

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



Basic features

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

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

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

No-load current I_0 max. at U_e	25 mA
Operating voltage U_b	10...30 VDC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ripple max. (% of U_e)	8 %
Switching frequency	5000 Hz
Turn-off delay t_{off} max.	0.1 ms
Turn-on delay t_{on} max.	0.1 ms
Voltage drop U_d max. at I_e	2 V

Environmental conditions

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

Functional safety

MTTF (40 °C)	1025 a
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Interface

Switching output	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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Material

Housing material	PBT
Material sensing surface	PMMA

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.

Mechanical data

Dimension	Ø 18 x 81.5 mm
Mounting part	Nut M18x1
	Screw M3

Tightening torque max.

1.5 Nm

Optical features

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

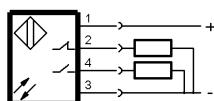
Range/Distance

Range	8...12 mm
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Connector Drawings



Wiring Diagrams



Opto Symbols

