



Inductive proximity sensors  
Cylindrical threaded housing, IMA12

IMA12-06BE3ZC0K



**Model Name** > IMA12-06BE3ZC0K  
**Part No.** > 6041792



**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**

Design:	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 <sup>1) 2) 3)</sup>
Repeatability (Ta constant):	± 0.01 mm
Resolution:	≤ 1 µm
Enclosure rating:	IP 67 <sup>4)</sup>
Electrical connection:	Connector M12, 4-pin <sup>5)</sup>

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

**Mechanics/electronics**

Supply voltage:	15 V DC ... 30 V DC
Residual ripple:	≤ 20 % <sup>1)</sup>
Time delay before availability:	≤ 50 ms

Temperature drift (of Sr)::	$\pm 10\%$ , $\pm 5\%$ <sup>2) 3)</sup>
Current consumption, no load:	$\leq 12\text{ mA}$ <sup>4)</sup>
Output current:	$10$ <sup>5)</sup>
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 <sup>6)</sup>
Short-circuit protection:	✓
Reverse polarity protection:	✓
Housing material:	Metal, Nickel-plated brass
Housing cap material:	Plastic, PBTP
Housing length:	45 mm
Thread length:	29 mm

1) Of V <sub>S</sub> <sup>2)</sup> At 0 °C ... +70 °C <sup>3)</sup> At -25 °C ... 0 °C <sup>4)</sup> Without load <sup>5)</sup> At voltage output QA1 <sup>6)</sup> -3 dB if s = 3 mm

### Reduction factors

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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

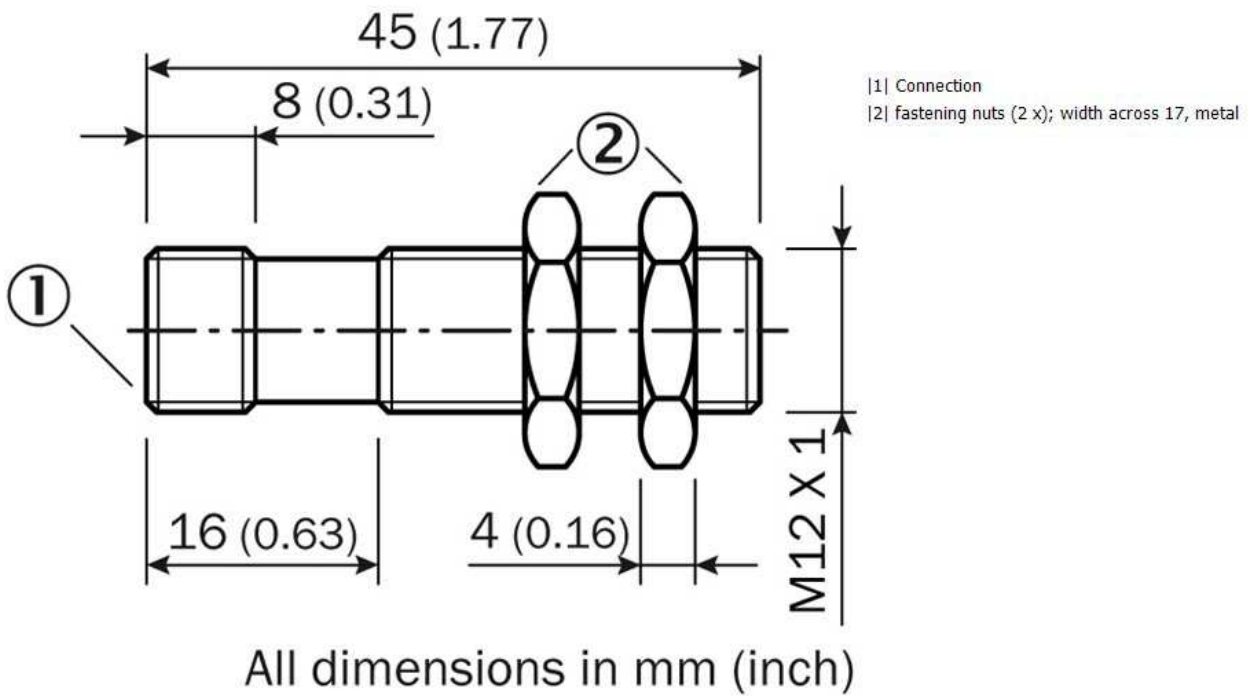
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A:	6 mm
B:	18 mm
C:	12 mm
D:	18 mm
E:	2 mm
F:	60 mm
Remark:	Associated graphic see "Installation"

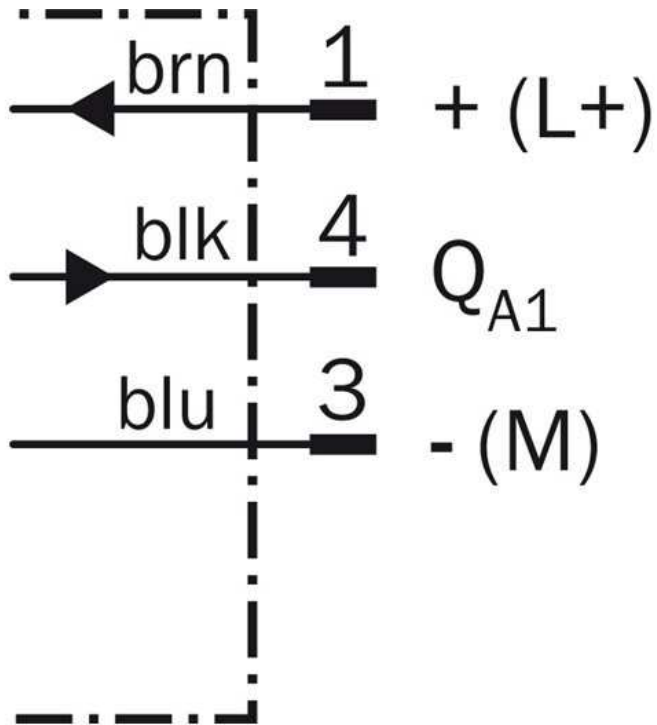
## Installation note



## Dimensional drawing



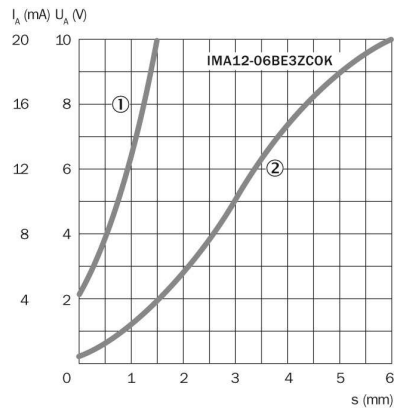
### Connection diagram



### Connection type



### Response curve



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