



Inductive proximity sensors
Cylindrical threaded housing, IMA18

IMA18-10BE1ZC0K



Model Name > IMA18-10BE1ZC0K
Part No. > 6041793



At a glance

- Size M18
- 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 20 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:	M18 x 1
Sensing range Sn:	10 mm
Assured sensing range Sa:	8.1 mm
Installation type:	Quasi-flush
Output function:	Analog
Repeatability (Ta not constant):::	0.3 mm ^{1) 2) 3)}
Repeatability (Ta constant):	± 0.02 mm
Resolution:	≤ 2 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: +10 V/ +0,4 V (23 °C), S = 5 mm: +5,2 V/ +0,4 V (23 °C)
Output current QA2:	S = 0 mm: 4 mA/ +0,8 mA (23 °C), S = 10 mm: 20 mA/ +0,8 mA (23 °C)
Bandwidth:	500 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:	32 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 = 5 mm ⁷⁾ QA1 loaded, QA2 unloaded ⁸⁾ QA1 loaded, QA2 loaded: see temperature reduction

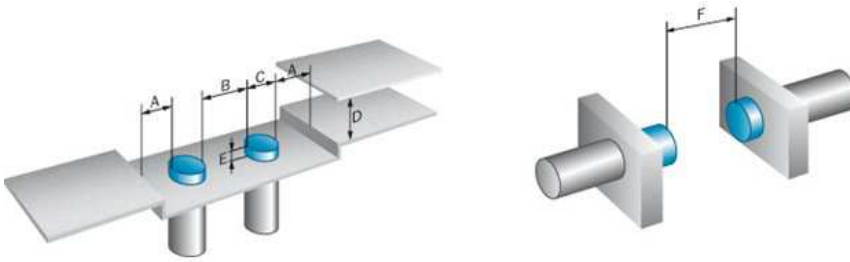
Reduction factors

Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.6
Copper (Cu):	Ca. 0.15
Aluminum (Al):	Ca. 0.18
Brass (Br):	Ca. 0.28

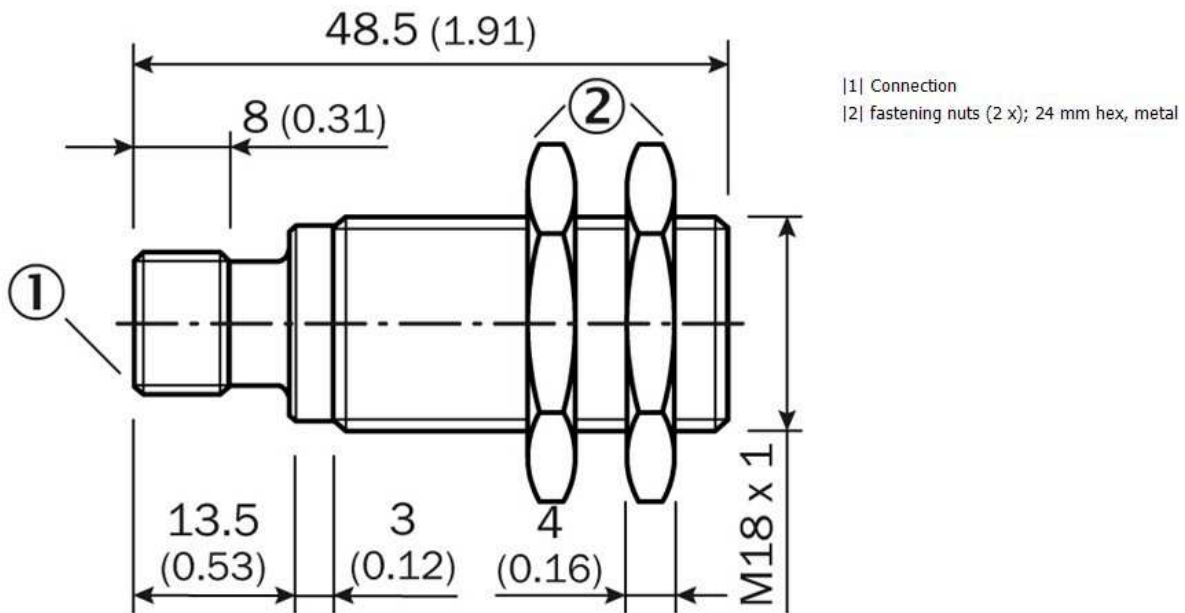
Installation note

A:	10 mm
B:	26 mm
C:	18 mm
D:	30 mm
E:	4 mm
F:	100 mm
Remark:	Associated graphic see "Installation"

Installation note

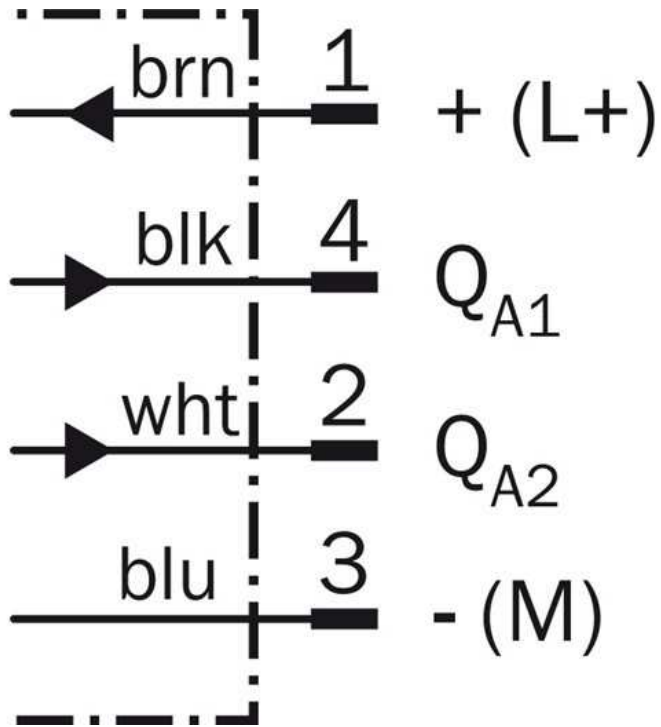


Dimensional drawing

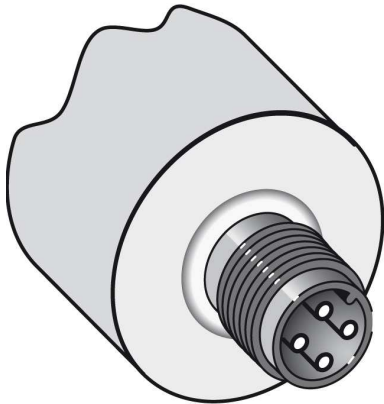


All dimensions in mm (inch)

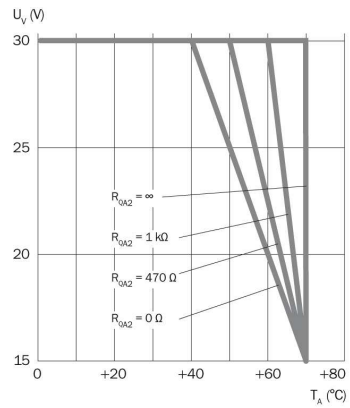
Connection diagram



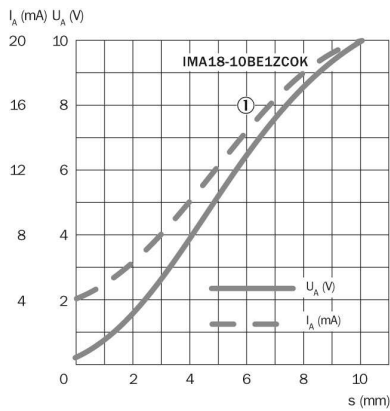
Connection type



Temperature derating



Response curve



Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com