

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



Basic features

| | |
|------------------------|----------------------------|
| Approval/Conformity | cULus CE EAC WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Contrast sensor |
| Series | 6K |
| Style | Square Connection 90° |

Display/Operation

| | |
|----------|---|
| Adjuster | button |
| Display | Output function- LED yellow LED green: Power |
| Setting | Contrast (switching point) Light-on/dark-on Teach mode Stand./Dyn./Obj. |

Electrical connection

| | |
|-----------------------------|-----------------------------|
| Connection | Connector, M8x1-Male, 3-pin |
| Polarity reversal protected | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|-------------------------------------|---|
| Input function | Key disable on/off Same function as button |
| 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 |
| Ripple max. (% of U_e) | 12 % |
| Switching frequency | 1500 Hz |
| Turn-off delay t_{off} max. | 0.33 ms |
| Turn-on delay t_{on} max. | 0.33 ms |
| Voltage drop U_d max. at I_e | 2.4 V |

Environmental conditions

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|-------------------------|--|
| 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) | 426 a |
|--------------|-------|

Interface

| | |
|------------------|---|
| Switching output | PNP normally open/normally closed (NO/NC) |
|------------------|---|

Material

| | |
|--------------------------|------|
| Housing material | ABS |
| Material sensing surface | PMMA |

Mechanical data

| | |
|---------------|---------------------|
| Dimension | 12 x 41.5 x 21.6 mm |
| Mounting part | Screw M3 |

Optical features

| | |
|--------------------------------|-------------------------|
| Ambient light max. | 5000 Lux |
| Average power Po max. | 390 µW |
| Beam characteristic | Focused |
| Laser class per IEC 60825-1 | 1 |
| Light spot size | 0.7 x 0.7 mm at 250 mm |
| Light type | Laser red light |
| Principle of optical operation | Diffuse sensor, focused |
| Pulse duration t max. | 0.7 µs |
| Pulse frequency | 11.7 kHz |
| Pulse power Pp max. | 8.5 mW |
| Switching function, optical | Light/dark switching |
| Wave length | 650 nm |

Range/Distance

| | |
|-------|------------|
| Range | 1...250 mm |
|-------|------------|

Remarks

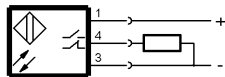
The sensor is functional again after the overload has been eliminated.
Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.
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.

Connector Drawings



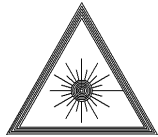
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1