



ZN-03VPS-KP0

ZN

CYLINDER SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
MZN-03VPS-KP0	1117577

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
Hysteresis, typ.	0.8 mT
Reproducibility	≤ 0.1 mT ¹⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No
Ambient operating temperature	-40 °C ... +80 °C
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

Connection type	Cable with connector M8, 3-pin, drag chain use, 0.3 m	
Connection type Detail		
Cable diameter	Ø 2.9 mm	
Bending radius	With fixed installation > 3 x cable diameter	
	For flexible use > 10 x cable diameter	
Torsion force	± 270° / 10 cm	
Torsion cycles	> 2,000,000	
Cable outlet	Axial	
Material		
Housing	Plastic	
Cable	TPU	
Items supplied	1 x mounting clip plugged in	
UL File No.	NRKH.E181493 & NRKH7.E181493	

¹⁾ 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

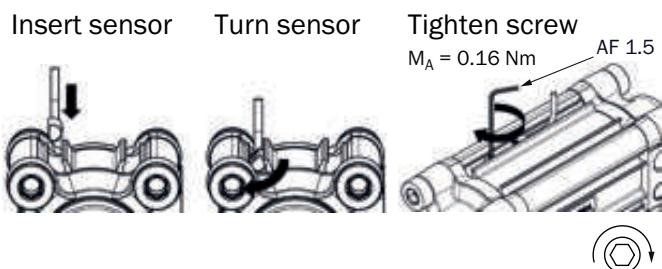
ETIM 8.0

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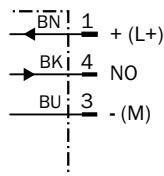
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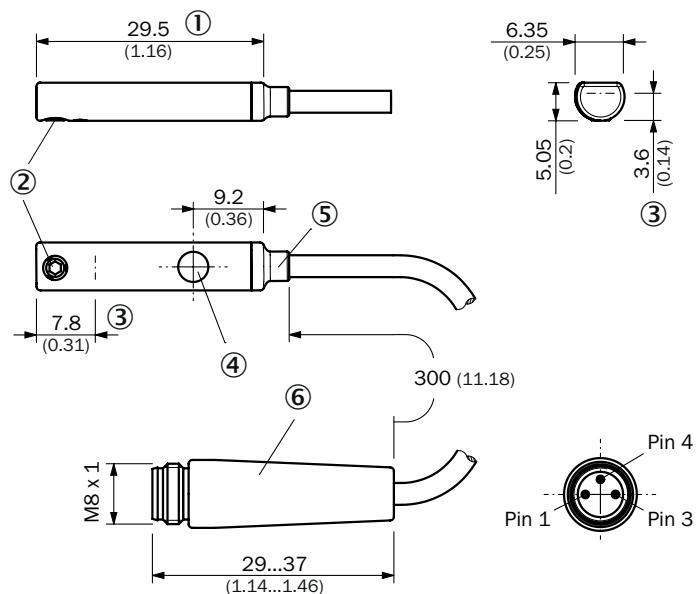
Installation note



Connection diagram Cd-002



Dimensional drawing Cable with connector M8



Dimensions in mm (inch)

- ① housing
- ② Fixing screw SW 1.5
- ③ Position sensor element
- ④ Display LED
- ⑤ Hotmelt sleeve

⑥ Connection

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, angled, A-codedDescription: UnshieldedConnection systems: Solder connectionPermitted cross-section: $\leq 0.25 \text{ mm}^2$	DOS-0803-W	7902078
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: $0.14 \text{ mm}^2 \dots 0.5 \text{ mm}^2$	DOS-0803-G	7902077
	<ul style="list-style-type: none">Connection type head A: Male connector, M8, 3-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: $0.14 \text{ mm}^2 \dots 0.5 \text{ mm}^2$	STE-0803-G	6037322
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, angled, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 3-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YG8U13-050VA1XLEAX	2096166
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, angled, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 2 m, 3-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YG8U13-020VA1XLEAX	2096165
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, angled, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 2 m, 3-wire, PUR, halogen-freeDescription: Sensor/actuator cable, unshieldedApplication: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1XLEAX	2094794
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 3-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 3-wire, PUR, halogen-freeDescription: Sensor/actuator cable, unshieldedApplication: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-050UA1XLEAX	2094788
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 3 m, 3-wire, PUR, halogen-freeDescription: Sensor/actuator cable, unshieldedApplication: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-030UA1XLEAX	2094787
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 2 m, 3-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U13-020VA1XLEAX	2095860
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 3-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 2 m, 3-wire, PUR, halogen-freeDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U13-020UA1XLEAX	2094782

	Brief description	Type	part no.
	<ul style="list-style-type: none"> Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-C60UA1XLEAX	2145889
	<ul style="list-style-type: none"> Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-030UA1XLEAX	2145891
	<ul style="list-style-type: none"> Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF8U13-C60VA1XLEAX	2146368

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.

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For us, that is "Sensor Intelligence."

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