Product data sheet

IHM06-06NPSVT0S

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
IHM06-06NPSVT0S	1114155

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

Detailed technical data

Features

Housing	Cylindrical smooth housing
Housing	Standard design
Diameter	Ø 6.5 mm
Sensing range S_n	6 mm
Safe sensing range S_a	4.86 mm
Installation type	Non-flush
Switching frequency	1,000 Hz
Connection type	Connector M8, 3-pin
Switching output	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 [1]
Special features	Visual adjustment indicator, IO-Link, triple sensing range

[1] 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	≤ 80 ms

[1] Of V_S.
[2] With Ia = 200 mA.
[3] Supply voltage Ub and constant ambient temperature Ta.

Hysteresis	1 % ... 10 %
Reproducibility	≤ 2 % [3]
Temperature drift (of S_r)	≤ 10 %
EMC	EN 60947-5-2
Continuous current I_a	≤ 200 mA
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse 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, LCP
Housing length	50 mm
UL File No.	NRKH.E348498

[1] Of V_S.

[2] With Ia = 200 mA.

[3] Supply voltage Ub and constant ambient temperature Ta.

Safety-related parameters

$MTTF_D$	1,330 years
DC_{avg}	0 %

Communication interface

Communication interface	IO-Link V1.1
Communication Interface detail	COM2 (38,4 kBaud)
Cycle time	10.4 ms
Process data length	1 Byte
Process data structure	Bit 0 = Sr reached Bit 1 = Sa reached

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.75
Aluminum (Al)	Approx. 0.5
Copper (Cu)	Approx. 0.43
Brass (Br)	Approx. 0.54

Installation note

Remark	Associated graphic see "Installation"
A	12 mm
B	35 mm
C	6.5 mm
D	18 mm
E	12 mm

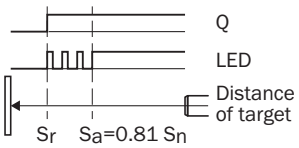
F	48 mm

Classifications

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

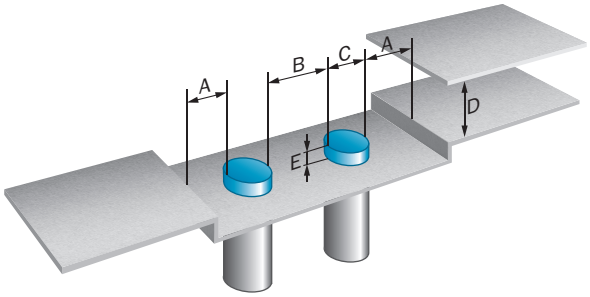
Adjustments

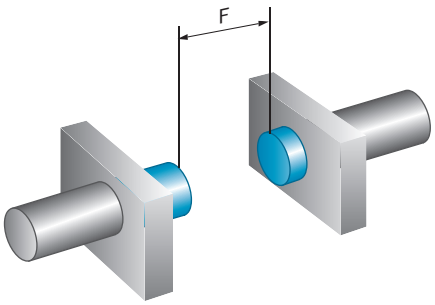
Installation aid



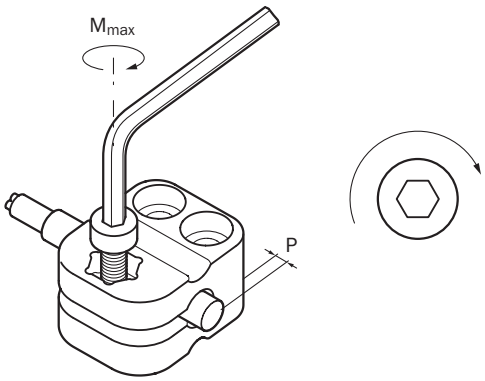
Installation note

Non-flush installation



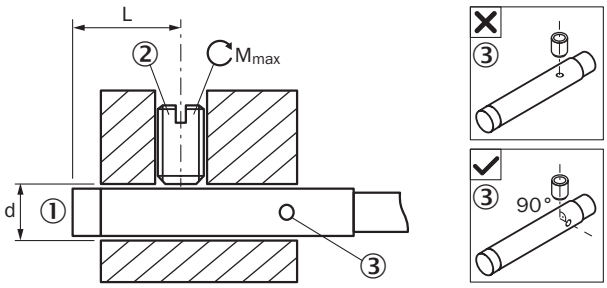


Mounting using BEF-KH-M0 bracket



Sensor type	Mounting adapter	Overrun (P)	Max. tightening torque (M_{max})
IHM03	BEF-KH-M03, part no. 2101064	0 mm ... 2 mm / ≥ 2 mm	≤ 0.4 Nm / ≤ 0.6 Nm
IHM04	BEF-KH-M04, part no. 2101065	0 mm ... 2 mm / ≥ 2 mm	≤ 0.4 Nm / ≤ 0.6 Nm
IMM04	BEF-KH-M04, part no. 2101065	≥ 0 mm	≤ 0.6 Nm
IMM05	BEF-KH-M05, part no. 2101066	≥ 0 mm	≤ 0.6 Nm
IHM06 flush	BEF-KH-M06, part no. 2101067	≥ 0 mm	≤ 0.6 Nm
IHM06 non-flush	BEF-KH-M06, part no. 2101067	≥ 4 mm	≤ 0.6 Nm

Fixing with setscrew

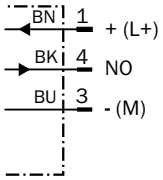


① Sensing face
② Recommended setscrew: M3, flat point
③ Display LED

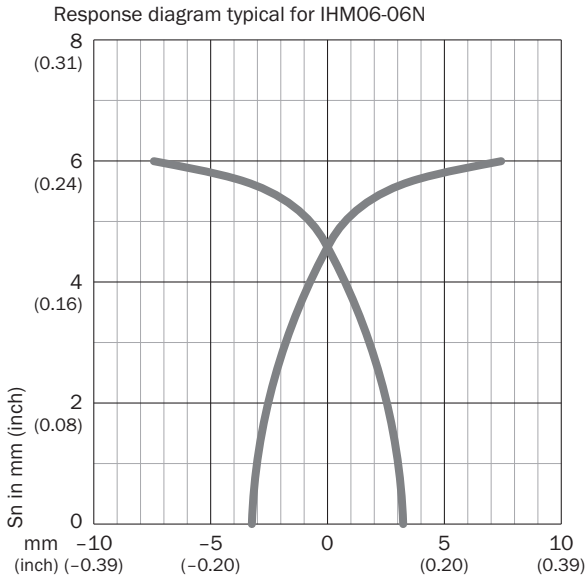
IHM06 non-flush	Mounting area (L)	Max. tightening torque (M_{max})	Diameter of mounting hole (d)
IHM06-04N*****K	8 mm ... 21 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-04N***T0K	8 mm ... 32 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-04N*****S	8 mm ... 32 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-04N***T0S	8 mm ... 42 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-06N*****K	12 mm ... 21 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-06N***T0K	12 mm ... 32 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-06N*****S	12 mm ... 32 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm
IHM06-06N***T0S	12 mm ... 42 mm	≤ 0.4 Nm	Ø 6.5 mm ... Ø 6.8 mm

Connection diagram

Cd-002



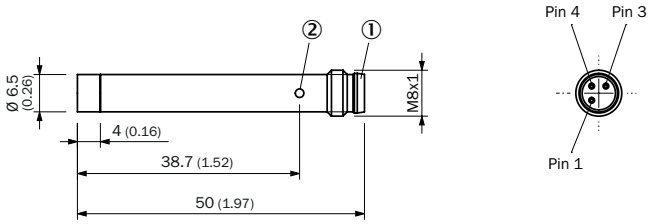
Response diagram



All dimensions in mm (inch)

Dimensional drawing (Dimensions in mm (inch))

IHM06, standard variant, non-flush, male connector



① Connection
② Function indicator

Recommended accessories

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

	Brief description	Type	Part no.
Distributors			
	Head A: 3-pin Cable: unshielded	Y8A34A2-C2A8000XXX	2115733
	Head A: 3-pin Cable: PUR, halogen-free, unshielded, 5 m	Y8A34A2-LXXXUAA050	2115727
	Head A: 3-pin Cable: unshielded	Y8A36A2-C2A8000XXX	2115734
	Head A: 3-pin Cable: PUR, halogen-free, unshielded, 5 m	Y8A36A2-LXXXUBA050	2115728
Plug connectors and cables			
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF8U13-020UA1XLEAX	2094782
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF8U13-020VA1XLEAX	2095860
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF8U13-050UA1XLEAX	2094788
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1XLEAX	2095884
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG8U13-020UA1XLEAX	2094794
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG8U13-020VA1XLEAX	2096165
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG8U13-050UA1XLEAX	2095586
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG8U13-050VA1XLEAX	2096166
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF8U13-020UA1M2A13	2096169
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M8, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF8U13-020UA1M8U13	2096304
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF8U13-020VA1M2A13	2096605

	Brief description	Type	Part no.
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF8U13-050UA1M2A13	2096170
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M8, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF8U13-050UA1M8U13	2096308
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1M2A13	2096606
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG8U13-020UA1M2A13	2095748
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: male connector, M8, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG8U13-020UA1M8U13	2107781
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: male connector, M12, 3-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG8U13-050UA1M2A13	2122842
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322
	Head A: male connector, M8, 3-pin, angled Cable: unshielded	STE-0803-WSK	6053170
Terminal and alignment brackets			
	Plastic (PA6), without mounting hardware	BEF-KH-M06	2101067

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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.

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