

MZC1, RZC1
DROP-IN, INSTALL, DONE

Magnetic cylinder sensors

SICKSensor Intelligence.

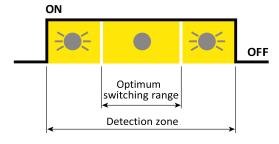
MZC1 UND RZC1: TOP OF THE CLASS FOR C-SLOTS

The MZC1 cylinder sensor is not only a perfect fit for any C-slot, visible setup is also a cinch thanks to optical adjustment indicators.

LED as optical adjustment indicator with monitoring function

The yellow LED ensures that the MZC1 is mounted correctly at the ideal switching point. If the sensor is placed at that position, the LED lights up continuously during switching operations. If the yellow LED flashes, the magnetic field strength has changed. The cylinder piston is located at the upper or lower outer area of the detection zone. The sensor switches faultlessly and provides an output signal within the entire detection zone, even in the outer areas. If the LED does not light up, the cylinder piston is located outside of the sensor's detection zone. In this case, the magnet field is too weak for a reliable output signal and the sensor does not switch. The values for the optimal switching point and the peripheral zones are preset at the factory.

Easy installation and mounting position monitoring



Bright power LED

In addition to the visual adjustment indicator, the new variants of the MZC1 cylinder sensor are fitted with a green LED. It lights up continuously if the sensor is operating, acting as a monitoring function. The bright green LED is immediately visible – even from a long distance.

The universal MZC1 from SICK is now the only sensor you need to reliably monitor the piston position in almost any pneumatic cylinder with a C-slot, regardless of the variants and mechanical tolerances of the cylinder manufacturer. For cylinders without a C-slot, such as round, tie-rod and profile cylinders, an extensive

 \otimes

Direct feedback facilitates handling and maintenance

Magnetic cylindersensors | sic K

Easily installed and quickly secured – in no time at all

range of mounting adapter accessories is

8015324/2016-0

more easily, more quickly or more reliably. Simply insert it and fasten it in place in moments; the new MZC1 housing concept leaves nothing to be desired. A quarter-turn of the eccentric retainer screw is enough to ensure sensor is firmly secured in place. No slipping and the switching point will not wander, even under strong vibrations.

Firm hold for more continuous switching reliability

The MZC1 magnetic cylinder sensor can be mounted in a C-slot using a combination screw. The screw can be tightened using either an Allen key or a flat-head screwdriver.



Screw being fitted with a flat-head screwdriver.

Another advantage: the screw-and-washer assembly is securely attached to the sensor housing and thus cannot be lost.

 $oldsymbol{arphi}$ The screw-and-washer assembly: Truly captive



Screw being fitted with an Allen key.

8015324/2016-03-30

Magnetic cylinders en sors | sic K

MZc1 SENSORS FOR C-SLOT CYLINDERS

DROP-IN, INSTALL, DONE





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The MZC1 magnetic cylinder sensor from SICK is a flexible solution for detecting the piston position in pneumatic actuators. The MZC1 can be mounted directly into all cylinders with standard C-slots. SICK also has an extensive range of adapters which enable the MZC1 to be used with other cylinder types. The MZC1 is characterized by its

At a glance

- Can be used in all cylinders, linear slides, and grippers with a C-slot and in many roundbody and tie-rod cylinders by means of adapters
- Easy to insert the sensor into the slot
- Fixing screw combines hexagon socket screw and slotted screw ele-

ments

Your benefits

- A sensor for a wide range of applications: The sensor design fits into all standard C-slots used around the world, regardless of the cylinder profile or make
- Quick and easy mounting using an Allen key or flat-head screwdriver
- Low maintenance costs as the sensor is resistant to shock and vibrations, meaning it does not slide about in the slot

- simple mounting principle: Insert the sensor into the slot and rotate the fixing screw a quarter turn to fix it securely to the cylinder. Furthermore, the MZC1 is available in a range of variants up to an enclosure rating of IP 69K. This ensures the sensor has a long service life and reduces maintenance costs.
- LED for indicating the output state
- PNP or NPN switching output, PUR or PVC cable, M8 or M12 plug connection available
- Enclosure ratings: IP 67, IP 68, IP 69K
- Saves time on initial installation and when replacing devices as the sensor can be easily inserted into the slot from above. The end caps of the cylinder do not have to be removed.
- Very rugged housing with enclosure rating IP 67, IP 68, or IP 69K extends the service life of the sensor



- www.mysick.com/en/MZc1

For more information, simply 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.

SENSORS FOR C-SLOT CYLINDERS MZc1

Detailed technical data

Features

cylinder type	C-slot
cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2
housing length	23.7 mm
output type	PNP / NPN (depending on type)
switching frequency	1,000 Hz
output function	NO / NC (depending on type)
enclosure rating	IP 68, IP 69K ^{1) 2)} IP 68 ¹⁾ (depending on type)

supply voltage	10 V DC 30 V DC
Power consumption 1)	≤ 8 mA
Voltage drop	≤ 2.5 V
continuous current i _a	≤ 100 mA
Protection class	III
response sensitivity, typ.	2.2 mT / 4.25 mT (depending on type)
overrun distance, typ.	4 mm / 7 mm (depending on type)
hysteresis, typ.	≤ 0.8 mT
repeatability ²⁾	≤ 0.1 mT
reverse polarity protection	I .
short-circuit protection	I .
Power-up pulse protection	I .
ambient operating temperature	−30 °C +80 °C
shock and vibration resistance	30 g, 11 ms / 10 55 Hz, 1 mm
еМс	According to EN 60947-5-2
housing material	Plastic
cable material	PVC / PUR (depending on type)
conductor cross-section	0.09 mm ²
UI File no.	NRKH.E181493

¹⁾ According to EN 60529 (IP 67 / IP 68)

Mechanics/electronics

²⁾ According to DIN 40050 (IP 69K)

MZc1 SENSORS FOR C-SLOT CYLINDERS

Ordering information

Other models g www.mysick.com/en/MZc1

MZC1 – short overrun distance

- Overrun distance, typ.: 4 mm
- Magnetic field sensitivity, min.: 2.2 mT

output	output	connection type	enclosure	cable	connection	type	Part no.
function	type		rating	material	diagram		

¹⁾ Without load.

²⁾ Ub and Ta constant.

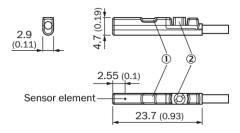
PVC Cd-001 MZC1-2V2PS-KW0 1059740 P68, IP 69K PUR Cd-001 MZC1-2V2PS-KWB 1059741 PVC Cd-001 MZC1-2V2PS-KWB 1059741 PVC Cd-001 MZC1-2V2PS-KWB 1059741 PVR Cd-001 MZC1-2V2PS-KWB 1059739 PVR Cd-001 MZC1-2V2PS-KUB 1059739 PVR Cd-002 MZC1-2V2PS-KPD 1059735 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2PS-KRD 1059737 Cable with connector M8, 3-pin, with knurled nuts, 0.5 m IP 68 PUR Cd-002 MZC1-2V2PS-KRD 1060129 PVR Cd-002 MZC1-2V2PS-KRD 1060129 Cable with connector M8, 3-pin, with knurled nuts, 1 m IP 68 PUR Cd-002 MZC1-2V2PS-KRD 1069736 Cable with connector M8, 3-pin, 0.3 m IP 68 PUR Cd-002 MZC1-2V2PS-KD0 1059736 Cable with connector M8, 3-pin, with knurled nuts, 1 m IP 68 PUR Cd-002 MZC1-2V2PS-KD0 1059744 Cable with connector M8, 3-pin, with knurled nuts, 1 m IP 68 PUR Cd-002 MZC1-2V2NS-KD0 1059744 Cable with connector M8, 3-pin, with knurled nuts, 0.5 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068564 NPN Cable with connector M8, 3-pin, with knurled nuts, 0.5 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068562 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068562 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1059742 Cable with connector M8, 3-pin,								
NO Post Pos					PVC	Cd-001	MZC1-2V2PS-KW0	1059740
Cable, 3-wire, 5 m PUR Cd-001 MZC1-2V2PS-KUB 1059739 PNP Cable with connector M8, 3-pin, 0.3 m PUR Cd-002 MZC1-2V2PS-KP0 1059735 Cable with connector M8, 3-pin, with knurled nuts, 0.3 m PUR Cd-002 MZC1-2V2PS-KR0 1059737 Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 1 m PER Cd-002 MZC1-2V2PS-KRD MZC1-2V2PS-KRD MZC1-2V2PS-KRD 1060129 MZC1-2V2PS-KRD 1060129 MZC1-2V2PS-KRD 1060129 MZC1-2V2PS-KRD 1068563 Cable with connector M12, 3-pin, 0.3 m PER Cd-002 MZC1-2V2PS-KRD MZC1-2V2PS-KRD 1059736 MZC1-2V2PS-KRD 1059736 MZC1-2V2PS-KRD 1059736 Cable with connector M8, 3-pin, 0.3 m PER Cd-002 MZC1-2V2PS-KRD 1059743 MZC1-2V2NS-KPD 1059744 1068564 NPN Cable with connector M8, 3-pin, with knurled nuts, 1 m NPN Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.3 m PER Cd-002 MZC1-2V2NS-KRD MZC1-2V2NS-KRD 1068562 MZC1-2V2NS-KRD 1068562			Cable, 3-wire, 2 m	IP 68, IP 69K	PUR	Cd-001		1059738
Pur					PVC	Cd-001	ZVZPS-KVVB	1059741
PNP Cable with connector M8, 3-pin, 0.3 m			Cable, 3-wire, 5 m	IP 68, IP 69K				
Cable with connector M8, 3-pin, with knurled nuts, 0.3 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 1 m Cable with connector M12, 3-pin, 0.3 m Cable with connector M12, 3-pin, 0.3 m IP 68 PUR Cd-002 MZC1-2V2PS-KRD 1060129 MZC1-2V2PS-KRD 1060129 MZC1-2V2PS-KRD 1068563 Cable with connector M12, 3-pin, 0.3 m IP 68 PUR Cd-002 MZC1-2V2PS-KRDS02 1068563 Cable with connector M12, 3-pin, 0.3 m IP 68 PUR Cd-002 MZC1-2V2PS-KQ0 1059736 Cable with connector M8, 3-pin, 0.3 m IP 68 PUR Cd-001 MZC1-2V2NS-KD0 1059743 Cable with connector M8, 3-pin, with knurled nuts, 1 m IP 68 PUR Cd-002 MZC1-2V2NS-KP0 MZC1- 2V2NS-KRDS03 1068564 NPN Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068562					PUR	Cd-001	MZC1-2V2PS-KUB	1059739
NO Cable with connector M8, 3-pin, with knurled nuts, 1 m		PNP	Cable with connector M8, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2PS-KP0	1059735
NO Cable with connector M8, 3-pin, with knurled nuts, 1 m IP 68 PUR Cd-002 MZC1-2V2PS-KRD 1060129				IP 68	PUR	Cd-002	MZC1-2V2PS-KR0	1059737
Rourled nuts, 1 m				IP 68	PUR	Cd-002	MZC1-2V2PS-KRD	1060129
Cable, 3-wire, 2 m	NO			IP 68	PUR	Cd-002	MZC1-2V2PS-KRDS02	1068563
Cable with connector M8, 3-pin, 0.3 m			Cable with connector M12, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2PS-KQ0	1059736
Cable with connector M8, 3-pin, with knurled nuts, 1 m NPN Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068562 PUR Cd-002 MZC1-2V2NS-KRD 1059742			Cable, 3-wire, 2 m	IP 68, IP 69K	PUR	Cd-001	MZC1-2V2NS-KU0	1059743
Cable with connector M8, 3-pin, with knurled nuts, 1 m NPN Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.3 m PUR Cd-002 MZC1-2V2NS-KRD 1068564 PUR Cd-002 MZC1-2V2NS-KRD 1059742			Cable with connector M8, 3-pin, 0.3 m	IP 68	PUR	Cd-002		1059744
Cable with connector M8, 3-pin, with knurled nuts, 0.5 m Cable with connector M8, 3-pin, with knurled nuts, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KRD 1068562 MZC1-2V2NS-KRD 1059742		NPN		IP 68	PUR	Cd-002	2V2NS-KRDS03	1068564
knurled nuts, 0.3 m			• •	IP 68	PUR	Cd-002	MZC1-2V2NS-KRD	1068562
Cable with connector M12, 3-pin, 0.3 m IP 68 PUR Cd-002 MZC1-2V2NS-KQ0 1077026				IP 68	PUR	Cd-002	MZC1-2V2NS-KR0	1059742
			Cable with connector M12, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2NS-KQ0	1077026

MZC1 – long overrun distance

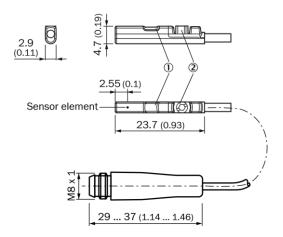
• Overrun distance, typ.: 7 mm

• Magnetic field sensitivity, min.: 4.25 mT

output function	output type	connection type	enclosure rating	cable material	connection diagram	type	Part no.
		Cable, 3-wire, 2 m	IP 68, IP 69K	PUR	Cd-001	MZC1-4V3PS-KU0	1059755
		Cable with connector M8, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-4V3PS-KP0	1059752
NO	PNP	Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	IP 68	PUR	Cd-002	MZC1-4V3PS-KR0	1059753
		Cable with connector M12, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-4V3PS-KQ0	1059754
		Cable, 3-wire, 2 m	IP 68, IP 69K	PUR	Cd-001	MZC1-4V3NS-KU0	1059756
	NPN	Cable with connector M8, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-4V3NS-KP0	1059757



- ① Indication LED
- ② Fixing screw



- ① Indication LED
- ② Fixing screw

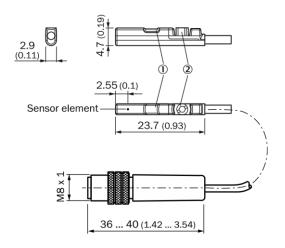
SENSORS FOR C-SLOT CYLINDERS MZc1

Dimensional drawings (Dimensions in mm (inch))

Cable

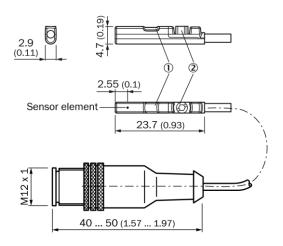
Cable with connector M8

Cable with connector M8, with knurled nuts



- ① Indication LED
- ② Fixing screw

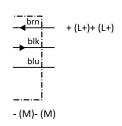
Cable with M12 male connector

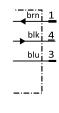


- ① Indication LED
- 2 Fixing screw

Connection diagram

Cd- 001





Cd-002

NONO

MZc1 Via SENSORS FOR C-SLOT CYLINDERS

DROP-IN, INSTALL, DONE







Additional information

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Connection diagram 11
Accessories

The MZC1 VIA magnetic cylinder sensor from SICK is a flexible solution for detecting the piston position in pneumatic actuators. The MZC1 VIA can be mounted directly into all cylinders with standard C-slots. SICK also has an extensive range of adapters which enable the MZC1 VIA to be used with other cylinder types. The MZC1 VIA is charac-

indicator and makes it easier to install the sensor and monitor its mounting position. The additional green LED indicates whether the MZC1 VIA is in operation.

At a glance

- yellow LED as optical adjustment indicator and output state display
- Green LED acts as a status indicator
- Can be used in all cylinders, linear slides, and grippers with a C-slot and in many roundbody and tie-rod cylinders by means of adapters
 - Easy to insert the sensor into the slot

Your benefits

- Easy installation and mounting position monitoring thanks to yellow LED
- Additional powerful green LED acts as a status indicator
- A sensor for a wide range of applications: The sensor design fits into all standard C-slots used around the world, regardless of the cylinder profile or make
- Quick and easy mounting using an

Allen key or flat-head screwdriver

- Fixing screw combines hexagon socket screw and slotted screw elements
- PNP or NPN switching output, PUR or PVC cable, M8 or M12 plug connection available
- Enclosure ratings: IP 67, IP 68, IP 69K
- Low maintenance costs as the sensor is resistant to shock and vibrations, meaning it does not slide about in the slot
- Saves time on initial installation and when replacing devices as the sensor can be easily inserted into the slot from above. The end caps of the cylinder do not have to be removed.
- Very rugged housing with enclosure rating IP 67, IP 68, or IP 69K extends the service life of the sensor

- www.mysick.com/en/MZc1_Via

terized by its simple mounting principle: Insert the sensor into the slot and rotate the fixing screw a quarter turn to fix it securely to the cylinder. The yellow LED serves as an optical adjustment

For more information, simply 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.

SENSORS FOR C-SLOT CYLINDERS MZc1 Via

Detailed technical data

Features

	cylinder type	C-slot	
	cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2	
	housing length	23.7 mm	
	output type	PNP	
	switching frequency	1,000 Hz	
	output function	NO	
	enclosure rating	IP 68, IP 69K ^{1) 2)} IP 68 ¹⁾ (depending on type)	
1)2) 50	special features	Dawer LED (green)	According to (IP 69K)
ng			to EN 60529 (IP

DIN 40050 According

67 / IP 68)

Mechanics/electronics

supply voltage	10 V DC 30 V DC	
Power consumption 1)	≤ 8 mA	
Voltage drop	≤ 2.5 V	
continuous current ia	≤ 100 mA	
Protection class	III	
response sensitivity, typ.	2.2 mT	
overrun distance, typ.	4 mm	
hysteresis, typ.	≤ 0.8 mT	
repeatability 2)	≤ 0.1 mT	
reverse polarity protection	I I	
short-circuit protection	I I	
Power-up pulse protection	I I	
ambient operating temperature	−30 °C +80 °C	
shock and vibration resistance	30 g, 11 ms / 10 55 Hz, 1 mm	
eMc	According to EN 60947-5-2	
housing material	Plastic	MZc1
cable material	PUR	Via
conductor cross-section	0.09 mm²	SENSORS
Ul File no.	NRKH.E181493	FOR C-

SLOT CyLINDERS

Ordering information

Other models g www.mysick.com/en/MZc1_Via

MZC1 VIA

- Special features: visual installation aid/LED indicator (yellow), Power LED (green)
- Overrun distance, typ.: 4 mm

1)1) Ub and Ta constant. Without load.

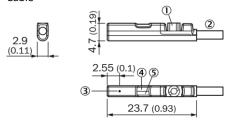
• Magnetic field sensitivity, min.: 2.2 mT

output function	output type	connection type	enclosure rating	cable material	connection diagram	type	Part no.
		Cable, 3-wire, 5 m	IP 68, IP 69K	PUR	Cd-001	MZC1-2V2PSAKUB	1079050
		Cable, 3-wire, 2 m	IP 68, IP 69K	PUR	Cd-001	MZC1-2V2PSAKU0	1079049
NO	PNP	Cable with connector M8, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2PSAKP0	1079046
		Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2PSAKR0	1079047
		Cable with connector M12, 3-pin, 0.3 m	IP 68	PUR	Cd-002	MZC1-2V2PSAKQ0	1079048

SENSORS FOR C-SLOT CYLINDERS MZc1 Via

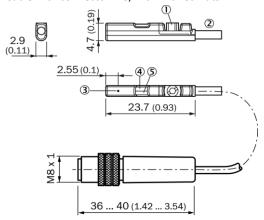
Dimensional drawings (Dimensions in mm (inch))

Cable



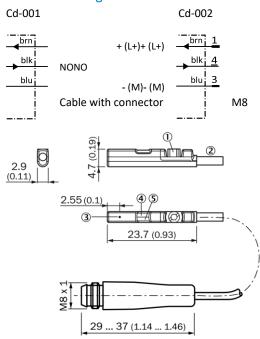
- ① Fixing screw
- ② Fixing screw
- 3 Connection
- 4 Position sensor element
- 5 Visual installation aid/LED indicator (yellow)
- 6 Power LED (green)

Cable with connector M8, with knurled nuts



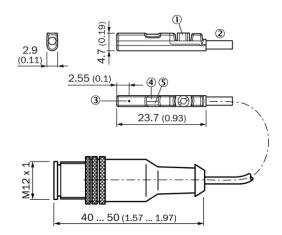
- ① Fixing screw
- 2 Connection
- 3 Position sensor element
- 4 Visual installation aid/LED indicator (yellow)
- 5 Power LED (green)

Connection diagram



- 1 Fixing screw
- 2 Connection
- 3 Position sensor element
- 4 Visual installation aid/LED indicator (yellow)5 Power LED (green)

Cable with M12 male connector



- 1 Fixing screw
- 2 Connection
- 3 Position sensor element
- 4 Visual installation aid/LED indicator (yellow)
- 5 Power LED (green)

DROP-IN, INSTALL, DONE



The RZC1 magnetic cylinder sensor with reed contact from SICK is a flexible solution for detecting the piston position in pneumatic actuators. The RZC1 can be mounted directly into all cylinders with standard C-slots. SICK also has an extensive range of adapters which enable the RZC1 to be used with other cylinder types. The RZC1 is characterized by its

sensor into the slot and rotate the fixing screw a quarter turn to fix it securely to the cylinder. Furthermore, the RZC1 is available in a range of variants up to an enclosure rating of IP 69K. This ensures the sensor has a long service life and

simple mounting principle: Insert the

At a glance

- Can be used in all cylinders, linear slides, and grippers with a C-slot and in many roundbody and tie-rod cylinders by means of adapters
- Easy to insert the sensor into the slot
- Fixing screw combines hexagon socket screw and slotted screw ele-

ments

Your benefits

- A sensor for a wide range of applications: The sensor design fits into all standard C-slots used around the world, regardless of the cylinder profile or make
- Quick and easy mounting using an Allen key or flat-head screwdriver
- Low maintenance costs as the sensor is resistant to shock and vibrations, meaning it does not slide about in the slot
- · LED for indicating the output state

reduces maintenance costs.

- Wide range of options with 3-wire reed, 2-wire reed, and 120 V reed versions
- Enclosure ratings: IP 67, IP 68, IP 69K
- Saves time on initial installation and when replacing devices as the sensor can be easily inserted into the slot from above. The end caps of the cylinder do not have to be removed.
- Very rugged housing with enclosure rating IP 67, IP 68, or IP 69K extends the service life of the sensor



- www.mysick.com/en/rZc1

For more information, simply 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

rZc1 SENSORS FOR C-SLOT CYLINDERS

	ac/dc 3-wire	ac/dc 2-wire
cylinder type	C-slot	
cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2	
housing length	26.3 mm	
output type	Reed	
switching frequency	500 Hz	
output function	NO	
enclosure rating	IP 68 ¹⁾ IP 69K ¹²⁾ IP 67 ¹⁾ (depending on type)	IP 67 ¹⁾

¹⁾ According to EN 60529 (IP 67 / IP 68)

Mechanics/electronics

²⁾ According to DIN 40050 (IP 69K)

 $^{^{\}mbox{\tiny 1}}$ 2) The sensor may only be used when mounted as a complete unit in the slot.

 $^{^{\}rm 2}$) Overvoltage category II. $^{\rm 4)}$ Ub and Ta constant.

	ac/dc 3-wire	ac/dc 2-wire
supply voltage	5 V AC/DC 30 V AC/DC	5 V AC/DC 120 V AC/DC (depending on type)
Power consumption 1)	5 mA	
Voltage drop	< 0.5 V	< 3.2 V
continuous current ia	≤ 500 mA	≤ 50 mA
switching capacity	≤ 10 W	1.5 W / 10 W (depending on type)
Protection class	III	II 2) 3) III (depending on type)
overrun distance, typ.	7 mm	
repeatability 4)	≤ 0.1 mT	
ambient operating temperature	−30 °C +80 °C	
shock and vibration resistance	30 g, 11 ms / 10 55 Hz, 1 mm	
eMc	According to EN 60947-5-2	
housing material	Plastic, PA, strengthened	
cable material	PUR	
conductor cross-section	0.09 mm²	
Ul File no.	NRKH.E181493	

Ordering information

Other models g www.mysick.com/en/rZc1

AC/DC 3-wire

- Electrical wiring: AC/DC 3-wire
- Continuous current I_a: ≤ 500 mA

¹⁾ Without load.

rZc1 SENSORS FOR C-SLOT CYLINDERS

supply voltage	connection	enclosure rating	connection diagram	type	Part no.
5 V AC/DC 30 V AC/DC	Cable, 3-wire, 2 m	IP 68 ¹⁾ , IP 69K ²⁾	Cd-035	RZC1-04ZRS-KU0	1059746
	Cable, 3-wire, 5 m	IP 68 1), IP 69K 2)	Cd-035	RZC1-04ZRS-KUB	1059749
	Cable with connector M8, 3-pin, 0.3 m	IP 67 1)	Cd-036	RZC1-04ZRS-KP0	1059747
	Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	IP 68 1)	Cd-036	RZC1-04ZRS-KR0	1059748
	Cable with connector M8, 3-pin, with knurled nuts, 0.5 m	IP 68 1)	Cd-036	RZC1-04ZRS-KRD	1060130
	Cable with connector M12, 3-pin, 0.3 m	IP 68 1)	Cd-036	RZC1-04ZRS-KQ0	1059745

1) According

to EN

60529 (IP 67 / IP 68)

2) According to DIN 40050 (IP 69K)

AC/DC 2-wire

Electrical wiring: AC/DC 2-wire
 Continuous current I_a: ≤ 50 mA

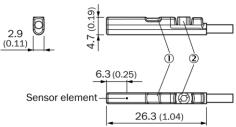
supply voltage	connection	enclosure rat- ing ¹⁾	connection diagram	type	Part no.
5 V AC/DC 120 V AC/DC	Cable, 2-wire, 2 m	IP 67	Cd-037	RZC1-04ZUS-KU0	1059750
	Cable, 2-wire, 2 m	IP 67	Cd-037	RZC1-04ZUS-KU0S01	1065397
5 V AC/DC 30 V AC/DC	Cable, 2-wire, 3 m	IP 67	Cd-037	RZC1-04ZUS-KUAS02	1070035
	Cable, 2-wire, 5 m	IP 67	Cd-037	RZC1-04ZUS-KUBS03	1073286
	Cable with connector M8, 2-pin, 0.3 m	IP 67	Cd-338	RZC1-04ZUS-KP0	1059751

According

to EN 60529 (IP 67 / IP 68)

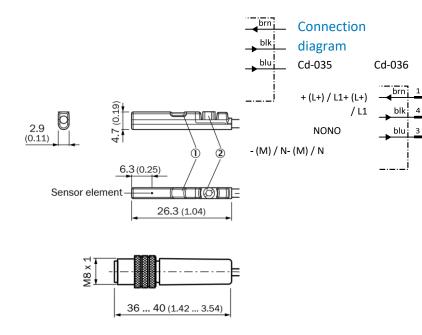
Dimensional drawings (Dimensions in mm (inch))





- ① Indication LED
- ② Fixing screw

Cable with connector M8, with knurled nuts

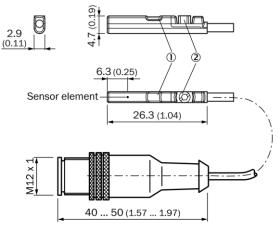


- 1 Indication LED
- 2 Fixing screw

rZc1 SENSORS FOR C-SLOT CYLINDERS

Cable with connector M8

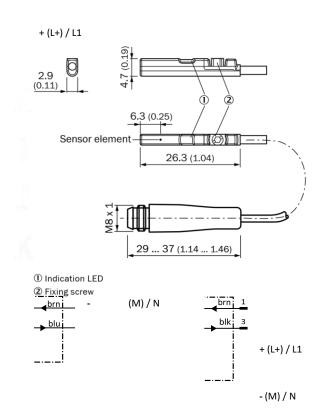
Cable with M12 male connector



① Indication LED ② Fixing screw







Accessories

Mounting systems

Brackets for cylinder sensors

For round body cylinders

Figure	Material	description	type	Part no.
473		Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-12	2077673
		Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-16	2077672
	Plastic, Aluminum	Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-20	2077671
*		Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-25	2077670
		Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-32	2077669

		Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C	BEF-KHZ-RC-40	2077668
P)		Mounting bracket on round body cylinder with piston diameter of 50 mm, $^{\varsigma}$ ambient temperature min 0 $^{\circ}$ C max 50 $^{\circ}$ C	BEF-KHZ-RC-50	2077667
		Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 $^{\circ}\text{C}$ max 50 $^{\circ}\text{C}$	BEF-KHZ-RC-63	2077666
	Stainless steel,	Mounting bracket on round body cylinder with piston diameter of 1 mm 130 mm, ambient temperature min -30° C max 80 $^{\circ}$ C	BEF-KHZ-RC1-130	2077686
Aluminum	Mounting bracket on round body cylinder with piston diameter of 1 mm 25 mm, ambient temperature min –30 °C max 80 °C	BEF-KHZ-RC1-25	2077685	

For SMC rails CDQ2 (T-/C-slot)

Figure	Material	description	type	Part no.
	Aluminum	Mounting bracket for mounting on SMC rails CDQ2 (C-slot)	BEF-KHZ-TC2	2046442

For SMC rails

ECDQ2 (T-/C-slot)

rZc1 SENSORS FOR C-SLOT CYLINDERS

Figure	Material	description	type	Part no.
	Aluminum	Mounting bracket for mounting on SMC rails ECDQ2 (C-slot)	BEF-KHZ-TC1	2046441

Connection systems

Plug connectors and cables

Connecting cables with female connector, M12, 3-pin, PUR, halogen-free

• Cable material: PUR, halogen-free

• Connector material: TPU

Figure	connection type head a	connection type head B	connecting cable	type	Part no.
			2 m, 3-wire	DOL-1203-G02MC	6039075
	Female connector, M12, 3-pin, straight, unshielded	Cable, open conductor heads	5 m, 3-wire	DOL-1203-G05MC	6039076
**	Straight, answerded		10 m, 3-wire	DOL-1203-G10MC	6039077
				DOL-1203-W02MC	6039078
	Female connector, M12, 3-pin, angled, unshielded	Cable, open conductor heads	5 m, 3-wire	DOL-1203-W05MC	6039079
ungled, drismetaed		10 m, 3-wire	DOL-1203-W10MC	6036752	

Connecting cables with female connector, M8, 3-pin, PVC, chemical resistant

• Cable material: PVC

• Connector material: TPU

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

(ready to assemble), M8, 3-pin

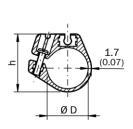
Figure	connection type head a	connection type head B	type	Part no.
	Female connector, M8, 3-pin, straight, unshielded	Screw-type terminals	DOS-0803-G	7902077
O.	Female connector, M8, 3-pin, angled, unshielded	Solder connection	DOS-0803-W	7902078

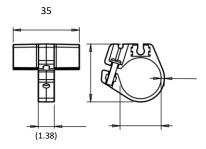
dimensional drawings for accessories SENSORS FOR C-SLOT CYLINDERS

Dimensional drawings (Dimensions in mm (inch))

Brackets for cylinder sensors

BEF-KHZ-RC-xx

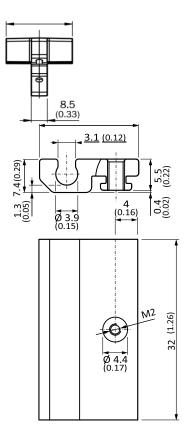




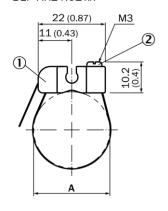
Part no. type Ø d cylinder h piston Ø

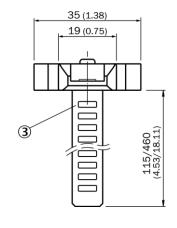
2077673	BEF-KHZ-RC-12	13.5	12	22.4
2077672	BEF-KHZ-RC-16	17.7	16	26.6
2077671	BEF-KHZ-RC-20	21.7	20	30.6
2077670	BEF-KHZ-RC-25	26.8	25	35.7
2077669	BEF-KHZ-RC-32	34	32	42.9
2077668	BEF-KHZ-RC-40	42	42	50.9
2077667	BEF-KHZ-RC-50	52.9	50	61.8

2077666 BEF-KHZ-RC-63 65 63 73.9



BEF-KHZ-RC1-xx



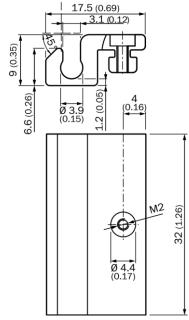


BEF-KHZ-TC2

17.5 (0.69)

- 1 Sensoradapter with C-slot for round body cylinder
- 2 Fixing screw
- 3 Strap

Part no.	type	cylinder piston Ø
2077673	BEF-KHZ-RC1-25	8 25
2077672	BEF-KHZ-RC1-130	8 130

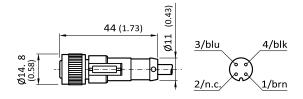


BEF-KHZ-TC1

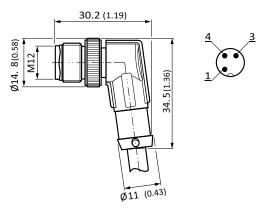
SENSORS FOR C-SLOT CYLINDERS dimensional drawings for accessories

Plug connectors and cables

DOL-1203-GxxMC

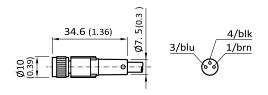


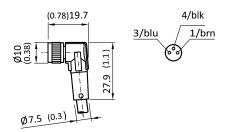
DOL-1203-WxxMC



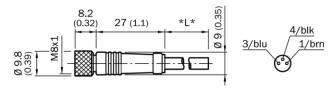
DOL-0803-GxxMC

DOL-0803-WxxMC

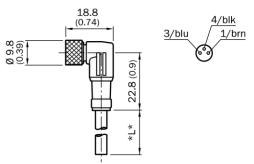




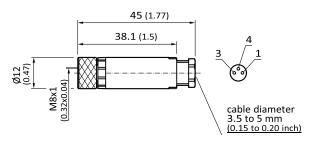
DOL-0803-GxxM



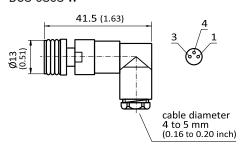
DOL-0803-WxxM



DOS-0803-G



DOS-0803-W



notes SENSORS FOR C-SLOT CYLINDERS

SENSORS FOR C-SLOT CYLINDERS **notes**

notes SENSORS FOR C-SLOT CYLINDERS

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