



IM04-01BPSVU2K

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
IM04-01BPSVU2K	6058029

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Housing	Short-body
Thread size	M4 x 0.5
Diameter	Ø 4 mm
Sensing range S_n	1 mm
Safe sensing range S_a	0.81 mm
Installation type	Flush
Switching frequency	8,000 Hz
Connection type	Cable, 3-wire, 2 m ¹⁾
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ²⁾
Items supplied	Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x)

¹⁾ Do not bend below 0 °C.

²⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 20 % ¹⁾
Voltage drop	≤ 2 V ²⁾
Time delay before availability	≤ 10 ms

¹⁾ Of V_S.

²⁾ With I_a = 100 mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a.

Hysteresis	1 % ... 10 %
Reproducibility	≤ 2 % ³⁾
Temperature drift (of S_r)	± 10 %
EMC	EN 60947-5-2 IEC 61000-4-2: (Testlevel 2) IEC 61000-4-4: (Testlevel 3)
Continuous current I_a	≤ 100 mA
Cable material	PUR
Conductor size	0.055 mm ²
Cable diameter	Ø 2.6 mm
Short-circuit protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +70 °C
Housing material	Stainless steel V2A, DIN 1.4305 / AISI 303
Sensing face material	Plastic, POM
Housing length	12 mm
Thread length	9 mm
Tightening torque, max.	≤ 0.8 Nm
UL File No.	NRKH.E191603

1) Of V_S.

2) With I_a = 100 mA.

3) Supply voltage U_B and constant ambient temperature T_a.

Safety-related parameters

MTTF_D	186 years
DC_{avg}	0%
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.8
Aluminum (Al)	Approx. 0.5
Copper (Cu)	Approx. 0.45
Brass (Br)	Approx. 0.6

Installation note

Remark	Associated graphic see "Installation"
A	0.5 mm
B	1 mm
C	4 mm
D	3 mm
E	0 mm
F	8 mm

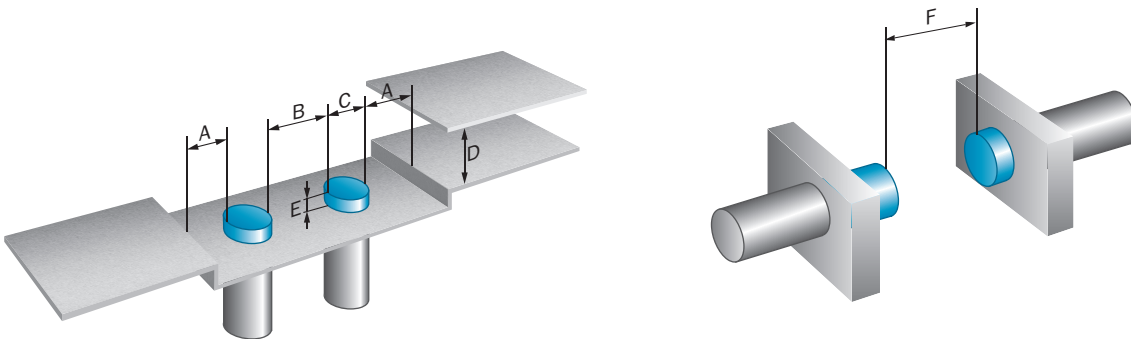
Certificates

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

Classifications

ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

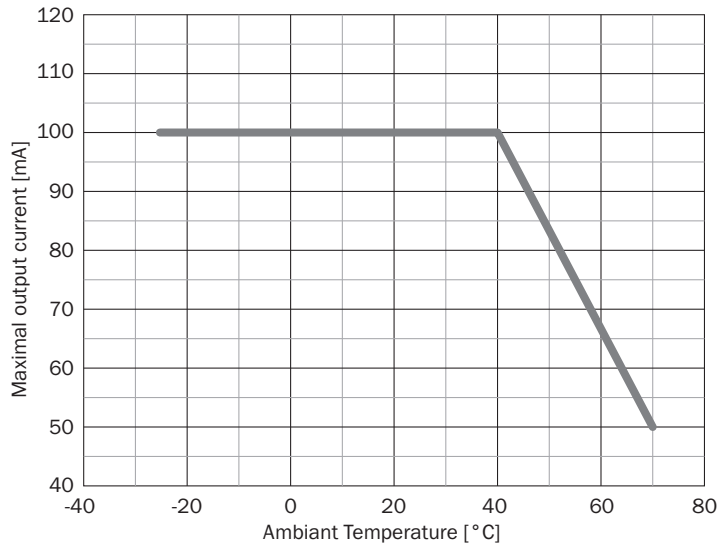
Installation note Flush installation



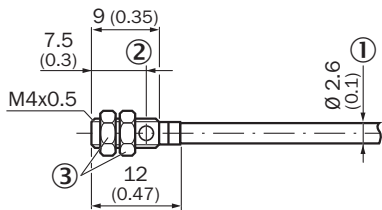
Connection diagram Cd-001



Temperature derating



Dimensional drawing Ultrashort, flush, cable




Dimensions in mm (inch)






- ① Connection
- ② Display LED
- ③ fastening nuts (2 x); 6 mm hex, stainless steel

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Material: Plastic• Details: Plastic (PA6)• Items supplied: Without mounting hardware• Usable for: Round sensors with 4 mm housing diameter without fixed stop	BEF-KH-M04	2101065

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-020VA1XLEAX	2095860
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-050UA1XLEAX	2094788
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-050VA1XLEAX	2095884
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-100VA1XLEAX	2095885
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG8U13-020VA1XLEAX	2096165
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG8U13-050VA1XLEAX	2096166
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG8U13-100VA1XLEAX	2096209
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Male connector, M8, 3-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² 	STE-0803-G	6037322
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² 	DOS-0803-G	7902077
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm² 	DOS-0803-W	7902078
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-020VA1M2A13	2096605
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable 	YF8U13-050VA1M2A13	2096606

	Brief description	Type	part no.
	<ul style="list-style-type: none"> • Cable: 5 m, 3-wire, PVC • Application: Untaminated zones, Zones with chemicals 		
	<ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • 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 • Application: Untaminated zones, Zones with chemicals 	YF8U13-C60VA1XLEAX	2146368
	<ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 1 m, 3-wire, PVC • Application: Untaminated zones, Zones with chemicals 	YG8U13-010VA1XLEAX	2146371
	<ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • 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, PVC • Application: Untaminated zones, Zones with chemicals 	YG8U13-030VA1XLEAX	2146372
	<ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • 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, PVC • Application: Untaminated zones, Zones with chemicals 	YG8U13-C60VA1XLEAX	2146370
	<ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Male connector, M12, 3-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 1 m, 3-wire, PVC • Application: Untaminated zones, Zones with chemicals 	YF8U13-010VA1M2A13	2146381

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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