

Model Number

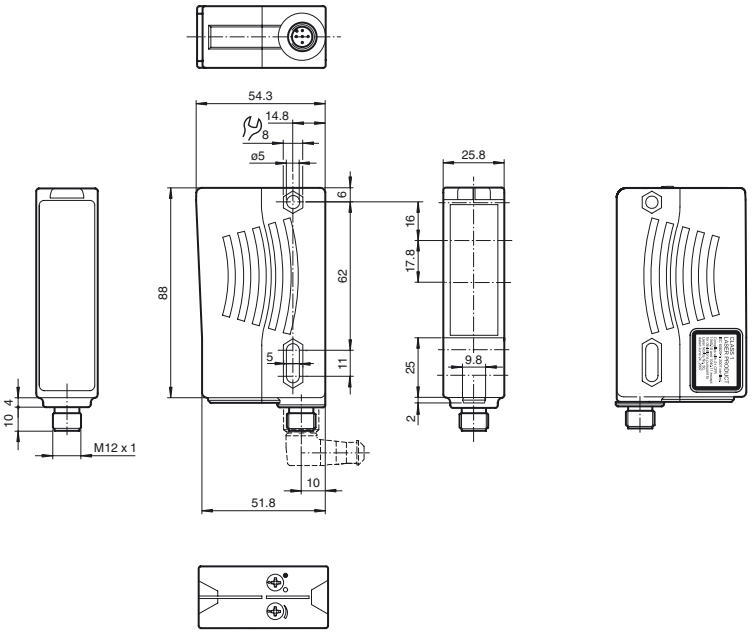
RL28-8-H-1500-LAS/47/105

Background suppression sensor
with 5-pin, M12 x 1 plastic connector

Features

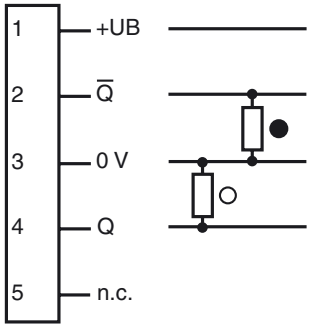
- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Laser version for long ranges
- Small light beam diameter for detection of small parts

Dimensions



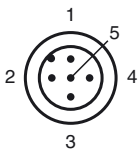
Electrical connection

Option: /47

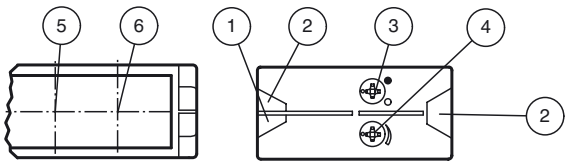


○ = Light on
● = Dark on

Pinout



Indicators/operating means



1	Operating display green
2	Switch state yellow
3	Bright/dark switch
4	Detection range adjuster
5	Receiver
6	Emitter

Release date: 2015-10-28 14:39 Date of issue: 2015-10-28 180708_eng.xml

Technical data

General specifications		
Detection range		100 ... 1500 mm
Detection range min.		50 ... 200 mm
Detection range max.		100 ... 1500 mm
Background suppression		max. + 10 % of the upper limit of the detection range
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		4.5 µs
Repetition rate		approx. 1.5 kHz
max. pulse energy		17 nJ
Light spot representation		max. 1.5 mm x 4 mm , light spot perpendicular to housing
Black/White difference (6 %/90 %)		≤ 40 %
Ambient light limit		50000 Lux
Functional safety related parameters		
$MTTF_d$		590 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green
Function indicator		2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range
Control elements		Detection range adjuster , Light/Dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
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
Time delay before availability	t_v	≤ 2 s
Output		
Switching type		light/dark on, switchable
Signal output		2 PNP outputs, complementary, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 200 mA
Switching frequency	f	140 Hz
Response time		3.5 ms
Ambient conditions		
Ambient temperature		-10 ... 50 °C (14 ... 122 °F)
Storage temperature		-25 ... 75 °C (-13 ... 167 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		5-pin, M12 x 1 plastic connector
Material		
Housing		Plastic ABS
Optical face		Plastic pane
Mass		approx. 70 g
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2:2007 + A1:2012
Standard conformity		
Product standard		EN 60947-5-2:2007 + A1:2012 IEC 60947-5-2:2007 + A1:2012
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
Standards		UL 60947-5-2: 2014 IEC 60825-1:2007 EN 60825-1:2007
Approvals and certificates		
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1

Laserlabel



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-MLV11-K
dove tail mounting clamp

OMH-RLK29-HW
Mounting bracket for rear wall mounting

OMH-RL28-C
Weld slag cover model

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

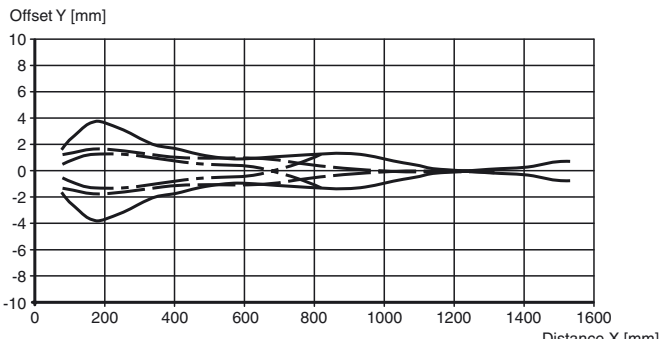
Release date: 2015-10-28 14:39 Date of issue: 2015-10-28 180708_eng.xml

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
PEPPERL+FUCHS SENSING YOUR NEEDS

Curves/Diagrams

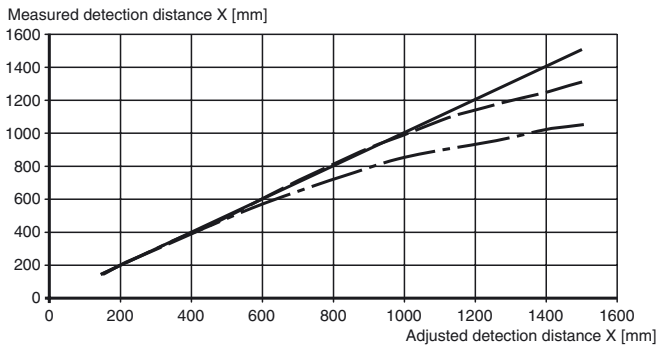
Characteristic response curve

RL28-8-H-1500-LAS...



Difference in detection distance

RL28-8-H-1500-LAS...



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.

Release date: 2015-10-28 14:39 Date of issue: 2015-10-28 180708_eng.xml