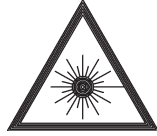
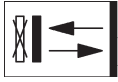


Photoelectric sensor

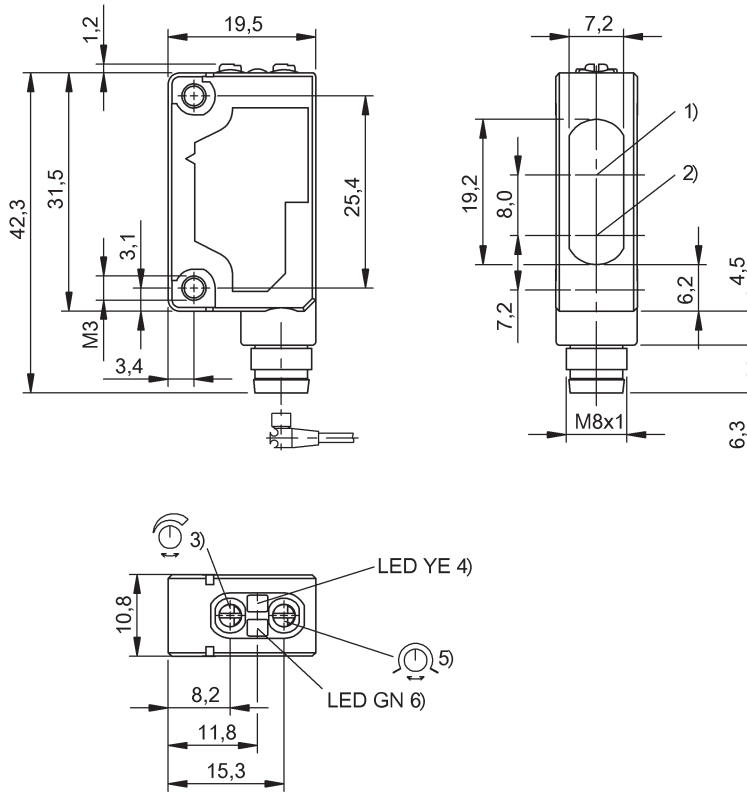
**BOS 5K-NU-LH12-S75**  
**BOS01K0**

**BALLUFF**

sensors worldwide



LASER CLASS 1 per IEC 60825-1:  
2003-10



1) Optical axis receiver 2) Optical axis emitter 3) Sn 4) Output function 5) Light-on / Dark-on 6) Stability

- Photoelectric sensor
- Series 5K
- Laser red light
- up to 500 mm



**General attributes**

Adjuster Potentiometer 6-turn (1x)  
Potentiometer 270° (1x)  
CE  
cULus  
CDRH  
Basic standard IEC 60947-5-2  
Enclosure Type per IEC 60529 IP67  
Indicator Output function - LED YE  
Stability - LED GN  
Polarity reversal protected yes  
Series Series 5K  
Setting Switching distance (Sn)  
Light-on/dark-on  
Short circuit protected yes  
Trademark GLOBAL

**Electrical attributes**

Connection type Connector  
Eff. operating current I<sub>e</sub> 100 mA  
Eff. operating voltage U<sub>e</sub> DC 24.0 V  
Electrical version DC, direct current  
No-load current max. I<sub>o</sub> at U<sub>e</sub> 35 mA  
Operating voltage U<sub>B</sub> max. DC [V] 30.0 V  
Operating voltage U<sub>B</sub> min. DC [V] 10.0 V  
Ripple max. (% of U<sub>e</sub>) 10 %  
Switching freq. f max. (at U<sub>e</sub>) 2000 Hz

Switching function NO/NC  
Switching output NPN (1x)  
Turn on time t<sub>on</sub> max. 0.25 ms  
Voltage drop U<sub>d</sub> max. (at I<sub>e</sub>) 1.5 V

**Mechanical attributes**

Ambient temperature T<sub>a</sub> max. 55 °C  
Ambient temperature T<sub>a</sub> min. -10 °C  
Connector type M8x1-S75  
Detection range S<sub>d</sub> 20...300 mm  
Dist. dev. 18 % max. (% of S<sub>r</sub>) 8 %  
Eff. operating distance S<sub>r</sub> 300 mm  
Housing material PC, PBT  
Length 1 10.8 mm  
Length 2 19.5 mm  
Length 3 43.5 mm  
Minimum operating distance 10 mm  
Mounting type Screw M3  
Range S<sub>n</sub> S<sub>n</sub> = 300 mm, adjustable  
Sensing face material PMMA  
Style Block, 90° connection  
Tightening torque max. 0.5 Nm

**Optical attributes**

Ambient light max. 5,000 Lux  
Average power P<sub>o</sub> max. < 390 μW (IEC 60825-1)  
Laser Class per IEC 60825-1 1

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For definitions of terms, see main catalog  
Subject to change

BOS01K0\_221982\_17/10/15

1(2)

**BOS 5K-NU-LH12-S75**  
**BOS01K0**

Light spot size, typical  
Light type  
Optical special feature  
Principle of optical operation  
Switching function, optical  
Wavelength

0.2 mm x 0.3 mm at focal point  
Laser red light  
Background suppression  
Light scanner, triangulation  
NO/NC: light-on/dark-on  
650 nm

**Additional text**

For use as UL listed product the Ambient temperature Ta max. may not exceed the value of 50°C.

Reference object (target): Gray card, 100 x 100

90 % remission, axial approach.

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

Only for NFPA 79 applications (machines with a supply voltage of maximum 600 volts).

Device shall be connected only by using any R/C (CYJV2) cord, having suitable ratings.

For additional information, refer to user's guide.

Order accessories separately.

To meet EMC requirements according EN 60947-5-2 the mounting bracket must not be grounded.

