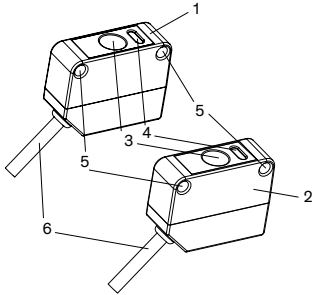


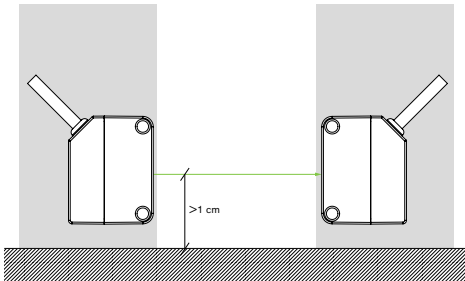
► Overview



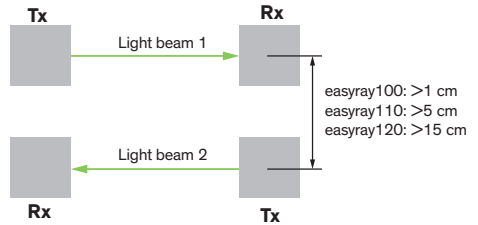
- 1 Emitter (black cable)
- 2 Receiver (gray cable)
- 3 Optical element
- 4 Status LED
- 5 Mounting holes
- 6 Cable

► Installation

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

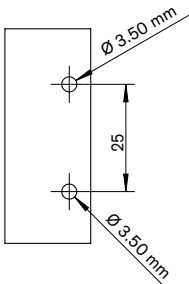


2. Cross mounting (overhead view)

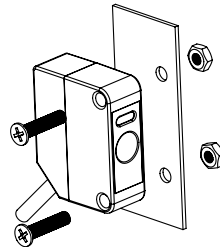


When using two through-beam light barriers, pay attention to crossed mounting.

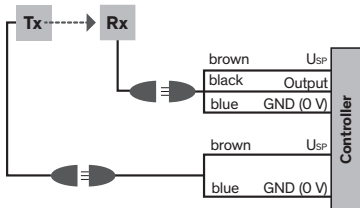
3. Drill two holes per sensor.



4. Fix the sensors with two screws (M3 recommended).



► Electrical connection

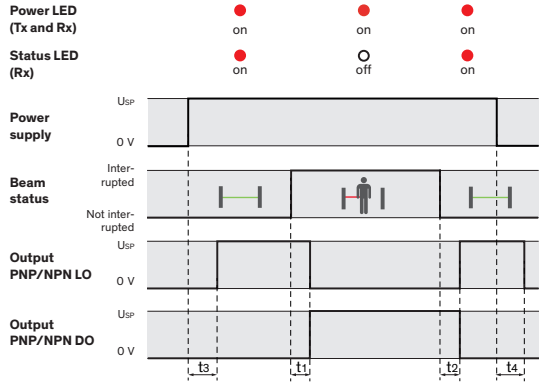


► **Naming**

easyray1a0bcd ee-f

a	: Operating range	0	2 m
		1	5 m
		2	12 m
b	: Cable type	C	M8 connector
		F	Fix cable
c	: Output type	U	push-pull
d	: Output logic	L	Light on
		D	Dark on
ee	: Type	SY	System
		Tx	Emitter
		Rx	Receiver
-f	: Cable length	2	2 m
		5	5 m
		12	12 m

► **Timing diagram**



► **Technical data**

OPTICAL

Operating range		
- easyray100	0.1 ... 2 m	
- easyray110	0.1 ... 5 m	
- easyray120	0.1 ... 12 m	
Aperture angle		
	Emitter	Receiver
- easyray100	±3° at 2 m	±5° at 2 m
- easyray110	±5° at 2 m	±9° at 2 m
- easyray120	±7° at 6 m	±9° at 6 m
Max. ambient light	100,000 Lux	
Wavelength, IR	940 nm	

MECHANICAL

Dimensions (l x w x h)	31 x 25 x 11 mm	
Housing material	PC	
Enclosure rating	IP65	
Temperature range (operation)	-25 °C ... +60 °C	

ELECTRICAL

Supply voltage Usp	10 ... 30 VDC	
Current consumption		
- Emitter	< 15 mA at 24 VDC	
- Receiver	< 15 mA at 24 VDC	
Output	PNP/NPN (push-pull)	
Max. output load	100 mA, 100 nF	
Response time t1	< 3 ms	
Release time t2	< 3 ms	
Start-up time t3	< 100 ms	
Switch-off time t4	< 100 ms	

CONNECTION CABLE AND ELECTRICAL CONNECTION

Emitter

Connection	Fix cable or M8, 4-pin
Length connection cable	
- easyray100	2 m
- easyray110	5 m
- easyray120	12 m
Diameter	Ø 3.5mm
Cable material	PVC, black
Wires	AWG26
• brown	Usp
• blue	GND (0 V)

Receiver

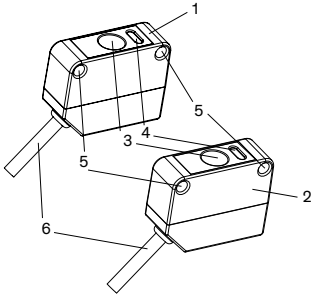
Connection	Fix cable or M8, 4-pin
Length connection cable	
- easyray100	2 m
- easyray110	5 m
- easyray120	12 m
Diameter	Ø 3.5mm
Cable material	PVC, gray
Wires	AWG26
• brown	Usp
• blue	GND (0 V)
• black	Output



CEDES AG is certified according to ISO 9001: 2015.

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

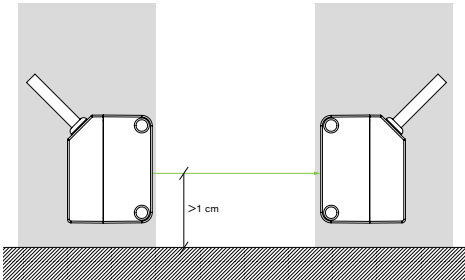
概述



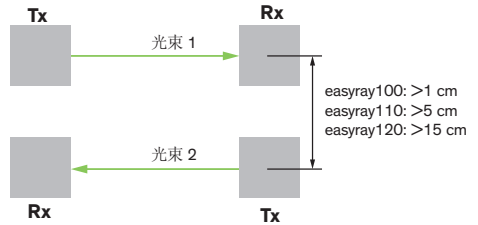
- 1 发射端（黑的电缆）
- 2 接收端（灰的电缆）
- 3 光眼
- 4 状态LED
- 5 安装孔
- 6 电缆

安装

1. 传感器位置：发射端和接收端需相对安装。

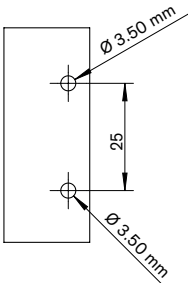


2. 交叉安装（俯视图）

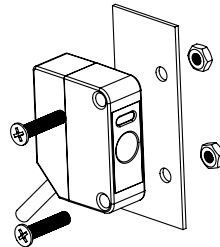


当使用双透射光束光栅时，注意要交换发射接收端位置。

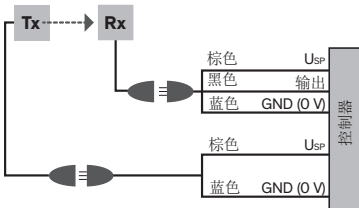
3. 为每个传感器开2个安装孔



4. 用2个螺钉固定传感器（建议使用M3）。



电气连接

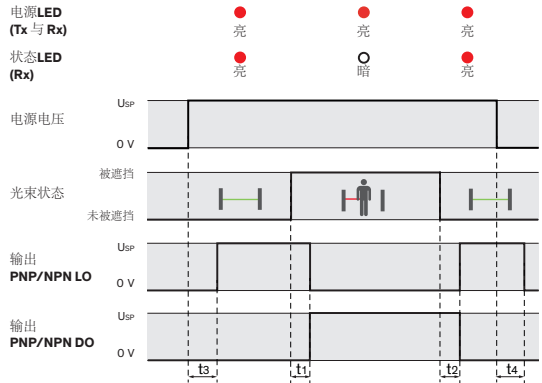


► 名称

easyray1a0bcd ee-f

a : 工作距离	0	2 m
	1	5 m
	2	12 m
b : 电缆类型	C	M8 插头
	F	固定电缆
c : 输出类型	U	推挽式
d : 输出逻辑	L	常亮
	D	常暗
ee : 类型	SY	系列
	Tx	发射端
	Rx	接收端
-f : 电缆长度	2	2 m
	5	5 m
	12	12 m

► 时序图



► 技术参数

光学参数

工作距离	0.1 ... 2 m
- easyray100	0.1 ... 2 m
- easyray110	0.1 ... 5 m
- easyray120	0.1 ... 12 m
光阑角	发射端 接收端
- easyray100	间隔2 m时±3° 间隔2 m时±5°
- easyray110	间隔2 m时±5° 间隔2 m时±9°
- easyray120	间隔6 m时±7° 间隔6 m时±9°
抗光强度	100,000 Lux
红外线波长	940 nm

机械参数

尺寸规格(宽×高×长)	31 × 25 × 11 mm
外壳材质	PC
防护等级	IP65
温度范围 (工作)	-25 °C ... +60 °C

电子参数

供电电压 U _{SP}	10 ... 30 VDC
电流消耗	
- 发射端	< 15 mA 在 24 VDC
- 接收端	< 15 mA 在 24 VDC
输出	PNP/NPN (推挽式)
最大输出负载	100 mA, 100 nF
响应时间 t ₁	< 3 ms
释放时间 t ₂	< 3 ms
启动时间 t ₃	< 100 ms
通断时间 t ₄	< 100 ms

电缆和电气连接

发射端

连接	固定电缆或者M8, 4-pin
连接电缆长度	
- easyray100	2 m
- easyray110	5 m
- easyray120	12 m
直径	Ø 3.5mm
线缆材质	PVC, 黑色
线缆	AWG26
• 棕色	U _{SP}
• 蓝色	GND (0 V)

接收端

连接	固定电缆或者M8, 4-pin
连接电缆长度	
- easyray100	2 m
- easyray110	5 m
- easyray120	12 m
直径	Ø 3.5mm
线缆材质	PVC, 灰色
线缆	AWG26
• 棕色	U _{SP}
• 蓝色	GND (0 V)
• 黑色	输出



CEDES AG于2015年经ISO 9001认证.

CEDES AG 保留对技术数据更改的权利, 无需事先告知.

www.cedes.com
数据表和更多信息

CEDES AG, Science Park | CH-7302 Landquart
Phone: +41 81 307 2323 | Fax: +41 81 307 2325 | info@cedes.com | www.cedes.com

