



Inductive proximity sensors
Cylindrical threaded housing, IM18

IM18-20NPS-NC1



Model Name > [IM18-20NPS-NC1](#)
Part No. > [6027580](#)



At a glance

- Stainless steel housing (316L/1.4404)
- Extremely watertight (IP 68/IP 69K)
- Triple sensing distance
- High resistance to mechanical stress
- Watertight housing suitable for use in hygienic and wash down areas
- Resistant to aggressive cleaning agents
- Visual adjustment indicator via output LED

Your benefits

- Less machine downtime due to rugged sensor design
- Cost reduction due to long service life even under the most extreme ambient conditions
- Quick and easy installation due to adjustment indicator via LEDs
- Large operating reserve due to triple operating distance
- High resistance to shock and impact due to stainless steel sensing face
- No restrictions on cleaning agents or processes, ensuring reliable operation



Features

Design:	Cylindrical
Thread size:	M18 x 1
Sensing range Sn:	20 mm
Assured sensing range Sa:	16.2 mm
Installation type:	Non-flush
Switching frequency:	200 Hz
Output type:	PNP
Output function:	NO
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 68 ¹⁾ IP 69K
Electrical connection:	Connector M12, 4-pin

¹⁾ According to EN 60529

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC
Residual ripple:	≤ 20 % ¹⁾

Voltage drop:	$\leq 2 \text{ V}^{2)}$
Power consumption:	$\leq 10 \text{ mA}^{3)}$
Time delay before availability:	$\leq 40 \text{ ms}$
Hysteresis:	1 % ... 15 %
Repeatability:.	$\leq 5 \%$ ^{4) 5)}
Temperature drift (of Sr):	$\leq 10 \%$
EMC:	According to EN 60947-5-2
Output current I _a :	$\leq 200 \text{ mA}$
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 ... +85 °C
Housing material:	Stainless steel, Stainless steel V4A (1.4435, 316L)
Housing cap material:	Metal
Housing length:	63.5 mm
Thread length:	35 mm
Tightening torque, max.:	$\leq 50 \text{ Nm}$

1) Of V_S ²⁾ At I_a max ³⁾ Without load ⁴⁾ Of Sr ⁵⁾ UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C

Reduction factors

Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	Ca. 1
Copper (Cu):	Ca. 0.85
Aluminum (Al):	Ca. 1
Brass (Br):	Ca. 1.3
Stainless steel (V4A, 316L):	Ca. 0.4

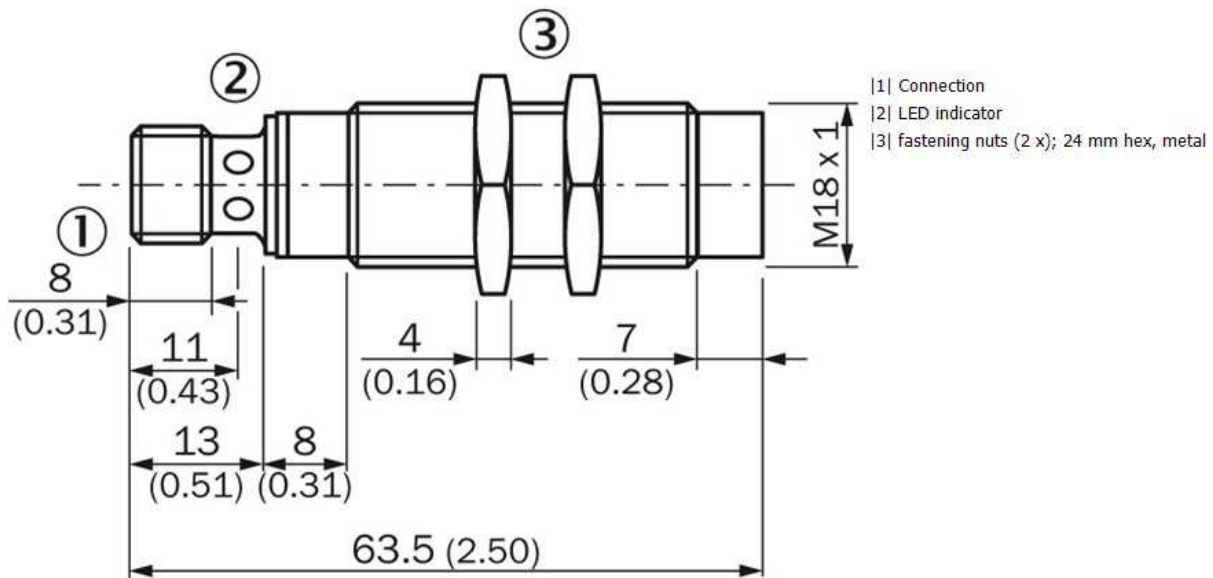
Installation note

A:	41 mm
B:	182 mm
C:	18 mm
D:	60 mm
E:	Aluminium: 20 mm, Stainless steel: 36 mm, Brass: 22 mm, Steel: 34 mm
F:	200 mm
Remark:	Associated graphic see "Installation"

Installation note

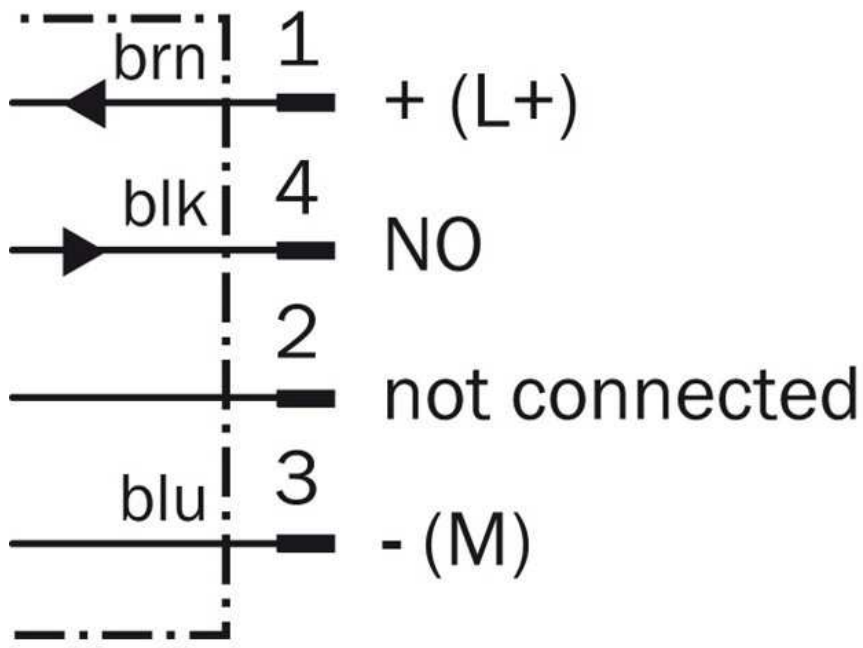


Dimensional drawing

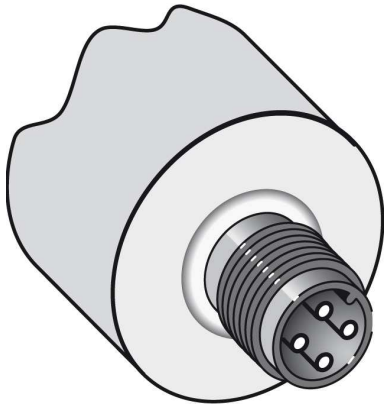


All dimensions in mm (inch)

Connection diagram



Connection type



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