MZN-03VPS-KW0

MZN

CYLINDER SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
MZN-03VPS-KW0	1117578

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

Detailed technical data

Features

Cylinder type	IMI Norgren slot
Cylinder types with adapter	Round body cylinder
Housing length	29.5 mm
Switching output	PNP
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 [1]

[1] According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Power consumption	10 mA, without load
Voltage drop	≤ 2 V
Continuous current I_a	≤ 100 mA
Protection class	III
Response sensitivity, typ.	2.8 mT
Overrun distance, typ.	9 mm [1]
Hysteresis, typ.	0.8 mT
Reproducibility	≤ 0.1 mT [2]
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No
Ambient operating temperature	–40 °C ... +80 °C

[1] Distance covered by the encoder magnet while the sensor outputs a switching signal.
[2] Supply voltage U_B and constant ambient temperature Ta.

Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Connection type	Cable, 3-wire, wire end ferrule, 2 m
Connection type Detail	
Conductor cross section	0.12 mm²
Cable diameter	Ø 2.9 mm
Bending radius	With fixed installation > 10 x cable diameter
	For flexible use > 15 x cable diameter
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PVC
Items supplied	1 x mounting clip plugged in
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Distance covered by the encoder magnet while the sensor outputs a switching signal.

[2] Supply voltage U_B and constant ambient temperature Ta.

Safety-related parameters

$MTTF_D$	4,675 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	✓
cULus certificate	✓

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

Insert sensor   Turn sensor   Tighten screw
$M_A = 0.16$ Nm   AF 1.5
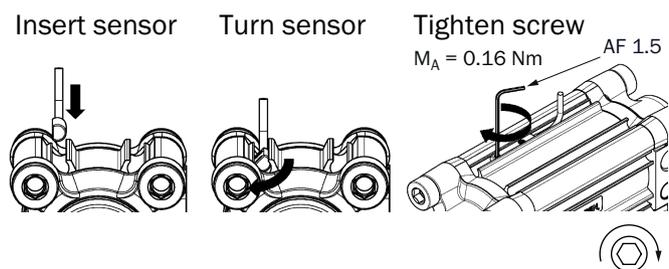
Connection diagram Cd-001

BN — + (L+)

BK — NO

BU — - (M)
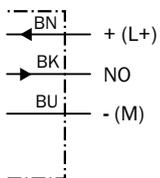
Functional principle Overrun distance

Q_{int}

ON

OFF

③ ② ③

OFF ON ON OFF OFF ④

Q_{int}

ON

OFF

③ ② ③

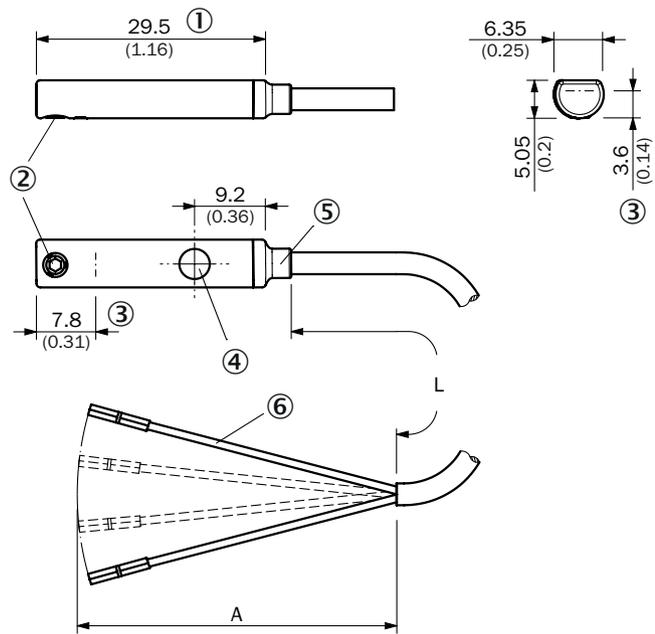OFF OFF ON ON OFF ④
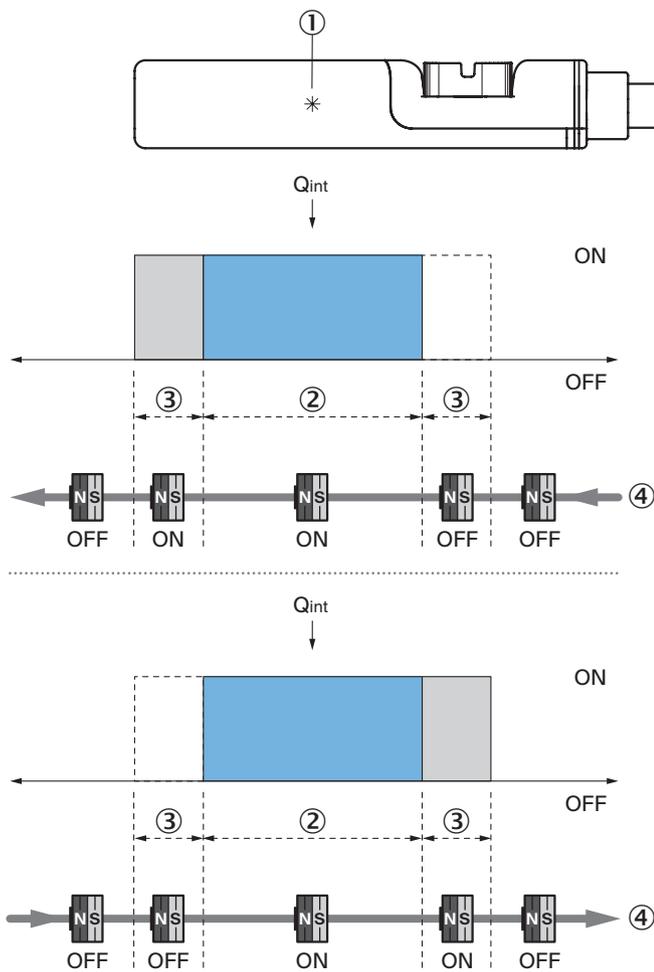
Note: Sensor housing may differ; representation corresponds to "NO contact" output function; overrun distance = switching point width + hysteresis
① Position sensor element
② Width of the switching point
③ Hysteresis
④ Direction of movement of the magnet

Dimensional drawing Cable

Dimensions in mm (inch)
① housing
② Fixing screw SW 1.5
③ Position sensor element
④ Display LED
⑤ Hotmelt sleeve
⑥ Connection

		L	A	
1117578	MZN-03VPS-KW0	2 m	42 mm	3
1117579	MZN-03VNS-KW0	2 m	42 mm	3
1117580	MZN-03VPS-KWB	5 m	42 mm	3
1117575	MZN-03VPS-KWD	10 m	42 mm	3

Recommended accessories

Other models and accessories ➔ www.sick.com/MZN

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting clip for round body cylinder, clamping range 9.2 mm to 10 mm, for piston rod diameter of 8 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-08	7902337
	• **Description:** Mounting clip for round body cylinder, clamping range 10.9 mm to 12 mm, for piston rod diameter of 10 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-10	7901753
	• **Description:** Mounting clip for round body cylinder, clamping range 12.9 mm to 41 mm, for piston rod diameter of 12 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-12	7901754
	• **Description:** Mounting clip for round body cylinder, clamping range 16.9 mm to 18 mm, for piston rod diameter of 16 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-16	7901755
	• **Description:** Mounting clip for round body cylinder, clamping range 21 mm to 22 mm, for piston rod diameter of 20 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-20	7901756
	• **Description:** Mounting clip for round body cylinder, clamping range 26.1 mm to 27.2 mm, for piston rod diameter of 25 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-25	7901757
	• **Description:** Mounting clip for round body cylinder, clamping range 33 mm to 35 mm, for piston rod diameter of 32 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-32	7901758
	• **Description:** Mounting clip for round body cylinder, clamping range 41.4 mm to 42.5 mm, for piston rod diameter of 40 mm • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included	BEF-S-R1-40	7901759

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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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