

ONLINE DATA SHEET
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Inductive proximity sensors
Cylindrical threaded housing, IMP14

IMP14-03BPSVC0S



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Inductive proximity sensors
Cylindrical threaded housing, IMP14

Model Name > IMP14-03BPSVC0S
Part No. > 6050137





At a glance

- Pressure resistant up to 500 bar
- Expected service life of up to 1 million pressure cycles
- Sensing range of 3 mm flush
- IP 68
- Stainless steel housing with active surface made from stable high-performance ceramic
- State-of-the-art ASIC technology from SICK
- Gas-tight at the sensor face

Your benefits

- Reduced maintenance costs
- Extremely resilient and durable
- Up to 50 times longer service life compared to conventional sensors under pressure cycles
- Simple compensation of cylinder tolerances
- Simple integration due to small design
- Controlled piston deceleration
- Increased piston service life due to collision prevention at the end of the work cycle

Features

Design:	Cylindrical
Thread size:	M14 x 1.5
Sensing range Sn:	3 mm
Assured sensing range Sa:	2.4 mm
Pressure resistance:	≤ 500 bar
Installation type:	Flush
Switching frequency:	500 Hz
Output type:	PNP
Output function:	NO
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 68 [1)]
Electrical connection:	Connector M12, 4-pin

1) Sensing face

Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC
Vacuum resistance:	10-8Torr [1]
Residual ripple:	≤ 20 % [2]
Voltage drop:	≤ 2 V [3]
Power consumption:	≤ 10 mA [4]
Time delay before availability:	≤ 50 ms
Hysteresis:	1 % ... 15 % [5]
Repeatability::	≤ 4 % [6] [7]
Temperature drift (of Sr):	15 %
EMC:	According to EN 60947-5-2 [8]
Output current Ia:	≤ 200 mA
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	-
Shock and vibration resistance:	30 g, 11 ms／10 ... 55 Hz, 1 mm
Ambient temperature operation:	-25 °C ... +80 °C
Housing material:	Stainless steel, V4A
Housing cap material:	Ceramics, ZrO2
Size sealing ring:	11.5 mm x 2.0 mm
Material sealing ring:	NBR
Housing length:	65 mm
Thread length:	11 mm
Tightening torque, max.:	≤ 70 Nm

[1] Front [2] Of V_S [3] With Ia = 200 mA [4] Without load [5] Typ. 8% [6] [7] [8] IEC61000-4-4: 1kV

Reduction factors

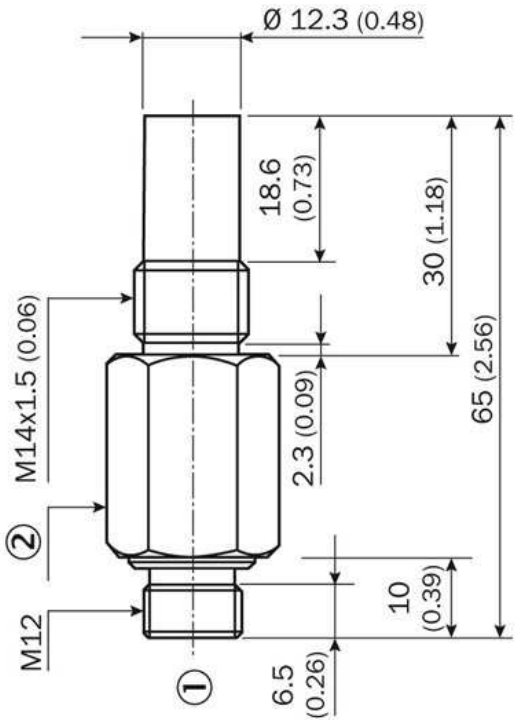
Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	1
Stainless steel (V2A, 304):	Ca. 0.85
Copper (Cu):	Ca. 0
Aluminum (Al):	Ca. 0
Brass (Br):	Ca. 0.15

Installation note

Remark:	Associated graphic see "Installation"

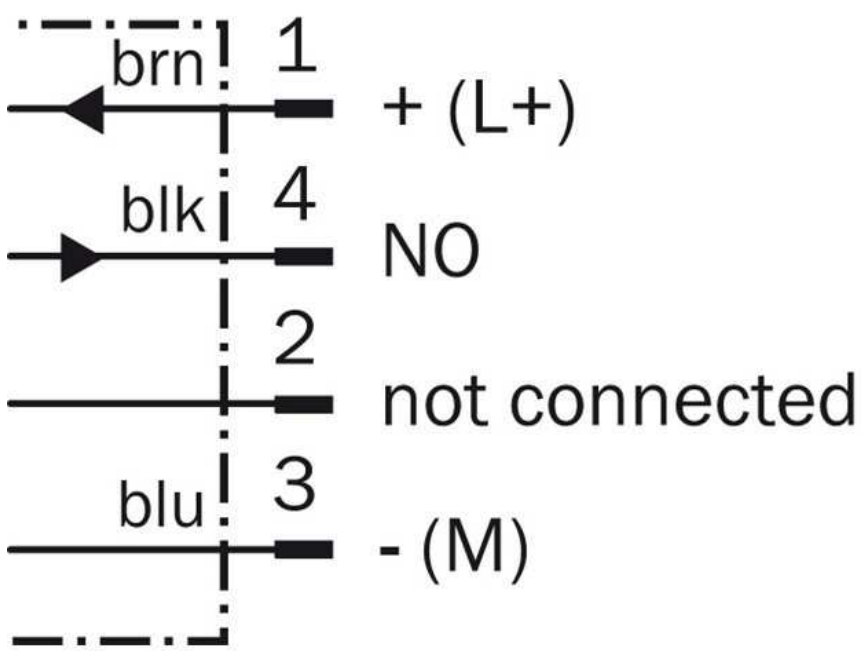
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Dimensional drawing



|1| Connector M12, 4-pin
|2| width across 19

Connection diagram



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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**

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