Model Number

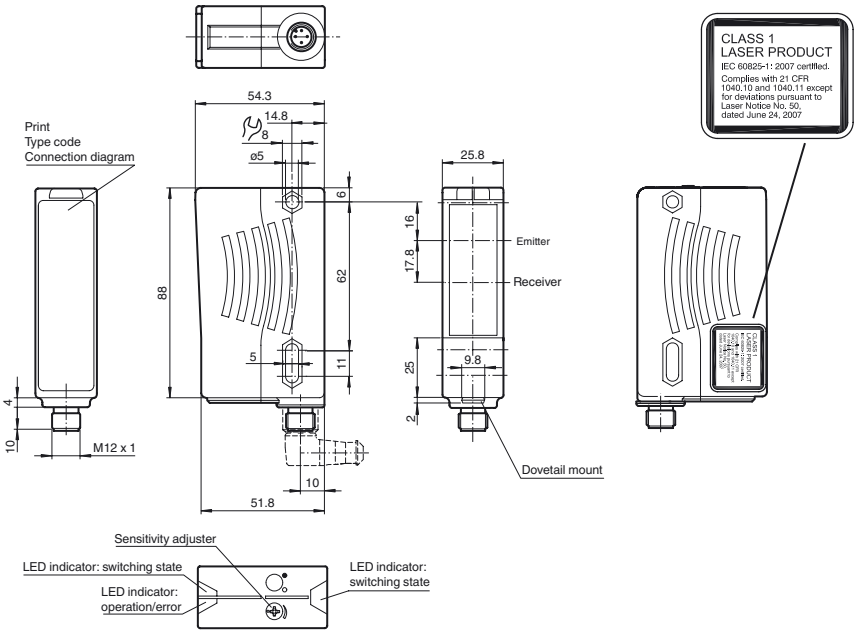
RL28-55-LAS-B3B/73c

Retroreflective sensor
with 4-pin, M12 x 1 plastic connector

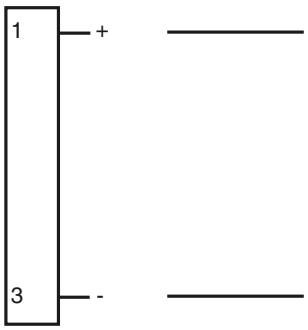
Features

- Sensor with AS interface according to Spec. 2.11
- 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

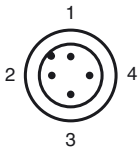
Dimensions



Electrical connection



Pinout



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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 µs
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		
$MTTF_d$		1200 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		60 %
Indicators/operating means		
Operating display		dual-LED green/red green: AS-Interface voltage, normal operation red: communication error or address 0 red/green flashing: peripherie fault
Function display		LED yellow: 1. LED lit constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point
Controls		sensitivity adjustment (Adjustment to < 25% of the effective operating range)
Electrical specifications		
Operating voltage	U_B	26.5 ... 31.6 V via AS-Interface network , min. 18.5 V
No-load supply current	I_0	≤ 40 mA
Protection class		II, rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
Input		
Test input		Data bit D2: 0: emitter on 1: emitter off
Output		
Output of the pre-fault indication		data bit D1: 0: stability control falls for approx. 10 s (LED yellow is flashing) or at once 0 after the 4. light beam interruptionch during the flashtimet 1: sufficient stability control
Switching type		light/dark on switchable via AS-i bus system
Signal output		AS-Interface
Switching frequency	f	1000 Hz
Response time		0.5 ms
Timer function		Impulsed off-delay IAB, 50 ms, switchable via AS-Interface
Ambient conditions		
Ambient temperature		-10 ... 50 °C (14 ... 122 °F)
Storage temperature		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Protection degree		IP67
Connection		Plastic connector M12 x 1, 4-pin
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
AS-Interface		EN 50295 AS-i Complete Spec 2.11
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

Accessories

VBP-HH1-V3.0-KIT
AS-Interface Handheld with accessory

VBP-HH1
Handheld programming device

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

REF-MH82
Reflector with Micro-structure, rectangular 82 mm x 60 mm, mounting holes

Other suitable accessories can be found at www.pepperl-fuchs.com

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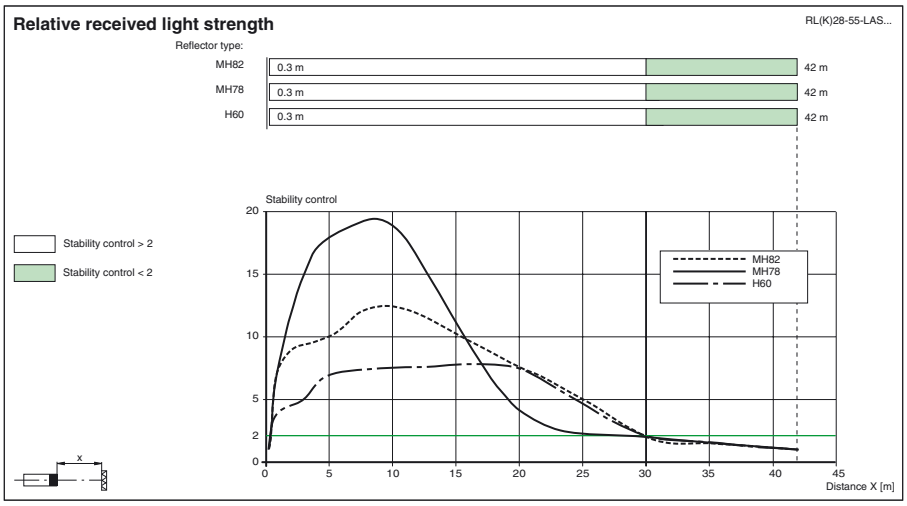
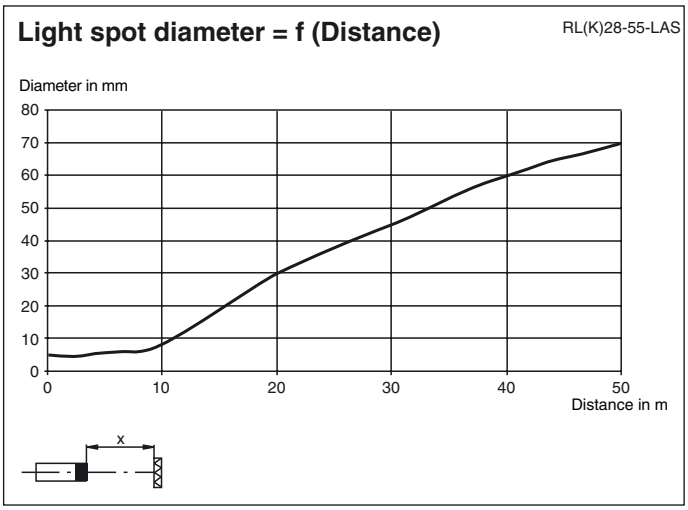
Approvals and certificates

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



Curves/Diagrams



AS-Interface programming

<F id="261">Address preset to 00, can be changed via Busmaster or programming devices

IO-Code	3
ID-Code	A
ID2	1

- **Data bit**
  <F id="263">Bitfunction
  D0 Switch output (0=light beam free, 1=light beam interrupted) applies to P1=0
  D1 Pre-fault indicator (0=alarm, 1=no alarm)
  D2 Test function (0=emitter ON, 1=emitter OFF)
  D3 not used
- **Parameter bit**
  <F id="263">Bitfunction (1/0)
  P0 not used
  P1 Light/dark-changeover switch (0=DS, 1=HS)
  P2 Time function IAB, 50 ms (0=time ON, 1=time OFF)
  P3not used

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.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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