

TOF/Spot-S (Safety version)

Technical data

FEATURES

- ▶ Time-of-Flight (TOF) sensor
- ▶ Exact distance setting, independent from background
- ▶ Excellent detection capability
- ▶ Solid-state relay and analog output
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m
- ▶ Easy mounting
- ▶ Insensitive to ambient light up to 100,000 Lux



OPTICAL

Operating range	
- P, T and A types	0.2 ... 6 m
- N type	0.2 ... 3 m
Active light spot at 2 m distance	40 mm × 40 mm
Offset	
- T type	0.15 m
Measurement precision	±5% at 2 m ±10 cm over the whole range
Max. ambient light	100,000 Lux

MECHANICAL

Dimensions	Ø 29.5 mm × 35.8 mm
Housing material	Polycarbonate
Housing color	Black
Enclosure rating	IP65
Temperature range	-40 °C ... +60 °C
Relative humidity (non-condensing)	0 ... 95 %C

ELECTRICAL

Supply voltage U_{sp}	10 ... 30 VDC
Current consumption at 24 VDC	50 mA
Peak current consumption during power up at 24 VDC	500 mA
Output	Solid-state relay, analog
Max. switching voltage	60 V
Max. switching current	150 mA
Max. power-up time	1 s
Max. response time	60 ms
Test response time	5 ms

P = Preset, N = Potentiometer, A = Analog, T = Teach-in button



CEDES AG is certified according to ISO 9001: 2015.

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

CONNECTION CABLE AND ELECTRICAL CONNECTION

Sensor	
Length	0.25 m
Connection	M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blue

Connection cable	
Length	2 m (other lengths on request)
Connection	M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blue
Wires	AWG26
• brown	+U _{sp}
• black	Output A / Analog output
• green	Output B / Analog GND
• blue	GND (0 V) / -U _{sp}
• white	Test input
• gray	Logic selector

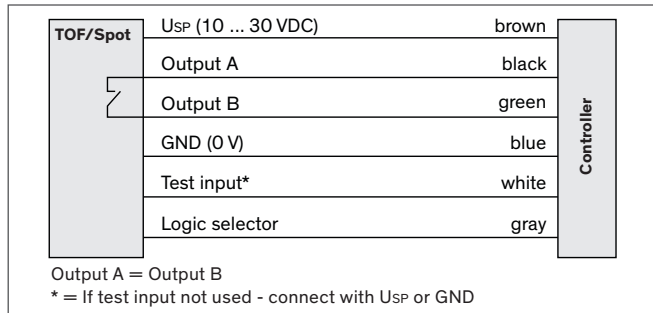
GENERAL

EMC emission	EN 12015:2014
EMC immunity	EN 12016:2013
Vibration	IEC 60068-2-6:2007
Shock	IEC 60068-2-27:2008
RoHS	2011/65/EU
Certificates	CE, TÜV
Safety categories	EN ISO 13849-1:2008, Cat. 2 PL C* EN 12978:2009 DIN 18650:2010, clause 5.7.4 EN 16005:2013, clause 4.6.8 EN 61508:2010, SIL1*

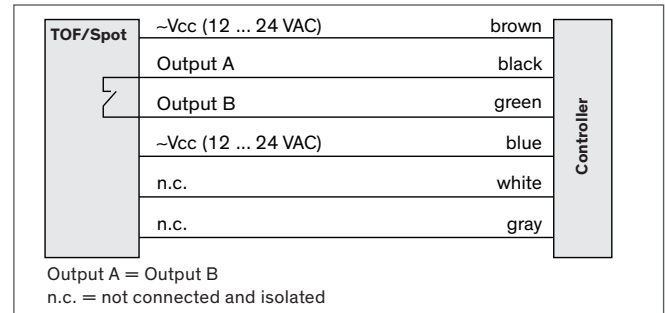
* only when the sensor is pointed towards a background within the max. operating range

Output connections

Solid state relay output (DC supply)

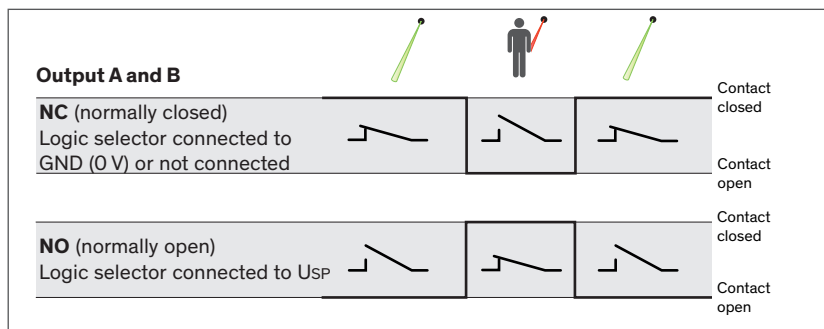


Solid state relay output (AC supply)

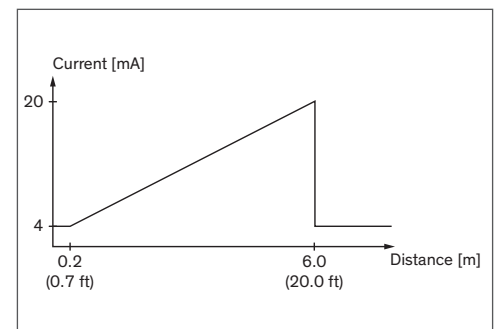


Output description

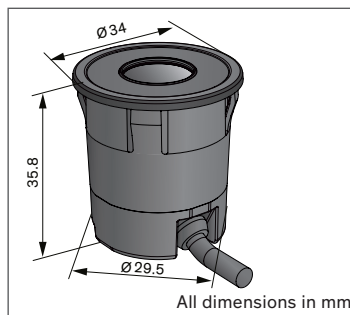
Solid state relay output



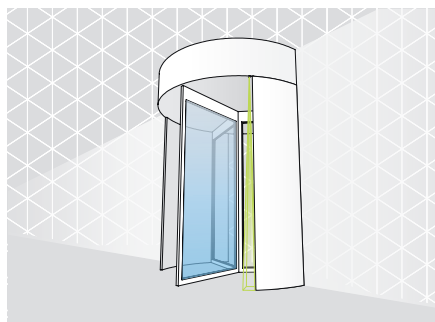
Analog output



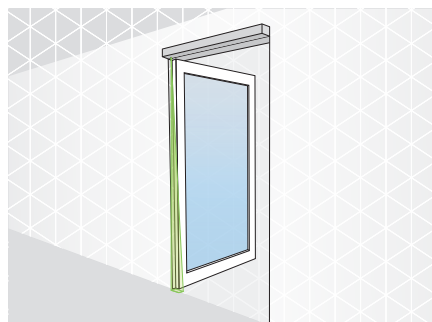
Dimensions



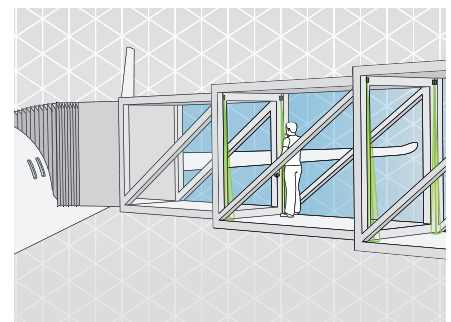
Application examples



Safeguarding the closing door edge on revolving doors



Safeguarding the closing door edge on swing doors



Safeguarding telescope edges on airport docking fingers