

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>	Rated switching distance (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 <math>I_0</math> max. at <math>U_e</math></b>	35 mA
<b>Operating voltage <math>U_b</math></b>	10...30 VDC
<b>Rated insulation voltage <math>U_i</math></b>	75 V DC
<b>Rated operating current <math>I_e</math></b>	100 mA
<b>Rated operating voltage <math>U_e</math> DC</b>	24 V
<b>Ripple max. (% of <math>U_e</math>)</b>	8 %
<b>Switching frequency</b>	1000 Hz
<b>Turn-off delay <math>t_{off}</math> max.</b>	0.33 ms
<b>Turn-on delay <math>t_{on}</math> max.</b>	0.33 ms
<b>Voltage drop <math>U_d</math> max. at <math>I_e</math></b>	2 V

**Environmental conditions**

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

**Functional safety**

MTTF (40 °C)	739 a
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**Material**

Housing material	PBT
Material sensing surface	PMMA

**Mechanical data**

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

**Optical features**

Ambient light max.	5000 Lux
Average power Po max.	390 µW
Beam characteristic	Divergent
Laser class per IEC 60825-1	1
Light spot size	Ø 1 mm at 150 mm
Light type	Laser red light
Principle of optical operation	Diffuse sensor, energetic
Pulse duration t max.	6.0 µs
Pulse frequency	25 kHz
Switching function, optical	Light-on
Wave length	650 nm

**Output/Interface**

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

Range	0...350 mm
Rated operating distance Sn	350 mm Adjustable

**Remarks**

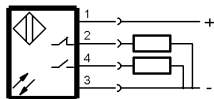
The sensor is functional again after the overload has been eliminated.  
 Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
 For additional information, refer to user's guide.  
 Order accessories separately.  
 For more information about MTTF and B10d see MTTF / B10d 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**



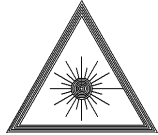
**Wiring Diagrams**



## Opto Symbols



## Warning Symbols



LASER CLASS 1 per IEC 60825-1