

Thru-beam sensor

OBE6000-12GM40-SE4-0,1M-V31

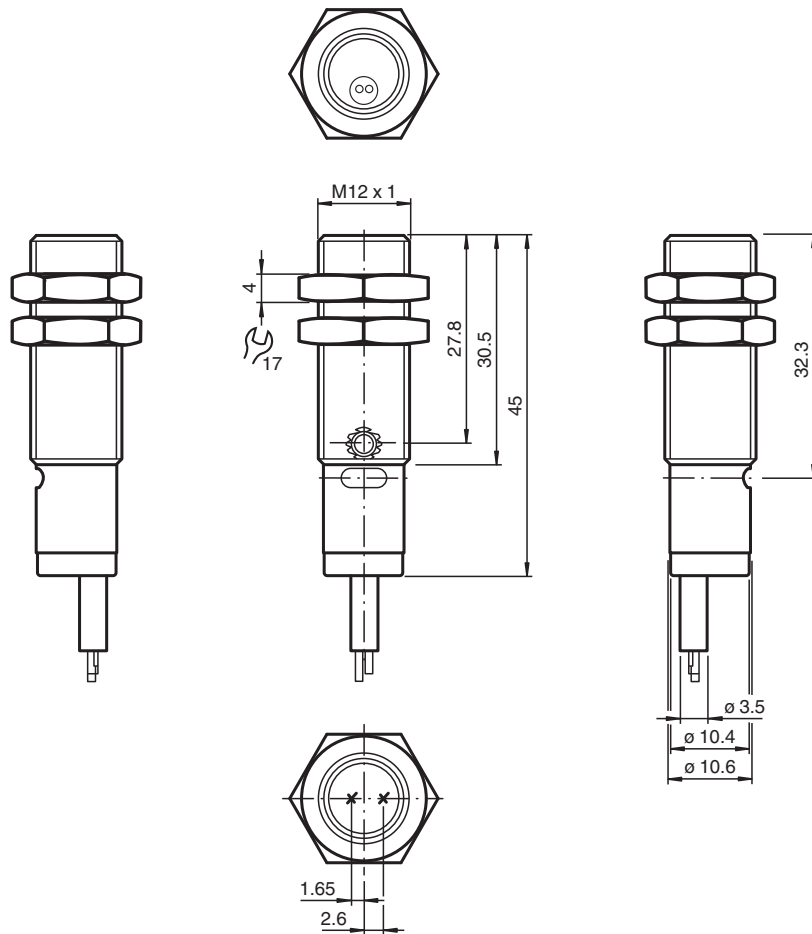


- Robust M12 threaded housing
- Less space required
- Light-on/dark-on, programmable
- Degree of protection IP67

Thru-beam sensor, M12 threaded housing design, nickel-coated brass housing, 6 meter detection range, red light, sensitivity adjuster, light/dark-on, DC version, NPN output, 100 mm fixed cable, and M12 plug, 4-pin



Dimensions



Technical Data

System components

Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 811961_eng.pdf

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

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Technical Data

Emitter	OBE6000-12GM40-S-0,1M-V31	
Receiver	OBE6000-12GM40-E4-0,1M-V31	
General specifications		
Effective detection range	0 ... 6000 mm	
Threshold detection range	8500 mm	
Adjustment range	500 ... 8500 mm	
Reference target	receiver	
Light source	LED	
Light type	red , 640 nm	
Angle deviation	+/- 2 °	
Diameter of the light spot	approx. 800 mm at a distance of 6 m Red light	
Opening angle	approx. 4	
Optical face	frontal	
Ambient light limit	EN 60947-5-2 ; 20000 Lux	
Functional safety related parameters		
MTTF _d	806 a	
Mission Time (T _M)	20 a	
Diagnostic Coverage (DC)	0 %	
Indicators/operating means		
Operation indicator	LED green: Power on	
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	
Control elements	sensitivity adjustment , receiver	
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC , class 2
Ripple	10 %	
No-load supply current	I ₀	≤ 30 mA (emitter and receiver)
Input		
Control input	light on +UB dark on: 0 V	
Output		
Switching type	light/dark on electrically switchable	
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 2 V
Switching frequency	f	≤ 1000 Hz
Response time	0.5 ms	
Conformity		
Product standard	EN 60947-5-2	
Compliance with standards and directives		
Standard conformity		
Standards	UL 508	
Approvals and certificates		
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure	
CCC approval	CCC approval / marking not required for products rated ≤36 V	
Approvals	CE, cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)	
Ambient conditions		
Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)	
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)	
Mechanical specifications		
Degree of protection	IP67	
Connection	100 mm fixed cable with M8 connector, 4-pin	

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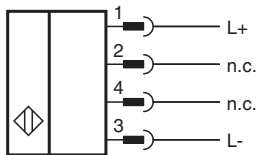
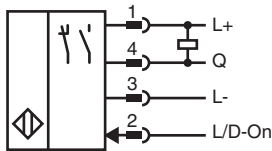
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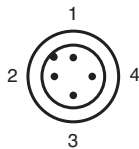
Technical Data

Material	
Housing	brass, nickel-plated
Optical face	PMMA
Mass	approx. 25 g (device)
Cable length	100 mm

Connection



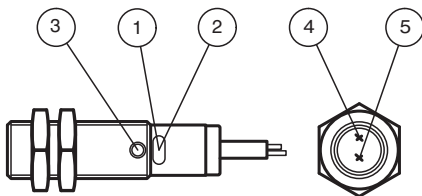
Connection Assignment



Wire colors in accordance with EN 60947-5-2

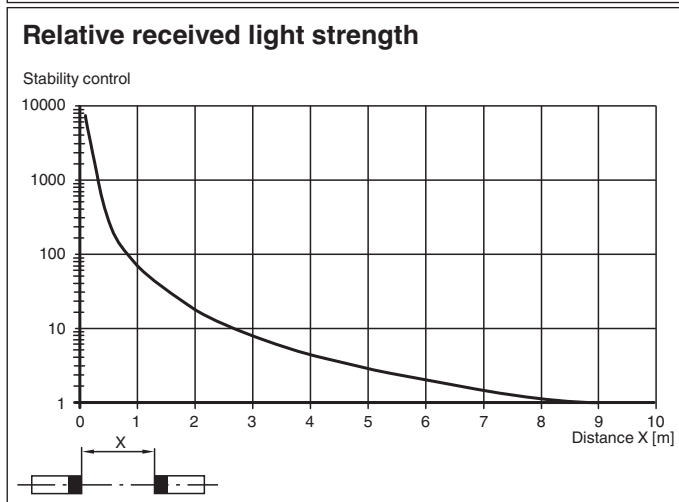
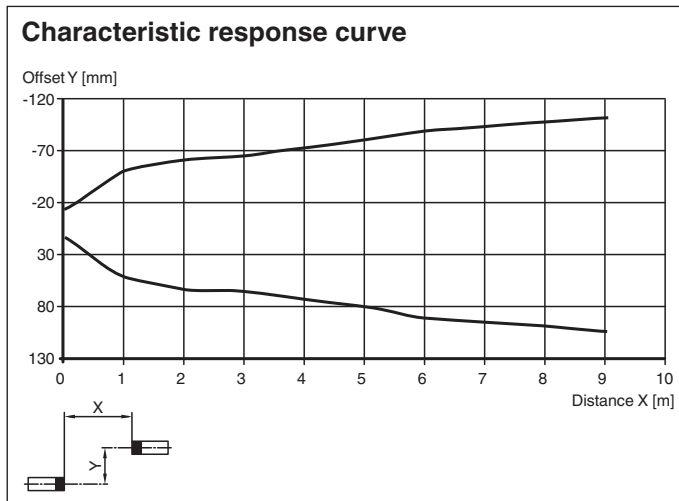
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Assembly








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

Characteristic Curve



Accessories

	BF 12	Mounting flange, 12 mm
	BF 12-F	Plastic mounting adapter, 12 mm
	BF 5-30	Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm
	V31-GM-2M-PUR	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey
	V31-WM-2M-PUR	Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey

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