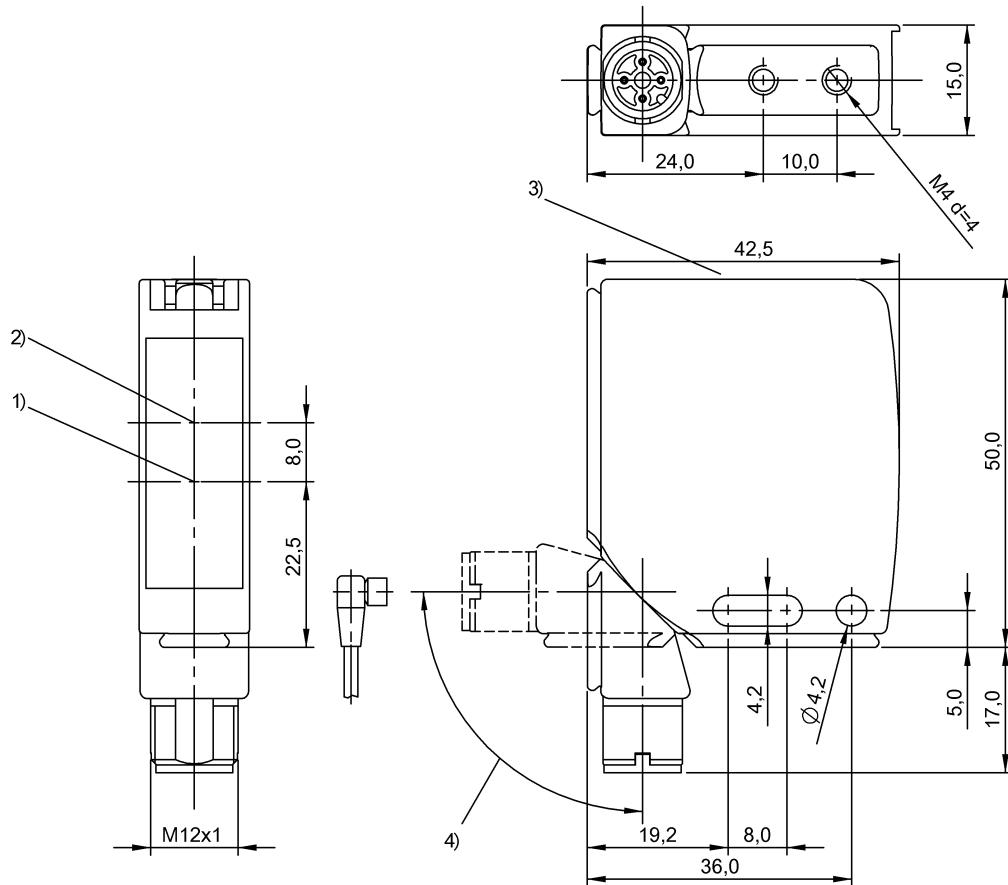


Photoelectric Sensors
BOS 21M-PA-LD10-S4
Order Code: BOS0032

BALLUFF



1) Optical axis emitter, 2) Optical axis receiver, 3) Display and control panel, 4) rotatable 270°



Basic features

| | |
|------------------------|-------------------------------------|
| Approval/Conformity | CE UKCA cULus WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Photoelectric sensor |
| Series | 21M |
| Style | Square Connection can be rotated |

Electrical connection

| | |
|-----------------------------------|------------------------------|
| Connection | Connector, M12x1-Male, 4-pin |
| Contact, surface protection | Gold plated |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Display/Operation

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

Electrical data

| | |
|--|-------------|
| Load capacitance max. at Ue | 1 μ F |
| No-load current I ₀ max. at Ue | 35 mA |
| Operating voltage U _b | 10...30 VDC |
| Protection class | II |
| Rated insulation voltage U _i | 75 V DC |
| Rated operating current I _e | 100 mA |
| Rated operating voltage U _e DC | 24 V |
| Ready delay t _v max. | 200 ms |
| Residual current I _r max. | 10 μ A |
| Ripple max. (% of Ue) | 8 % |
| Switching frequency | 2000 Hz |
| Turn-off delay t _{off} max. | 0.25 ms |
| Turn-on delay t _{on} max. | 0.25 ms |
| Utilization category | DC -13 |
| Voltage drop U _d max. at I _e | 2 V |

Environmental conditions

| | |
|-------------------------|--|
| Ambient temperature | -10...50 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 g _n , 11 ms, 3x6 |
| EN 60068-2-6, Vibration | 10...55 Hz, amplitude 1 mm, 3x30 min |
| IP rating | IP67 |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 306 a |
|--------------|-------|

Interface

| | |
|------------------|---|
| Switching output | PNP normally closed (NC) PNP normally open (NO) Pins 4-2 |
|------------------|---|

Remarks

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

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

For additional information, refer to user's guide.

Order accessories separately.

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

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.

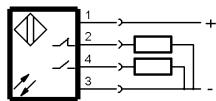
Connector Drawings



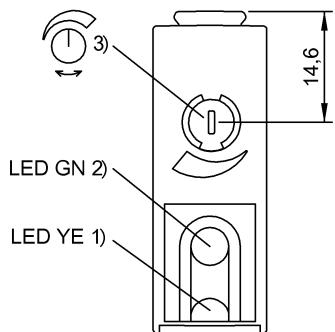
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Wiring Diagrams



Help Views

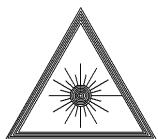


- 1) Output function
- 2) Operating voltage
- 3) Sensitivity

Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1