



Retroreflective sensor OBR1000-R2-E0-0,4M-V3-P



- Ultra-small housing design
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Integrated polarization filter allows the detection of reflective objects
- Extremely long detection range paves the way for new applications

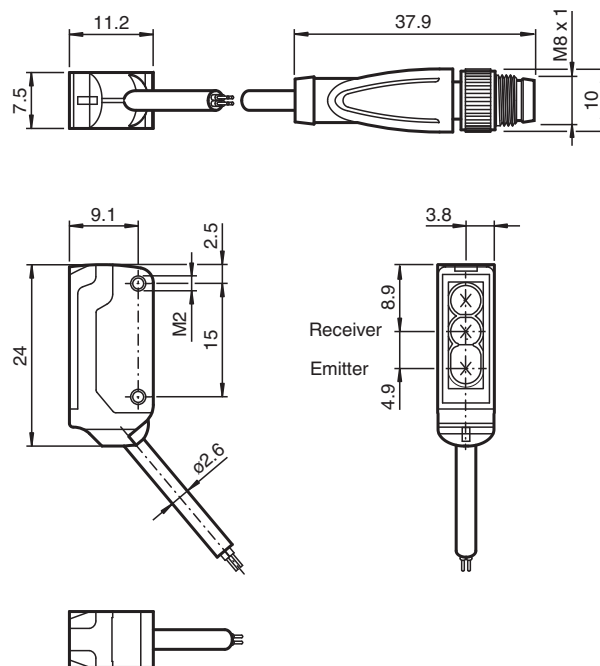
Retroreflective sensor for standard applications, miniature design, polarization filter, 1000 mm detection range, red light, dark on, NPN output, 400 mm fixed cable with plug M8, 3-pin



Function

The nano sensor has been developed for a broad range of applications. It offers excellent durability and is exceptionally easy to install. The housing is compact and, with its 45° cable outlet, can be installed in the smallest spaces. New functional principles and functionality open up a range of new options.

Dimensions



Technical Data

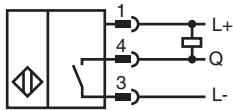
General specifications

Effective detection range	0 ... 1 m
Reflector distance	40 ... 1000 mm
Threshold detection range	1.4 m
Reference target	H40 reflector

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
Output		
Switching type	NO contact / dark-on	
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 50 mA	
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	24 mm	
Housing depth	11.2 mm	
Degree of protection	IP67	
Connection	400 mm fixed cable with 3-pin M8 x 1 connector	
Material		
Housing	PC/ABS and TPU	
Optical face	PMMA	
Cable	PUR	
Installation	Fixing screws , 2 x M2 allen head screws included with delivery	
Mass	approx. 20 g	
Cable length	400 mm	

Connection



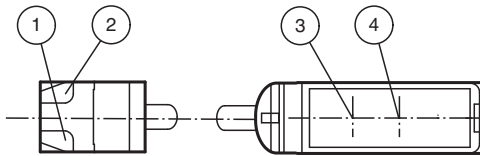
Connection Assignment



Wire colors in accordance with EN 60947-5-2

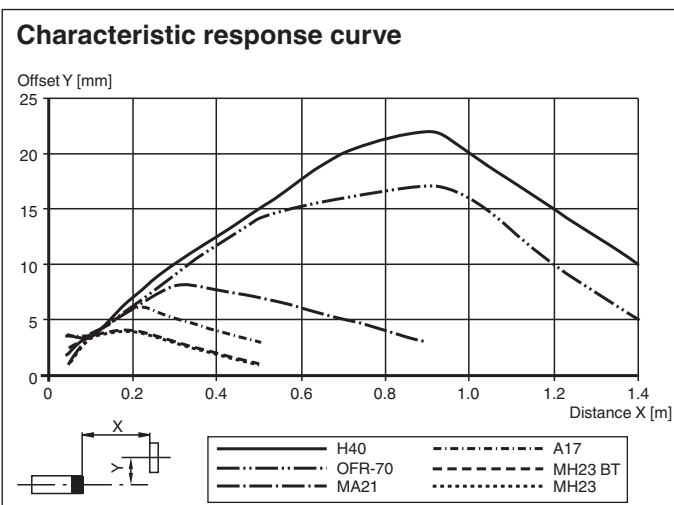
- 1 | BN (brown)
- 3 | BU (blue)
- 4 | BK (black)

Assembly



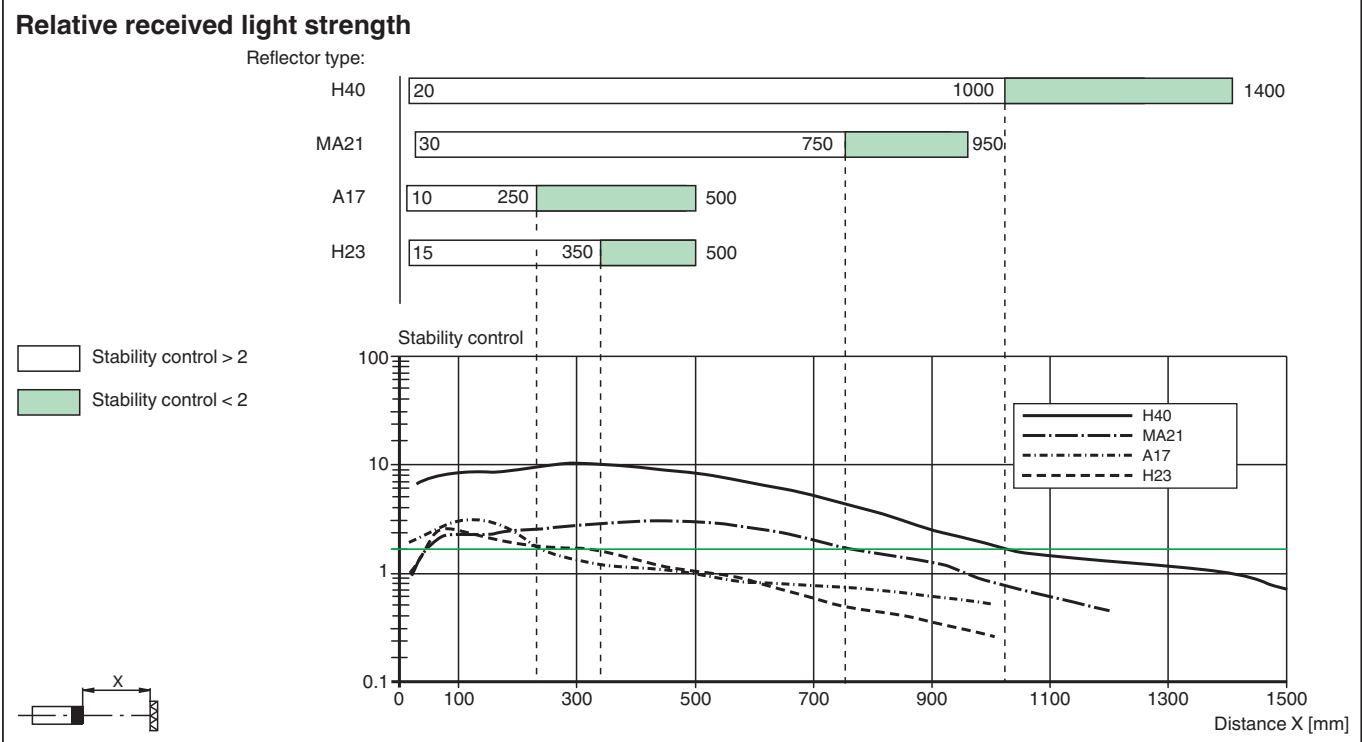
1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

Characteristic Curve



Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 70141811_eng.pdf

Characteristic Curve



Accessories

	MH-R2-01	Mounting aid for R2 series, Mounting bracket
	MH-R2-02	Mounting aid for R2 series, Mounting bracket
	MH-R2-03	Mounting aid for R2 series, Mounting bracket
	MH-R2-04	Mounting aid for R2 series, Mounting bracket

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 70141811_eng.pdf