Data sheet

MZC2-1V7PS-FRX

MZC2

CYLINDER SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
MZC2-1V7PS-FRX	1113680

Other models and accessories ➜ www.sick.com/MZC2

Detailed technical data

Features

Cylinder type	C-slot
Preferred manufacturer slot	Festo, Zimmer, Gimatic
Housing length	19.5 mm
Switching output	PNP
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67
Special features	Completely embedded mounting in the slot, providing protection

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Power consumption	8 mA, without load
Voltage drop	≤ 2.5 V
Continuous current I_a	≤ 50 mA [1]
Protection class	III
Ex area category	3G, 3D
Device labeling	II 3G Ex ec IIC T4 Gc X, II 3D Ex tc IIIC T 135 °C Dc X
Response sensitivity, typ.	1.7 mT
Overrun distance, typ.	2 mm [2]
Hysteresis, typ.	≤ 0.4 mT
Reproducibility	≤ 0.1 mT [3]
Reverse polarity protection	Yes
Short-circuit protection	Yes

[1] Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.
[2] Distance covered by the encoder magnet while the sensor outputs a switching signal.
[3] Supply voltage U_B and constant ambient temperature Ta.

Status indicator LED	Yes
Teach-in	No
Power-up pulse protection	Yes
Ambient operating temperature	–25 °C ... +55 °C
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Connection type	Cable with plug M8, 3-pin, with knurled nut, drag chain use, 0.5 m
Connection type Detail	
Conductor cross section	0.09 mm²
Cable diameter	Ø 1.9 mm
Bending radius	With fixed installation = 12 x cable diameter
	For flexible use = 15 x cable diameter
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PUR
UL File No.	E181493

[1] Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.
[2] Distance covered by the encoder magnet while the sensor outputs a switching signal.
[3] Supply voltage U_B and constant ambient temperature Ta.

Safety-related parameters

$MTTF_D$	1,469 years
DC_{avg}	0 %
T_M (mission time)	20 years

Certificates

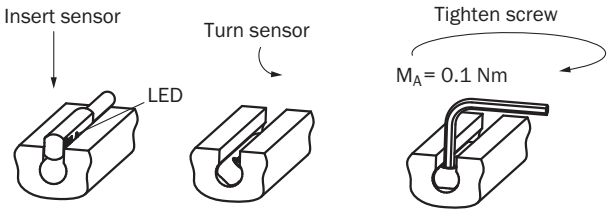
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

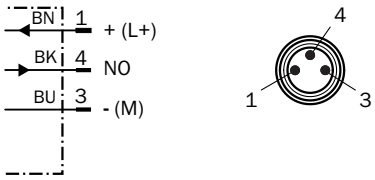
ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104

ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

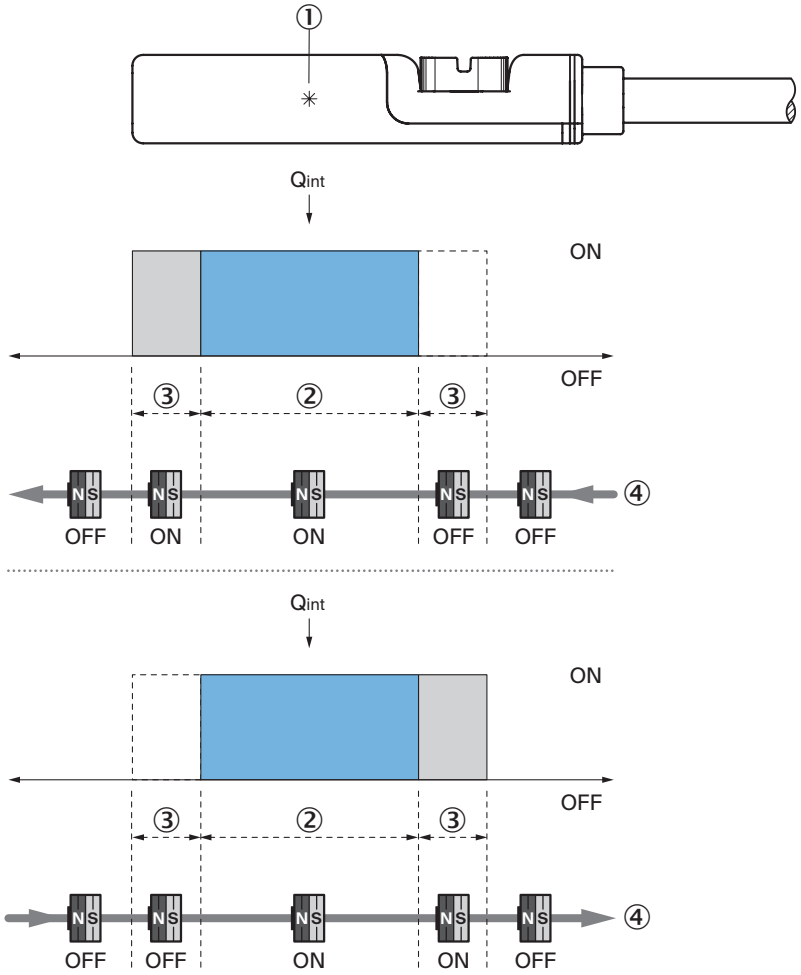
Installation note



Connection diagram Cd-419



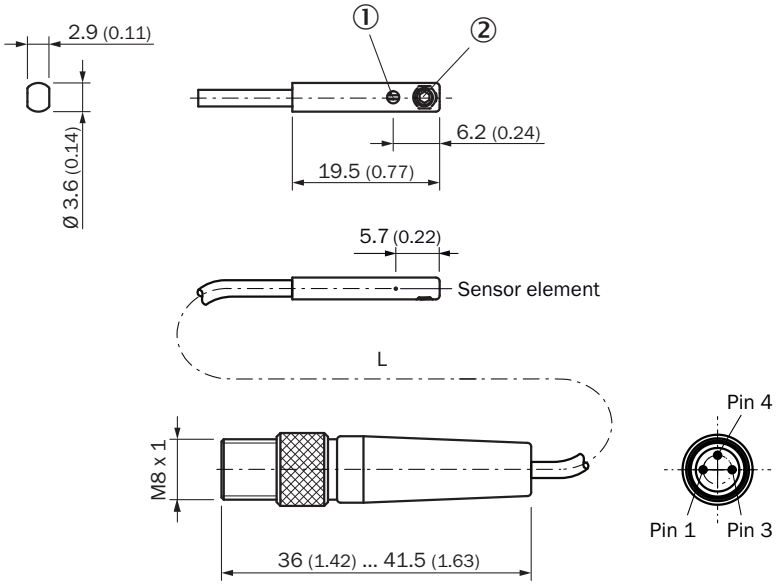
Functional principle Overrun distance



Note: Sensor housing may differ; representation corresponds to “NO contact” output function; overrun distance = switching point width + hysteresis

① Position sensor element
② Width of the switching point
③ Hysteresis
④ Direction of movement of the magnet

Dimensional drawing Cable with plug M8, with knurled nut



Dimensions in mm (inch)
① LED indicator yellow
② threaded pins M2,5 x 2

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1099966	MZC2-1V7NS-FR0	0.5	3
1099965	MZC2-1V7PS-FR0	0.5	3
1113680	MZC2-1V7PS-FRX	0.5	3

SICK AT A GLANCE

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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