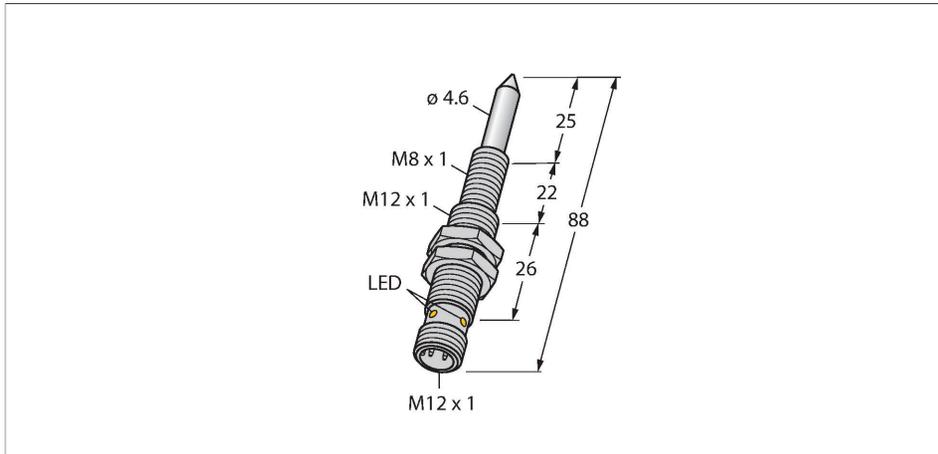


NIMFE-EMT12/4.6L88-UP6X-H1141

Magnetic Field Sensor

For Detection of Ferromagnetic Parts



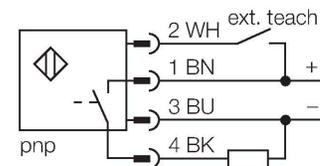
Technical data

Type	NIMFE-EMT12/4.6L88-UP6X-H1141
Ident. no.	1600619
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U _{ss}
DC rated operational current	≤ 100 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I _o	≤ 1 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, Connection programmable, PNP
Design	Threaded barrel, EMT12/4,6L88
Dimensions	88 mm
Housing material	Stainless steel, 1.4301 (AISI 304), PTFE-coated
Active area material	Stainless steel, 1.4301 (AISI 304), PTFE-coated
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301, PTFE-coated
- DC 3-wire, 10...30 VDC
- NC/NO parametrizable with teach adapter VB2-SP1
- M12 x 1 male connector

Wiring diagram



Functional principle

The weld sensors are available in different versions, with different signal intensities and diameters. Ferromagnetic parts which differ strongly in their material properties and diameters can thus be detected. A target part has to be located within the so called sensitive area in order to be detected. The internal sensor signal reaches the maximum intensity if the sensitive area is completely covered by the target. Partial coverage is also possible.

Sensitive area S = 9 mm
Within this area the sensor signal changes when components are connected.

Maximum range M = 13 mm
In case of complete coverage of the sensitive area the maximum signal intensity is achieved.

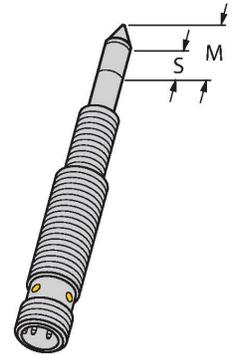
NIMFE-EMT12/4.6L88-UP6X-H1141 | 12/03/2020 06-36 | technical changes reserved

Technical data

MTTF 874 years acc. to SN 29500 (Ed. 99) 40 °C

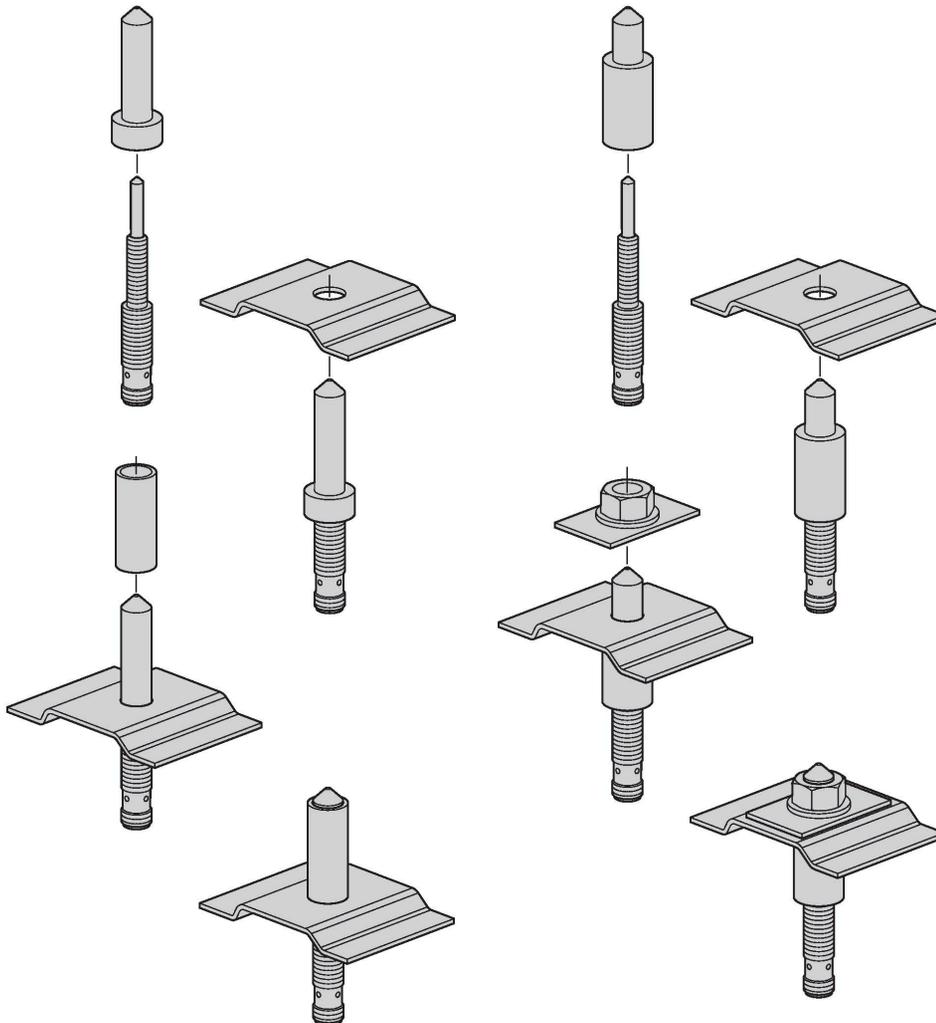
Power-on indication LED, Green

Switching state LED, Yellow



Mounting instructions

Mounting instructions/Description



Distance D 3 x B

Distance W 3 x Sn

Distance T 3 x B

Distance S 1.5 x B

Distance G 6 x Sn

Diameter active area B \varnothing 12 mm

The magnetic field sensor is especially suited for the detection of welding nuts as well as spacer or reinforcing sleeves. The parts to be detected must always consist of ferromagnetic material, so that a proper function can be guaranteed. Most applications need center bolts to tack the welding nuts and reinforcing sleeves in place and thus provide mechanical protection of the sensors. These bolts have to be made of non-ferromagnetic material, like stainless steel for example. Center bolts are not available at Turck, as these have to be individually produced for and adjusted to the correspondent application.

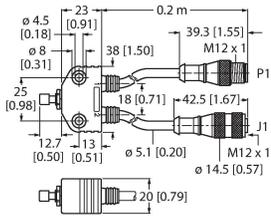
The welding nut sensor detects ferritic targets with diameters between 6 mm and 12 mm.

Accessories

VB2-SP1

A3501-29

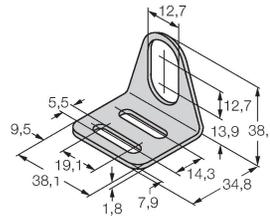
Teach adapter



MW-12

6945003

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-12

6901321

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

