

ONLINE DATA SHEET
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Magnetic proximity sensors
Cylindrical threaded housing, MM12

MM12-60APO-ZUK



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Magnetic proximity sensors
Cylindrical threaded housing, MM12

Model Name > MM12-60APO-ZUK
Part No. > 1040065





At a glance

- Detection of magnets
- Operating distances up to 90 mm or more based on the magnet strength
- High switching frequency
- Short-circuit, reverse polarity and power-up pulse suppression protection
- Robust nickel-plated brass housing with fine thread M12 x 1 mm
- IP 67 enclosure rating
- Cylindrical design
- PNP or NPN output

Your benefits

- Non-contact operation eliminates interference from dirt, dust and vibrations, increasing sensor life and reducing maintenance costs
- Space-saving installation due to small design
- Large operating distances with reliable switching increase throughput
- Non-contact, universal detection through several substances, including plastic containers and pipes protective PTFE walls and non-magnetic metal walls

CE

Features

Thread size:	M12 x 1
Design:	Cylindrical
Sensing range Sn:	60 mm [1)]
Assured sensing range Sa:	48.6 mm
Magnetic sensitivity:	1 mT
Switching frequency:	1,000 Hz
Output type:	PNP
Output function:	NC
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 67 [2)]
Magnetic alignment:	Axial
Connection type:	Cable, 3-wire, 2 m [3)]
Housing:	Standard

[1)] Sensing range based on installation in non-magnetic material using Magnet MAG-3010-B (M4.0) [2)] According to EN 60529 [3)] Do not bend below 0 °C

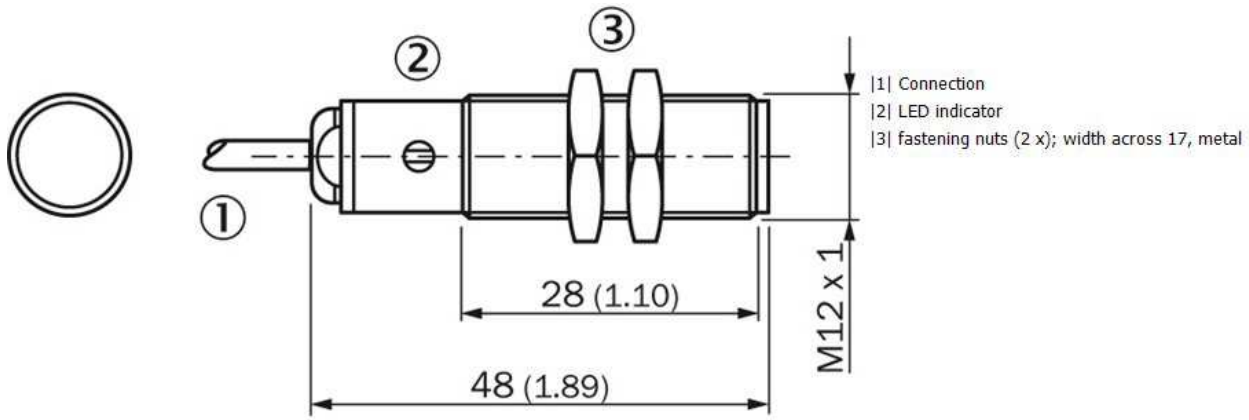
Mechanics/electronics

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Housing length:	44 mm
Supply voltage:	10 V DC ... 30 V DC
Ripple:	≤ 10 % [1]
Power consumption:	≤ 10 mA [2]
Voltage drop:	≤ 2 V [3]
Output current Ia:	≤ 200 mA
Hysteresis:	1 % ... 10 %
Repeatability:	≤ 1 % [4]
Temperature drift (of Sr):	± 10 %
EMC:	According to EN 60947-5-2
Tightening torque, max.:	15 Nm
Reverse polarity protection:	✓
Short-circuit protection [5]:	✓
Housing material:	Metal, Nickel-plated brass
Special feature:	Short version
Power-up pulse protection:	✓
Time delay before availability:	≤ 20 ms
Ambient operating temperature:	-25 °C ... 75 °C
Shock and vibration resistance:	30 g, 11 ms／10 ... 55 Hz, 1 mm
Cable material:	PUR/PVC
Wire-break protection:	0
Items supplied:	Fastening nuts (2 x)

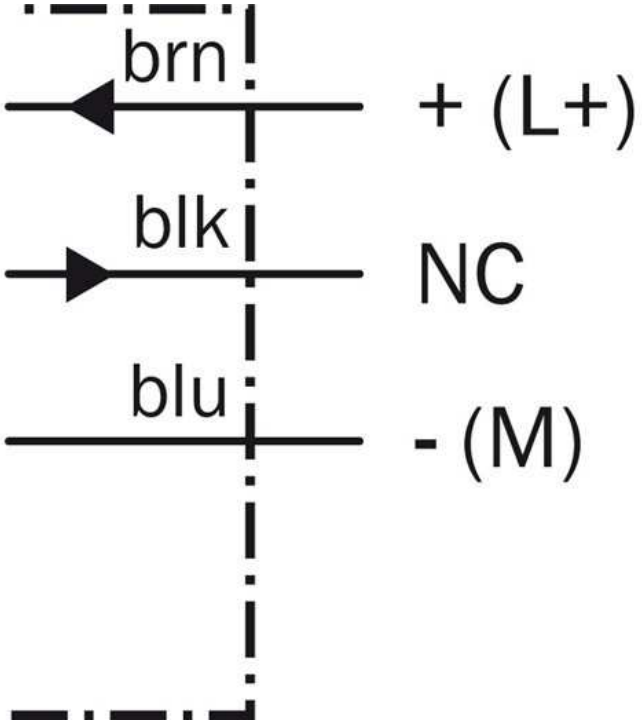
[1] Of V_S [2] Without load [3] At I_a max [4] Von Sr (VS und Ta constant) [5] Pulsed

Dimensional drawing

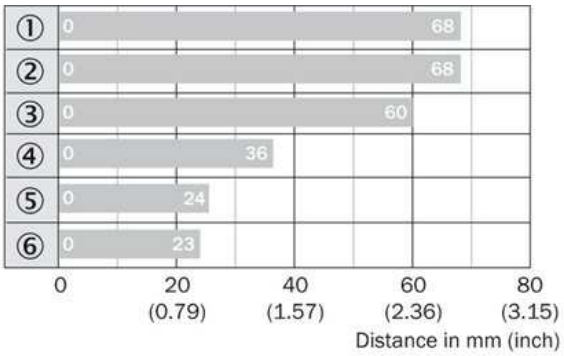


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Connection diagram



Operating distance

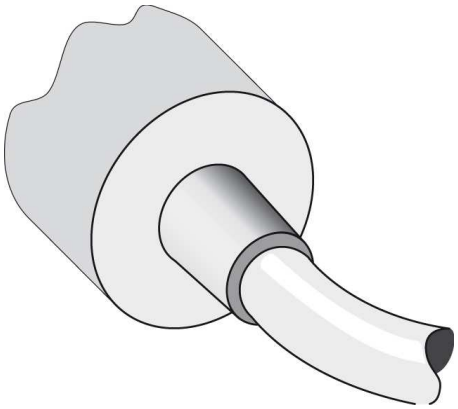


Max. sensing range S_n, flush or non-flush installation, non-magnetizable material

Magnet type	Part no.
① MAG-3315-B (M 5.1)	7902086
② MAG-3015-B (M 5.0)	7901786
③ MAG-3010-B (M 4.0)	7901785
④ MAG-2006-B (M 3.0)	7901784
⑤ MAG-0625-A (M 2.0)	7901783
⑥ MAG-1003-S (M 1.0)	7901782

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Connection type



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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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