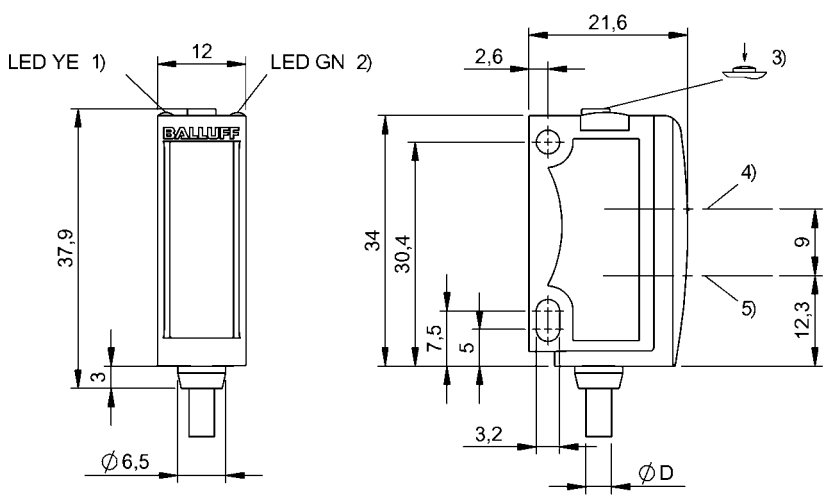


Photoelectric Sensors
BOD 6K-RA02-02
Order Code: BOD001M



1) Output function, 2) Operating voltage, 3) Sn, light/dark, 4) Optical axis receiver, 5) Optical axis emitter



Basic features

Application	Distance measurement
Approval/Conformity	CE cULus Ecolab WEEE
Basic standard	IEC 60947-5-2, IEC 60947-5-7
Principle of operation	Photoelectric distance sensor
Series	6K
Style	Square Connection 90°

Display/Operation

Adjuster	button
Display	Output function- LED yellow LED green: Power
Setting	Factory setting (Reset) Light-on/dark-on Switching output Q Output curve rising / falling Switching distance, 2 values Measuring range QA

Electrical connection

Cable diameter D	3.50 mm
Cable length L	2 m
Conductor cross-section	0.14 mm ²
Connection	Cable, 2.00 m, PVC
Number of conductors	4
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

No-load current I _o max. at U _e	30 mA
Operating voltage U _b	13...30 VDC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Ripple max. (% of U _e)	10 %
Switching frequency	1000 Hz
Turn-off delay t _{off} max.	0.5 ms
Turn-on delay t _{on} max.	0.5 ms
Voltage drop U _d max. at I _e	2.4 V

Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67
IP rating per DIN 40050	IP69K

Functional safety

MTTF (40 °C) 395 a

Interface

Analog output Analog, voltage 1...10 V
Output characteristic linear rising/falling
Switching output PNP normally open/normally closed (NO/NC)

Material

Housing material ABS
Material jacket PVC
Material sensing surface PMMA

Mechanical data

Dimension 12 x 37.9 x 21.6 mm
Mounting part Screw M3

Optical features

Ambient light max. 5000 Lux
Beam characteristic Divergent
Light spot size Ø 5 mm at 50 mm
Light type LED, red light
Principle of optical operation Triangulation
Switching function, optical Light/dark switching
Wave length 632 nm

Range/Distance

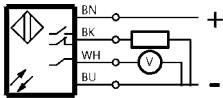
Accuracy ±0.5 % FS
Distance deviation 18 % max. (% of Sr) 7 %
Range 20...80 mm
Rated operating distance Sn 80 mm Adjustable
Repeat accuracy 0.5 %FS
Resolution ≤ 120 µm

Remarks

Order accessories separately.
For additional information, refer to user's guide.
Do not press key using a pointed tool.
The sensor is functional again after the overload has been eliminated.
Reference object (target): gray card, 200 x 200, 18 % remission, axial approach.
When using as a UL product the ambient temperature Ta max. must not exceed 50°C.
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.

Wiring Diagrams



Opto Symbols

