



Inductive proximity sensors  
Cylindrical threaded housing, IMA30

IMA30-40NE1ZC0K



**Model Name** > IMA30-40NE1ZC0K  
**Part No.** > 6041796



**At a glance**

- Size M30
- 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 40 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:	M30 x 1.5
Sensing range Sn:	40 mm
Assured sensing range Sa:	32.4 mm
Installation type:	Non-flush
Output function:	Analog
Repeatability (Ta not constant):::	0.6 mm <sup>1) 2) 3)</sup>
Repeatability (Ta constant):	± 0.1 mm
Resolution:	≤ 10 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):	≤ 10 %
Current consumption, no load:	≤ 12 mA <sup>2)</sup>
Output current:	± 10 mA <sup>3)</sup>
Load resistance, max.:	1,000 Ω, 400 Ω <sup>4) 5)</sup>
Output voltage:	0 V ... 10 V
Output voltage QA1:	S = 0 mm: 0 V/-0 +0,4 V (23 °C), S = 20 mm: +5,2 V/ + -0,4 V (23 °C), S = 40 mm: +10 V/ + -0,4 V (23 °C)
Output current QA2:	S = 0 mm: 4 mA/ + -0,8 mA (23 °C), S = 40 mm: 20 mA/ + -0,8 mA (23 °C)
Bandwidth:	100 Hz <sup>6)</sup>
Short-circuit protection:	✓
Reverse polarity protection:	✓
Ambient temperature operation:	-25 °C ... 70 °C <sup>7) 8)</sup>
Housing material:	Metal, Nickel-plated brass
Housing cap material:	Plastic, PBTP
Housing length:	48.5 mm
Thread length:	25 mm

1)  $\frac{V_S}{V_S}$  <sup>2)</sup> Without load <sup>3)</sup> At voltage output QA1 <sup>4)</sup>  $U_b = 15 V$  <sup>5)</sup>  $U_b = 30 V$  <sup>6)</sup> -3 dB if s = 20 mm <sup>7)</sup> QA1 loaded, QA2 unloaded <sup>8)</sup> QA1 loaded, QA2 loaded: see temperature reduction

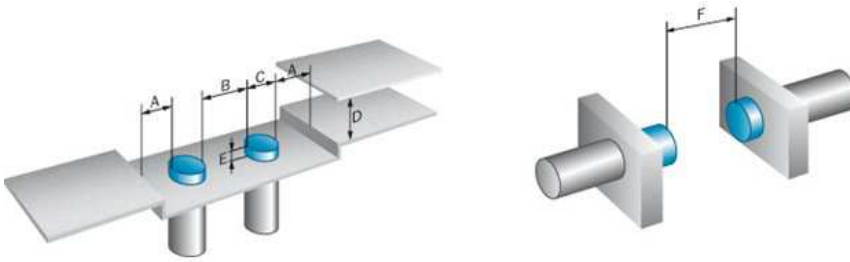
### Reduction factors

Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.8
Copper (Cu):	Ca. 0.4
Aluminum (Al):	Ca. 0.4
Brass (Br):	Ca. 0.5

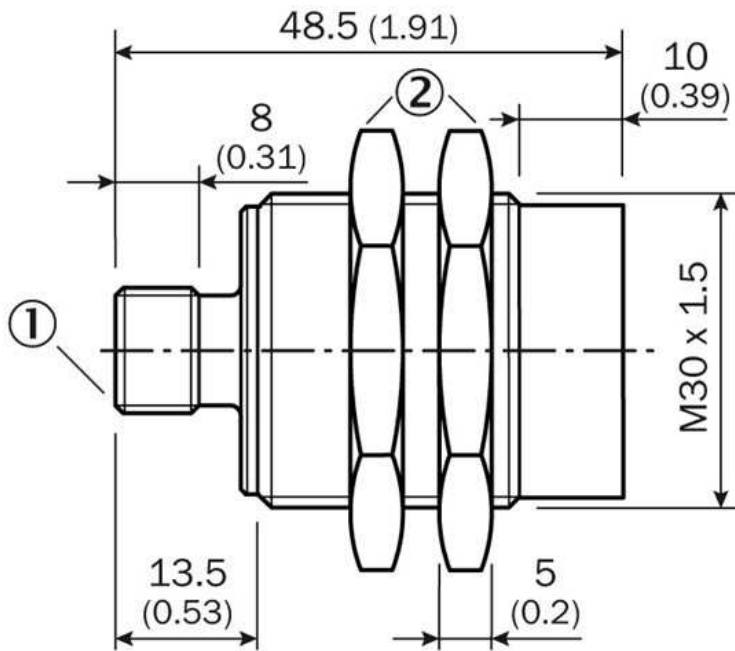
### Installation note

A:	40 mm
B:	120 mm
C:	30 mm
D:	120 mm
E:	Aluminium: 25 mm, Stainless steel: 20 mm, Brass: 25 mm, Steel: 35 mm
F:	400 mm
Remark:	Associated graphic see "Installation"

## Installation note



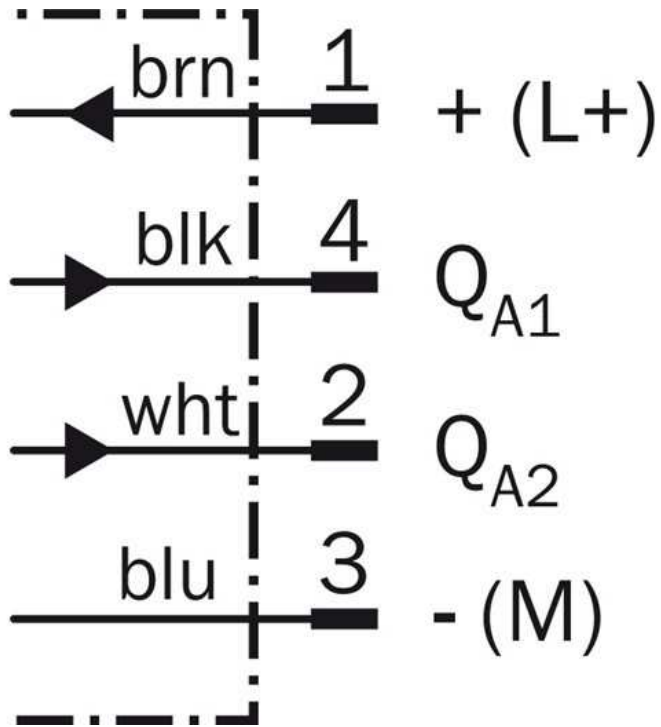
## Dimensional drawing



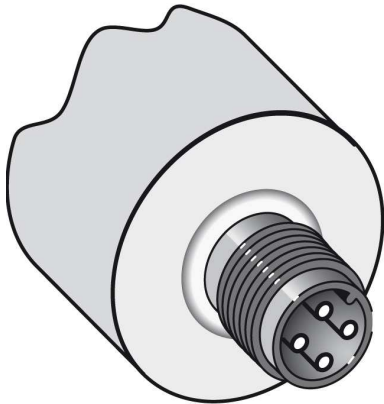
- |1| Connection
- |2| fastening nuts (2 x); 36 mm hex, metal

All dimensions in mm (inch)

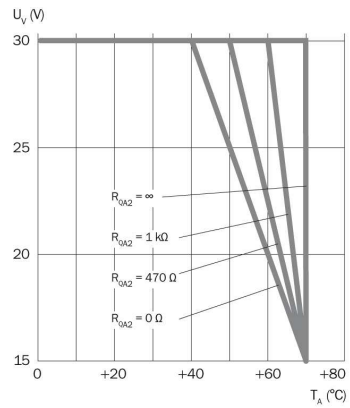
Connection diagram



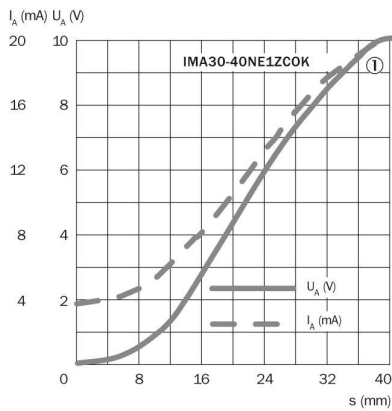
Connection type



Temperature derating



Response curve



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