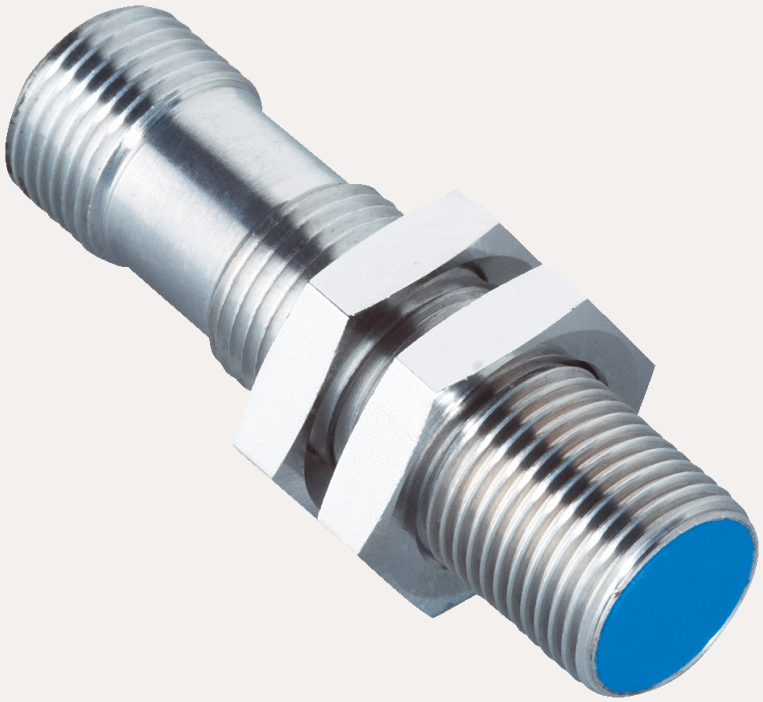
SICK.COM



DATA SHEET

IMA12-06BE1ZC0S

IMA
Inductive proximity sensors

SICK
Sensor Intelligence



Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IMA12-06BE1ZC0S

ORDERING INFORMATION

Type	part no.
IMA12-06BE1ZC0S	6056420

Further device versions and accessories at www.sick.com/IMA

DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	0 mm ... 6 mm
Installation type	Quasi-flush
Connection type	Male connector M12, 4-pin
Output function	Analog
Repeatability (T_a not constant)	0.3 mm [1) 2) 3)]
Repeatability (T_a constant)	± 0.01 mm
Resolution	≤ 1 µm
Enclosure rating	IP67 [4)]
Special features	Analog output, triple sensing range
Items supplied	Mounting nut, brass, chromium-plated (2x) Toothed washer, stainless steel (2 x)

[1)] As per IEC 60947-5-2.

[2)] Ub = DC 20 V ... 30 V.

[3)] TA = 23 °C ± 5 °C.

[4)] According to EN 60529: 2000-09.

MECHANICS/ELECTRONICS

Supply voltage	15 V DC ... 30 V DC
Ripple	≤ 20 % [1]
Time delay before availability	≤ 50 ms
Temperature drift (of S_r)	± 5 % [2] ± 10 % [3]
No load current	≤ 12 mA [4]
Load current	± 10 mA [5]
Output voltage Q_{A1}	s = 0 mm: 0 V/-0 +0,4 V (23 °C) s = 3 mm: +5,2 V/ +-0,4 V (23 °C) s = 6 mm: +10 V/ +-0,4 V (23 °C)
Output current Q_{A2}	s = 0 mm: 4 mA/ +-0,8 mA (23 °C) s = 6 mm: 20 mA/ +-0,8 mA (23 °C)
Output voltage	0 V ... 10 V
Bandwidth	1,000 Hz [6]
Short-circuit protection	✓
Ambient operating temperature	–25 °C ... +70 °C
Housing material	Brass, chromium-plated
Sensing face material	Plastic, PTB
Housing length	50 mm
Thread length	50 mm

[1] Of V_S.

[2] At 0 °C ... +70 °C.

[3] At –25 °C ... 0 °C.

[4] Without load.

[5] At voltage output QA1.

[6] –3 dB if S_n = 3 mm.

SAFETY-RELATED PARAMETERS

$MTTF_D$	88 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. 0.47
Aluminum (Al)	Approx. 0.28
Copper (Cu)	Approx. 0.2
Brass (Br)	Approx. 0.35

INSTALLATION NOTE

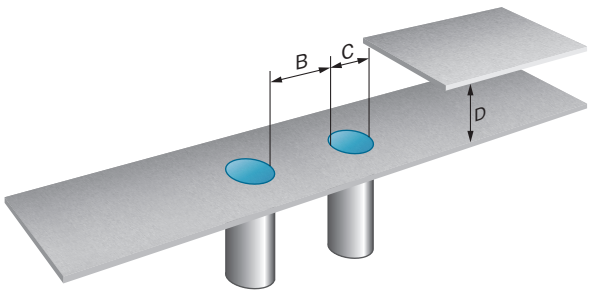
Remark	Associated graphic see "Installation"
A	6 mm
B	30 mm
C	12 mm
D	18 mm
E	2 mm

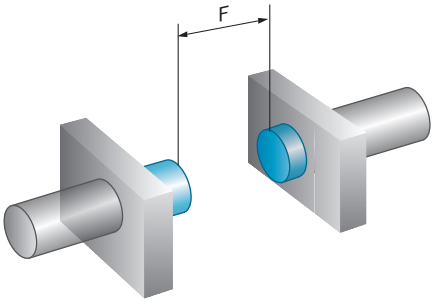
F	60 mm

CERTIFICATES

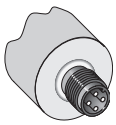
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓

INSTALLATION NOTE FLUSH INSTALLATION

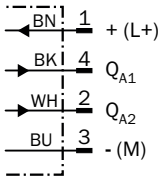




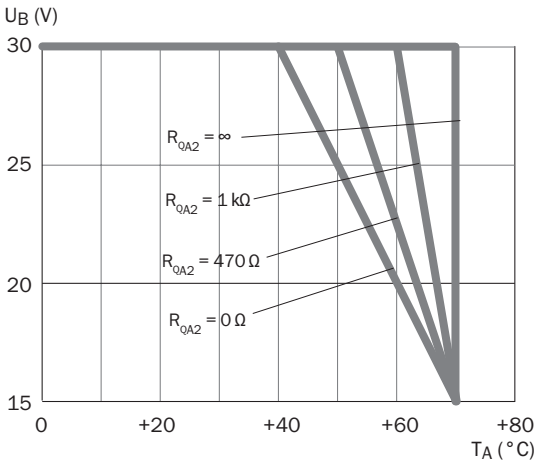
CONNECTION TYPE



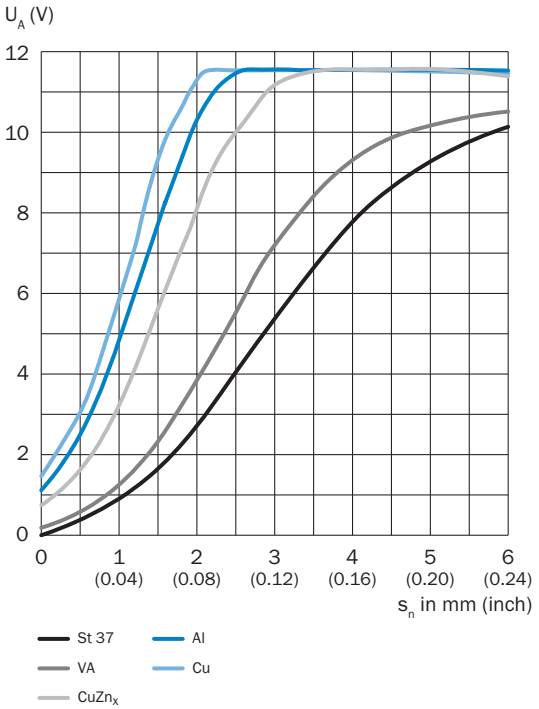
CONNECTION DIAGRAM CD-022



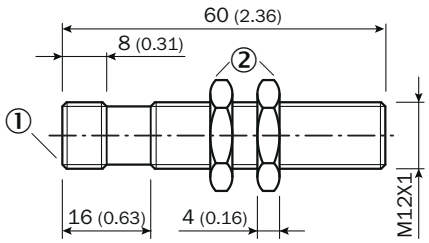
TEMPERATURE DERATING



RESPONSE DIAGRAM REDUCTION FACTORS



DIMENSIONAL DRAWING IMA12, CONNECTOR, QUASI-FLUSH



Dimensions in mm (inch)
① Connection
② Fastening nuts (2x); width across 17, metal

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6056420



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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Sensor Intelligence