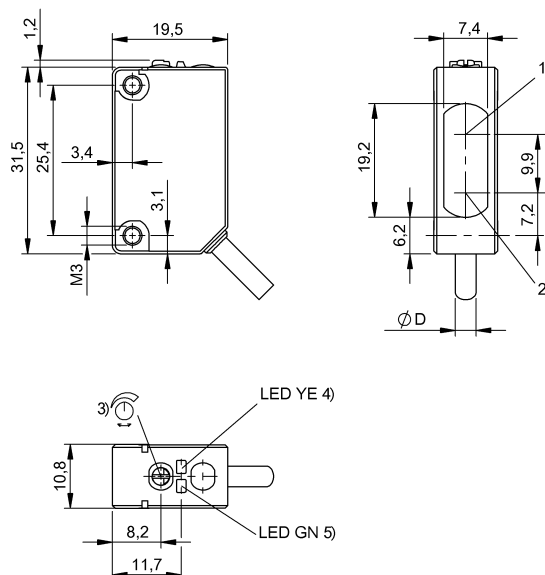


Photoelectric Sensors
BOS 5K-NS-ID10-02
Order Code: BOS0116

BALLUFF



1) Optical axis receiver, 2) Optical axis emitter, 3) Sn, 4) Output function, 5) stability



Basic features

Approval/Conformity	cULus CE WEEE UKCA
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	5K
Style	Square Connection 45°
Trademark	Global

Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow Stability - LED green
Setting	Rated switching distance (Sn)

Electrical connection

Cable diameter D	3.50 mm
Cable length L	2 m
Conductor cross-section	0.20 mm ²
Connection	Cable, 2.00 m, PVC
Number of conductors	3
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	10...30 VDC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	100 ms
Ripple max. (% of U _e)	10 %
Switching frequency	500 Hz
Turn-off delay t _{off} max.	1 ms
Turn-on delay t _{on} max.	1 ms
Voltage drop U _d max. at I _e	2 V

Internet

www.balluff.com

Subject to change without notice: 229613

eCl@ss 9.1: 27-27-09-03

ETIM 6.0: EC001821

BOS0116_0.74_2026-02-12

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Photoelectric Sensors
BOS 5K-NS-ID10-02
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BALLUFF

Environmental conditions

Ambient temperature	-25...55 °C
EN 60068-2-27, Shock	Half-sinus, 50 g _n , 11 ms, 3x10
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.75 mm, 3x20 min
IP rating	IP67

Functional safety

MTTF (40 °C)	38 a
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Interface

Switching output	NPN normally open (NO)
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Material

Housing material	PC
	PBT
Material jacket	PVC
Material sensing surface	PMMA

Mechanical data

Dimension	10.8 x 32.7 x 19.5 mm
Mounting part	Screw M3

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Light type	Infrared
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light-on
Wave length	880 nm

Range/Distance

Range	0...900 mm
Rated operating distance Sn	900 mm, Adjustable

Remarks

Order accessories separately.

For additional information, refer to user's guide.

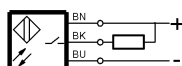
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.

The sensor is functional again after the overload has been eliminated.

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 (Schematic)



Opto Symbols





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PRODUCT: BOS0116 / BOS 5K Diffuse Photoelectric Sensor

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