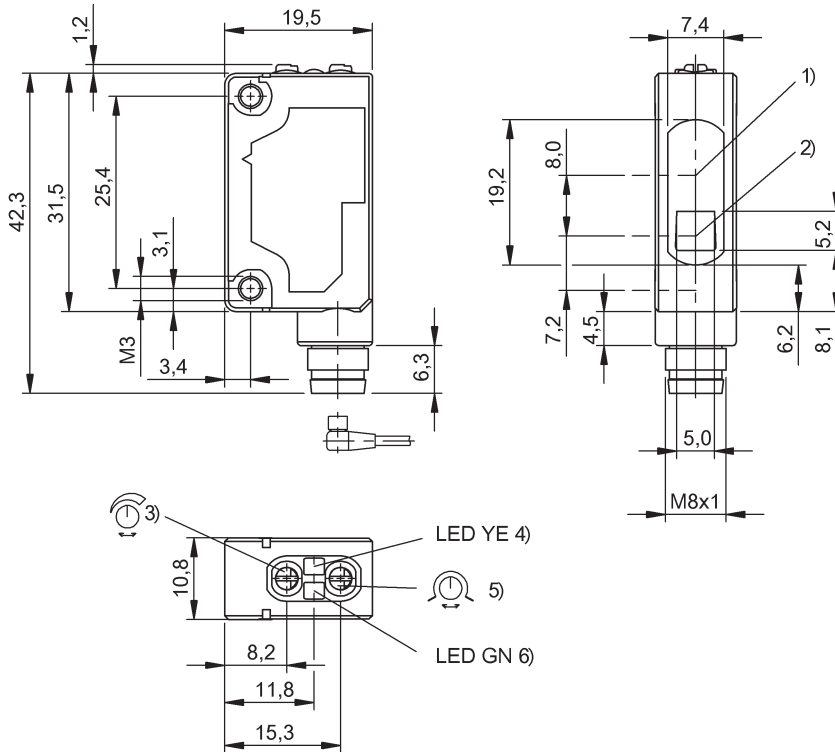


LASER CLASS 1 per IEC 60825-1:  
2003-10



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

- Photoelectric sensor
- Series 5K
- Laser red light
- up to 10 m



**General attributes**

Adjuster Potentiometer 270° (2x)  
Approvals / Conformity cULus  
CE  
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  
Reference reflector BOS R-22  
Series Series 5K  
Setting Light-on/dark-on  
Sensitivity (Sn)  
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  
Eff. operating distance S<sub>r</sub> 10000 mm  
Housing material PC, PBT  
Length 1 10.8 mm  
Length 2 19.5 mm  
Length 3 43.5 mm  
Mounting type Screw M3  
Operating range R<sub>o</sub> 0...10 m  
Range S<sub>n</sub> S<sub>n</sub> = 10 m, 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  
Light spot size, typical Ø5 mm at 3 m  
Light type Laser red light

Photoelectric sensor

**BOS 5K-NU-LR10-S75**  
**BOS01JU**

**BALLUFF**

sensors worldwide

Polarizing filter  
Principle of optical operation  
Switching function, optical  
Wavelength

yes  
Retro-reflective sensor  
NO/NC: dark-on/light-on  
650 nm

**Additional text**

Polarizing filters prevent spurious switching due to reflecting and shiny parts.  
For additional information, refer to user's guide.

Order accessories separately.

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.  
Operating object (test target): Gray card, 200 x 200, 90 % remission, lateral approach,

direction of movement vertical to plane of lens axes.

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

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

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

