

1) Optical axis, 2) Operating voltage, 3) Output function normally open



Basic features

Approval/Conformity	Ecolab CE WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Fork sensor
Series	F
Style	Fork Straight connection

Electrical connection

Cable diameter D	4.20 mm
Cable length L	0.25 m
Connection	Cable with connector, M12x1- Male, 4-pin, 0.25 m, PUR
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Display/Operation

Display	Output function- LED yellow LED green: Power
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Electrical data

Load capacitance max. at Ue	0.5 µF
No-load current I _o max. at Ue	35 mA
Operating voltage U _b	10...30 VDC
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	200 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	10 %
Switching frequency	3000 Hz
Turn-off delay t _{off} max.	0.167 ms
Turn-on delay t _{on} max.	0.167 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	3 V

Environmental conditions

Ambient temperature	-10...60 °C
EN 60068-2-27, Shock	Half-sinus, 100 gn, 2 ms, 3x8000 Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67/IP69K

Material

Housing material	Stainless steel (1.4404)
Material jacket	PUR
Material sensing surface	PMMA

Remarks

Order accessories separately.
 For additional information, refer to user's guide.
 The sensor is functional again after the overload has been eliminated.
 Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.

Mechanical data

Dimension	12 x 85 x 86 mm
Fork opening	50 mm
Mounting	Screw M4

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	Ø 1.25 mm Light exit
Light type	LED, red light
Principle of optical operation	Fork sensor
Smallest part typ.	0.80 mm
Switching function, optical	dark-on/light-on
Wave length	660 nm

Output/Interface

Switching output	2x PNP normally open/normally closed (NO/NC)
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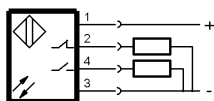
Range/Distance

Hysteresis H max.	0.05 mm
Repeat accuracy lateral max.	25 µm

Connector Drawings



Wiring Diagrams



Opto Symbols

