



Model Number

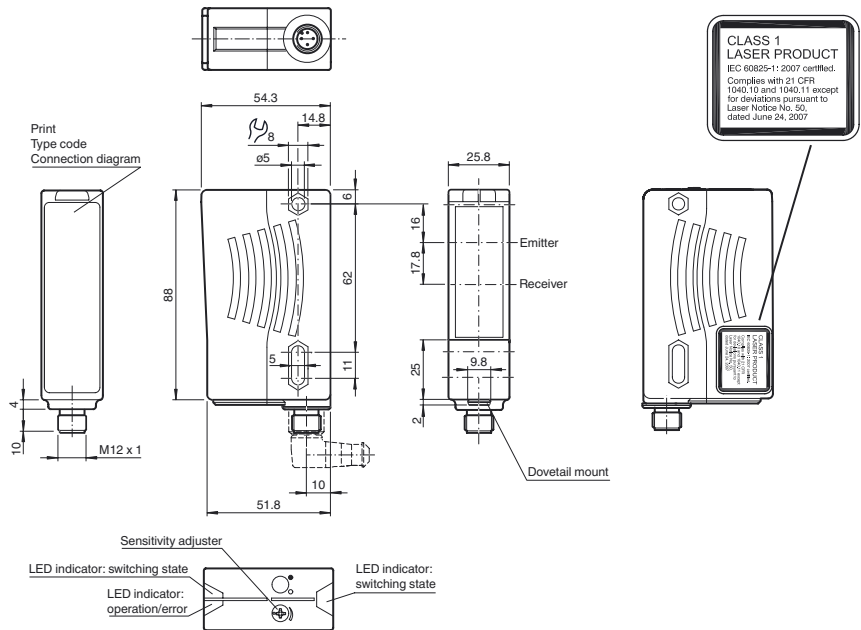
RL28-55-LAS-B3B/73c

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

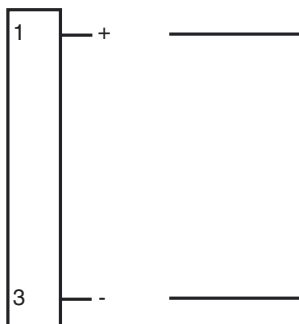
Features

- 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

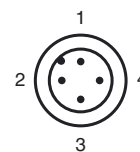
Dimensions



Electrical connection



Pinout



Release date: 2011-12-21 10:26 Date of issue: 2013-11-19 134251_eng.xml

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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@de.pepperl-fuchs.com

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

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
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

Operation indicator	dual-LED green/red green: AS-Interface voltage, normal operation red: communication error or address 0 red/green flashing: peripherie fault
Function indicator	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
Control elements	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

Pre-fault indication output	data bit D1: 0: stability control falls for approx. 10 s (LED yellow is flashing) or at once 0 after the 4. light beam interruption during the flashtime 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

Approvals and certificates**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-MLV11-K

dove tail mounting clamp

OMH-RLK29-HW

Mounting bracket for rear wall mounting

OMH-RL28-C

Weld slag cover model

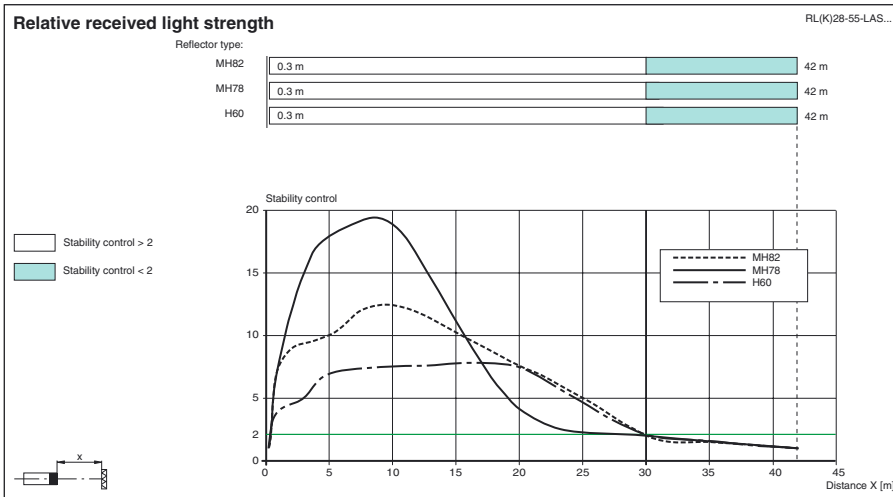
REF-MH82

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

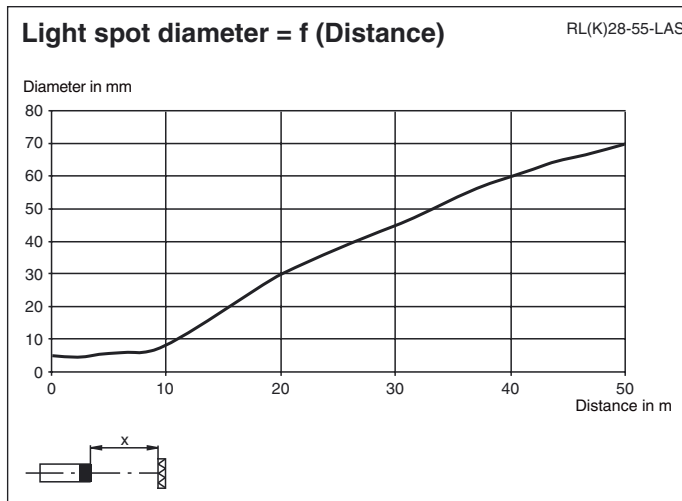
Other suitable accessories can be found at www.pepperl-fuchs.com

CCC approval
Approvals

CCC approval / marking not required for products rated ≤36 V
CE, cULus



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)
- P3 not used

Release date: 2011-12-21 10:26 Date of issue: 2013-11-19 134251_eng.xml

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.