CEDES
The Sensor Pioneers.

TOF/Spot
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, C, 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	
- C and T types	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 / 12 ... 24 VAC
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, C = Automatic calibration, N = Potentiometer, A = Analog,
T = Teach-in button

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
Certificate	CE

CE RoHS✓

CEDES AG is certified according to ISO 9001: 2015.

Output connections

Solid state relay output (DC supply)

TOF/Spot		
	U_{SP} (10 ... 30 VDC)	brown
	Output A	black
	Output B	green
	GND (0 V)	blue
	Test input*	white
	Logic selector	gray

Controller

Output A = Output B
* = If test input not used - connect with U_{SP} or GND
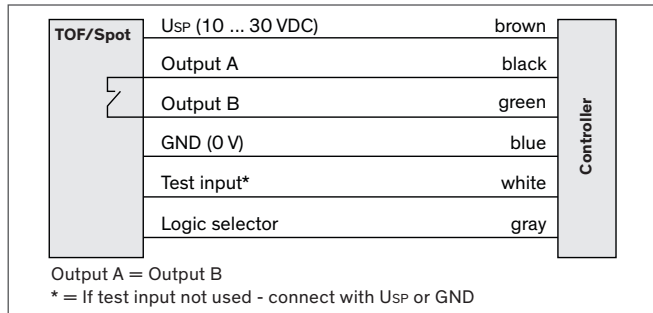
Solid state relay output (AC supply)

TOF/Spot		
	~Vcc (12 ... 24 VAC)	brown
	Output A	black
	Output B	green
	~Vcc (12 ... 24 VAC)	blue
	n.c.	white
	n.c.	gray

Controller

Output A = Output B
n.c. = not connected and isolated

Analog output (DC supply)

TOF/Spot		
	U_{SP} (10 ... 30 VDC)	brown
	Analog output (4 ... 20 mA)	black
	Analog GND	green
	GND (0 V)	blue
	Test input*	white
	n.c.	gray

Controller

* = If test input not used - connect with U_{SP} or GND
n.c. = not connected and isolated

Dimensions

Ø34
35.8
Ø29.5

All dimensions in mm
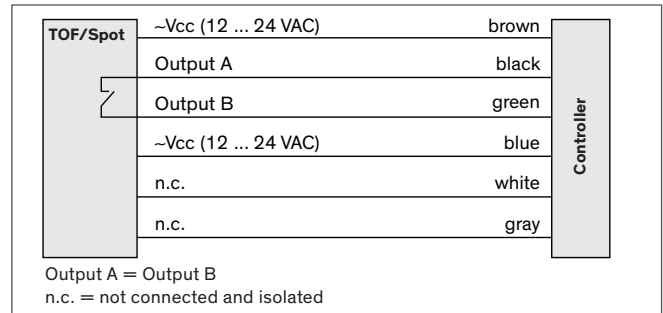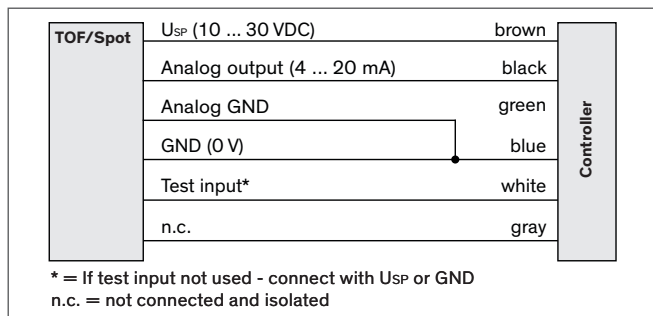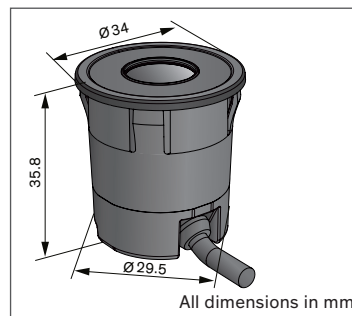
Output description

Solid state relay output

Output A and B

	Contact closed / Contact open
NC (normally closed) Logic selector connected to GND (0 V) or not connected	
NO (normally open) Logic selector connected to U_{SP}	

Analog output

Current [mA]
20
4
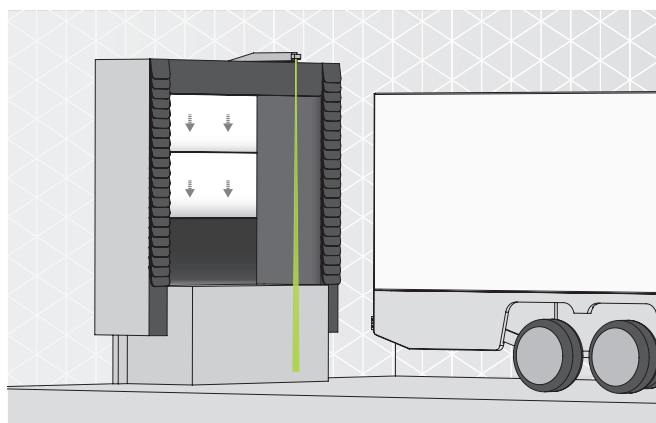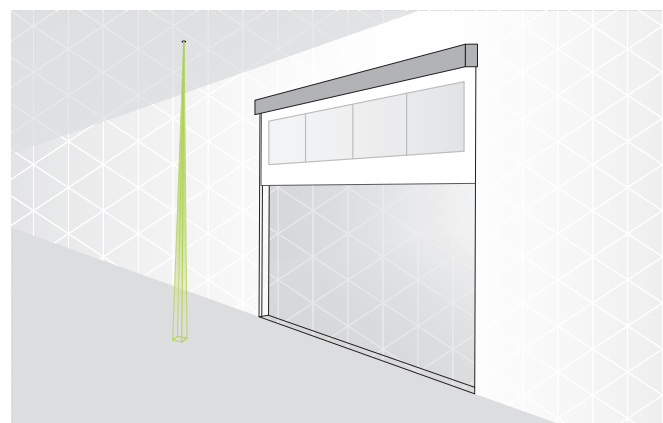0.2   6.0   Distance [m]
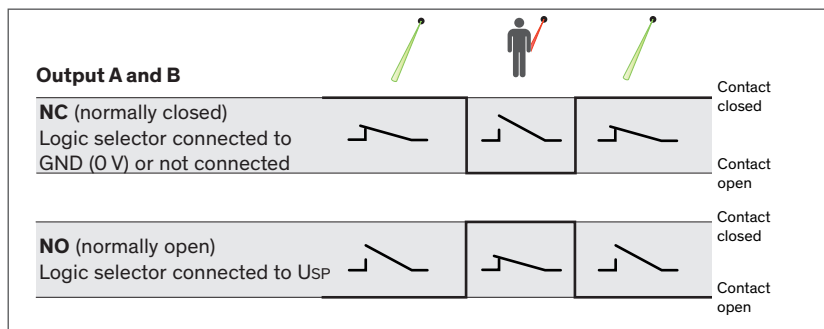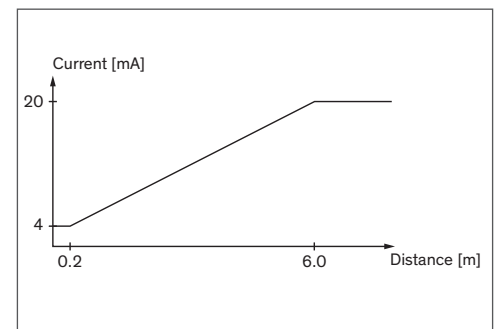
Application examples

Truck detection in loading bay

Replaces ‚pull-string' door opening