



Model Number

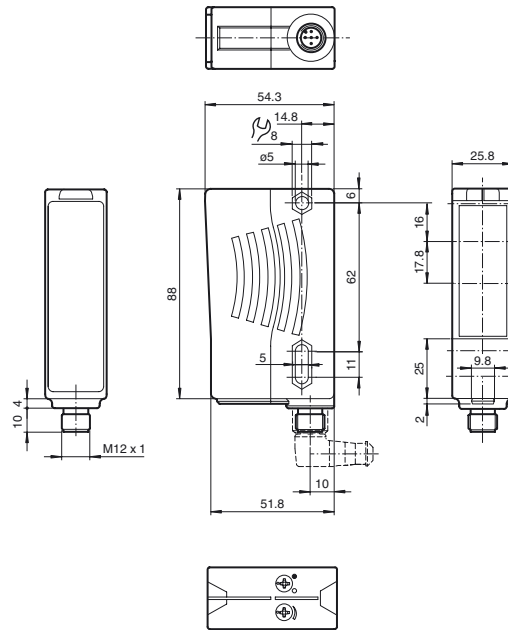
RL28-55-LAS/49/82b/105

Retroreflective sensor
with 5-pin, M12 x 1 plastic connector

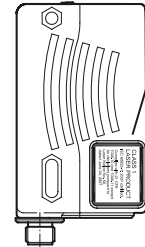
Features

- Visible red light, pulsed LASER light
- Ultra bright LEDs for power on, pre fault indication and switching state
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

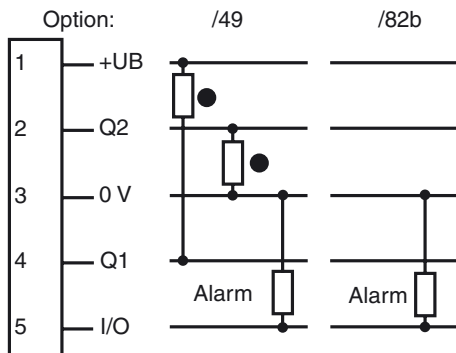
Dimensions



CLASS 1 LASER PRODUCT
IEC 60825-1:2007 certified.
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.



Electrical connection



Release date: 2010-10-06 11:06 Date of issue: 2011-01-26 123759_ENG.xml

Subject to modifications without notice

Pepperl+Fuchs Group
www.pepperl-fuchs.com

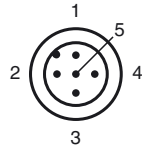
USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411
fa-info@pepperl-fuchs.com

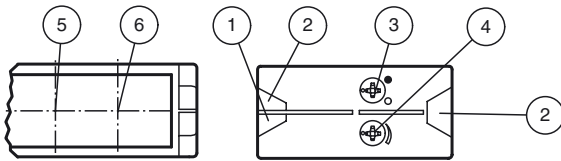
Copyright Pepperl+Fuchs
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

- = Light on
- = Dark on

Pinout



Indicators/operating means



| | |
|---|-------------------------|
| 1 | Operating display green |
| 2 | Switch state yellow |
| 3 | Bright/dark switch |
| 4 | Sensitivity adjustment |
| 5 | Receiver |
| 6 | Emitter |

Accessories

- OMH-05**
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
- OMH-07**
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
- OMH-21**
Mounting bracket
- OMH-22**
Mounting bracket
- OMH-RLK29**
Mounting bracket
- OMH-MLV11-K**
dove tail mounting clamp
- OMH-RLK29-HW**
Mounting bracket for rear wall mounting
- OMH-RL28-C**
Protective cover
- REFLEKTOR MH82**
Reflector with Micro-structure, rectangular 82 mm x 60 mm, mounting holes

Suitable reflectors and cable sockets can be found in the Internet

Release date: 2010-10-06 11:06 Date of issue: 2011-01-26 123759_ENG.xml

Technical data**General specifications**

| | |
|----------------------------|--------------------------------------|
| Effective detection range | 0 ... 30 m |
| Reflector distance | 0.3 ... 30 m |
| Threshold detection range | 42 m |
| Reference target | MH82 reflector |
| Light source | laser diode |
| Light type | modulated visible red light |
| Laser nominal ratings | |
| Note | LASER LIGHT , DO NOT STARE INTO BEAM |
| Laser class | 1 |
| Wave length | 650 nm |
| Beam divergence | < 1.5 mrad |
| Pulse length | approx. 4.5 μ s |
| Repetition rate | approx. 6 kHz ... 20 kHz |
| max. pulse energy | 4 nJ |
| Approvals | CE, cULus |
| Diameter of the light spot | approx. 45 mm at 30 m |
| Angle of divergence | Emitter: < 0.1 ° Receiver: < 2 ° |
| Ambient light limit | 50000 Lux |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 1000 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|-------------------|--|
| Operating display | LED green |
| Function display | 2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted |
| Controls | sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light/Dark switch |

Electrical specifications

| | | |
|------------------------|----------------|--|
| Operating voltage | U _B | 10 ... 30 V DC |
| Ripple | | max. 10 % |
| No-load supply current | I ₀ | ≤ 35 mA |
| Protection class | | II, rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 |

Output

| | | |
|------------------------------------|--|------------|
| Output of the pre-fault indication | 1 PNP, inactive when falling short of the stability control for 10;s immediately inactive if 4 light beam interruptions take place | |
| Switching type | light/dark on switchable | |
| Signal output | 1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected , open collectors | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 200 mA | |
| Voltage drop | U _d | ≤ 2.5 V DC |
| Switching frequency | f | 1000 Hz |
| Response time | | 0.5 ms |

Ambient conditions

| | |
|---------------------|-------------------------------|
| Ambient temperature | -10 ... 50 °C (14 ... 122 °F) |
| Storage temperature | -20 ... 75 °C (-4 ... 167 °F) |

Mechanical specifications

| | |
|-------------------|----------------------------------|
| Protection degree | IP67 |
| Connection | 5-pin, M12 x 1 plastic connector |
| Material | |
| Housing | Plastic ABS |
| Optical face | Plastic pane |
| Mass | 80 g |

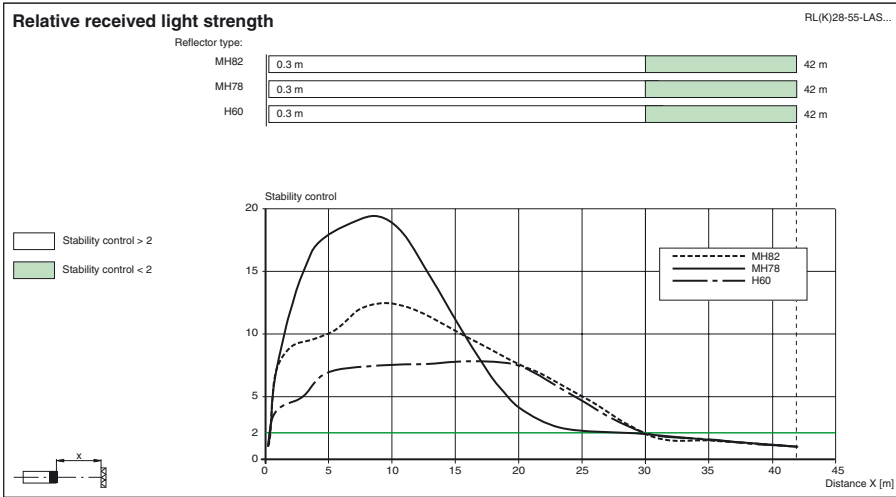
Compliance with standards and directives

| | |
|----------------------|--|
| Directive conformity | EMC Directive 2004/108/EC |
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 IEC 60947-5-2:2007 |
| Laser class | IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007 |

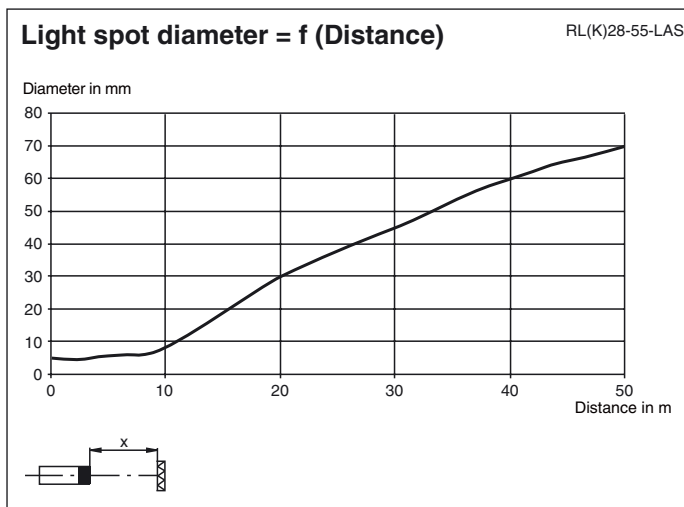
Approvals and certificates

| | |
|--------------|--|
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |
|--------------|--|

Release date: 2010-10-06 11:06 Date of issue: 2011-01-26 123759_ENG.xml



Curves/Diagrams



Laser notice laser class 1

- The irradiation can lead to irritation especially in a dark environment. Do not point at people!
- Maintenance and repairs should only be carried out by authorized service personnel!
- Attach the device so that the warning is clearly visible and readable.
- The warning accompanies the device and should be attached in immediate proximity to the device.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Release date: 2010-10-06 11:06 Date of issue: 2011-01-26 123759_ENG.xml