
design	Ø4.0x20.5mm	Ø4.0x20.5mm	Ø4.0x20.5mm
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	2m PUR cable, 3-wire	M12-cable connector, PUR, 3-pin	M8-cable connector, PUR, 3-pin
connection accessories	-	e.g. VK200025 , 2m, straight, PUR	e.g. VK200075 , 2m, straight, PUR
mounting accessories	positive stop AM000111	positive stop AM000111	positive stop AM000111

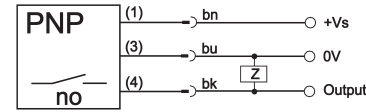
connection

cable device



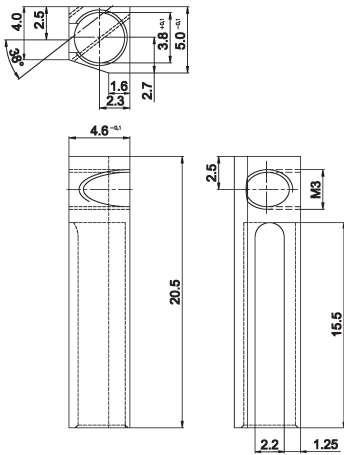
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

connector device

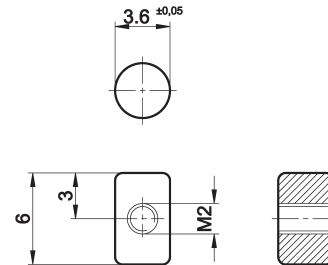


M12-cable connector with rotatable outer thread

adaptor AM000081



positive stop AM000111



ACCESSORIES

article-no.	description	material
AM000081	adaptor for T-groove	aluminium
AM000111	positive stop for C-groove	stainless steel

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets **ipf-SENSORFLEX**" or search our website for "VK".

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