



Order designation

ToF-S1; Time-of-Flight (ToF) Sensor

ToF-1Sn*: Art.-No. 10001720

ToF-1St*: Art.-No. 10001722

*n = Potentiometer

*t = Teach-In button

Features

- Time-of-Flight (ToF) sensor
- Exact distance setting, independent from background
- Excellent detection capability
- 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
- **ToF-1Sn:** Detection Range adjustable via potentiometer
- **ToF-1St:** Detection Range can be set via Teach-In button or by reversal the supply voltage

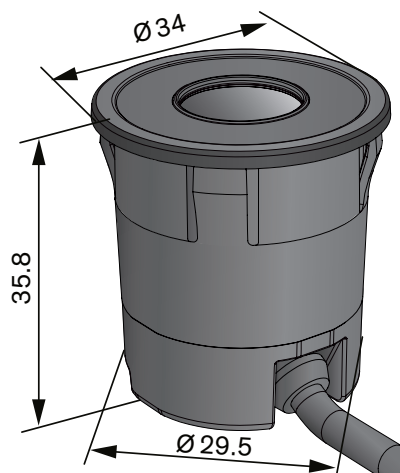
Typical Applications

- Presence detection of vehicles and persons
- Presence and movement detection, e.g. at car park barriers
- Opening pulse generator of industrial doors
- Replaces 'pull-string' door opening
- Height classification of objects

Approvals and certificates

- This device is CE certified and may be operated in all countries of the European Community. In other countries, the applicable national regulations must be observed.

Dimensions



All dimensions in mm

Technical Data

General data	
EMV emission	EN 12015:2014 EN 61000-6-3:2007, +A1:2011
EMV Immunity	EN 12016:2013 EN 61000-6-2:2019
Vibration	IEC 60068-2-6:2007
Shock	IEC 60068-2-27:2008
RoHS	2011/65/EU
Certificate	CE
Optical	
Operating range	0.2 ... 6 m
- T Type	0.2 ... 3 m
- N Type	
Active light spot at 2 m distance	20 mm × 20 mm
Offset	
- T Type	0.15 m (from background)
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 %
Electrical	
Supply voltage U_{sp}	10 ... 30 VDC
Current consumption at 24 VDC	50 mA
Peak current consumption during 500 mA power up at 24 VDC	500 mA
Outputs	Solid-state relay, NO/NC configurable
Max. switching voltage	60 V
Max. switching current	150 mA
Max. power-up time	1 s
Max. response time	60 ms



Technical Data

Sensor: Connection cable and electrical connections

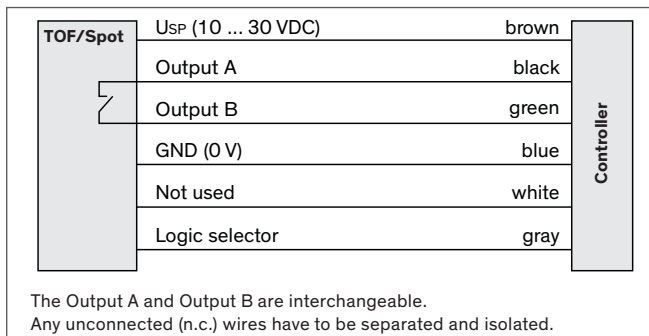
Length	0.25 m
Connection	Screwable, M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blau

Connection cable and electrical connections

Length	2 m (other lengths on request)
Connection	Screwable, M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blue
Wires	AWG26
• brown	+USP
• black	Output A
• green	Output B
• blue	GND (0 V)
• white	Not used
• gray	Logic selector

Connection diagram

Solid state relay output



Logic selector

Solid state relay output

