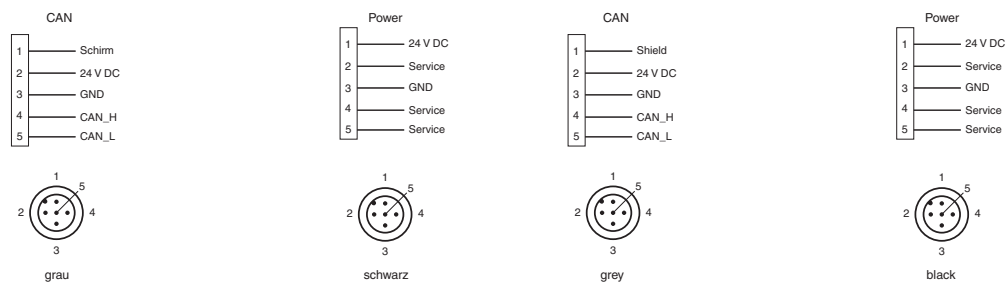


Elektrischer Anschluss

Electrical connection



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2-D-LiDAR-Sensor
mit 2 Gerätesteckern M12 x 1
2-D LiDAR Sensor
with two M12 x 1 connectors

OMD8000-R2100-Y317114



Part. 317114
Date 05/08/2018
Doc. 45-5375
DIN A3 ->

PEPPERL+FUCHS
SENSING YOUR NEEDS

Technische Daten

| Allgemeine Daten | |
|------------------------------------|---|
| Messbereich | 0,2 ... 2 m (sw 6 %) 0,2 ... 8 m (ws 90 %) max. 25 m <P>min. Echopulsbreite 2500 mm von 0,2 ... 1 m <P> |
| Lichtsender | IRED |
| Lichtart | infrarot, Wechsellicht, 850 nm |
| Messverfahren | Pulse Ranging Technology (PRT) |
| Scanrate | 50 s ⁻¹ (1 Scan = 11 Messungen) |
| Scanwinkel | 88° |
| Lichtfleckdurchmesser | 550 mm bei 4 m (Orthogonal) |
| Fremdlichtgrenze | > 80000 Lux |
| Auflösung | 1 mm |
| Kenndaten funktionale Sicherheit | |
| MTTF _d | 123 a |
| Gebrauchsdauer (T _M) | 20 a |
| Diagnosedeckungsgrad (DC) | 0 % |
| Anzeigen/Bedienelemente | |
| Betriebsanzeige | LED grün |
| Datenflussanzeige | LED rot: CAN Error LED grün: CAN Run |
| Funktionsanzeige | LED gelb |
| Elektrische Daten | |
| Betriebsspannung U _B | 10 ... 30 V DC |
| Welligkeit | 10 % innerhalb der Versorgungstoleranz |
| Leerlaufstrom I ₀ | ≤ 120 mA / 24 V DC |
| Schutzklasse | III |
| Bereitschaftsverzug t _v | < 3 s |
| Schnittstelle | |
| Schnittstellentyp | CAN |
| Protokoll | CANopen, 250 kbit/s |
| Messgenauigkeit | |
| Messwertauschen | 20 mm (1 Sigma, 4 m weiß, Orthogonal) |
| Winkelauflösung | 8 ° |
| Absolute Genauigkeit | +/- 50 mm (Orthogonal) |
| Umgebungsbedingungen | |
| Umgebungstemperatur | -30 ... 60 °C (-22 ... 140 °F) |
| Lagertemperatur | -30 ... 70 °C (-22 ... 158 °F) |
| Relative Luftfeuchtigkeit | 95 % , keine Betauung |
| Mechanische Daten | |
| Gehäusebreite | 81 mm |
| Gehäusehöhe | 45 mm |
| Schutzart | IP67 |
| Anschluss | M12x1 Stecker, 5-polig, Standard (Versorgung; Farbe schwarz) M12x1 Stecker, 5-polig, Standard (RS 232; Farbe grau; geschirmt) |
| Material | |
| Gehäuse | Kunststoff |
| Lichtaustritt | Lexan (PC) |
| Masse | ca. 250 g |
| Normen- und Richtlinienkonformität | |
| Richtlinienkonformität | |
| EMV-Richtlinie 2004/108/EG | EN 60947-5-2:2007 |
| Normenkonformität | |
| Produktnorm | EN 60947-5-2:2007 IEC 60947-5-2:2007 |
| Normen | EN 62471:2008 |
| Zulassungen und Zertifikate | |
| UL-Zulassung | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| CCC-Zulassung | Produkte, deren max. Betriebsspannung ≤36 V ist, sind nicht zulassungspflichtig und daher nicht mit einer CCC-Kennzeichnung versehen. |

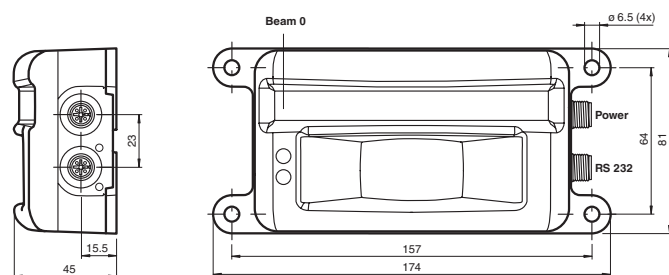
Technical data

| General specifications | |
|---|---|
| Measurement range | 0.2 ... 2 m (bw 6%) 0.2 ... 8 m (wh 90%) nicht uebersetzt! |
| Light source | IRED |
| Light type | modulated infrared light, 850 nm |
| Measuring method | Pulse Ranging Technology (PRT) |
| Scan rate | 50 s ⁻¹ (1 scan = 11 measurements) |
| Scanning angle | 88° |
| Diameter of the light spot | 550 mm at 4 m (orthogonal) |
| Ambient light limit | > 80000 Lux |
| Resolution | 1 mm |
| Functional safety related parameters | |
| MTTF _d | 123 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |
| Indicators/operating means | |
| Operation indicator | LED green |
| Data flow indicator | LED red: CAN Error LED green: CAN Run |
| Function indicator | LED yellow |
| Electrical specifications | |
| Operating voltage U _B | 10 ... 30 V DC |
| Ripple | 10 % within the supply tolerance |
| No-load supply current I ₀ | ≤ 120 mA / 24 V DC |
| Protection class | III |
| Time delay before availability t _v | < 3 s |
| Interface | |
| Interface type | CAN |
| Protocol | CANopen, 250 kbit/s |
| Measurement accuracy | |
| Measured value noise | 20 mm (1 sigma, 4 m on white, orthogonal) |
| Angle resolution | 8 ° |
| Absolute accuracy | +/- 50 mm (orthogonal) |
| Ambient conditions | |
| Ambient temperature | -30 ... 60 °C (-22 ... 140 °F) |
| Storage temperature | -30 ... 70 °C (-22 ... 158 °F) |
| Relative humidity | 95 % , no moisture condensation |
| Mechanical specifications | |
| Housing width | 81 mm |
| Housing height | 45 mm |
| Degree of protection | IP67 |
| Connection | 5-pin, M12x1 connector, standard (supply; color black) 5-pin, M12x1 connector, standard (RS 232; color grey; shielded) |
| Material | |
| Housing | plastic |
| Optical face | Lexan (PC) |
| Mass | approx. 250 g |
| Compliance with standards and directives | |
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 60947-5-2:2007 |
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 IEC 60947-5-2:2007 |
| Standards | EN 62471:2008 |
| Approvals and certificates | |
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| CCC approval | CCC approval / marking not required for products rated ≤36 V |

Sicherheitshinweise:

- Vor der Inbetriebnahme Betriebsanleitung lesen
- Anschluss, Montage und Einstellung nur durch Fachpersonal
- Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie

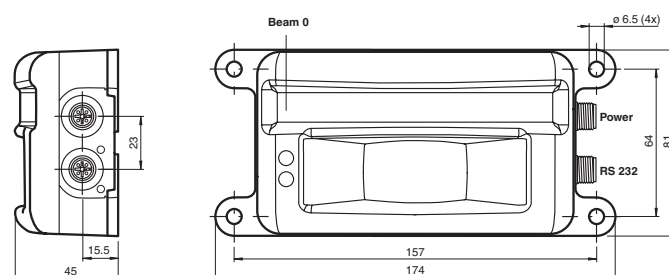
Abmessungen



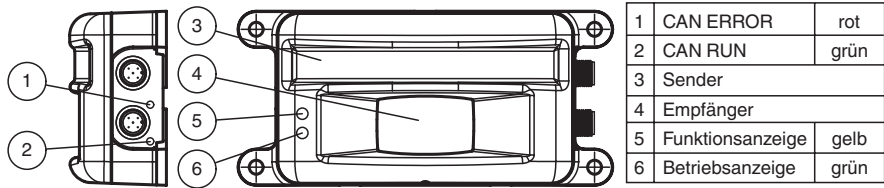
Security Instructions:

- Read the operating instructions before attempting commissioning
- Installation, connection and adjustments should only be undertaken by specialist personnel
- Not a safety component in accordance with the EU Machinery Directive

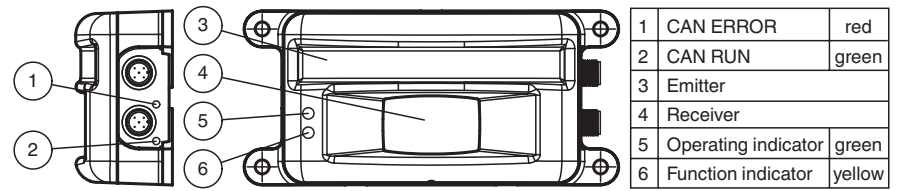
Dimensions



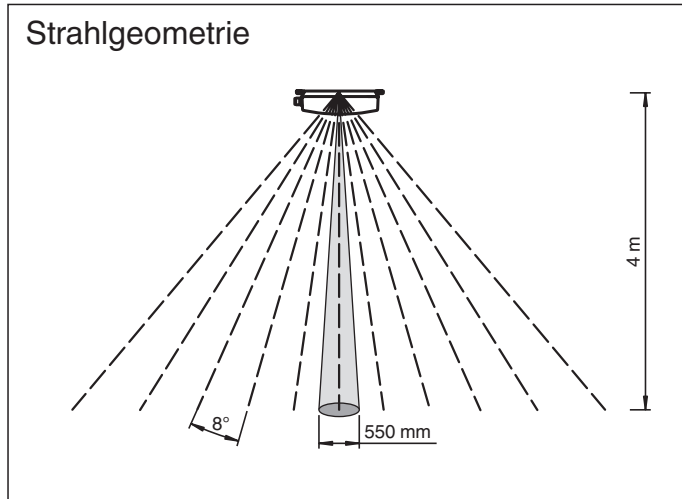
Anzeigen/Bedienelement



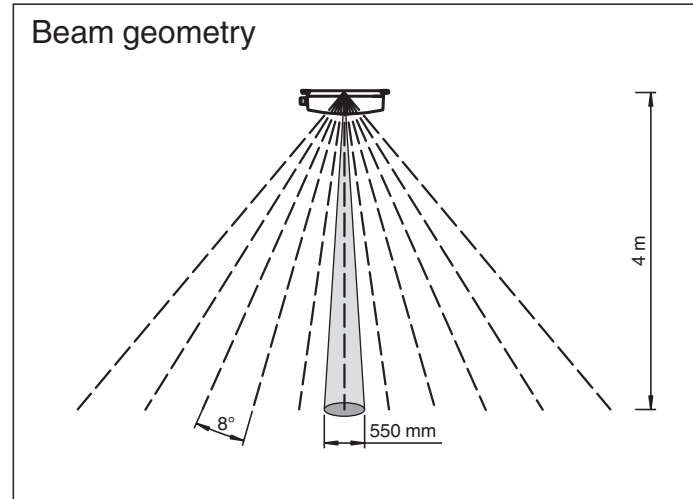
Indicating/Operating



Kurven/Diagramme



Curves/Diagrams



Installationsanweisung für Nordamerika

Wenn eine Verbindung zum mehrpoligen M12-Steckverbinder hergestellt wird, muss das Produkt in der endgültigen Installation der Stromversorgung mit einer UL-gelisteten Kabel-/Steckverbinderbaugruppe (CYJV) verwendet werden, die für mindestens 30 V DC und mindestens 1,0 A ausgelegt ist.

Installation Instructions for North America

If a connection is made to the M12 multi-pin connector, the product shall be used with a UL-listed cable/connector (CYJV) assembly rated minimum 30 VDC, minimum 1.0 A, in the final installation for power supply.