

Technical Data

Light source	LED	
Light type	modulated visible red light , 630 nm	
Polarization filter	yes	
Angle deviation	approx. 2 °	
Diameter of the light spot	approx. 60 mm at a distance of 800 mm	
Opening angle	approx. 2 °	
Optical face	frontal	
Ambient light limit	EN 60947-5-2 : 30000 Lux	
Functional safety related parameters		
MTTF _d	800 a	
Mission Time (T _M)	20 a	
Diagnostic Coverage (DC)	0 %	
Indicators/operating means		
Operation indicator	LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz)	
Function indicator	LED yellow: lights up when receiving the light beam ; flashes when falling short of the operating reserve; OFF when light beam is interrupted	
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC , class 2
No-load supply current	I ₀	< 10 mA
Input		
Test input	Test of switching function at 0 V	
Output		
Switching type	NO contact / dark-on	
Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 50 mA , resistive load	
Voltage drop	U _d	≤ 1.5 V DC
Switching frequency	f	approx. 800 Hz
Response time	600 μs	
Conformity		
Product standard	EN 60947-5-2	
Approvals and certificates		
UL approval	cULus Recognized, Class 2 Power Source	
CCC approval	CCC approval / marking not required for products rated ≤36 V	
Ambient conditions		
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)	
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)	
Mechanical specifications		
Housing width	7.5 mm	
Housing height	26 mm	
Housing depth	13.8 mm	
Degree of protection	IP67	
Connection	200 mm fixed cable with 4-pin, M8x1 connector	
Material		
Housing	PC/ABS and TPU	
Optical face	PMMA	
Cable	PUR	
Mass	approx. 20 g	
Cable length	200 mm	

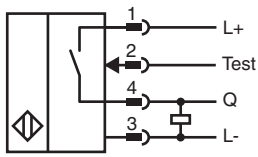
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Connection



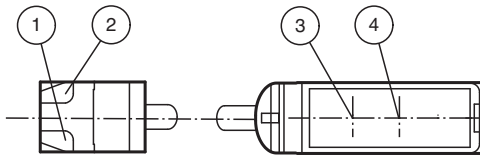
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

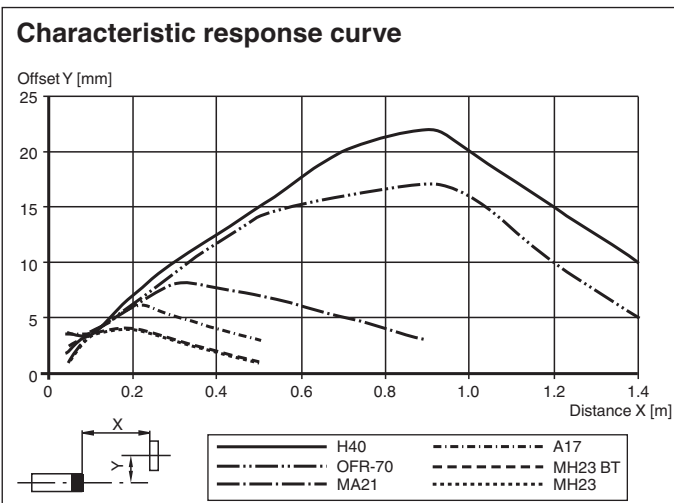
Assembly



1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

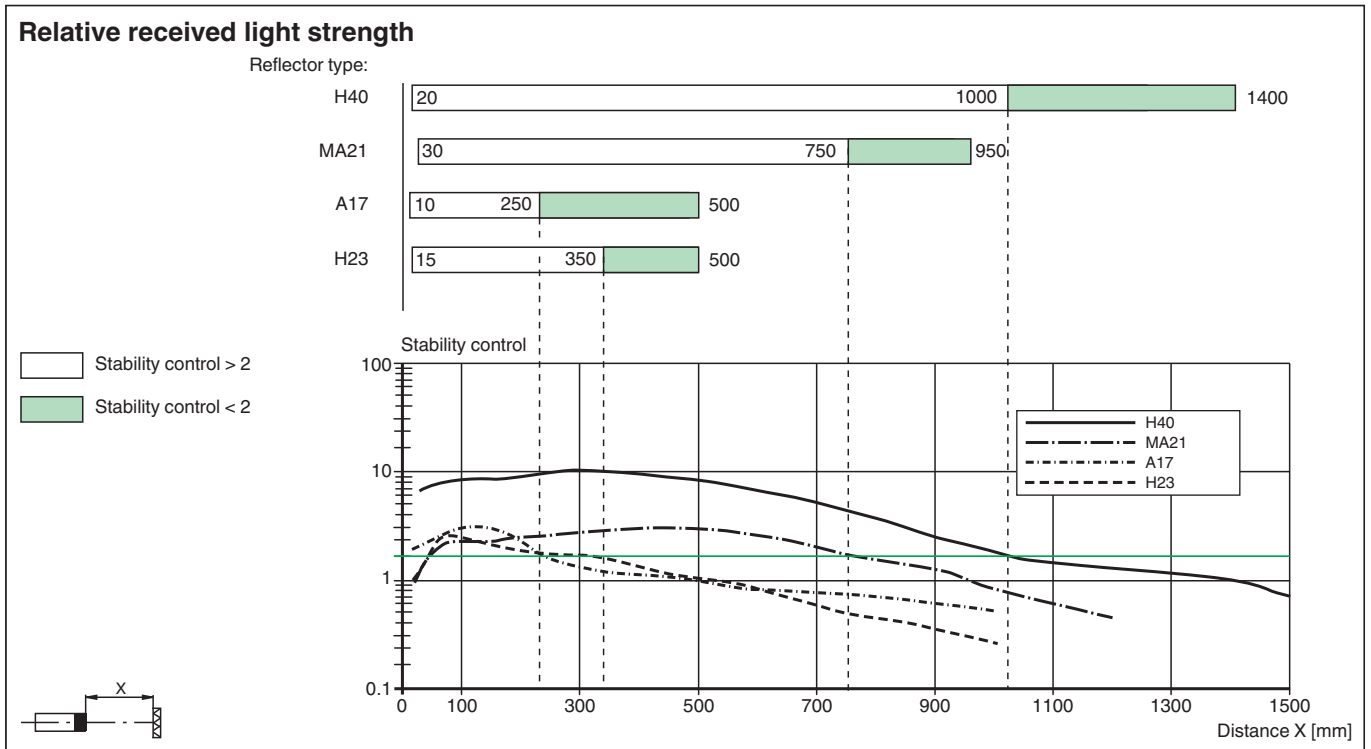
Characteristic Curve

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Characteristic Curve



Accessories

	MH-R3-01	Mounting aid for sensors from the R3 series, mounting bracket
	MH-R3-02	Mounting aid for sensors from the R3 series, mounting bracket
	MH-R3-03	Mounting aid for sensors from the R3 series, mounting bracket
	MH-R3-04	Mounting aid for sensors from the R3 series, mounting bracket
	V31-WM-2M-PUR	Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey
	V31-GM-2M-PUR	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey

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