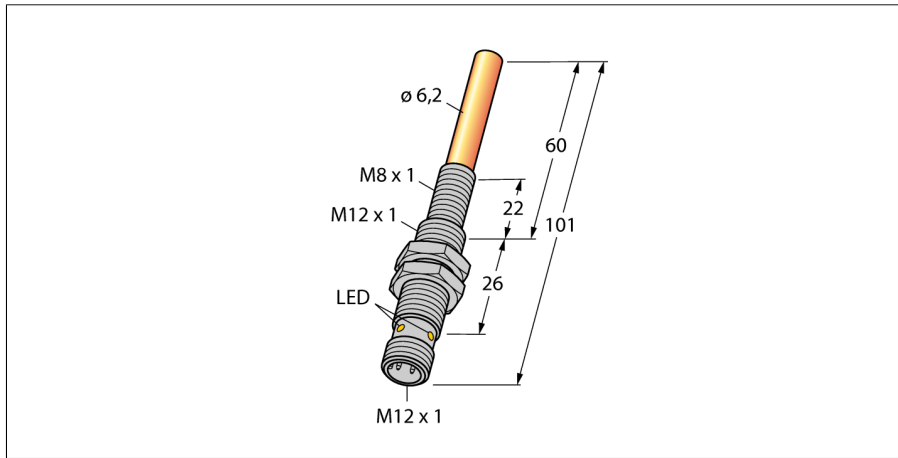


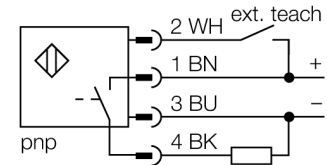
磁感应传感器
用于铁磁金属检测
with TIN coating

NIMFE-EM12/6,2L101-UP6X-H1141/S1182



- M12 x 1 圆柱螺纹
- 不锈钢 1.4301
- 3线直流, 10...30 VDC
- 通过示教适配器 VB2-SP1 编程 (NC/NO)
- M12 x 1 接插件

接线图



功能原理

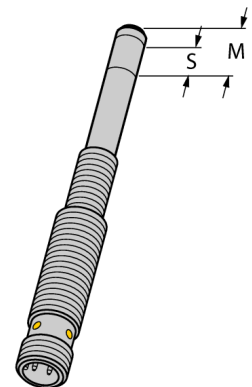
检测焊接螺母的传感器有不同信号强度和直径两类。可以检测材料属性和直径都不同的铁磁元件。被测物必须被置于所谓的灵敏区域，以便能被检测到。如果被测物能够完全覆盖灵敏区域，传感器内部信号将达到最大值。部分覆盖也能够被检测得。

灵敏区域的距离 $S=11\text{mm}$

如果有更多的元件进入检测区域，信号强度就会发生变化

最大的区域距离 $M=14\text{mm}$

假设灵敏区域能够被完全覆盖，那么信号强度能够达到最大值。



型号	NIMFE-EM12/6,2L101-UP6X-H1141/S1182
货号	1600612
安装方式	齐平
环境温度	-25...+70 °C
工作电压	10...30VDC
余波	≤ 10 % U_{s}
直流额定工作电流	≤ 200 mA
空载电流 I_0	≤ 15 mA
漏电流	≤ 0.1 mA
额定绝缘电压	≤ 0.5 kV
短路保护	是/ 循环
压降在 I_0	≤ 1 V
断路/反极性保护	是/ 是
输出性能	3线, 可编程式连接, PNP
设计	圆柱螺纹, EM12/6,2L101
尺寸	101 mm
外壳材料	不锈钢型, V2A (1.4301)
感应面材料	不锈钢, TIN 涂层
最大扭矩	10 Nm
连接	接插件, M12 x 1
防震动性	55 Hz (1 mm)
防冲击性	30 g (11 ms)
防护等级	IP67
MTTF	874 years 符合SN 29500 (Ed.99) 40 °C 认证
工作电压指示	LED 指示灯 绿
开关状态指示	LED 指示灯 黄
B有效面积直径	∅ 12 mm

磁感应传感器
用于铁磁金属检测
with TIN coating
NIMFE-EM12/6,2L101-UP6X-H1141/S1182

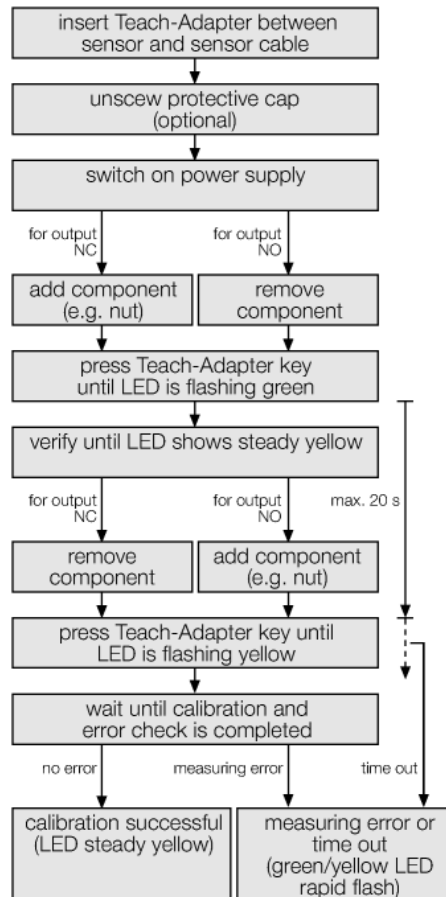
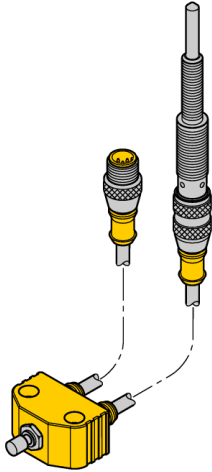
examples of use



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 spares 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.

磁感应传感器
用于铁磁金属检测
with TIN coating
NIMFE-EM12/6,2L101-UP6X-H1141/S1182

Parameterisation with the teach adapter:



The measuring signal in the sensor is influenced by the diameter and the material characteristics of the center bolt, but also by the cover of the sensitive area. Therefore each sensor has to be conditioned to the operating environment, i.e. to the applied sleeves or protective caps and the target (nut, sleeve etc.) In order to calibrate a sensor, the teach adapter VB2-SP1 made by Turck is needed.

Error display

If the output is in switch-on state and the error messages 'overload' i.e. 'short circuit' are signaled, the output is immediately switched off. Within one second the sensor checks if the state of short circuit still remains, if not, the output is switched-on again.

The states of 'overload' or 'short circuit' are signaled yellow by the LED with 1 Hz. Each sensor monitors the internal signals and hardware components. The output is switched-off by the following errors:

- Interruption of the sensor signal (e.g. by a magnetic field)
- Excess temperature (internal device temperature >100°C)
- Defective hardware

Sensor errors are indicated by alternate flashing green and yellow LEDs. The sensor errors are usually self-resetting, i.e. the sensor changes automatically to the normal operating state, after the error was corrected.

After switching on the operating voltage the sensor checks its operating parameters. If errors occur during the checking process, the sensor remains in the error state (green LED blinking). The output cannot be switched-on in this state. A new calibration with the teach adapter is required.

磁感应传感器
用于铁磁金属检测
with TIN coating
NIMFE-EM12/6,2L101-UP6X-H1141/S1182

附件

型号	货号		尺寸图
VB2-SP1	6999084	示教适配器	