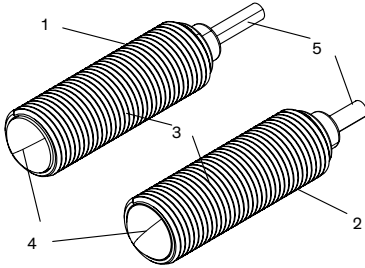


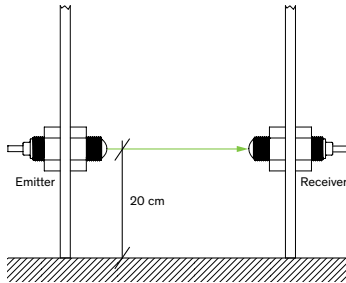
► Overview



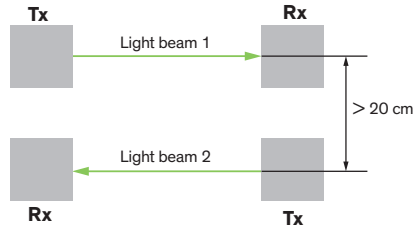
- 1 Emitter
- 2 Receiver
- 3 M12 sensor housing
- 4 Optical element
- 5 Cable

► Installation

1. Position of the sensor: Emitter and receiver needs to mount opposite each other.

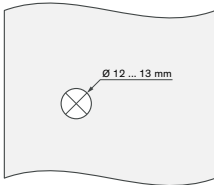


2. Cross mounting (overhead view)

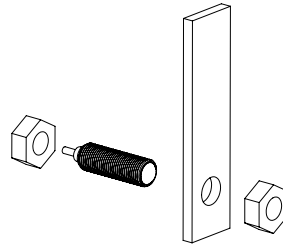


When using two through-beam light barriers, pay attention to crossed mounting.

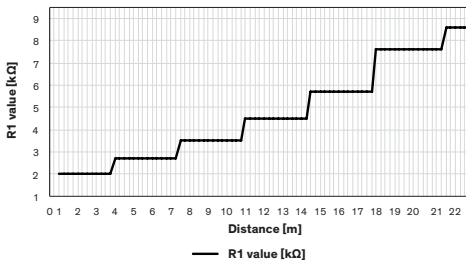
3. Drill one hole per sensor.



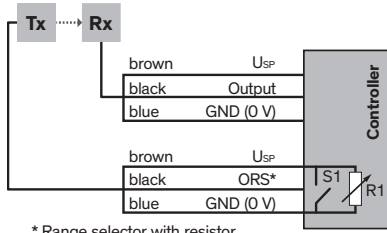
4. Fix the sensors with two screws nut M12.



► Operating range adjustment



► Electrical connection



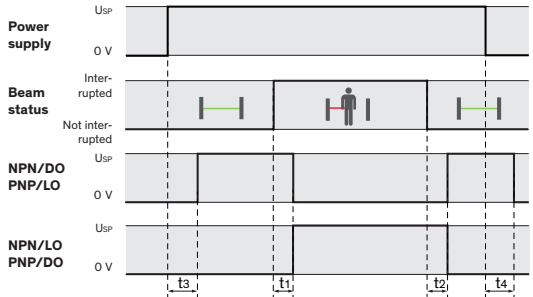
* Range selector with resistor

S1: Connection between blue and black to mute the emitter and test the system.

R1: Operating Range adjustment by resistor.

S1 and R1 needs to implement in the control unit

► Timing diagram



► Technical data

OPTICAL

Operating range	1 ... 20 m
Aperture angle	
- Emitter	±5° at 12 m
- Receiver	±5° at 12 m

MECHANICAL

Dimensions	M12 × 42 mm
Housing material	
- Body	M12, stainless steel
- Front	Polycarbonate, black
Enclosure rating	IP67
Temperature range	-25 °C ... +60 °C

ELECTRICAL

Supply voltage U_{sp}	10 ... 30 VDC
Typ. current consumption	
- Emitter	< 20 mA at 24 VDC
- Receiver (w/o load)	< 20 mA at 24 VDC
Output	PNP or NPN
Max. output current	100 mA
Response time t_1	< 10 ms
Release time t_2	< 10 ms
Start-up time t_3	< 300 ms
Switch-off time t_4	< 100 ms

CONNECTION CABLE AND ELECTRICAL CONNECTION

Emitter

Diameter	Ø 2.9 mm
Length connection cable	20 m, fix cable
Material	PVC, gray
Wires	AWG26
• brown	U_{sp}
• blue	GND
• black	Range selector with resistor

Receiver

Diameter	Ø 2.9 mm
Length connection cable	20 m, fix cable
Material	PVC, black
Wires	AWG26
• brown	U_{sp}
• blue	GND
• black	Output



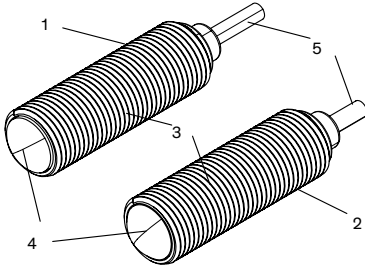
CEDES AG is certified according to ISO 9001: 2015.

CEDES AG reserves the right to modify or change technical data without prior notice.

ELS 500

安装指南

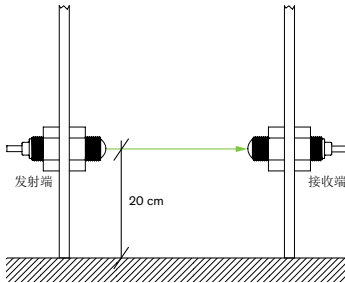
概述



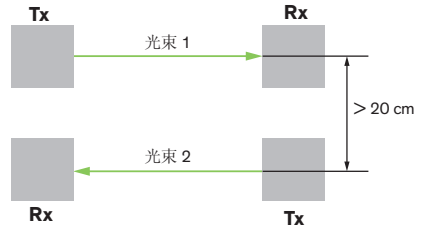
- 1 发射端
- 2 接收端
- 3 M12 传感器外壳
- 4 光眼
- 5 电缆

安装

1. 传感器位置：发射端和接收端需相对安装。

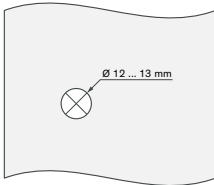


2. 交叉安装（俯视图）

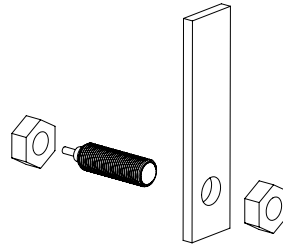


当使用双透射光束光栅时，注意要交换发射接收端位置。

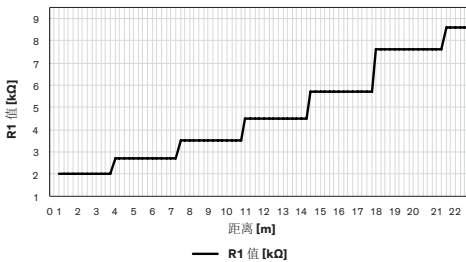
3. 为每个传感器开一个安装孔



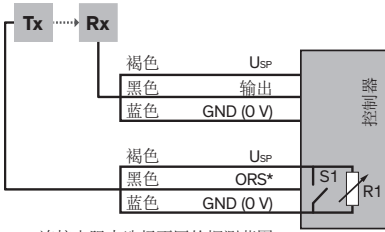
4. 用两个M12螺母固定传感器



工作范围调节



► 电气连接



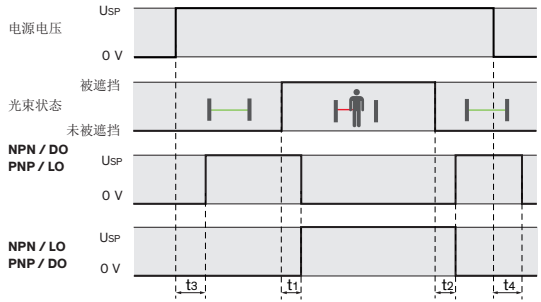
* 连接电阻来选择不同的探测范围

S1: 连接蓝色和黑色以屏蔽发射端和进行系统测试

R1: 工作范围通过电阻调节

S1和R1需要在控制器中执行

► 时序图



► 技术参数

光学参数

工作距离	1 ... 20 m
光阑角	
- 发射端	±5° 在 12 m
- 接收端	±5° 在 12 m

机械参数

尺寸规格	M12 × 42 mm
外壳材质	
- 主体	M12, 不锈钢
- 正面	聚碳酸酯(PC), 黑色
防护等级	IP67
温度范围	-25 °C ... +60 °C

电子参数

供电电压 Usp	10 ... 30 VDC
电流消耗	
- 发射端	< 20 mA 在 24 VDC
- 接收端 (无负载)	< 20 mA 在 24 VDC
输出	PNP 或 NPN
最大输出电流	100 mA
响应时间	< 10 ms
释放时间 t2	< 10 ms
启动时间 t3	< 300 ms
通断时间 t4	< 100 ms

电缆和电气连接

发射端

直径	Ø 2.9 mm
连接电缆长度	20 m, 固定电缆
材质	PVC, 灰色
线缆	AWG26
• 褐色	Usp
• 蓝色	GND
• 黑色	连接电阻来选择不同的探测范围

接收端

直径	Ø 2.9 mm
连接电缆长度	20 m, 固定电缆
材质	PVC, 黑色
线缆	AWG26
• 褐色	Usp
• 蓝色	GND
• 黑色	输出



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