

# TOF/Spot-S (for automatic windows)

## 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 <sub>sp</sub>	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

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

<b>Connection cable</b>	
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 <sub>sp</sub>
• black	Output A / Analog output
• green	Output B / Analog GND
• blue	GND (0 V) / -U <sub>sp</sub>
• white	Test input
• gray	Logic selector

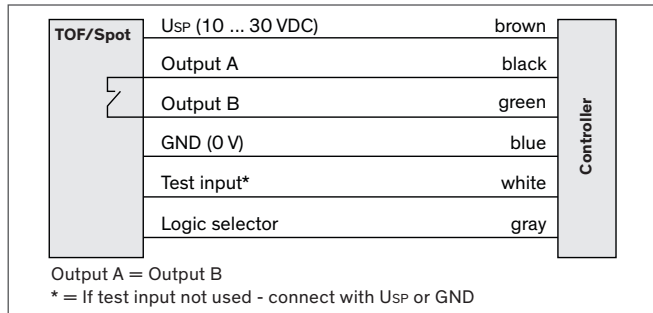
### GENERAL

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*

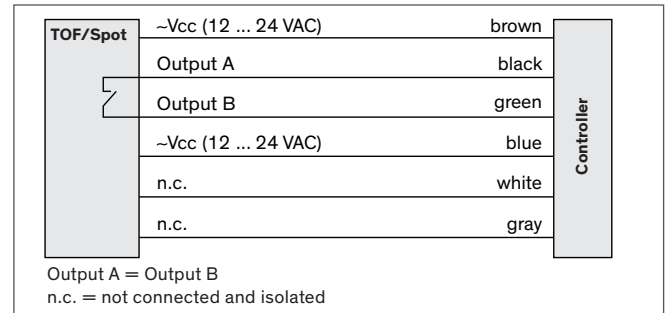
\* only when the sensor is pointed towards a background within the max. operating range

**Output connections**

**Solid state relay output (DC supply)**

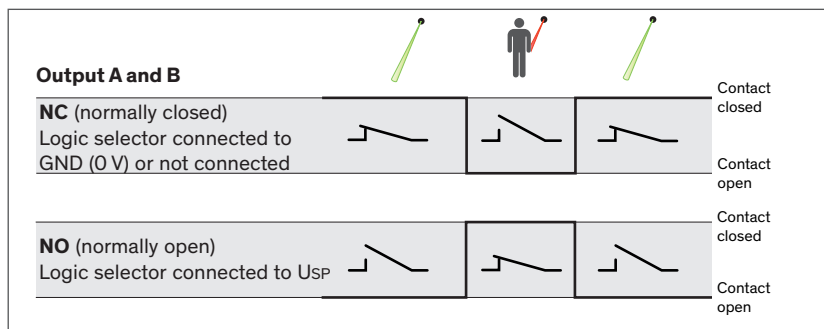


**Solid state relay output (AC supply)**

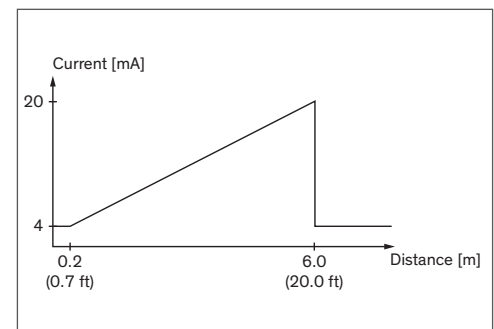


**Output description**

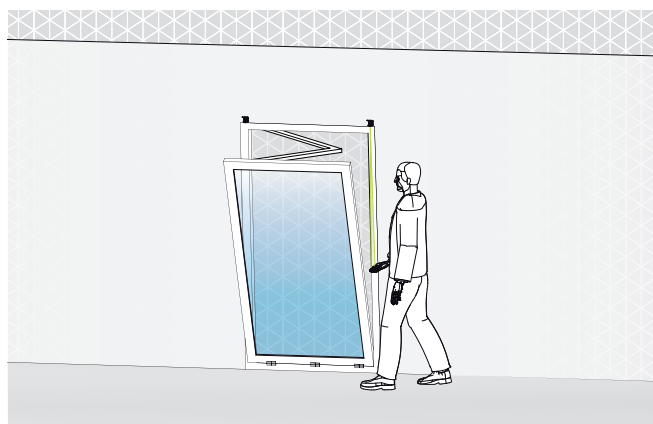
**Solid state relay output**



**Analog output**



**Application**



Automatic windows

**Dimensions**

