design   **M5x0.5**
          M8x1
          M12x1

flush   sensing range   **40mm**
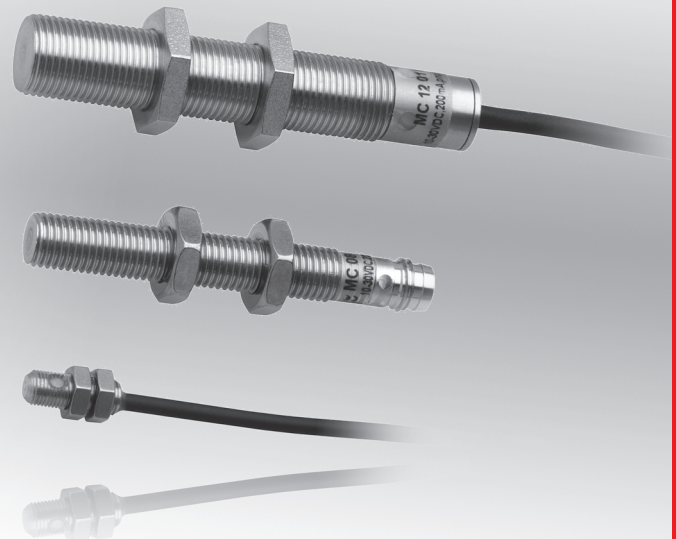
✓ **stainless steel housing**

✓ **LED display**

✓ **integrated amplifier**

✓ **short-circuit and reverse polarity protection**

✓ **devices with thread to EURONORM**

✓ **high sampling frequency and sensing range**

✓ **connection with cable, M8- or M12-connector**

**super small M5x0.5
temperatures up to +130°C**

DC PNP °C
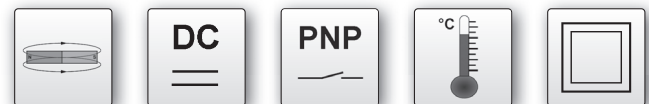
description

In control technology, these magnet sensors serve the task of non-contact and wear-free position recognition. They are used everywhere where inductive proximity switches reach the limits of their usefulness.

Compared with inductive sensors, they offer a significantly higher sensing range.

Even the smallest model, M5x0.5mm, has a 40mm sensing range on the magnet **AM000009**.

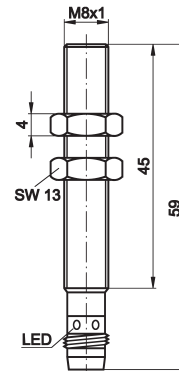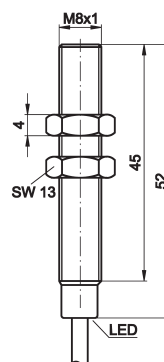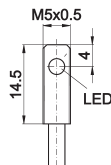With the appropriate type of magnets, even greater sensing ranges can be achieved.

The object to be recognized has to be provided with a magnet, as it is only this that the sensors react to.

As magnet fields penetrate all non-magnetizable materials, the sensors can recognize magnets e.g. through non-ferrous metal walls, stainless steel walls, aluminium walls, plastic walls or wooden walls.

application examples

▶ position recognition from the exterior through stainless steel pipes

▶ speed inquiries in the case of rotating shafts

▶ position inquiries on chain guides

▶ inquiries concerning door positions

article-no.	MC050176	MC0501A6	MC080100	MC080170
connection	cable connector	cable	cable	M8-connector
temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C

TECHNICAL DATA

	MC050176	MC0501A6	MC080100	MC080170
sensing range *	40mm	40mm	40mm	40mm
output signal	pnp, no	pnp, no	pnp, no	pnp, no
operating voltage	8 ... 30V DC	8 ... 30V DC	8 ... 30V DC	8 ... 30V DC
current consumption (w/o load)	≤ 20mA	≤ 20mA	≤ 20mA	≤ 20mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
hysteresis (Sn)	5 ... 15%	5 ... 15%	5 ... 15%	5 ... 15%
real sensing range Sr	Sn ±10%	Sn ±10%	Sn ±10%	Sn ±10%
sampling frequency	1kHz	1kHz	1kHz	1kHz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
housing material	stainless steel	stainless steel	stainless steel	stainless steel
design	M5x0.5	M5x0.5	M8x1	M8x1
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	M8-cable connector, 3-pin	cable, 2m, PUR	cable, 2m, PUR	M8-connector, 3-pin
connection accessories	e.g. **VK200075**, 2m, straight, PUR	-	-	e.g. **VK200075**, 2m, straight, PUR
mounting accessories	**AY000045**	**AY000045**	**AY000047**	**AY000047**

* referring to the magnet
AM000009

article-no.	MC120100	MC120120	MC120155
connection	cable	M12-connector	cable
temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +130°C

TECHNICAL DATA

sensing range *	40mm	40mm	40mm
output signal	pnp, no	pnp, no	pnp, no
operating voltage	8 ... 30V DC	8 ... 30V DC	8 ... 30V DC
current consumption (w/o load)	≤ 20mA	≤ 20mA	≤ 20mA
output current (max. load)	200mA	200mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
hysteresis (Sn)	5 ... 15%	5 ... 15%	5 ... 15%
real sensing range Sr	Sn ±10%	Sn ±10%	Sn ±10%
sampling frequency	1kHz	1kHz	1kHz
status display	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
housing material	stainless steel	stainless steel	stainless steel
design	M12x1	M12x1	M12x1
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +130°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	cable, 2m, PUR	M12-connector, 3-pin	cable, 2m, silicone
connection accessories	-	e.g. **VK200025**, 2m, straight, PUR	-
mounting accessories	**AY000049**	**AY000049**	**AY000049**

* referring to the magnet
AM000009

connection

cable device M5, M8, M12

PNP	(1)	bn	+Vs
	(3)	bu	0V
no	(4)	bk	Output
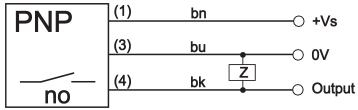
connector device M5, M8, M12

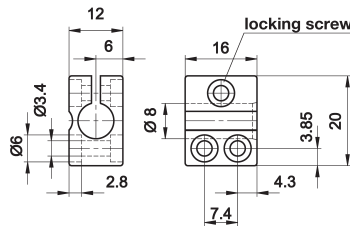| PNP	(1)	bn	+Vs
	(3)	bu	0V
no	(4)	bk	Output
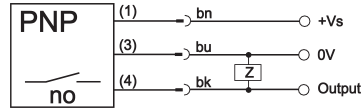
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

quick clips

AY000045
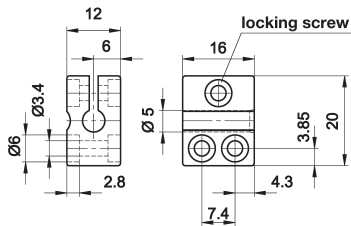
AY000047

AY000049
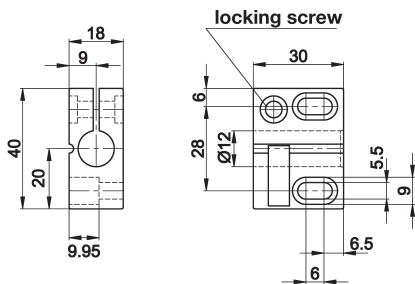
quick clips with positive stop
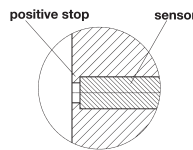
ARTICLE-NO.	DESCRIPTION	DESIGN	NOTES
AY000045	quick clip	Ø5mm	PA6 / galvanized steel screws
AY000047	quick clip	Ø8mm	PA6 / galvanized steel screws
AY000048	quick clip with positive stop	Ø8mm	PA6 / galvanized steel screws
AY000049	quick clip	Ø12mm	PA6 / galvanized steel screws
AY000050	quick clip with positive stop	Ø12mm	PA6 / galvanized steel screws
AM000001	accessories, magnet, bariumferrite	Ø20mm / length 6.5mm	bore 4.3mm
AM000002	accessories, magnet, bariumferrite	Ø30mm / length 15mm	bore 5.6mm
AM000009	accessories, magnet, bariumferrite	Ø30mm / length 10mm	can be fastened with adhesive
AM000010	accessories, magnet, plastic jacket	Ø35mm / length 17mm	bore 5.6mm
AM000020	accessories, magnet, neodelta	Ø10mm / length 3mm	can be fastened with adhesive

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.