



Background suppression sensor

RL28-8-H-1500-LAS/47/115b

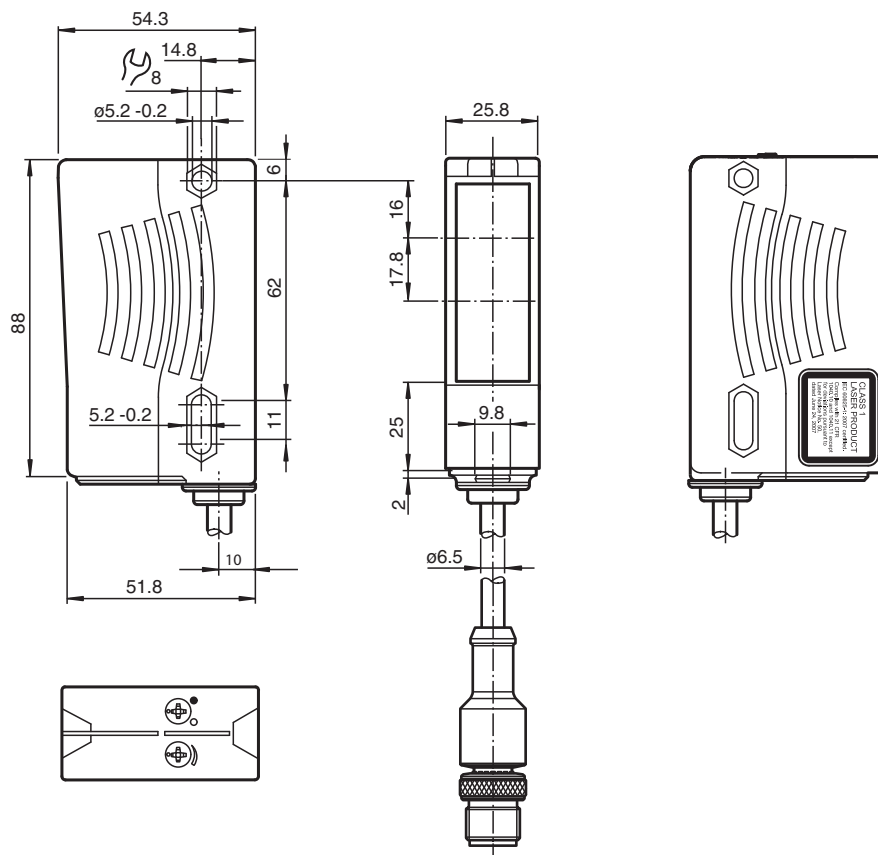
- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Laser version for long ranges
- Small light beam diameter for detection of small parts



Background suppression sensor



Dimensions



Technical Data

General specifications

Detection range	100 ... 1500 mm
Detection range min.	50 ... 200 mm

Release date: 2022-10-25 Date of issue: 2022-10-25 Filename: 194926_eng.pdf

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 1111
fa-info@de.pepperl-fuchs.com

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

PEPPERL+FUCHS

Technical Data

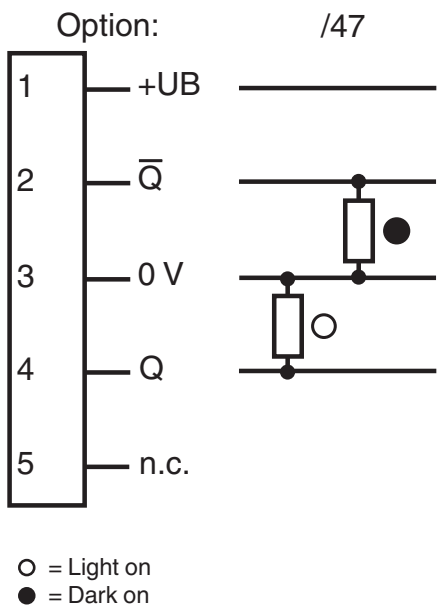
Detection range max.	100 ... 1500 mm
Background suppression	max. + 10 % of the upper limit of the detection range
Light source	laser diode
Light type	modulated visible red light
Laser nominal ratings	
Note	LASER LIGHT , DO NOT STARE INTO BEAM
Laser class	1
Wave length	650 nm
Beam divergence	< 1.5 mrad
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	Sensing range adjuster , Light-on/dark-on changeover 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
Conformity	
Product standard	EN 60947-5-2
Laser safety	EN 60825-1
Approvals and certificates	
EAC conformity	TR CU 020/2011
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
FDA approval	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
Ambient conditions	
Ambient temperature	-10 ... 50 °C (14 ... 122 °F)
Storage temperature	-40 ... 60 °C (-40 ... 140 °F)
Mechanical specifications	
Housing width	25.8 mm
Housing height	88 mm

Release date: 2022-10-25 Date of issue: 2022-10-25 Filename: 194926_eng.pdf

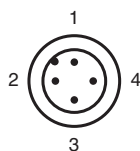
Technical Data

Housing depth	54.3 mm
Degree of protection	IP67
Connection	0.2 m fixed cable with 4-pin, M12 connector
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	approx. 70 g

Connection Assignment



Connection Assignment

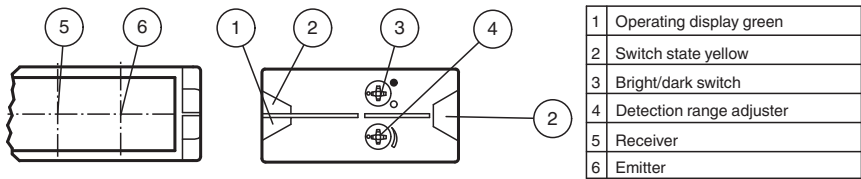


Wire colors in accordance with EN 60947-5-2

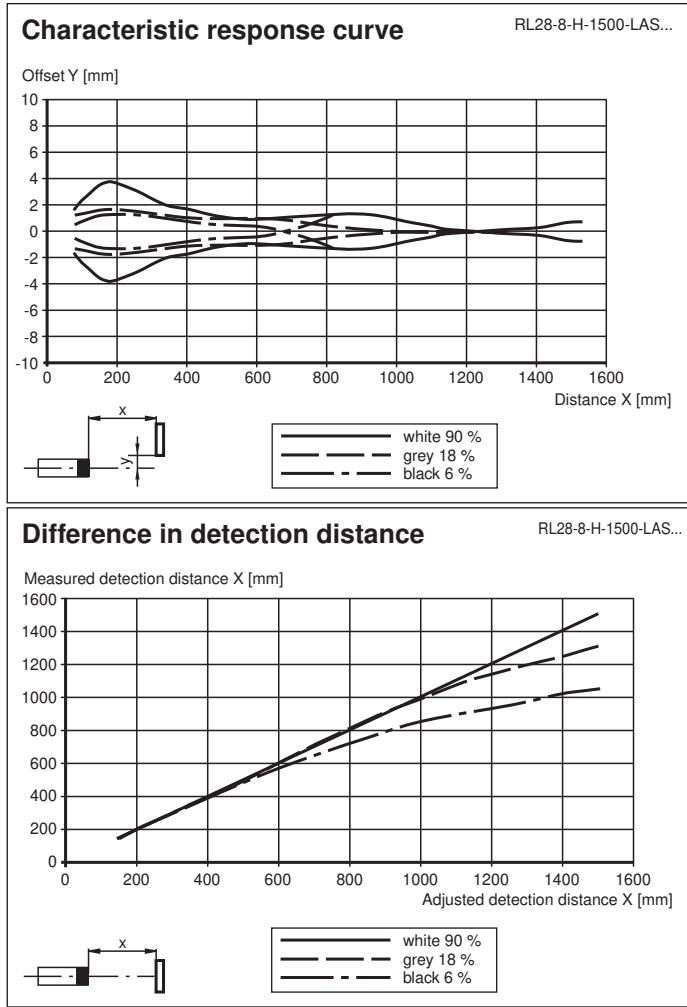
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Release date: 2022-10-25 Date of issue: 2022-10-25 Filename: 194926_eng.pdf

Assembly



Characteristic Curve



Release date: 2022-10-25 Date of issue: 2022-10-25 Filename: 194926_eng.pdf

Application



Safety Information



Accessories

	OMH-05	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	OMH-21	Mounting bracket: mounting aid for sensors in the RL* series
	OMH-22	Mounting aid for RL* series
	OMH-RLK29-HW	Mounting bracket for rear wall mounting
	OMH-RL28-C	Weld slag cover model

Release date: 2022-10-25 Date of issue: 2022-10-25 Filename: 194926_eng.pdf