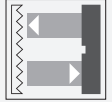




Retroreflective sensor RL28-55-LAS/47/82b/105

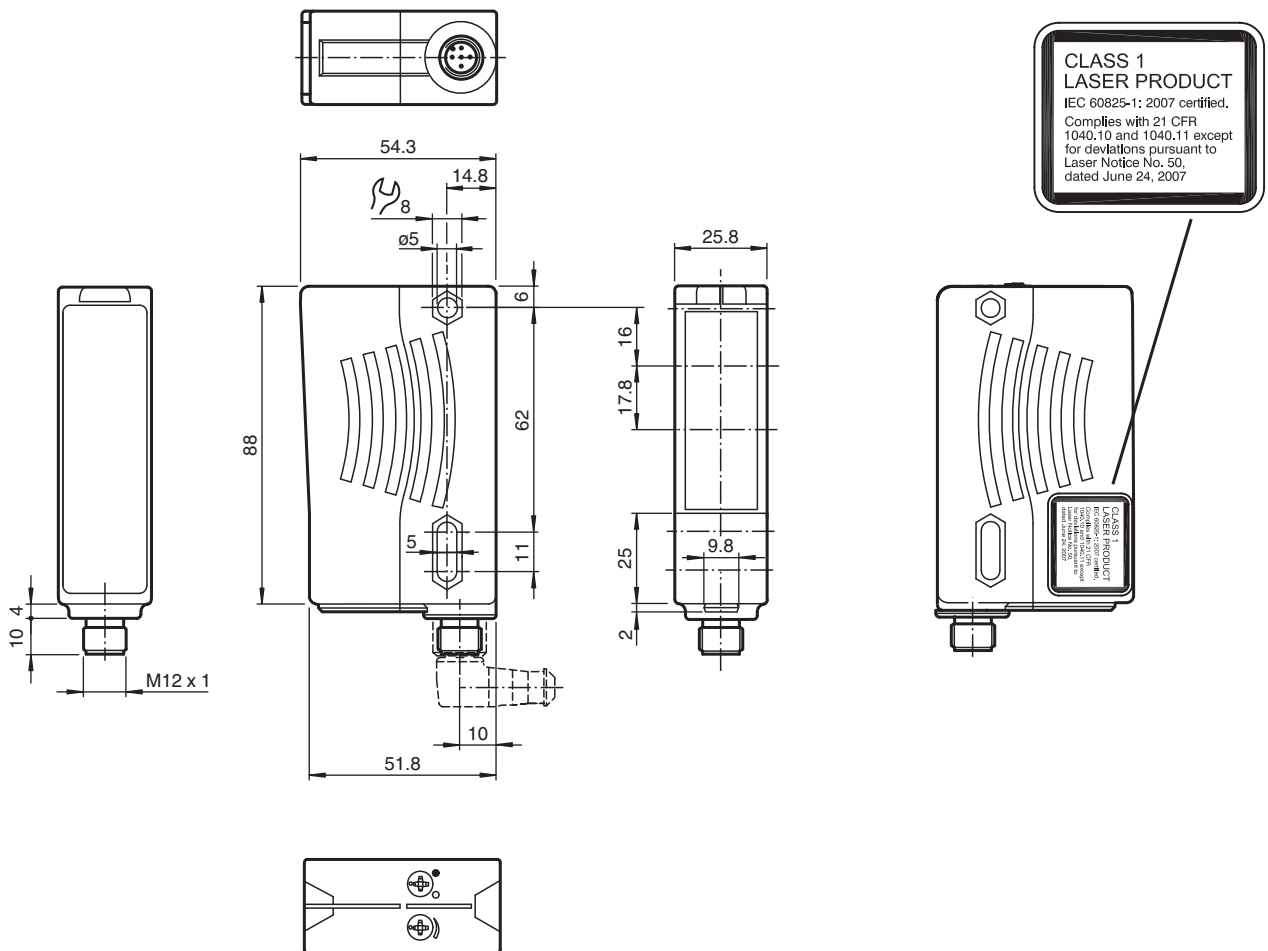


- Visible red light, pulsed LASER light
- Ultra bright LEDs for power on, weak signal indication and switching state
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II
- Waterproof, degree of protection IP67

Retroreflective sensor with polarization filter



Dimensions



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

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PEPPERL+FUCHS

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
Polarization filter	yes
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
Opening angle	Emitter: < 0.1 ° Receiver: < 2 °
Ambient light limit	50000 Lux

Functional safety related parameters

MTTF _d	560 a
Mission Time (T _M)	10 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green
Function indicator	2 LEDs yellow, light up when light beam is free, flash when falling short of the operating reserve, are off when light beam is interrupted
Control elements	sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light-on/dark-on changeover 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

Stability alarm output		1 PNP, inactive when falling short of the operating reserve for 10;s immediately inactive if 4 light beam interruptions take place
Switching type		light/dark on switchable
Signal output		2 PNP, complementary, 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

Conformity

Product standard	EN 60947-5-2
Laser safety	IEC 60825-1:2014

Compliance with standards and directives

Standard conformity	
Product standard	

Approvals and certificates

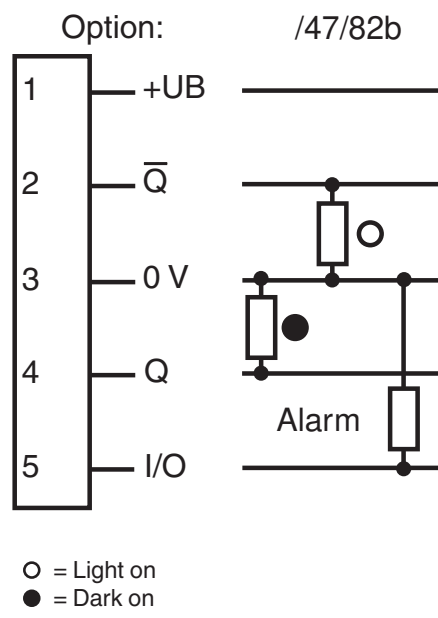
UL approval	E87056 , cULus Listed , class 2 power supply , type rating 1
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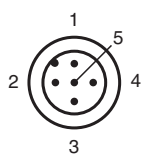
Technical Data

FDA approval		IEC 60825-1:2014 Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3 as described in Laser Notice 56, dated May 8, 2019.
Ambient conditions		
Ambient temperature		-10 ... 50 °C (14 ... 122 °F)
Storage temperature		-40 ... 60 °C (-40 ... 140 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		5-pin, M12 x 1 plastic connector
Material		
Housing		Plastic ABS
Optical face		Plastic pane
Mass		80 g
Dimensions		
Height		88 mm
Width		25.8 mm
Depth		54.3 mm

Connection Assignment



Connection Assignment

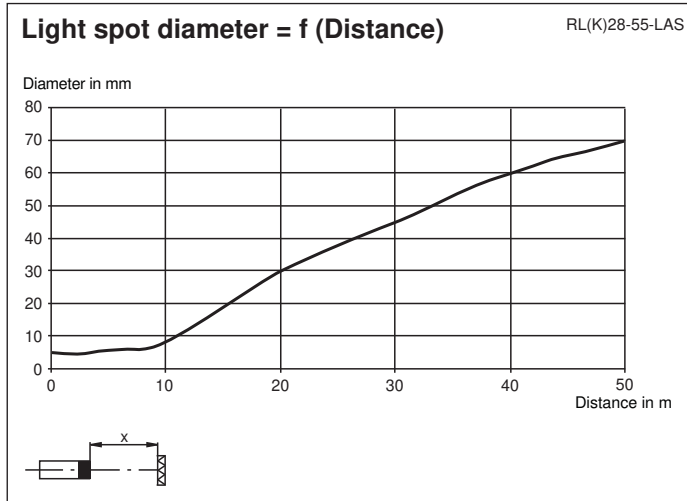
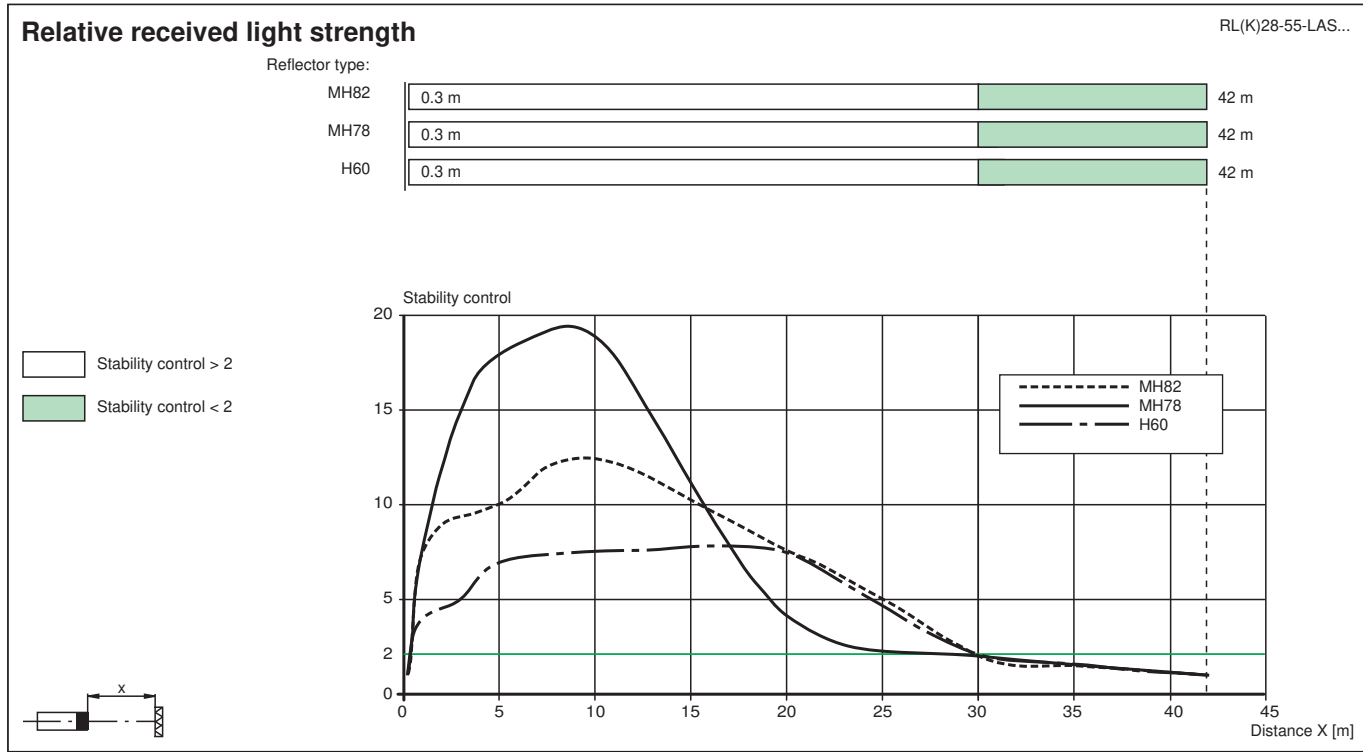
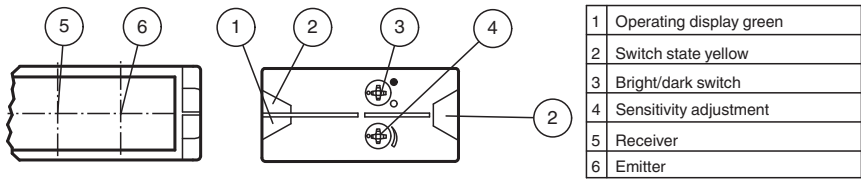


Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

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Assembly



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