

1) Optical axis, 2) Output function, 3) Sn



IND. CONT. EQ  
 1TD4  
 for use in the secondary of  
 a class 2 source of supply



### Basic features

<b>Approval/Conformity</b>	CE cULus EAC WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Series</b>	18KF
<b>Style</b>	Flat cylinder Straight optics
<b>Trademark</b>	Global

### Display/Operation

<b>Adjuster</b>	Potentiometer 270°
<b>Display</b>	Output function- LED yellow
<b>Setting</b>	Sensitivity (Sn)

### Electrical connection

<b>Connection</b>	Connector, M12x1-Male, 4-pin
<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

### Electrical data

<b>No-load current I<sub>o</sub> max. at U<sub>e</sub></b>	35 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ripple max. (% of U<sub>e</sub>)</b>	8 %
<b>Switching frequency</b>	1500 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	0.33 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	0.33 ms
<b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b>	2 V

Photoelectric Sensors  
**BOS 18KF-PA-1LQP-S4-C**  
 Order Code: BOS00JT

**BALLUFF**

**Environmental conditions**

<b>Ambient temperature</b>	-10...50 °C
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 0.5 mm, 3x30 min
<b>Protection degree</b>	IP67

**Functional safety**

<b>MTTF (40 °C)</b>	634 a
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**Material**

<b>Housing material</b>	PBT
<b>Material sensing surface</b>	PMMA

**Mechanical data**

<b>Dimension</b>	Ø 18 x 81.5 mm
<b>Mounting</b>	Screw M3 Nut M18x1
<b>Tightening torque max.</b>	1.5 Nm

**Optical features**

<b>Ambient light max.</b>	5000 Lux
<b>Average power Po max.</b>	390 µW
<b>Blind zone</b>	100 mm
<b>Laser class per IEC 60825-1</b>	1
<b>Light type</b>	Laser red light
<b>Polarizing filter</b>	yes
<b>Principle of optical operation</b>	Retroreflective sensor
<b>Pulse duration t max.</b>	6.0 µs
<b>Pulse frequency</b>	25 kHz
<b>Wave length</b>	650 nm

**Output/Interface**

<b>Switching output</b>	PNP normally open (NO) PNP NC Pins 4-2
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**Range/Distance**

<b>Range</b>	0...16 m
<b>Rated operating distance Sn</b>	16 m Adjustable

**Remarks**

Order accessories separately.

For additional information, refer to user's guide.

Polarizing filters prevent spurious switching due to reflecting and shiny parts.

The sensor is functional again after the overload has been eliminated.

Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.

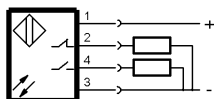
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

**Connector Drawings**



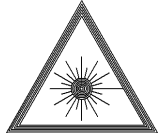
**Wiring Diagrams**



## Opto Symbols



## Warning Symbols



LASER CLASS 1 per IEC 60825-1