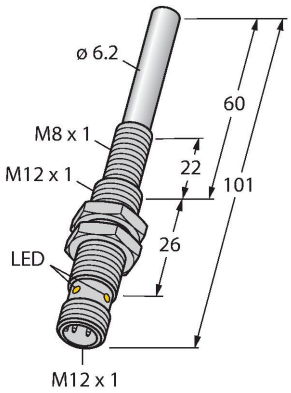
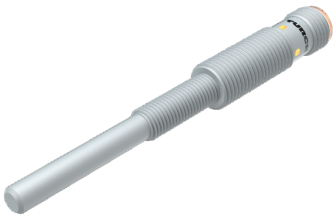
NIMFE-EMT12/6.2L101-UN6X-H1141
Magnetic Field Sensor
For Detection of Ferromagnetic Parts





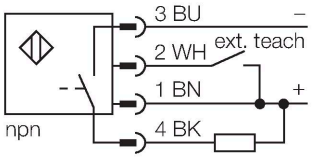
Technical data

Type	NIMFE-EMT12/6.2L101-UN6X-H1141
ID	1600615
General data	
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 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_e	≤ 1 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, Connection programmable, NPN
Mechanical data	
Design	Threaded barrel, EMT12/4,6L88
Dimensions	101 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

Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301, PTFE-coated
- DC 3- wire, 10…30 VDC
- Programmable (NC/NO) with teach adapter VB2-SP1
- M12 x 1 connector

Wiring diagram



Functional principle

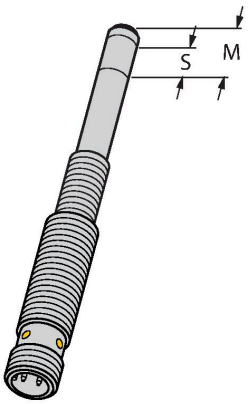
The weld sensors are available in different versions, with different signal intensities and diameters. Ferromagnetic parts which differ strongly in their material properties and diameters can thus be detected. A target part has to be located within the so called sensitive area in order to be detected. 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 = 11mm
Within this area the sensor signal changes when components are connected.

Maximum range M = 14mm
In case of complete coverage of the sensitive area the maximum signal intensity is achieved.

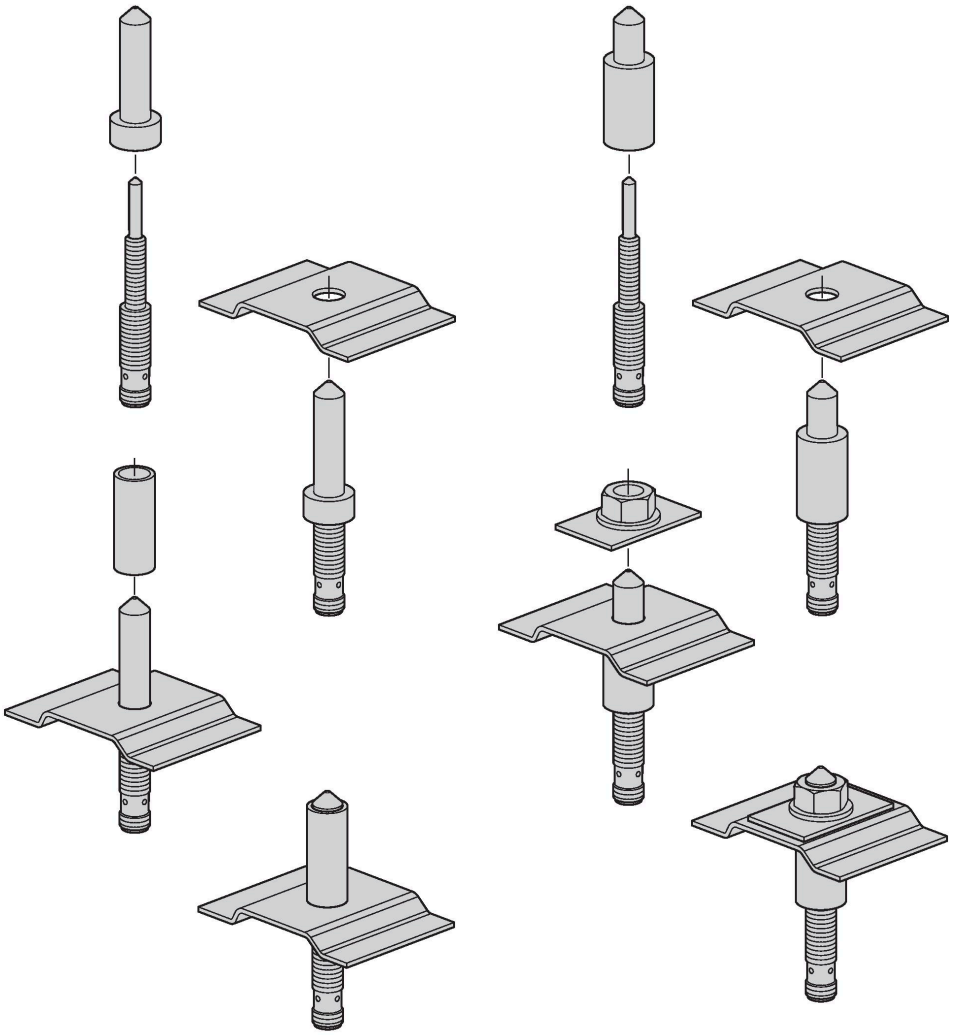
Technical data

Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
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 × 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	Ø 12 mm

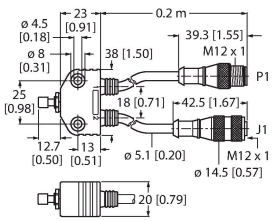
The magnetic field sensor is especially suited for the detection of welding nuts as well as spacer or reinforcing sleeves. The parts to be detected must always consist of ferromagnetic material, so that a proper function can be guaranteed. Most applications need center bolts to tack the welding nuts and reinforcing sleeves in place and thus provide mechanical protection of the sensors. Theses 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 easily detects ferritic targets with diameters between 10 mm and 20 mm.

Accessories

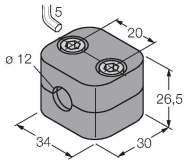
VB2-SP1	A3501-29

Teach adapter



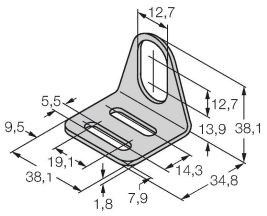
BSS-12	6901321

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



MW12	6945003

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



NIMFE-EMT12/6.2L101-UN6X-H1141| 02/21/2025 14-48 | technical changes reserved