



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

Design:	Cylindrical
Thread size:	M30 x 1.5
Sensing range Sn:	20 mm
Assured sensing range Sa:	16.2 mm
Installation type:	Quasi-flush
Output function:	Analog
Repeatability (Ta not constant):::	0.3 mm ^{1) 2) 3)}
Repeatability (Ta constant):	± 0.05 mm
Resolution:	≤ 5 µm
Enclosure rating:	IP 67 ⁴⁾
Electrical connection:	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
Residual 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 temperature operation:	-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⁾ $U_b = 15 V$ ⁵⁾ $U_b = 30 V$ 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

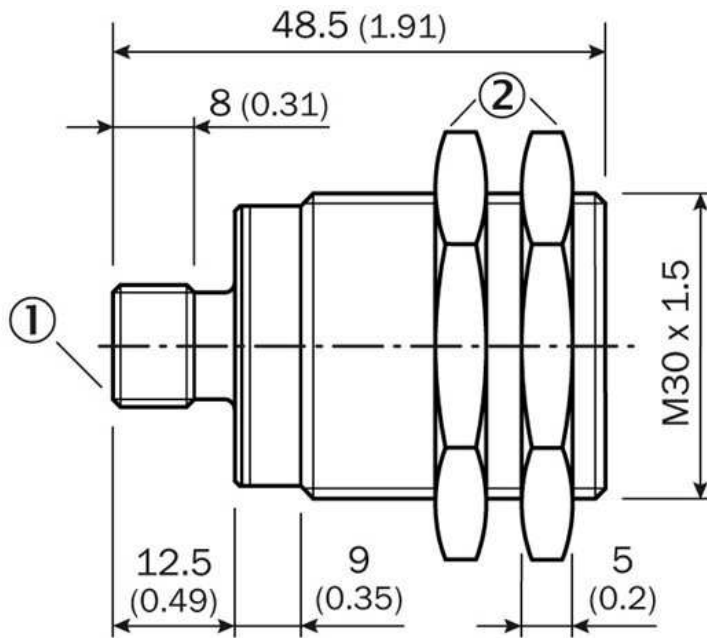
Installation note

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



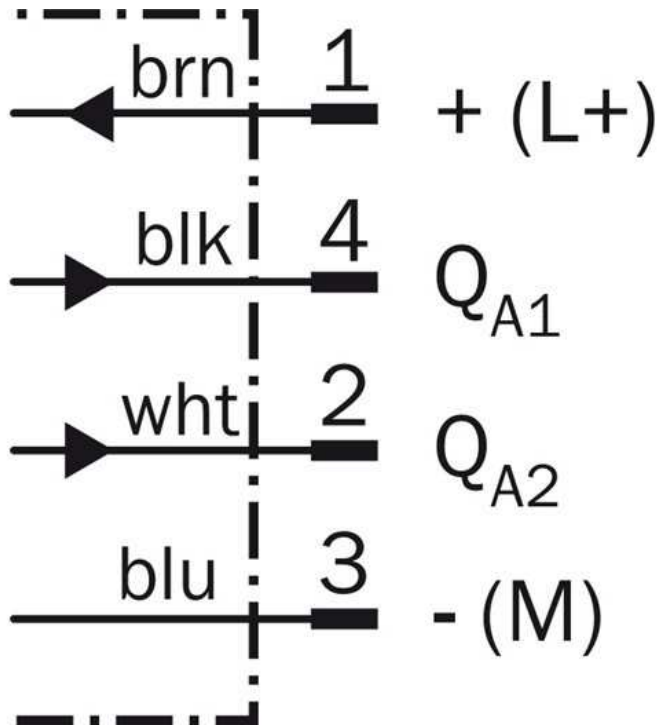
Dimensional drawing



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

All dimensions in mm (inch)

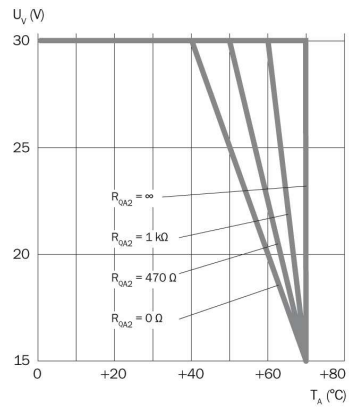
Connection diagram



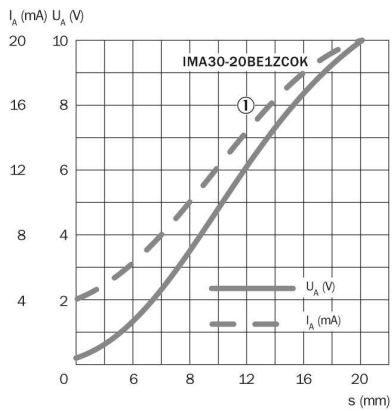
Connection type



Temperature derating



Response curve



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