



Inductive proximity sensors
Cylindrical threaded housing, IMA12

IMA12-06BE1ZC0S



Type > [IMA12-06BE1ZC0S](#)
Part No. > [6056420](#)



At a glance

- Size M12
- Output signal proportional to distance
- Triple operating distance
- Analog current and voltage signal in one sensor
- High level of repeat accuracy
- No blind spots
- Operating distance from 0 mm to 6 mm

Your benefits

- High positioning accuracy
- High repeatability provides increased machine throughput, less wear and tear, and decreased downtime
- No blind zone - increases machine throughput and efficiency
- Current and voltage output in one sensor requires less inventory of maintenance stock, reducing costs
- Minimal temperature drift provides operational consistency



Features

Housing:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	6 mm
Assured sensing range Sa:	4.86 mm
Installation type:	Quasi-flush
Output function:	Analog
Repeatability (Ta not constant):::	0.3 mm ^{1) 2) 3)}
Repeatability (Ta constant):	± 0.01 mm
Resolution:	≤ 1 µm
Enclosure rating:	IP 67 ⁴⁾
Connection type:	Connector M12, 4-pin ⁵⁾

¹⁾ As per IEC 60947-5-2 ²⁾ Ub = DC 20 V ... 30 V ³⁾ TA = 23 °C ± 5 °C ⁴⁾ As per EN 60529: 2000-09 ⁵⁾ Max. cable length 300 m

Mechanics/electronics

Supply voltage:	15 V DC ... 30 V DC
Ripple:	≤ 20 % ¹⁾
Time delay before availability:	≤ 50 ms

Temperature drift (of Sr)::	$\pm 10\%$, $\pm 5\%$ ^{2) 3)}
Current consumption, no load:	$\leq 12\text{ mA}$ ⁴⁾
Output current:	10 mA ⁵⁾
Output voltage:	0 V ... 10 V
Output voltage QA1:	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)
Bandwidth:	1,000 Hz ⁶⁾
Short-circuit protection:	✓
Reverse polarity protection:	✓
Housing cap material:	Plastic, PBTP
Housing length:	50 mm
Thread length:	50 mm
Housing material:	Metal, Nickel-plated brass

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 = 3 mm

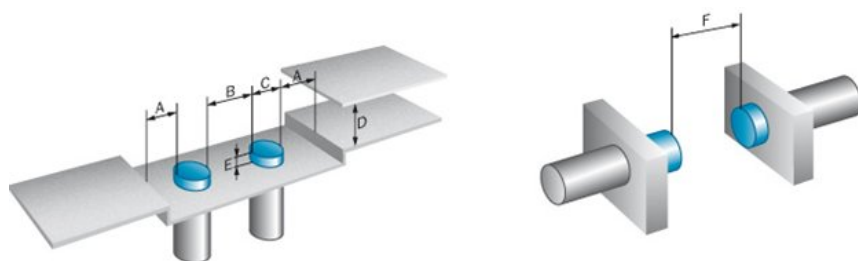
Reduction factors

Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.47
Copper (Cu):	Ca. 0.2
Aluminum (Al):	Ca. 0.28
Brass (Br):	Ca. 0.35

Installation note

A:	6 mm
B:	30 mm
C:	12 mm
D:	18 mm
E:	2 mm
F:	60 mm
Remark:	Associated graphic see "Installation"

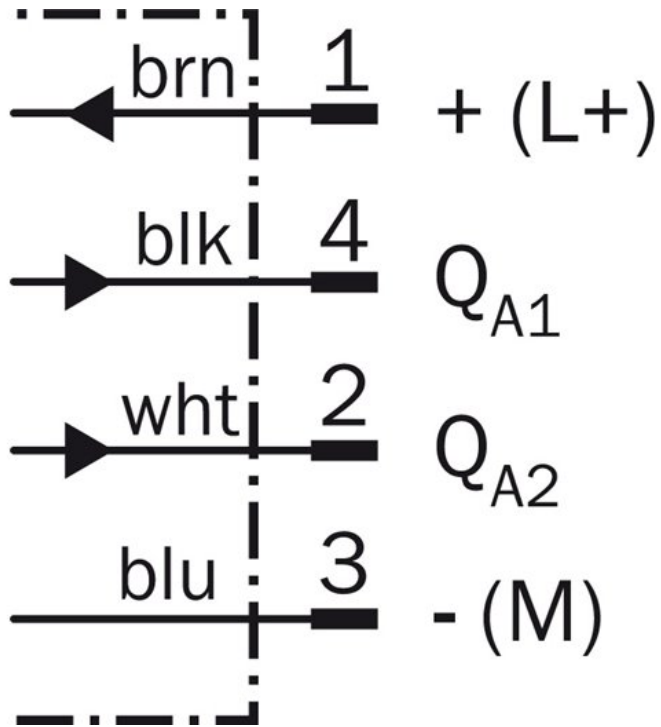
Installation note



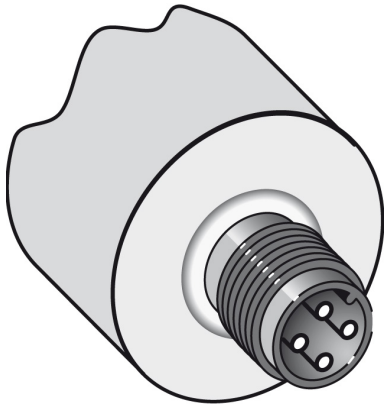
Dimensional drawing

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Connection diagram



Connection type



Temperature derating

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Response curve

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