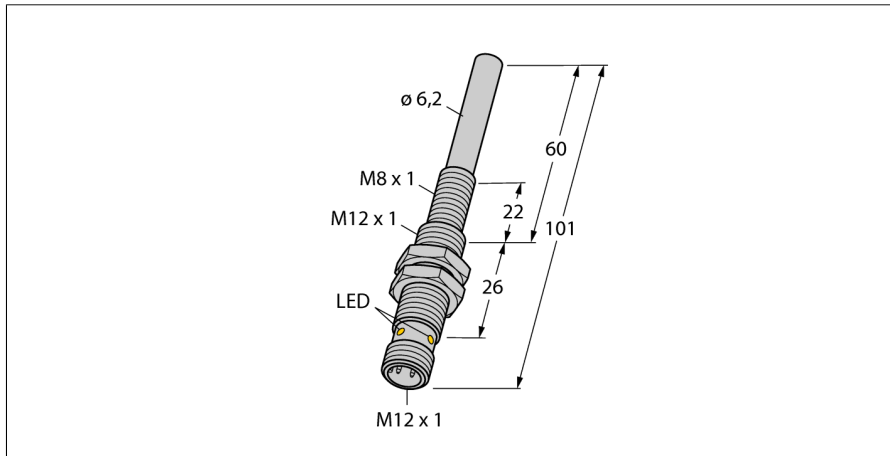
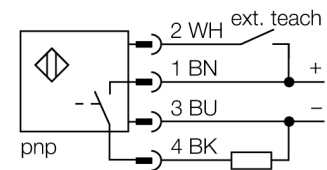


**Magnetic field sensor
for detection of ferromagnetic parts
NIMFE-M12/6,2L101-UP6X-H1141**



- Threaded barrel, M12/M8
- Chrome-plated brass
- 3-wire DC, 10...30 VDC
- NC/NO parametrizable with teach adapter VB2-SP1
- Male M12 x 1

Wiring diagram



Functional principle

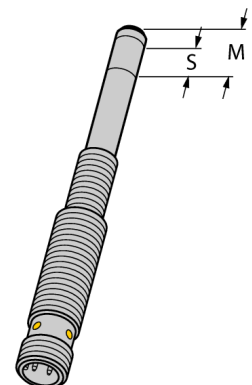
The magnetic field sensors for welding nuts are available in two different versions, with different signal intensities and diameters. Ferromagnetic spares which differ strongly in their material properties and diameters can be detected. A target part has to be located within the so called sensitive area 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 $S = 11\text{ mm}$

Within this area the sensor signal changes when components are connected.

Maximum range $M = 14\text{ mm}$

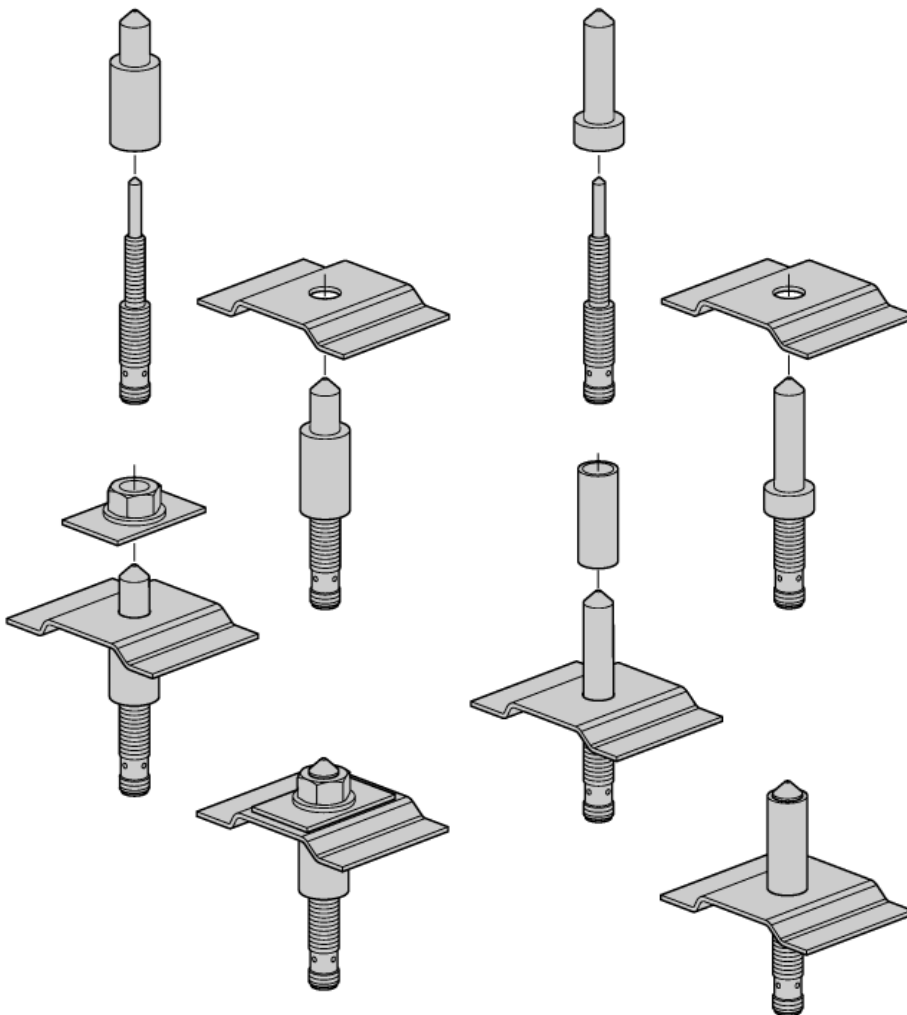
In case of complete coverage of the sensitive area the maximum signal intensity is achieved.



| | |
|---|---|
| Type code | NIMFE-M12/6,2L101-UP6X-H1141 |
| Ident no. | 1600609 |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 10...30VDC |
| Residual ripple | ≤ 10 % U_{s} |
| DC rated operational current | ≤ 200 mA |
| No-load current I_0 | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Rated insulation voltage | ≤ 0.5 kV |
| Short-circuit protection | yes/ cyclic |
| Voltage drop at I_n | ≤ 1 V |
| Wire breakage / Reverse polarity protection | yes/ complete |
| Output function | 3-wire, connection programmable, PNP |
| Design | threaded barrel, M12/6,2L101 |
| Dimensions | 101 mm |
| Housing material | metal, CuZn, chrome-plated |
| Material active area | Metal, CuZn, chrome-plated |
| Max. tightening torque housing nut | 10 Nm |
| Connection | male, M12 x 1 |
| 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 |

**Magnetic field sensor
for detection of ferromagnetic parts
NIMFE-M12/6,2L101-UP6X-H1141**

examples of use



The magnetic field sensor for detection of ferromagnetic parts is especially suited for the detection of welding nuts as well as spacer or reinforcing sleeves. The spacers have to be made of ferromagnetic material in order to guarantee correct performance. Most applications need center bolts to retain the welding nuts and reinforcing sleeves 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 produced individually and adjusted to the correspondent application. The weld sensor detects targets with diameters between 10 and 20 mm easily.

**Magnetic field sensor
for detection of ferromagnetic parts
NIMFE-M12/6,2L101-UP6X-H1141**

Accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------|-----------|---|-------------------|
| BSS-12 | 6901321 | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene | |
| VB2-SP1 | 6999084 | Teach adapter | |