

Information Concerning these Instructions

- These instructions apply to the inductive sensors with ID code INTT2xx.
- In the event of possible changes, the respectively current version of the operating instructions can be accessed at www.wenglor.com in the product's separate download area.
- They make it possible to use the product safely and efficiently.
- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- Read the operating instructions carefully before using the product.
- Local accident prevention regulations and national work safety regulations must be complied with as well.

NOTE!
The operating instructions must be read carefully before using the product and must be kept on hand for later reference.

Use for Intended Purpose

The product is based on the following functional principle:

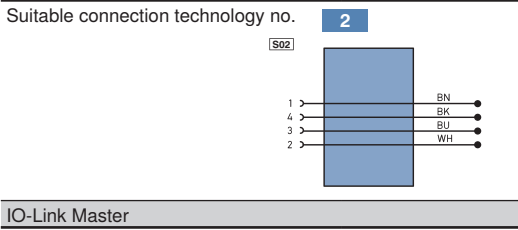
Inductive Sensors
An LC resonant circuit is arranged under the active surface of the inductive sensors. The electromagnetic field generated by this is affected when metals approach it (e.g. steel, aluminum, or brass). The output switches as soon as the metal reaches the set switching distance.

General Safety Precautions

- Not a safety component in accordance with the EC machinery directive.
- The product is not suitable for use in potentially explosive atmospheres.
- Protect the sensor against contamination and mechanical influences.
- Only accessories supplied or approved by wenglor may be used with the product.

Complementary Products (see catalog)

wenglor offers connection technology for field wiring.



说明信息

- 这些说明适用于设有 ID 代码 INTT2xx 的接近开关。
- 如果发生可能更改，可在 www.wenglor.com 网站的产品单独下载区域访问操作说明的当前版本。
- 借助当前版操作说明可以安全高效地使用产品。
- 这些说明是产品的组成部分，必须在整个使用寿命内保存在手边。
- 使用前仔细阅读产品操作说明。
- 还须遵守当地事故预防规定和国家的工作安全规程。

注意！
使用前必须仔细阅读产品操作说明并须保存在手边以供以后查阅。

用于预定用途

产品基于下列工作原理：

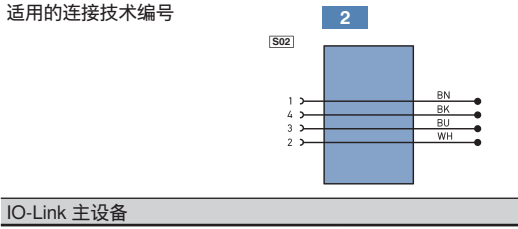
接近开关
在 接近开关的作用面装有一个 LC 谐振电路。当金属（例如钢、铝或黄铜）接近它时会影响由此产生的电磁场。一旦金属到达设定的开关量距离，输出端立即切换。

一般安全防护措施

- 按照欧盟机械指令属于非安全件。
- 产品不适用于易爆环境。
- 保护好传感器以免受污染和机械影响。
- 只允许 wenglor 供应的或认可的配件与产品一起使用。

补充产品（见目录）

wenglor 提供现场布线连接技术。



Error Indicator

The sensors have an integrated error indicator (continuous blinking at 5 Hz). Error indication (LED) may be triggered by:

- Mechanical damage to the coil
- Short-circuit at output 1

Technical Data

	INTT201	INTT203	INTT207	INTT209	INTT211	INTT213
Cable Length (L)	1 m	5 m	10 m	15 m	20 m	30 m
Inductive Data						
Switching Distance	25 mm					
Standard Target	75 × 75 mm					
Correction Factors V2A/CuZn/Al	0,6/1,0/0,85					
Mounting	non-flush					
Mounting A/B/C/D in mm	50/130/50/20					
Mounting B1 in mm	0...75					
Switching Hysteresis	< 10%					
Electrical Data						
Supply Voltage	10...30 V DC					
Supply Voltage with IO-Link	18...30 V DC					
Current Consumption (Ub = 24 V)	< 15 mA					
Switching Frequency	50 Hz					
Temperature Drift	< 10%					
Temperature Range, Sensor Head	-10...250 °C					
Temperature Range, Plug	0...70 °C					
Number of Switching Outputs	2					
Switching Output Voltage Drop	< 1 V					
Switching Output/Switching Current	100 mA					
Residual Current Switching Output	< 100 µA					
Short Circuit Protection	yes					
Reverse Polarity and Overload Protection	yes					
Interface	IO-Link V1.1					
Protection Class	III					
Service Life (Tu = +200 °C)	100 000 h					
Service Life (Tu = +250 °C)	60 000 h					
Mechanische Daten						
Sensor Head Material	V2A, PEEK, PTFE					
Plug material	CuZn, nickel-plated					
Degree of protection	IP65					
Connection	M12 × 1; 4-polig					
PWIS-free	yes					
Safety-relevant Data						
MTTFd (EN ISO 13849-1)	3706,54 a					
Function						
Error Indicator	yes					
Programmable switching distance	15/20/25 mm					
Output Function						
IO-Link	yes					
Switchable to NC/NO	yes					
Configurable as PNP/NPN/Push-Pull	yes					
Error Output	yes					
Default Settings						
Switching Distance	25 mm					
Output Function	PNP					
Switching Function A1	NO					
Switching Function A2	Error (normally closed function)					

Installation

- Observe all applicable electrical and mechanical regulations, standards, and safety rules.
- Make sure that the sensor is mounted in a mechanically secure fashion.
- The sensor cable is not suitable for use with drag chains. The cable may not be pinched.
- When laying the cable it must be assured that the bending radius is at least 5 times the cable diameter: Bending radius >3,4 mm × 5 = 17 mm.

weproTec (Mounting B1)

Thanks to innovative **wepro**Tec technology, two inductive sensors can be mounted very close to each other within clearance zone B1. No reciprocal influence occurs amongst the sensors within this zone.

Conditions of Use

- Clearance zones B1 and B make reference to the outside edge of the sensor (see "Mounting" first image second row).
- The sensors may only be operated within zones B1 and B.
- The specified clearances apply to installation in air. If the sensors are installed within an attenuating material (e.g. steel), these values are improved. Testing in the application is required in order to determine the exact distance.

weproTec functionality (see "B1 installation in mm" in the technical data) is not operative when IO-Link communication is active. The specified values are valid for the greatest switching distance (default setting).

IO-Link

Process and parameter data can be found in the interface protocol at:
www.wenglor.com → Product World → Enter the desired product number as a search term → "Download" on the product page

Process data:

- Object detected
- Error display

Parameter data:

- Switching distance (3 selectable)
- Output function A1 (PNP, NPN, push-pull)
- Switching function A1 (normally open, normally closed)
- Switching function A2 (antivalent, error output NO, error output NC, no output)

Maintenance Instructions

NOTE!
• This wenglor sensor is maintenance-free.
• It's advisable to clean and to check the plug connections at regular intervals.
• Do not clean the sensor with solvents or cleansers which could damage the product.

Proper Disposal

wenglor sensoric GmbH does not accept the return of unusable or irreparable products. Respectively valid national waste disposal regulations apply to product disposal.

安装

- 遵守所有相关电气机械规程、标准和安全规章。
- 确保传感器机械安装牢固。
- 传感器电缆适合与拖链结合使用。不允许挤压电缆。
- 铺设电缆时必须确保弯曲半径至少是电缆直径的 5 倍。弯曲半径 >3.4 mm × 5 = 17 mm。

错误指示器

传感器设有集成式错误指示器（在 5 Hz 下连续闪烁）。错误指示（LED）触发原因如下：

- 线圈发生机械损坏
- 输出端 1 发生短路

技术参数

	INTT201	INTT203	INTT207	INTT209	INTT211	INTT213
电缆长度 (L)	1 m	5 m	10 m	15 m	20 m	30 m
电感参数						
开关量距离	25 mm					
标准目标	75 × 75 mm					
修正系数 V2A/CuZn/Al	0,6/1,0/0,85					
安装	不平整					
安装 A/B/C/D, 单位 mm	50/130/50/20					
安装 B1, 单位 mm	0...75					
开关量滞后	< 10%					
电气参数						
电源电压	10...30 V DC					
通过 IO-Link 提供电源	18...30 V DC					
耗用电流 (Ub = 24 V)	< 15 mA					
开关量频率	50 Hz					
温度偏差	< 10%					
温度范围, 传感头	-10...250 °C					
温度范围, 插头	0...70 °C					
开关量输出端数量	2					
开关量输出端电压降	< 1 V					
开关量输出端/开关量电流	100 mA					
剩余电流/开关量输出端	< 100 µA					
短路保护	是					
反极性和过载保护	是					
接口	IO-Link V1.1					
防护等级	III					
使用寿命 (Tu = +200 °C)	100 000 h					
使用寿命 (Tu = +250 °C)	60 000 h					
机械参数						
传感头材质	V2A, PEEK, PTFE					
插头材质	黄铜, 镀镍					
防护等级	IP65					
接口	M12 × 1; 4 针					
不含 PWIS	是					
安全数据						
MTTFd (EN ISO 13849-1)	3706,54 a					
功能						
错误指示器	是					
可编程设定的开关量距离	15/20/25 mm					
输出功能						
IO-Link	是					
可切换到常闭/常开	是					
可设置为 PNP/NPN/推拉	是					
错误输出端	是					
默认设置						
开关量距离	25 mm					
输出功能	PNP					
开关量功能 A1	常开					
开关量功能 A2	错误 (常闭功能)					

weproTec （安装 B1）

由于采用创新 **wepro**Tec 技术，在间隙区域 B1 内两个接近开关可以彼此靠近安装。在该区域的开关中不会发生相互影响。

使用条件

- 间隙区域 B1 和 B 参照开关的外缘（见 "安装" 第一个图像第二行）。
- 只允许在 B1 和 B 区域操作开关。
- 规定的间隙适用于空中安装。如将这些开关安装在衰减材料范围（例如钢），数值会得到改进。必须在应用中进行测试，以确定准确的距离。

当 IO-Link 通讯工作时，**wepro**Tec 功能（见技术参数中"B1 安装，单位 mm）不运行。规定值对最大开关量距离（默认设置）有效。

IO-Link

在 www.wenglor.com 产品世界 中可以看到过程参数数据：在产品页面 "下载" 处输入所要的产品编号，作为搜索术语。**→→→**

过程数据：

- 物体检测
- 错误显示

参数数据：

- 开关量距离（可以选择 3 种距离）
- 输出功能 A1（PNP、NPN、推挽）
- 开关量功能 A1（常开、常闭）
- 开关量功能 A2（反效、错误输出端常开、错误输出端 常闭，无输出端）

维护说明

注意！
• 该 wenglor 传感器免维护。
• 建议定期清洁和检查插头连接。
• 请勿用可能损坏产品的溶剂或清洗剂清洗开关。

妥善处理

wenglor sensoric gmbh 不受理不能用的或无法修补产品的退货。产品处置适用分别有效的废物处置规定。