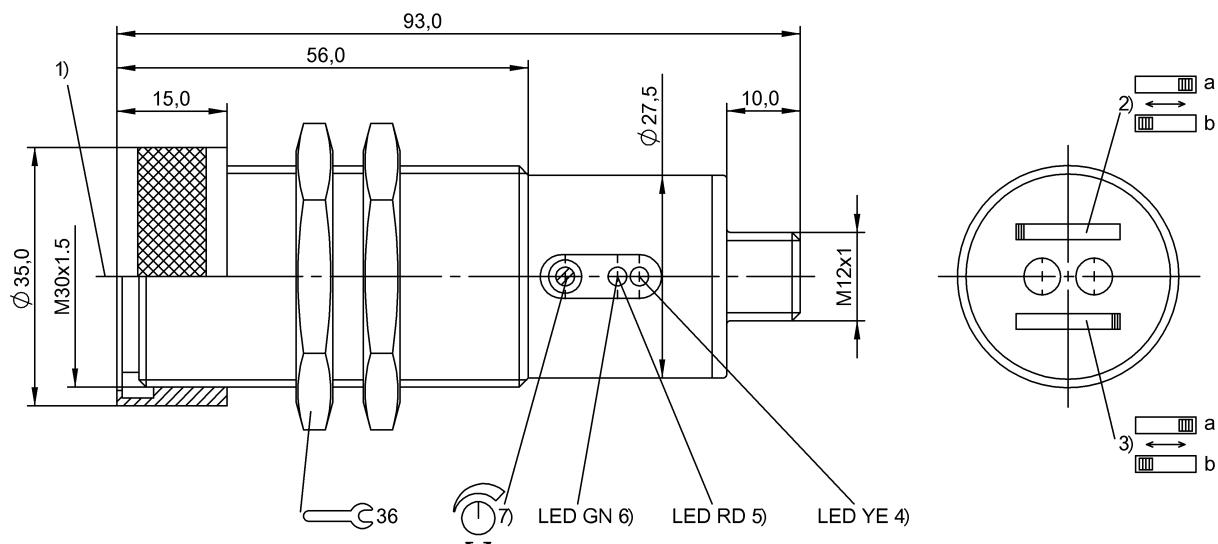


Photoelectric Sensors
BOS 30M-PU-1PH-SA3-C
Order Code: BOS008T

BALLUFF



1) Optical axis, 2) a= Dark-on / b= Light-on, 3) a= 1x Sn / b= 0.5x Sn, 4) Light reception, 5) Error, 6) Operating voltage, 7) Sn



Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	30M
Style	Cylinder Straight optics

Display/Operation

Adjuster	18-turn potentiometer
Display	LED green: Power Error - LED red LED yellow: Light received
Setting	Rated switching distance (Sn)

Electrical connection

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

Electrical data

Load capacitance max. at U_e	1 μ F
No-load current I_0 max. at U_e	40 mA
Operating voltage U_b	10...30 VDC
Output resistance R_o	22.0 kOhm
Rated operating current I_e	200 mA
Rated operating voltage U_e DC	24 V
Ready delay $t_{v \max}$	300 ms
Residual current I_r max.	50 μ A
Ripple max. (% of U_e)	10 %
Switching frequency	100 Hz
Turn-off delay $t_{off \max}$	5 ms
Turn-on delay $t_{on \max}$	5 ms
Utilization category	DC-13
Voltage drop U_d max. at I_e	2.4 V

Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
IP rating	IP65

Functional safety

MTTF (40 °C)	5 a
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Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Material

Housing material	Brass, nickel-plated
Material sensing surface	Glass
Surface protection	nickel-plated

Mechanical data

Dimension	Ø 35 x 93 mm
Mounting part	Nut M30x1.5
Tightening torque max.	40 Nm

Optical features

Ambient light max.	1000 Lux
Beam characteristic	Divergent
Light type	Infrared
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light/dark switching
Wave length	880 nm

Range/Distance

Hysteresis H max. (% of Sr)	15.0 %
Range	200...2000 mm
Rated operating distance Sn	2 m Adjustable
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %

Remarks

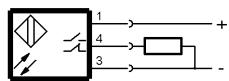
The sensor is functional again after the overload has been eliminated.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
For additional information, refer to user's guide.
Order accessories separately.
For more information about MTTF and B10d see MTTF / B10d Certificate

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

