

SICK.COM



DATA SHEET

IQ05-1B5NS-ZU1

IQY
Inductive proximity sensors

SICK Sensor Intelligence

INDUCTIVE PROXIMITY SENSORS

IQ05-1B5NS-ZU1

ORDERING INFORMATION

Type	part no.
IQ05-1B5NS-ZU1	6087451

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



DETAILED TECHNICAL DATA

FEATURES

Housing	Rectangular
Dimensions (W x H x D)	5 mm x 25 mm x 5 mm
Sensing range S_n	1.5 mm
Safe sensing range S_s	1.215 mm
Installation type	Flush
Switching frequency	3,000 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	NPN
Switching output detail	NPN
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
Ripple	$\leq 20\%$ ¹⁾

¹⁾ Of V_s .

²⁾ At $I_{s,max}$.

³⁾ $U_b = 20\text{ V DC} \dots 30\text{ V DC}$, $T_a = 23\text{ °C} \pm 5\text{ °C}$.

Voltage drop	$\leq 2 \text{ V}^{2)}$
Time delay before availability	$\leq 10 \text{ ms}$
Hysteresis	1% ... 10 %
Reproducibility	$\leq 1.5 \%^{3)}$
Temperature drift (of S ₁)	$\pm 10 \%$
EMC	According to EN 60947-5-2
Continuous current I _a	$\leq 200 \text{ mA}$
Cable material	PUR
Conductor size	0.06 mm ²
Short-circuit 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	Brass, chromium-plated
Sensing face material	Plastic, POM

¹⁾ Of V_s.

²⁾ At I_a max.

³⁾ U_b = 20 V DC ... 30 V DC, T_a = 23 °C ± 5 °C.

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. 0.85
Aluminum (Al)	Approx. 0.6
Copper (Cu)	Approx. 0.6
Brass (Br)	Approx. 0.7

INSTALLATION NOTE

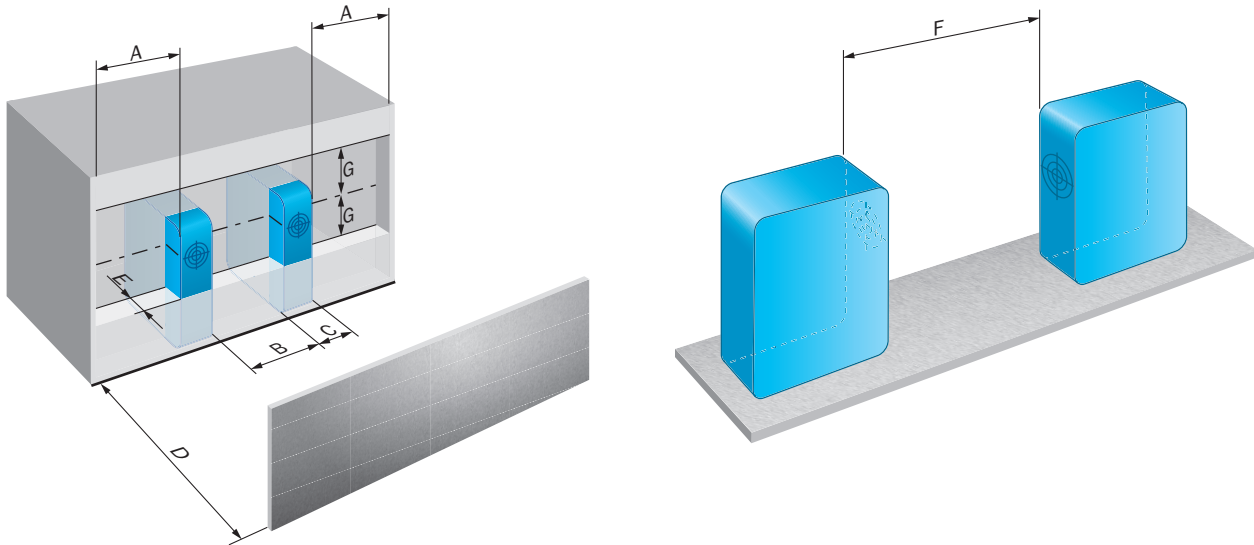
Remark	Associated graphic see "Installation"
A	1.5 mm
B	1 mm
C	5 mm
D	4.5 mm
E	0 mm
F	12 mm
G	4 mm

CERTIFICATES

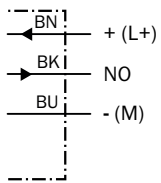
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

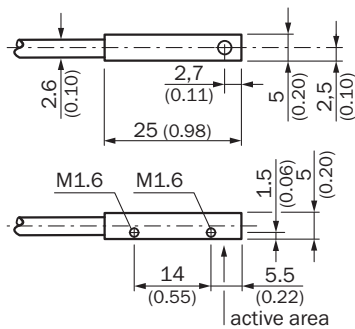
INSTALLATION NOTE



CONNECTION DIAGRAM CD-001



DIMENSIONAL DRAWING IQ05



Dimensions in mm (inch)

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/6087451



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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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