

1) Optical axis, 2) Output function, 3) stability/error, 4) Sn



### Basic features

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

### Display/Operation

<b>Adjuster</b>	button
<b>Display</b>	Output function- LED yellow Error - LED red+green, alt. Stability - LED green
<b>Setting</b>	Teach-in mode normal/fine Light-on/dark-on Contrast (switching point)

### 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>	25 mA
<b>Operating voltage <math>U_b</math></b>	10...30 VDC
<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>	5000 Hz
<b>Turn-off delay <math>t_{off}</math> max.</b>	0.1 ms
<b>Turn-on delay <math>t_{on}</math> max.</b>	0.1 ms
<b>Voltage drop <math>U_d</math> max. at <math>I_e</math></b>	2 V

Photoelectric Sensors  
**BKT 18KF-001-P-S4**  
**Order Code: BKT000H**



**Environmental conditions**

<b>Ambient temperature</b>	-25...70 °C
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

**Functional safety**

<b>MTTF (40 °C)</b>	1025 a
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**Interface**

<b>Switching output</b>	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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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 part</b>	Nut M18x1 Screw M3
<b>Tightening torque max.</b>	1.5 Nm

**Optical features**

<b>Beam characteristic</b>	Focused
<b>Light spot size</b>	Ø 4.5 mm at 10 mm
<b>Light type</b>	LED white light
<b>Principle of optical operation</b>	Diffuse sensor, focused
<b>Switching function, optical</b>	Light/dark switching dark-on
<b>Wave length</b>	400...700 nm

**Range/Distance**

<b>Range</b>	8...12 mm
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**Remarks**

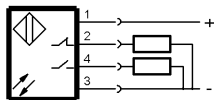
The sensor is functional again after the overload has been eliminated.  
 Reference object (target): Color bar card, 100 x 100, contrast yellow/white and blue/black, lateral approach of color bars.  
 For additional information, refer to user's guide.  
 Order accessories separately.  
 Do not press key using a pointed tool.  
 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**

