

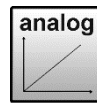
PY740026

Light section sensors

- / measurement of object heights
- / high measuring accuracy
- / flexible mounting -30°/+30°
- / with touch-display
- / aluminum housing



laser cutting procedure
laser protection class 2



General data

| | |
|--|--|
| dimensions | 26 x 55 x 85mm |
| function | object height |
| function: FLEX MOUNT and MEASURING FIELD | yes |
| measuring range (distance) | 100 ... 500mm |
| start of measuring range | 100mm |
| end of measuring range | 500mm |
| measuring field size (width) | 13 ... 66mm |
| measuring field width right @ end of measuring range | +33mm |
| measuring field width left @ end of measuring range | -33mm |
| blind range | 0 ... 100mm |
| measuring frequency | |
| - OBJECT light (approx. 90% refl.) | 440 ... 1540Hz |
| - OBJECT dark (approx. 6% refl.) | 340 ... 770Hz |
| response time | |
| - OBJECT light (approx. 90% refl.) | 1.3 ... 4.5ms |
| - OBJECT dark (approx. 6% refl.) | 2.6 ... 5.8ms |
| resolution AVG DIST (max. measuring field width) | 15 ... 55µm (w/o filter) 8 ... 28µm (with filter precision high) 4 ... 25µm (with filter precision very high) |
| resolution MIN / MAX DIST | 70 ... 150µm (w/o filter) 45 ... 75µm (with filter precision high) 25 ... 45µm (with filter precision very high) |
| repeat accuracy AVG DIST (max. measuring field width) | 10 ... 40µm (w/o filter) 5 ... 25µm (with filter precision high) 4 ... 20µm (with filter precision very high) |
| repeat accuracy MIN / MAX DIST | 30 ... 90µm (w/o filter) 20 ... 70µm (with filter precision high) 15 ... 60µm (with filter precision very high) |
| linearity deviation | ± 100µm |
| temperature drift | ±0.04% Sde/K |

| | |
|---|----------------------------|
| PRECISION filter values: | median average |
| standard | off off |
| high | off 3 |
| very high | 16 3 |
| smallest detectable object | 1 ... 5mm |
| laser class | 2 |
| max. unevenness reference surface (rms) | 1mm |
| min. length reference surface | 12mm |
| LIVE MONITOR: | |
| min. object height | 10mm |
| min. object width | 12mm |
| digital hysteresis | 1% of Sd (switching point) |
| operating display | LED green |
| output display | LED yellow / LED red |
| light source | laser diode red, pulsed |
| adjustment | touch display |

Mechanical data

| | |
|------------------------|------------------------|
| width / height / legth | 26 / 74 / 55mm |
| design | cuboid, frontal optics |
| housing material | aluminum |
| front screen | glass |
| connection | M12-connector, 8-pin |
| weight | 130g |

Electrical data

| | |
|--------------------------------------|--|
| operating voltage | 15 ... 28V DC |
| current consumption max. (ohne Last) | 120mA |
| output circuit | analog |
| output signal | 4 ... 20mA / 0 ... 10V DC (adjustable) |
| switching output | push-pull |
| switching function | Out 1 / alarm |
| output current | < 100mA |
| reverse polarity protection | yes, +VS to GND |
| short-circuit protection | yes |

Ambient conditions

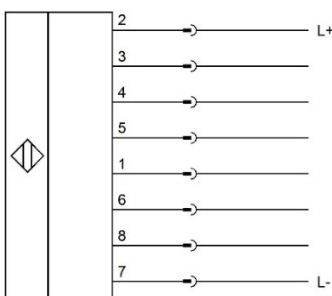
| | |
|------------------------------------|--|
| ambient light immunity | < 35kLux |
| temperature (operating) | -10 ... +50°C |
| temperature (storage) | -25 ... +75°C |
| protection class | IP67 |
| vibration resistance (sinusoidal) | IEC 60068-2-6:2008 7.5mm p-p for f = 2 - 8Hz, 2g for f = 8 – 200Hz, or 4g for 200 – 500Hz |
| resonance test | IEC 60068-2-6:2008 1.5mm p-p for f = 10 - 57Hz , 10 cycles for each axis 10g for f = 58 -2.000Hz, 10 cycles for each axis |
| vibration resistance (coincidence) | IEC 60068-2-64:2008 spectrum: 0.1g2/Hz for 20 – 1.000Hz, 30 minutes / axis (>10gRMS) |
| shock resistance | IEC 60068-2-27:2009 50g / 11ms or 100g / 6ms, 10 shocks in each axis and each direction |

| | |
|-------------------|---|
| | 100g / 2ms, 5.000 shocks in each axis and each direction |
| impact resistance | IEC 60068-2-27 100g / 2ms, 4,000 shocks in each axis and each direction |

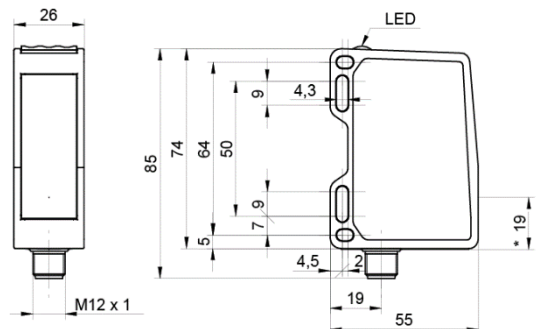
Optical data

| | |
|---|------------------------------------|
| light source | AlGaInP laser diode |
| wave length | 660nm |
| operating mode | pulsed |
| pulse duration | |
| mode light objects | 0.15ms |
| mode dark objects | 0.8ms |
| pulse period | |
| mode light objects | >0.65ms |
| mode dark objects | >1.3ms |
| emitted total pulse power | 10mW |
| beam shape | elliptical (focused to laser line) |
| focal distance df | 350mm |
| beam size @ window | |
| vertical | 2.2mm |
| parallel | 5.8mm |
| beam size @ focus point | |
| vertical | < 0.4mm |
| parallel | L = 65mm |
| beam divergence | |
| vertical | 4.8mrad |
| parallel | 9.4° |
| laser classification (IEC 60825-1/2014) | laser class 2 |
| Nominal ocular hazard distance (NOHD) | 1.5m |

Connection



Dimensional drawing



*optical axis

functions: 1 = n. c., 2 = L+, 3 = 4-20mA/0-10V, 4 = Push Pull, 5 = Alarm Push Pull, 6 = n. c., 7 = L-, 8 = Hold

colors: 1 = WH (white), 2 = BN (brown), 3 = GN (green), 4 = YE (yellow), 5 = GY (gray), 6 = PK (pink), 7 = BU (blue), 8 = RD (red)

Safety warnings:

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these articles in applications where the safety of a person depends on their functionality.