

cylinder sensors 1200

docian			
design	10 x 16 x 19.5mm Ø3.6 x 20.5mm Ø4.0 x 20.5mm		
C-groove cylinder	sensor surface	middle area	CE SU DIA
✓ temperature r	ange up to +130°C		
 ✓ wear-free and electronic ope ✓ robust metal h 		cause of fully	
	•		
	ower		
✓ high locking p			Com 1
 ✓ high locking p ✓ fast mounting 			Can Internet
 ✓ high locking p ✓ fast mounting ✓ very short des 		sign	(Class

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

description

CE

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.

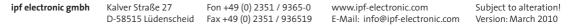
As magnetic fields penetrate all non-magnetizable materials, the sensor magnets can for example sense through non-ferrous metal walls, steel walls, aluminium walls, plastic walls or wooden walls.

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 absolut 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

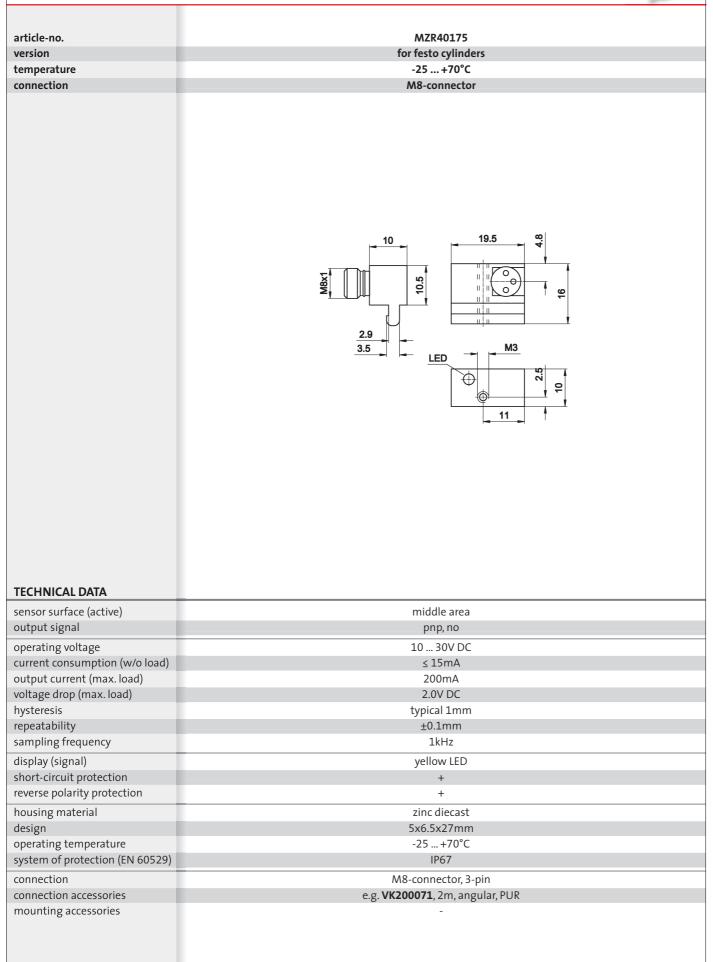
- detecting the position of a cylinder piston
- limit of travel enquiry







1200 cylinder sensors









dechouic		cylinder sensors 1200	
article-no. version temperature connection	MZR40158 for festo cylinders -25 +130°C M8-cable connector, teflon, 300mm	MZR401A8 for festo cylinders -25 +70°C 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	
urrent consumption (w/o load)	≤ 15mA	≤ 15mA	
utput current (max. load)	150mA	150mA	
oltage drop (max. load)	2.0V DC	2.0V DC	
nysteresis epeatability	typical 1mm ±0.1mm	typical 1mm ±0.1mm	
ampling frequency	1kHz	1kHz	
isplay (signal)		yellow LED	
hort-circuit protection	+	+	
everse polarity protection	+	+	
iousing material	zinc diecast	stainless steel	
esign	Ø3.6x20.5mm	Ø3.6x20.5mm	
perating temperature	-25 +130°C	-25 +70°C	
ystem of protection (EN 60529)	IP67	IP67	
onnection	M8-cable connector, teflon, 3-pin	2m cable, PUR, 3-wire	
onnection accessories nounting accessories	e.g. VK200075, 2m, straight, PUR adaptor, AM000081, positive stop AM000111	adaptor, AM000081, positive stop AM000111	

1200 cylinder sensors

	MZR40128	MZR40178	
version	for festo cylinders	for festo cylinders -25 +70°C M8-cable connector, PUR, 300mm	
temperature	-25 +70°C		
connection	M12-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 !			
	50	37	
TECHNICAL DATA	XCIM		
	middle area		
sensor surface (active)			
sensor surface (active) output signal	middle area	middle area	
sensor surface (active) output signal operating voltage	middle area pnp, no	middle area pnp, no	
sensor surface (active) output signal operating voltage current consumption (w/o load)	middle area pnp, no 10 30V DC	middle area pnp, no 10 30V DC	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load)	middle area pnp, no 10 30V DC ≤ 10mA	middle area pnp, no 10 30V DC ≤ 10mA	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	middle area pnp, no 10 30V DC ≤ 10mA 200mA	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC	middle area pnp, no 10 30V DC ≤ 10mA 200mA	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal)	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED +	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED +	
sensor surface (active) putput signal operating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + +	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + +	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + stainless steel	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material design	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + stainless steel Ø3.6x20.5mm	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel Ø3.6x20.5mm	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material design operating temperature	$\begin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel Ø3.6x20.5mm -25 +70°C	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material design operating temperature system of protection (EN 60529)	$\begin{tabular}{ c c c c } \hline & & & & & & & & & & & & & & & & & & $	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel Ø3.6x20.5mm -25 +70°C IP67	
sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material design operating temperature system of protection (EN 60529) connection	middle area pnp, no 10 30V DC ≤ 10mA 200mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + stainless steel Ø3.6x20.5mm -25 +70°C IP67 M12-cable connector, PUR, 3-pin	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel Ø3.6x20.5mm -25 +70°C IP67 M8-cable connector, PUR, 3-pin	
TECHNICAL DATA sensor surface (active) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) hysteresis repeatability sampling frequency display (signal) short-circuit protection reverse polarity protection housing material design operating temperature system of protection (EN 60529) connection accessories mounting accessories	$\begin{tabular}{ c c c c } \hline & & & & & & & & & & & & & & & & & & $	middle area pnp, no 10 30V DC ≤ 10mA 200mA 2.0V DC typical 1mm ±0.1mm 1kHz yellow LED + + + stainless steel Ø3.6x20.5mm -25 +70°C IP67	



Subject to alteration! com Version: March 2010



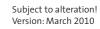


cylinder sensors 1200

article-no. version temperature connection	MZR401A9 for SMC cylinders -25 +70°C 2m PUR cable	MZR40129 for SMC cylinders -25 +70°C M12-cable connector, 300mm	MZR40179 for SMC cylinders -25 +70°C 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 mounting accessories	- positive stop AM000111	e.g. VK200025 , 2m, straight, PUR positive stop AM000111	e.g. VK200075 , 2m, straight, PUR positive stop AM000111

CE

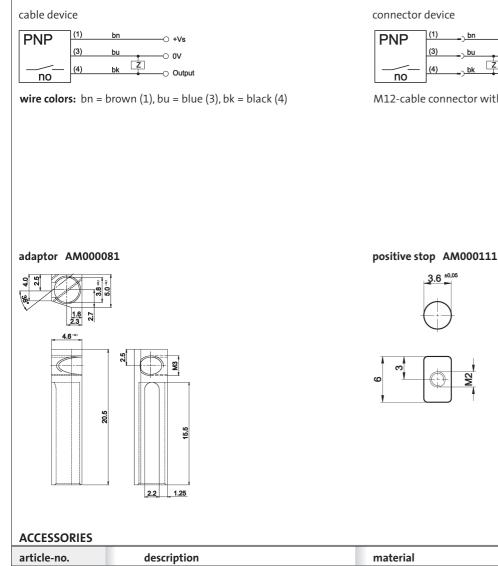
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1200 cylinder sensors

connection



adaptor for T-groove

positive stop for C-groove

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".

aluminium

stainless steel

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

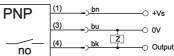


AM000081

AM000111



connector device



3.6 ±0,05

M12-cable connector with rotatable outer thread