



Inductive proximity sensors Cylindrical threaded housing, IMA30

IMA30-20BE1ZC0K



Model Name > IMA30-20BE1ZC0K
Part No. > 6041795



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

Housing:	Cylindrical
Thread size:	M30 x 1.5
Sensing range S_n :	20 mm
Assured sensing range S_a :	16.2 mm
Installation type:	Quasi-flush
Output function:	Analog
Repeatability (T_a not constant):::	0.3 mm ^{1) 2) 3)}
Repeatability (T_a constant):	± 0.05 mm
Resolution:	≤ 5 µm
Enclosure rating:	IP 67 ⁴⁾
Connection type:	Connector M12, 4-pin ⁵⁾

¹⁾ As per IEC 60947-5-2 ²⁾ $U_b = DC\ 20\ V \dots 30\ V$ ³⁾ $T_A = 23\ ^\circ C \pm 5\ ^\circ C$ 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):	≤ 10 %
Current consumption, no load:	≤ 12 mA ²⁾
Output current:	10 ³⁾
Load resistance, max.:	1,000 Ω, 400 Ω ⁴⁾ ⁵⁾
Output voltage:	0 V ... 10 V
Output voltage QA1:	S = 0 mm: 0 V/-0 +0,4 V (23 °C), S = 10 mm: +5,2 V/ +-0,4 V (23 °C), S = 20 mm: +10 V/ +-0,4 V (23 °C)
Output current QA2:	S = 0 mm: 4 mA/ +-0,8 mA (23 °C), S = 20 mm: 20 mA/ +-0,8 mA (23 °C)
Bandwidth:	200 Hz ⁶⁾
Short-circuit protection:	✓
Reverse polarity protection:	✓
Ambient operating temperature::	-25 °C ... 70 °C ⁷⁾ ⁸⁾
Housing material:	Metal, Nickel-plated brass
Housing cap material:	Plastic, PBTP
Housing length:	48.5 mm
Thread length:	27 mm

¹⁾ Of V _S ²⁾ Without load ³⁾ At voltage output QA1 ⁴⁾ Ub = 15 V ⁵⁾ Ub = 30 V ⁶⁾ -3 dB if s = 10 mm ⁷⁾ QA1 loaded, QA2 unloaded ⁸⁾ QA1 loaded, QA2 loaded: see temperature reduction

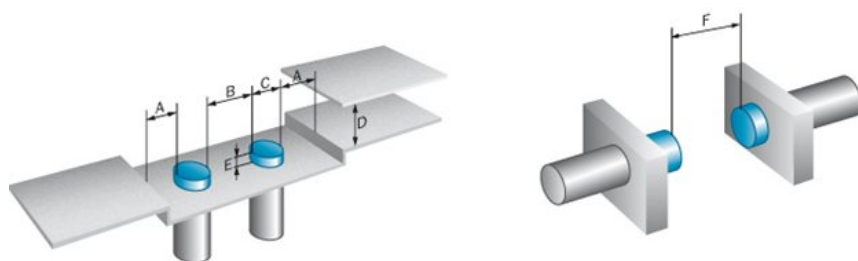
Reduction factors

Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.65
Copper (Cu):	Ca. 0.17
Aluminum (Al):	Ca. 0.2
Brass (Br):	Ca. 0.3

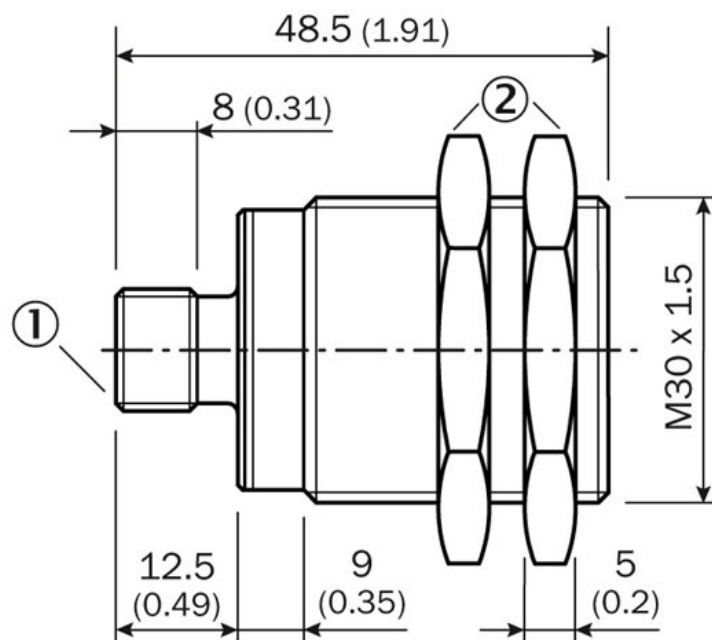
Installation note

A:	25 mm
B:	50 mm
C:	30 mm
D:	60 mm
E:	6 mm
F:	200 mm
Remark:	Associated graphic see "Installation"

Installation note



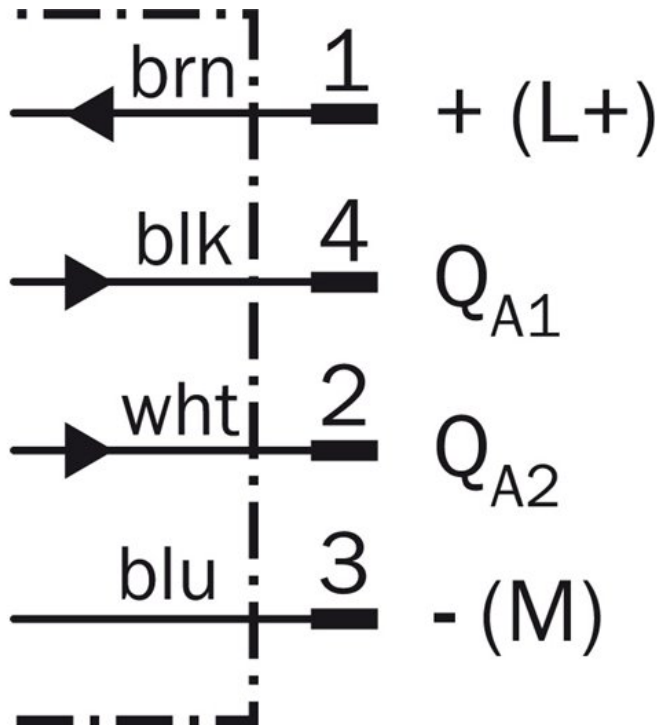
Dimensional drawing



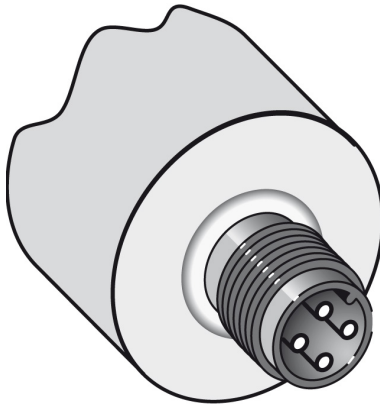
- |1| Connection
- |2| fastening nuts (2 x); 36 mm hex, metal

All dimensions in mm (inch)

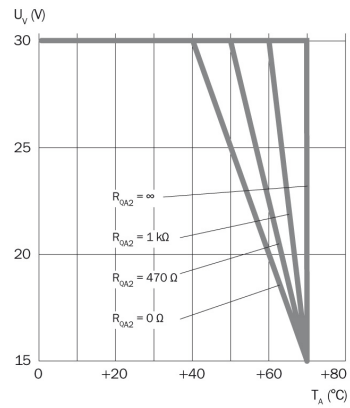
Connection diagram



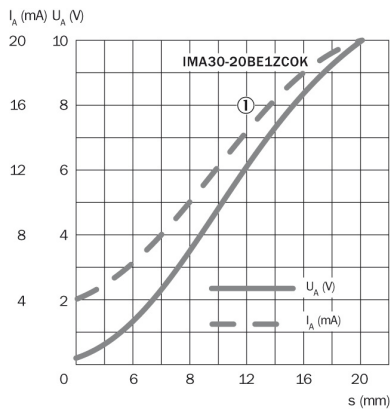
Connection type



Temperature derating



Response curve



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