

MZT8

ONLY IN BLUE: PRECISE, TRIED AND TRUE

Magnetic cylinder sensors

SICK
Sensor Intelligence.

TAKING SWITCHING RELIABILITY AND USER-FRIENDLINESS TO THE NEXT LEVEL

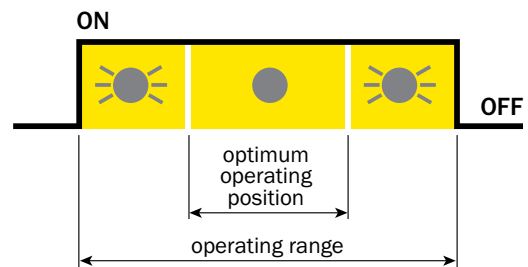
The tried and true MZT8 magnetic cylinder sensor is now ever better. Its new visual installation aid optimizes precision, whilst the additional power LED improves handling. Add to that NAMUR and high-temperature variants, and there you have it: a reliable cylinder sensor which can be used in all the demanding applications.

LED as visual installation aid with monitoring function

The yellow LED ensures that the MZT8 is mounted correctly at the ideal switching point. When the sensor is placed there, the LED permanently lights up during switching operations. If the yellow LED flashes, the magnetic field strength has changed. The cylinder piston's position is then at the upper or lower outer zone of the operating range.

The sensor switches reliably and provides an output signal within the entire operating range, even in the outer zones. If the LED does not light up, the cylinder piston is located outside of the sensor's operating range. The magnetic field is then too weak for a proper output signal and the sensor does not switch. The values for the optimum switching point and the outer zones are already preset ex works for the new MZT8 variants.

✔ Easy installation and mounting position monitoring



Bright power LED

In addition to the visual installation aid, the new variants of the MZT8 cylinder sensor are fitted with a green LED. This shines permanently if the sensor is in operation and therefore fulfills a monitoring role. The bright green LED is immediately visible – even from a long distance.

✔ Direct feedback facilitates handling and maintenance



SAFE AND RELIABLE – EVEN IN CHALLENGING ENVIRONMENTS

Outstanding explosion protection according to ATEX

The MZT8 magnetic cylinder sensor meets the highest standards for use in explosive environments. The NAMUR version fulfills the requirements of the highest ATEX category 1D, 1G (dust and gas) for use in areas with constant, long-term, or frequent explosive atmospheres. SICK has also versions in the ATEX category 3D, 3G for use in areas with a lower risk of explosion. These explosion-protected variants of the MZT8 are suitable for use in silo hatches, elevators, mills, or conveyors.

✔ Very high level of safety



Perfect for high temperature applications

The high-temperature variants of the MZT8 magnetic cylinder sensor can be used safely at temperatures of up to 100 °C. Even in tough environments, such as the metal-working industry, they always provide reliable switching signals.

✔ Suitable for temperatures of up to 100 °C



Rugged design ensures long service life

There are variants with an enclosure rating of up to IP 69K for applications where the MZT8 cylinder sensor comes into frequent contact with water or is subject to high-pressure cleaning. The rugged housing and electronics are resistant to cleaning agents, cooling lubricants, and other production chemicals.

✔ Process safety and minimal maintenance

QUICK AND EASY: DROP-IN MOUNTING WITH COMBINATION SCREW

Compact and suitable for use with all T-slot cylinders

Its sophisticated product concept makes the MZT8 cylinder sensor the no. 1 choice for all mounting and handling processes requiring extremely precise position monitoring.

Its housing length (just 24 millimeters) makes it particularly ideal for short stroke cylinder applications. As the eccentric screw is placed in the middle of the sensor, the MZT8 can be installed directly into the end positions of the cylinder.

✔ High degree of efficiency – entire cylinder stroke usable



Screw being fitted with a flat-head screwdriver



Screw being fitted with an Allen key

Simply insert and fix in place in no time

With its innovative housing design, the MZT8 magnetic cylinder sensor can be easily inserted into any common T-slot from above. A clever mechanism locks and fixes the sensor perfectly in place: Once the sensor has been inserted, the captive stainless steel screw is tightened simply with only a quarter turn. A flat-head screwdriver will tighten as well as an Allen key in the universal head of the rugged screw.

The stainless steel screw also prevents the sensor from slipping or shifting in the slot, even in the event of heavy vibrations. It mechanically locks the sensor firmly in place in the slot – regardless of any size tolerances!

Another advantage of the captive eccentric screw is that it is much easier to mount the sensor in any position, which is not the case with many other sensors – even if mounting it overhead.

✔ Installed and secured in no time at all

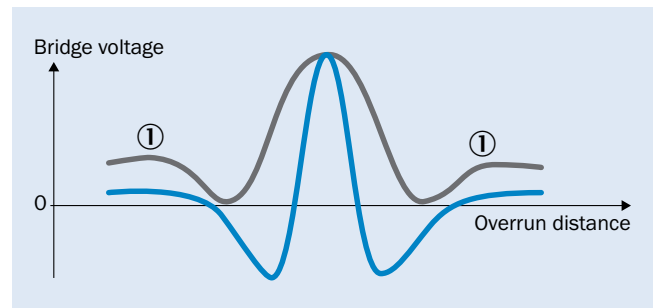
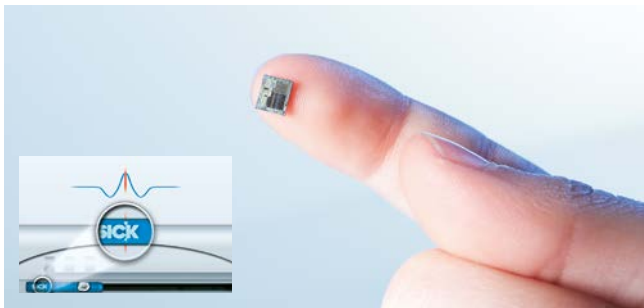
OUTSTANDING FUNCTIONALITY AND CUSTOMIZED SOLUTIONS

Switching accuracy without multiple switching: ASIC from SICK

The combination of patented GMR technology and ASIC developed by SICK allows the piston position to be clearly detected, even with cylinders with weak magnetic fields. This intelligent technology suppresses the side lobes of the magnetic field and, in doing so, prevents multiple switching (① in the diagram, right).

Furthermore, ASIC from SICK enables accurate sensitivity settings to be made; in fact, these are five times more accurate than the settings in conventional cylinder sensors. The low tolerance levels also increase the degree of precision in terms of detecting the switching point.

✔ High performance and precision through patented technology



A range of connecting cable and signal line variants

The outer sheath on the MZT8 connecting cables is available as a resilient PUR version or a budget-friendly PVC version, with different lengths to choose from; the PUR version also comes with optional M8 or M12 connectors.

✔ A variant to meet every need

SICK: your reliable partner for customized solutions

As your professional business partner, SICK will assess and meet your specific requirements. After analyzing the necessary product adjustments, we work with you to define the specifications for your customized solution.

✔ Finding the perfect solution together



Cable

- Length
- Material
- Special features (e.g., oil resistance)

Electronics

- Switching output (NPN/PNP)
- Normally open / normally closed
- Pulse stretching



Connection

- M8
- M12
- Special connector

Mounting adapter

- Customized mounting concept for quick and secure installation of the sensor

Switching characteristics

- Hysteresis
- Switch-on delay
- Response sensitivity

TYPICALLY SICK: QUICK MOUNTING, PRECISE SWITCHING, HIGH TEMPERATURE STABILITY



Product description

The MZT8 magnetic cylinder sensor from SICK is the flexible solution for piston position detection in pneumatic actuators. The sensor can be inserted into cylinders extremely easily and tightened using the combination screw with just a quarter-turn of a flat head screwdriver or an Allen wrench. The way the sensor sits firmly in the slot is just one of the reasons why the MZT8 is ideally suited to use in pneumatic cylinders

with T-slots. The patented GMR technology and ASIC from SICK ensure that the sensor switches precisely and only on one single occasion. Multiple switching is suppressed, increasing machine performance. The MZT8 is available in a range of variants up to IP 69K enclosure rating and with temperature stability up to 100 °C. This guarantees a long service life for the sensor and low maintenance costs.

At a glance

- High-temperature variants: temperature-resistant up to 100 °C
- Combination screw for quick mounting
- Enclosure ratings: IP 67, IP 68, IP 69K
- Very short sensor housing for use in short stroke cylinders
- PNP or NPN switching output, PUR or PVC cable, M8 or M12 connection can be selected
- Can be used in all cylinders, linear slides, and grippers with T-slots and with many round body, tie-rod, and dove-tail groove cylinders using an adapter

Your benefits

- Can be used in temperatures up to 100 °C
- Very rugged housing with enclosure rating IP 67, IP 68, or IP 69K extends the service life of the sensor
- Increases machine performance thanks to precise, single switching
- Quick and easy mounting using Allen wrench or flat head screwdriver
- Saves time during initial installation and when replacing the device, as the sensor is very easy to insert in the slot from above. No need to dismantle the cylinder end caps
- Low maintenance costs, as the sensor is resistant to shocks and vibrations and therefore does not move out of its position in the slot



Additional information

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→ www.mysick.com/en/MZT8

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

Cylinder type	T-slot
Cylinder types with adapter	Profile cylinder Tie rod cylinder Roundbody cylinder Cylinders with dovetail slots SMC rail cylinder CDQ2 SMC rail cylinder ECDQ2
Housing length	24 mm
Output type	PNP / NPN (depending on type)
Switching frequency typ.	1,000 Hz
Output function	NO / NC (depending on type)
Enclosure rating	IP 68 ¹⁾ IP 67 ¹⁾ , IP 69K ²⁾ IP 68 ¹⁾ , IP 69K ²⁾ (depending on type)
Special features	Temperature-resistant up to 100 °C (depending on type)

¹⁾ According to EN 60529 (IP67/IP68)

²⁾ According to DIN 40050 (IP69K)

Mechanics/electronics

Supply voltage	10 V DC ... 24 V DC / 10 V DC ... 30 V DC (depending on type)
Power consumption ¹⁾	≤ 10 mA
Voltage drop	≤ 2.2 V
Output current I_a	≤ 50 mA / ≤ 200 mA (depending on type)
Protection class	III
Magnetic field sensitivity, typ.	2.6 mT / 2.8 mT (depending on type)
Overrun distance typ.	3 mm / 9 mm (depending on type)
Hysteresis typ.	≤ 0.5 mT
Repeatability ²⁾	≤ 0.1 mT
Reverse polarity protection	✓
Short-circuit protection	✓
Power-up pulse protection	✓
Ambient operating temperature	0 °C ... +100 °C / -30 °C ... +80 °C (depending on type)
Shock/vibration	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Housing material	Plastic
Housing cap material	PA12
Cable material	PUR / PVC (depending on type)
Conductor cross-section	0.14 mm ²

¹⁾ Without load.

²⁾ Ub and Ta constant.

Ordering information

MZT8 - overrun distance short - Temperature-resistant up to 100 °C

- **Ambient temperature operation:** 0 °C ... +100 °C
- **Overrun distance typ.:** 3 mm
- **Supply voltage:** 10 V DC ... 24 V DC
- **Output current I_a:** ≤ 50 mA
- **Magnetic field sensitivity:** 2.6 mT

Output type	Output function	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.
PNP	NO	Cable, 3-wire, 2 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSTKW0	1073269
		Cable, 3-wire, 5 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSTKWB	1073270
		Cable, 3-wire, 10 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSTKWD	1073271
		Cable with connector M8, 3-pin, 0,3 m	PVC	IP 68, IP 69K	Cd-002	MZT8-2V6PSTKPO	1073268

MZT8 - overrun distance short

- **Ambient temperature operation:** -30 °C ... +80 °C
- **Overrun distance typ.:** 3 mm
- **Supply voltage:** 10 V DC ... 30 V DC
- **Output current I_a:** ≤ 200 mA
- **Magnetic field sensitivity:** 2.6 mT

Output type	Output function	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.		
PNP	NC	Cable, 3-wire, 2 m	PUR	IP 68, IP 69K	Cd-003	MZT8-03VPO-KU0	1044931		
		Cable, 3-wire, 10 m	PUR	IP 68, IP 69K	Cd-003	MZT8-03VPO-KUD	1060429		
		Cable with connector M8, 3-pin, 0.3 m	PUR	IP 68	Cd-004	MZT8-03VPO-KPO	1044930		
	NO	Cable, 3-wire, 2 m	PUR	IP 68, IP 69K	Cd-001	MZT8-03VPS-KU0	1044469		
			PVC	IP 67, IP 69K	Cd-001	MZT8-03VPS-KW0	1044349		
		Cable, 3-wire, 3 m	PUR	IP 68, IP 69K	Cd-001	MZT8-03VPS-KUA	1044466		
		Cable, 3-wire, 5 m	PUR	IP 68, IP 69K	Cd-001	MZT8-03VPS-KUB	1044470		
			PVC	IP 67, IP 69K	Cd-001	MZT8-03VPS-KWB	1048314		
		Cable, 3-wire, 10 m	PUR	IP 68, IP 69K	Cd-001	MZT8-03VPS-KUD	1054051		
		Cable with connector M8, 3-pin, 0.3 m	PUR	IP 68	Cd-002	MZT8-03VPS-KPO	1044458		
		Cable with connector M8, 3-pin, 0.75 m	PUR	IP 68	Cd-002	MZT8-03VPS-KPD	1044461		
		Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	PUR	IP 68	Cd-002	MZT8-03VPS-KRD	1044464		
		Cable with connector M8, 3-pin, with knurled nuts, 0.5 m	PUR	IP 68	Cd-002	MZT8-03VPS-KRO	1044459		
		Cable with connector M8, 3-pin, with knurled nuts, 5 m	PUR	IP 68	Cd-002	MZT8-03VPS-KRB	1044463		
		Cable with connector M12, 3-pin, 0.3 m	PUR	IP 68	Cd-002	MZT8-03VPS-KQ0	1044460		
		Cable with connector M12, 3-pin, 1 m	PUR	IP 68	Cd-002	MZT8-03VPS-KQD	1058317		
		NPN	NO	Cable, 3-wire, 2 m	PUR	IP 68, IP 69K	Cd-001	MZT8-03VNS-KU0	1044934
					PVC	IP 68, IP 69K	Cd-001	MZT8-03VNS-KW0	1044468
Cable, 3-wire, 3 m	PUR			IP 68, IP 69K	Cd-001	MZT8-03VNS-KUA	1068912		
Cable with connector M8, 3-pin, 0.3 m	PUR			IP 68	Cd-002	MZT8-03VNS-KPO	1044932		
Cable with connector M8, 3-pin, with knurled nuts, 0.5 m	PUR			IP 68	Cd-002	MZT8-03VNS-KRO	1044935		

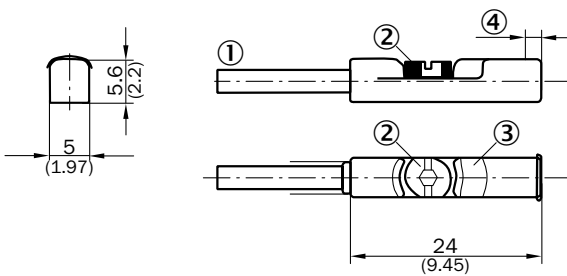
MZT8 - overrun distance long

- **Ambient temperature operation:** -30 °C ... +80 °C
- **Overrun distance typ.:** 9 mm
- **Supply voltage:** 10 V DC ... 30 V DC
- **Output current I_a :** ≤ 200 mA
- **Magnetic field sensitivity:** 2.8 mT

Output type	Output function	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.
PNP	NO	Cable, 3-wire, 2 m	PUR	IP 68, IP 69K	Cd-001	MZT8-28VPS-KU0	1048049
		Cable, 3-wire, 5 m	PVC	IP 67, IP 69K	Cd-001	MZT8-28VPS-KWB	1057030
		Cable with connector M8, 3-pin, 0.3 m	PUR	IP 68	Cd-002	MZT8-28VPS-KP0	1048048
		Cable with connector M8, 3-pin, with knurled nuts, 0.5 m	PUR	IP 68	Cd-002	MZT8-28VPS-KR0	1048050
		Cable with connector M12, 3-pin, 0.3 m	PUR	IP 68	Cd-002	MZT8-28VPS-KQ0	1048051
		Cable with connector M12, 3-pin, 0.5 m	PUR	IP 68	Cd-002	MZT8-28VPS-KQD	1058311
NPN	NO	Cable, 3-wire, 2 m	PUR	IP 68, IP 69K	Cd-001	MZT8-28VNS-KUA	1068535

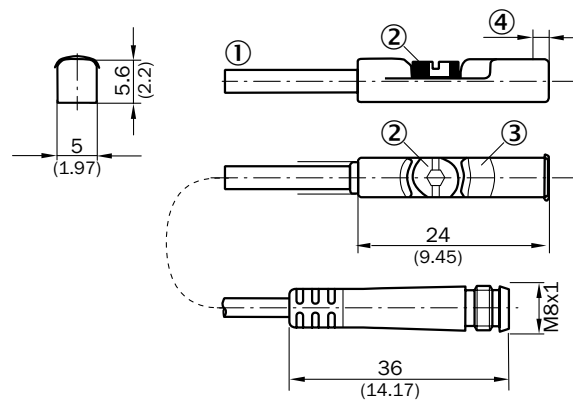
Dimensional drawings (Dimensions in mm (inch))

Cable



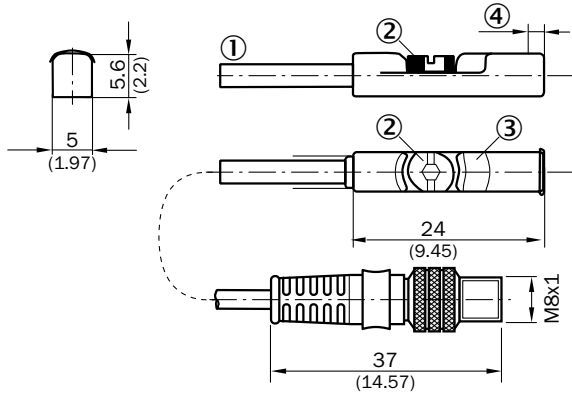
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm; Overrun distance long: 1.7 mm

Cable with connector M8



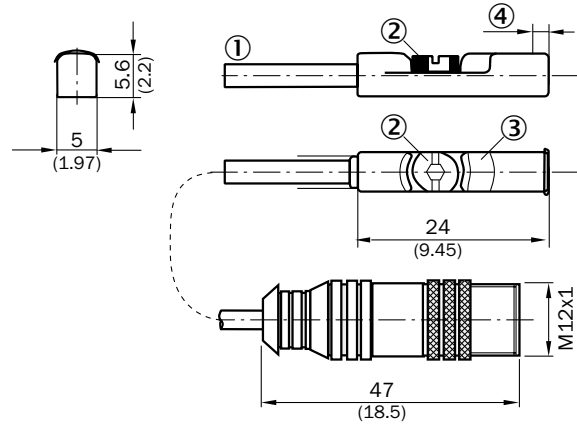
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm; Overrun distance long: 1.7 mm

Cable with connector M8, with knurled nuts



- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm;
Overrun distance long: 1.7 mm

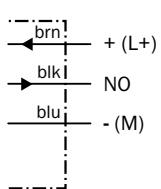
Cable with connector M12



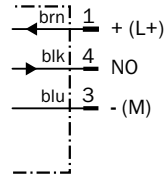
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm;
Overrun distance long: 1.7 mm

Connection diagram

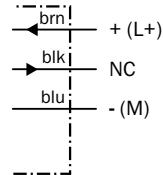
Cd-001



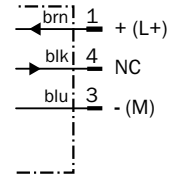
Cd-002



Cd-003



Cd-004



TYPICALLY SICK: PRECISION SENSOR FOR HIGH MACHINE PERFORMANCE



Product description

The MZT8 magnetic cylinder sensor from SICK is the flexible solution for piston position detection in pneumatic actuators. The sensor can be inserted into cylinders extremely easily and tightened using the combination screw with just a quarter-turn of a flat head screwdriver or an Allen wrench. The way the sensor sits firmly in the slot is just one of the reasons why the MZT8 is ideally suited to use in pneumatic cylinders with T-slots. The patented GMR technology and ASIC from SICK ensure that the

sensor switches precisely and only on one single occasion. Multiple switching is suppressed, increasing machine performance. The MZT8 is available in a range of variants up to the IP 69K enclosure rating. This guarantees a long service life for the sensor and low maintenance costs. The yellow LED is used as visual installation aid and makes it easy to install and monitor the mounting position of the sensor. The additional green LED indicates whether the MZT8 is in operation.

At a glance

- Yellow LED as visual installation aid and switching status indicator
- Operating indicator via green LED
- Combination screw for quick mounting
- Enclosure ratings: IP 67, IP 68, IP 69K
- Very short sensor housing for use in short stroke cylinders
- Can be used in all cylinders, linear slides, and grippers with T-slots and with many round body, tie-rod, and dove-tail groove cylinders using an adapter

Your benefits

- Simple installation and monitoring of the assembly position via yellow LED
- Operating indicator via additional high-power green LED
- Very rugged housing with enclosure rating IP 67, IP 68, or IP 69K extends the service life of the sensor
- Increases machine performance thanks to precise, single switching
- Quick and easy mounting using Allen wrench or flat head screwdriver
- Saves time during initial installation and when replacing the device, as the sensor is very easy to insert in the slot from above. No need to dismantle the cylinder end caps.
- Low maintenance costs, as the sensor is resistant to shocks and vibrations and therefore does not move out of its position in the slot



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→ www.mysick.com/en/MZT8_VIA

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

Cylinder type	T-slot
Cylinder types with adapter	Profile cylinder Tie rod cylinder Roundbody cylinder Cylinders with dovetail slots SMC rail cylinder CDQ2 SMC rail cylinder ECDQ2
Housing length	24 mm
Output type	PNP
Switching frequency typ.	1,000 Hz
Output function	NO
Enclosure rating	IP 68 ¹⁾ IP 68 ¹⁾ , IP 69K ²⁾
Special features	Visual installation aid/LED indicator (yellow) Power LED (green)

¹⁾ According to EN 60529 (IP67/IP68)

²⁾ According to DIN 40050 (IP69K)

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Power consumption ¹⁾	≤ 10 mA
Voltage drop	≤ 2.2 V
Output current I_a	≤ 200 mA
Protection class	III
Magnetic field sensitivity, typ.	2.6 mT
Overrun distance typ.	3 mm
Hysteresis typ.	≤ 0.5 mT
Repeatability ²⁾	≤ 0.1 mT
Reverse polarity protection	✓
Short-circuit protection	✓
Power-up pulse protection	✓
Ambient operating temperature	-30 °C ... +80 °C
Shock/vibration	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Housing material	Plastic
Housing cap material	PA12
Cable material	PUR
Conductor cross-section	0.14 mm ²

¹⁾ Without load.

²⁾ Ub and Ta constant.

Ordering information

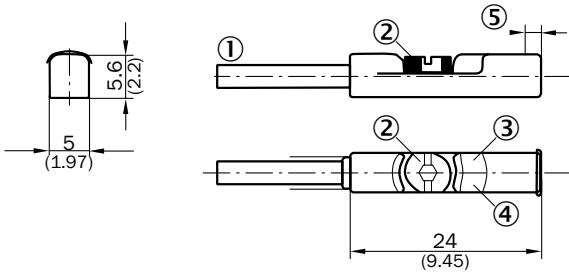
MZT8 VIA

- **Special features:** Visual installation aid/LED indicator (yellow); Power LED (green)
- **Overrun distance typ.:** 3 mm
- **Magnetic field sensitivity, min.:** 2.6 mT

Output type	Output function	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.
PNP	NO	Cable, 3-wire, 2 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSAKU0	1073265
		Cable, 3-wire, 5 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSAKUB	1073266
		Cable, 3-wire, 10 m	PVC	IP 68, IP 69K	Cd-001	MZT8-2V6PSAKUD	1073267
		Cable with connector M8, 3-pin, 0,3 m	PVC	IP 68	Cd-002	MZT8-2V6PSAKP0	1073264

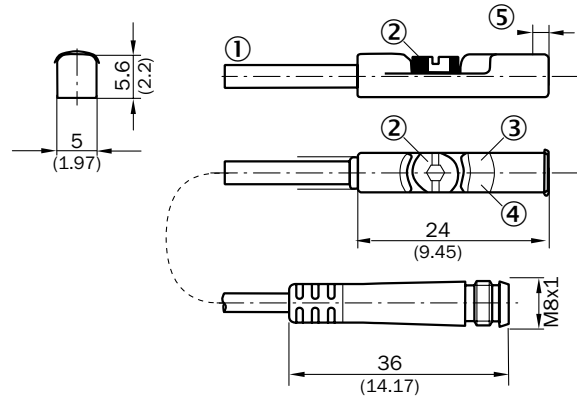
Dimensional drawings (Dimensions in mm (inch))

Cable



- ① Connection
- ② Fixing screw
- ③ Visual installation aid/LED indicator (yellow)
- ④ Power LED, green
- ⑤ Position sensor element; Overrun distance short: 2 mm

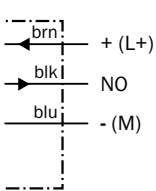
Cable with connector M8



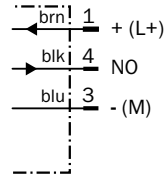
- ① Connection
- ② Fixing screw
- ③ Visual installation aid/LED indicator (yellow)
- ④ Power LED, green
- ⑤ Position sensor element; Overrun distance short: 2 mm

Connection diagram

Cd-001



Cd-002



TYPICALLY SICK: MAXIMUM PERFORMANCE FOR EXPLOSIVE ENVIRONMENTS



Product description

The MZT8 ATEX magnetic cylinder sensor from SICK is the flexible solution for piston position detection in pneumatic actuators in explosive environments. The NAMUR version meets the highest demands and fulfills the requirements of the top ATEX category 1D, 1G (dust and gas) for use in areas with con-

stant, long-term, or frequent explosive atmospheres. SICK has versions in the ATEX category 3D, 3G for use in areas with a lower risk of explosion. With this range of explosion-protected variants, the MZT8 ATEX is suitable for use in silo hatches, elevators, mills, or conveyors.

At a glance

- Variants fulfill the requirements of ATEX categories 1D, 1G and 3D, 3G
- Combination screw for quick mounting
- Enclosure rating: IP 67
- Very short sensor housing for use in short stroke cylinders
- Can be used in all cylinders, linear slides, and grippers with T-slots and with many round body, tie-rod, and dove-tail groove cylinders using an adapter

Your benefits

- Optimum explosion protection: NAMUR version for ATEX category 1D, 1G
- Quick and easy mounting using Allen wrench or flat head screwdriver
- Saves time during initial installation and when replacing the device, as the sensor is very easy to insert in the slot from above. No need to dismantle the cylinder end caps
- Low maintenance costs, as the sensor is resistant to shocks and vibrations and therefore does not move out of its position in the slot



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→ www.mysick.com/en/MZT8_ATEX

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

	Namur, 1G, 1D	3G, 3D
Cylinder type	T-slot	
Cylinder types with adapter	Profile cylinder Tie rod cylinder Roundbody cylinder Cylinders with dovetail slots SMC rail cylinder CDQ2 SMC rail cylinder ECDQ2	
Housing length	24 mm	
Output type	NAMUR ¹⁾	PNP
Switching frequency typ.	1.000 Hz	
Output function	-	NO
Enclosure rating ²⁾	IP 67	

¹⁾ According NAMUR EN 60947-5-6. Using of isolated switch amplifier with certificates of conformity for explosion areas is recommended (U ≤ 20 V; I ≤ 60 mA; P ≤ 100 mW). See "accessories" on page 21.

²⁾ According to EN 60529 (IP67/IP68).

Mechanics/electronics

	Namur, 1G, 1D	3G, 3D
Supply voltage	8.2 V DC ... 20 V DC ¹⁾	10 V DC ... 26 V DC ²⁾
Power consumption ³⁾	≤ 10 mA	
Voltage drop	≤ 2,2 V	
Output current I _a	≤ 60 mA ¹⁾	≤ 50 mA ²⁾
Hazardous area category	1G, 1D	3G, 3D
ATEX marking	II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T135 °C Da	II 3G Ex nA op is IIC T4 Gc X, II 3D Ex tc IIIC T135 °C Dc X
Magnetic field sensitivity, typ.	2.8 mT	
Overrun distance typ.	9 mm	
Hysteresis typ.	≤ 0.5 mT	
Repeatability ⁴⁾	≤ 0.1 mT	
Reverse polarity protection	✓	
Short-circuit protection	✓	
Power-up pulse protection	✓	
Ambient operating temperature	-25 °C ... +80 °C	-20 °C ... +50 °C
Shock/vibration	30 g, 11 ms / 10 ... 55 Hz, 1 mm	
EMC	According to EN 60947-5-2	
Housing material	Plastic	
Housing cap material	PA12	
Cable material	PVC	
Conductor cross-section	0.14 mm ²	

¹⁾ According NAMUR EN 60947-5-6. Using of isolated switch amplifier with certificates of conformity for explosion areas is recommended (U ≤ 20 V; I ≤ 60 mA; P ≤ 100 mW). See "accessories" on page 21.

²⁾ Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.

³⁾ Without load.

⁴⁾ U_b and T_a constant.

Ordering information

MZT8 ATEX, Namur, 1G, 1D

- **Supply voltage:** 8.2 V DC ... 20 V DC¹⁾
- **Output current I_a :** ≤ 60 mA¹⁾
- **Overrun distance typ.:** 9 mm
- **Magnetic field sensitivity, min.:** 2.8 mT

Output type	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.
NAMUR ¹⁾	Cable, 2-wire, 2 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KW0	1069424
	Cable, 2-wire, 3 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KWA	1070456
	Cable, 2-wire, 5 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KWB	1070461
	Cable, 2-wire, 6 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KWDS01	1070462
	Cable, 2-wire, 7 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KWDS02	1070463
	Cable, 2-wire, 10 m	PVC	IP 67	Cd-305	MZT8-2V8-N-KWDS03	1070464
	Cable with connector M8, 2-pin, 0.3 m	PVC	IP 67	Cd-306	MZT8-2V8-N-KP0	1070465
	Cable with connector M8, 2-pin, with knurled nuts, 0.5 m	PVC	IP 67	Cd-306	MZT8-2V8-N-KR0	1070466
	Cable with connector M12, 2-pin, with knurled nuts, 0.3 m	PVC	IP 67	Cd-306	MZT8-2V8-N-KQ0	1070467

¹⁾ According NAMUR EN 60947-5-6. Using of isolated switch amplifier with certificates of conformity for explosion areas is recommended (U ≤ 20 V; I ≤ 60 mA; P ≤ 100 mW). See "accessories" on page 21.

MZT8 ATEX, 3G, 3D

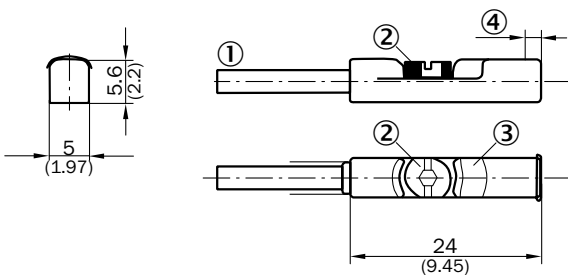
- **Supply voltage:** 10 V DC ... 26 V DC¹⁾
- **Output current I_a :** ≤ 50 mA¹⁾
- **Overrun distance typ.:** 9 mm
- **Magnetic field sensitivity, min.:** 2.8 mT

Output type	Output function	Connection type	Cable material	Enclosure rating	Connection diagram	Model name	Part no.
PNP	NO	Cable, 3-wire, 2 m	PVC	IP 67	Cd-307	MZT8-03VPS-KWX	1073405
		Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	PVC	IP 67	Cd-308	MZT8-03VPS-KRX	1073406
		Cable with connector M12, 3-pin, with knurled nuts, 0.3 m	PVC	IP 67	Cd-308	MZT8-03VPS-KQX	1073407

¹⁾ Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.

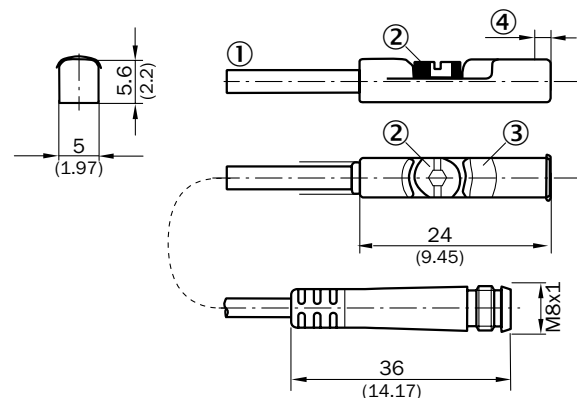
Dimensional drawings (Dimensions in mm (inch))

Cable



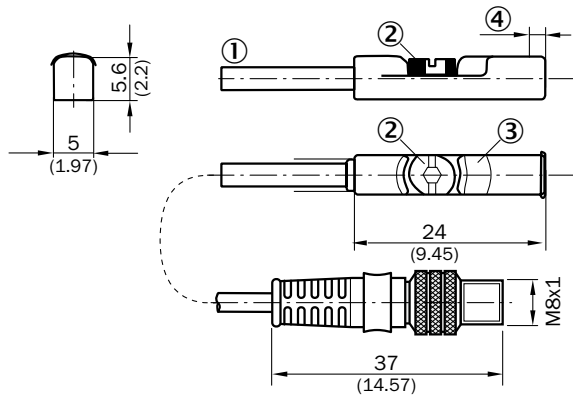
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm; Overrun distance long: 1.7 mm

Cable with connector M8



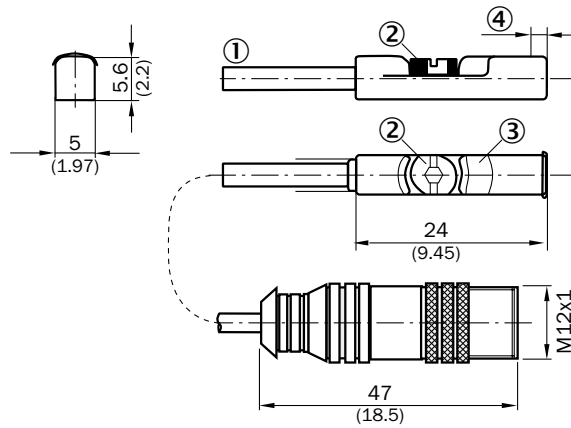
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm; Overrun distance long: 1.7 mm

Cable with connector M8, with knurled nuts



- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm;
Overrun distance long: 1.7 mm

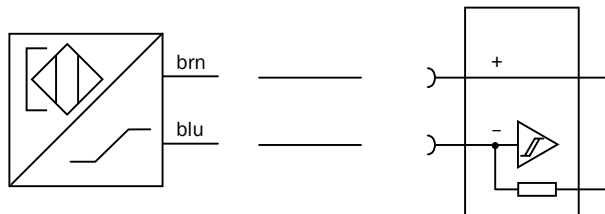
Cable with connector M12



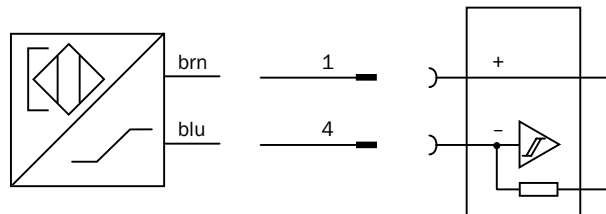
- ① Connection
- ② Fixing screw
- ③ LED indicator
- ④ Position sensor element; Overrun distance short: 2 mm;
Overrun distance long: 1.7 mm

Connection diagram

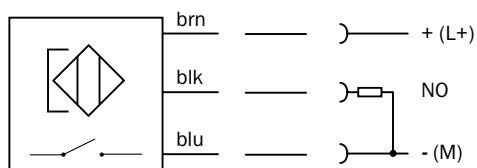
Cd-305



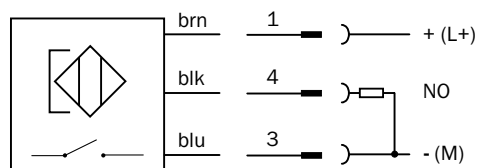
Cd-306



Cd-307




Cd-308




Recommended accessories

Brackets for cylinder sensors


For cylinders with dovetail-slot

Figure	Material	Description	Model name	Part no.
	Aluminum	Mounting bracket for cylinder with dovetail slot	BEF-KHZ-ST1	2022703


For profile cylinders and tie-rod cylinders

Figure	Material	Description	Model name	Part no.
	Zinc diecast	Mounting bracket for integrated profile cylinder/ tie-rod cylinder	BEF-KHZ-PT1	2022702


For round body cylinders

Figure	Material	Description	Model name	Part no.
	Plastic, stainless steel	Mounting bracket on round body cylinder with diameter of 8 mm to 25 mm	BEF-KHZ-RT1-25	5311171
		Mounting bracket on round body cylinder with diameter of 8 mm to 63 mm	BEF-KHZ-RT1-63	5311172
		Mounting bracket on round body cylinder with diameter of 8 mm to 130 mm	BEF-KHZ-RT1-130	5311506

For SMC rails CDQ2 (T-slot)

Figure	Material	Description	Model name	Part no.
	Aluminum	Mounting bracket for mounting on SMC rails CDQ2 (T-slot)	BEF-KHZ-TT2	2046440



For SMC rails ECDQ2 (T-slot)

Figure	Material	Description	Model name	Part no.
	Aluminum	Mounting bracket for mounting on SMC rails ECDQ2 (T-slot)	BEF-KHZ-TT1	2046439



Plug connectors and cables

Connecting cables with female connector

M12, 3-pin, PUR, halogen-free



Figure	Connection type head A	Connection type head B	Connecting cable	Model name	Part no.
	Female connector, M12, 3-pin, straight, unshielded	Cable, open conductor heads	2 m, 3-wire	DOL-1203-G02MC	6039075
			5 m, 3-wire	DOL-1203-G05MC	6039076
	Female connector, M12, 3-pin, angled, unshielded	Cable, open conductor heads	2 m, 3-wire	DOL-1203-W02MC	6039078
			5 m, 3-wire	DOL-1203-W05MC	6039079

M8, 3-pin, PVC, chemical resistant

Figure	Connection type head A	Connection type head B	Connecting cable	Model name	Part no.
	Female connector, M8, 3-pin, straight, unshielded	Cable, open conductor heads	2 m, 3-wire	DOL-0803-G02M	6010785
			5 m, 3-wire	DOL-0803-G05M	6022009
	Female connector, M8, 3-pin, angled, unshielded	Cable, open conductor heads	2 m, 3-wire	DOL-0803-W02M	6008489
			5 m, 3-wire	DOL-0803-W05M	6022010


Female connectors (ready to assemble)

M8, 3-pin

Figure	Connection type head A	Connection type head B	Model name	Part no.
	Female connector, M8, 3-pin, straight, unshielded	Screw-type terminals	DOS-0803-G	7902077
	Female connector, M8, 3-pin, angled, unshielded	Pin penetration	DOS-0803-W	7902078



Male connectors (ready to assemble)

M8, 3-pin

Figure	Connection type head A	Connection type head B	Model name	Part no.
	Male connector, M8, 3-pin, straight, unshielded	Screw-type terminals	STE-0803-G	6037322

Other

Switching unit MZT8 NAMUR

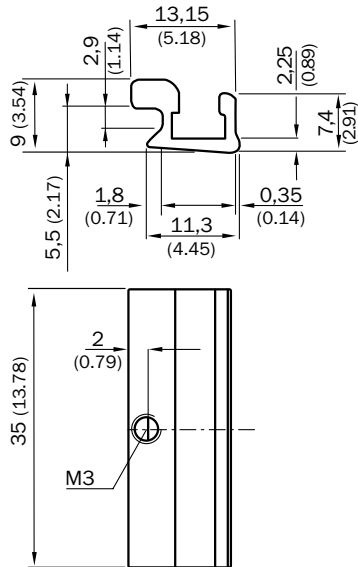
Figure	Description	Model name	Part no.
	Switching unit MZT8 NAMUR, 115 V, 1.5 VA, 3-pin	EN2-2EX-1	6041096
	Switching unit MZT8 NAMUR, 24 V, 0.7 W, 2-pin	EN2-2EX-3	6041095

Dimensional drawings accessories

Brackets for cylinder sensors

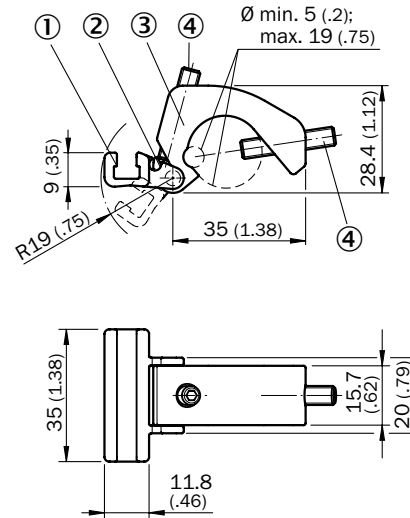
For cylinders with dovetail-slot

BEF-KHZ-ST1



For profile cylinders and tie-rod cylinders

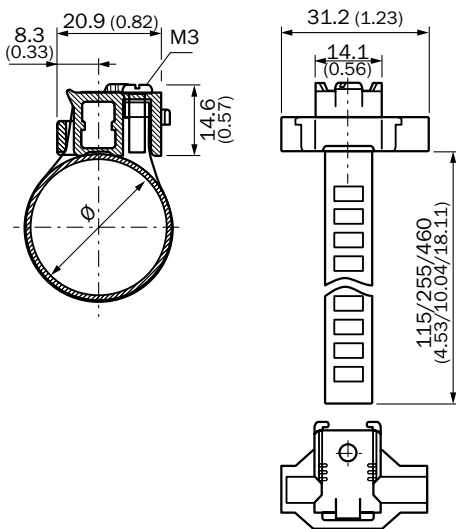
BEF-KHZ-PT1



- ① Sensoradapter with T-Slot for magn.Cylindersensors
- ② Fixing for cable $\varnothing 3,2\text{mm}$ (0.126 inch)
- ③ Cylinderadapter
- ④ Mounting screws M5

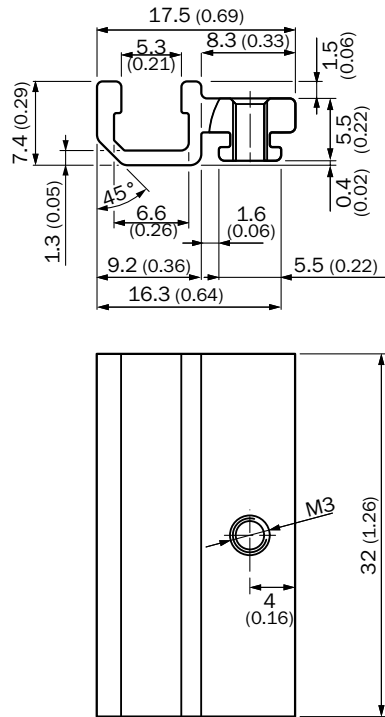
For round body cylinders

BEF-KHZ-RT1-130 / BEF-KHZ-RT1-25 / BEF-KHZ-RT1-63



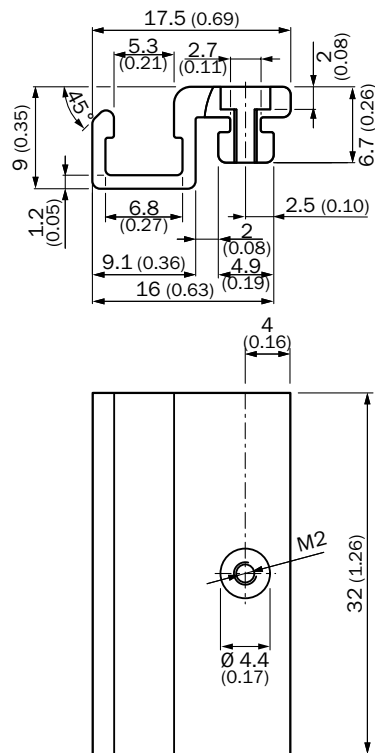
For SMC rails CDQ2 (T-slot)

BEF-KHZ-TT2



For SMC rails ECDQ2 (T-slot)

BEF-KHZ-TT1

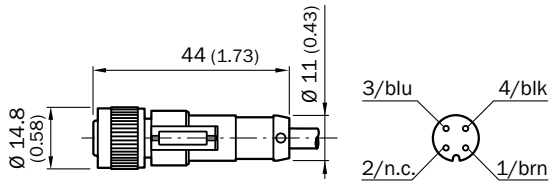


Plug connectors and cables

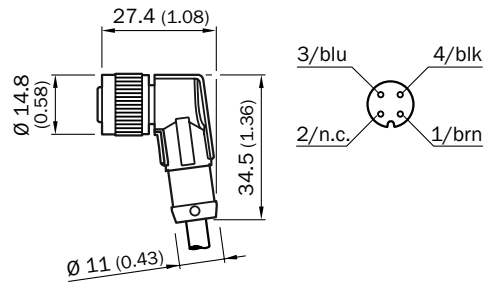
Connecting cables with female connector

M12, 3-pin, PUR, halogen-free

DOL-1203-G02MC / DOL-1203-G05MC

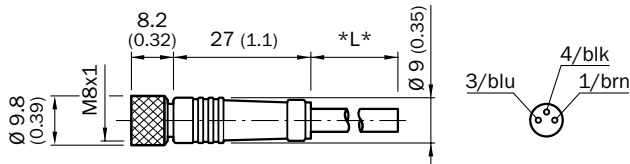


DOL-1203-W02MC / DOL-1203-W05MC

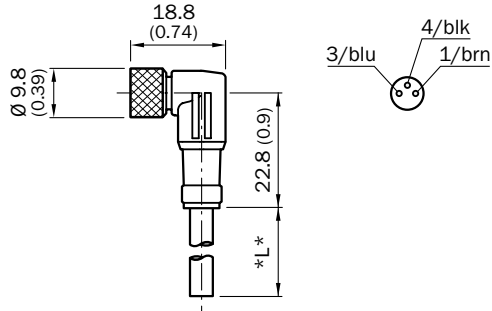


M8, 3-pin, PVC, chemical resistant

DOL-0803-GxxM



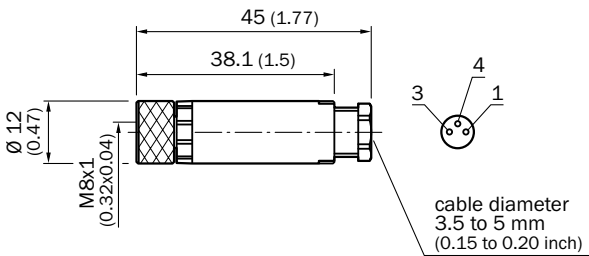
DOL-0803-WxxM



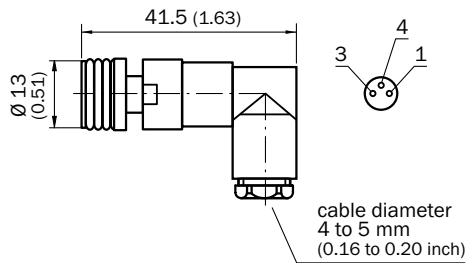
Female connectors (ready to assemble)

M8, 3-pin

DOS-0803-G



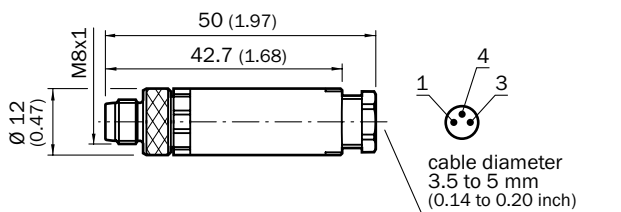
DOS-0803-W



Male connectors (ready to assemble)

M8, 3-pin

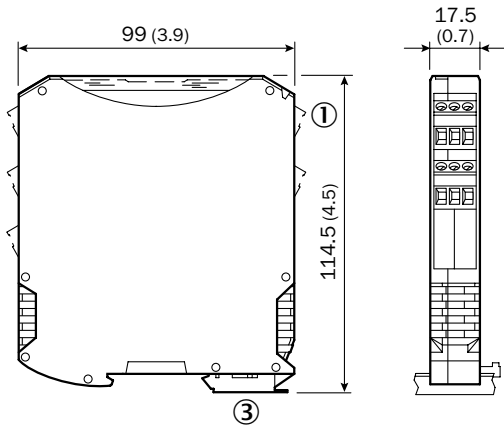
STE-0803-G



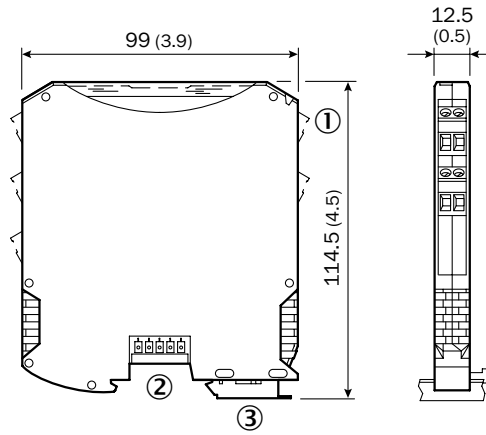
Other

Switching unit MZT8 NAMUR

EN2-2EX-1

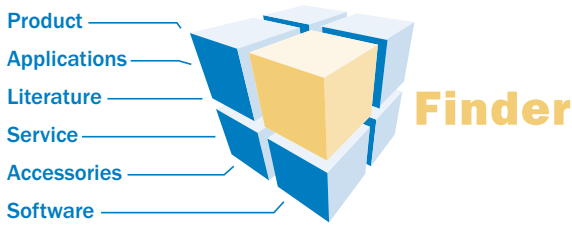


EN2-2EX-3



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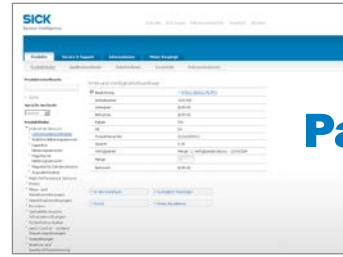
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