

Thru-beam sensor (pair)

OBE15M-18GM40A-SE0-V1

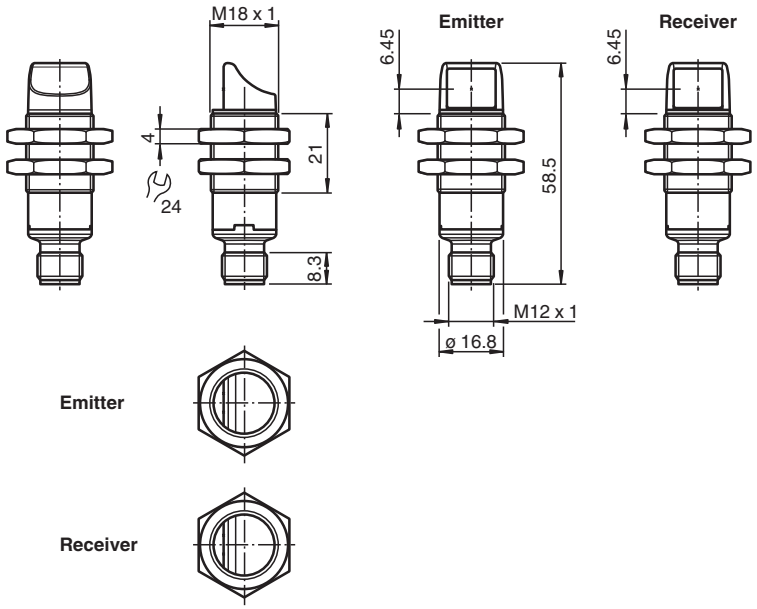
- Strong metallic housing in cylindrical shape M18 x 1
- Not sensitive to ambient light
- Degree of protection IP67
- Very high detection range

Thru-beam sensor (pair)

Function

The optical sensors of this series have an M18 threaded housing that is optionally available in plastic or metal.
The sensors are robust and versatile.
Focusing on the essential requirements simplifies selection and commissioning, saving time and costs.

Dimensions



Technical Data

System components		
Emitter		OBE15M-18GM40A-S-V1
Receiver		OBE15M-18GM40A-E0-V1
General specifications		
Effective detection range		0 ... 15 m

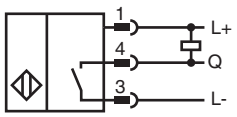
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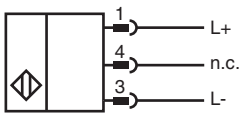
Technical Data

Threshold detection range		21 m
Light source		LED
Light type		modulated visible red light
Diameter of the light spot		approx. 110 mm at 1 m
Angle of divergence		approx. 2.9 °
Optical face		lateral
Ambient light limit		EN 60947-5-2 10000 Lux
Functional safety related parameters		
$MTTF_d$		838 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: on - power on flashing (4 Hz) - short circuit
Function indicator		Receiver: Yellow LED: Permanently lit - light path clear Permanently off - object detected Flashing (4 Hz) - insufficient operating reserve
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I_0	< 25 mA
Protection class		III
Output		
Switching type		Q - Pin4: NPN normally open / dark-on
Signal output		1 NPN output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA , resistive load
Voltage drop	U_d	≤ 1.5 V DC
Switching frequency	f	500 Hz
Response time		≤ 1 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		3-pin, M12 x 1 connector
Material		
Housing		brass, nickel-plated
Optical face		PMMA
Connector		plastic
Mass		approx. 16 g per device

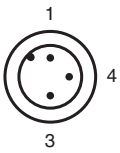
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Connection





Connection Assignment

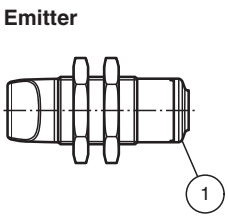


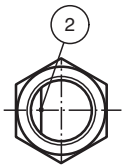
Wire colors in accordance with EN 60947-5-2

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

Indication

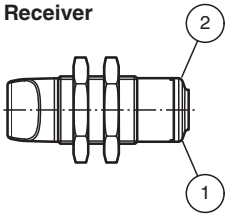
Emitter

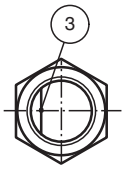




1	Operating display	green
2	Emitter	

Receiver



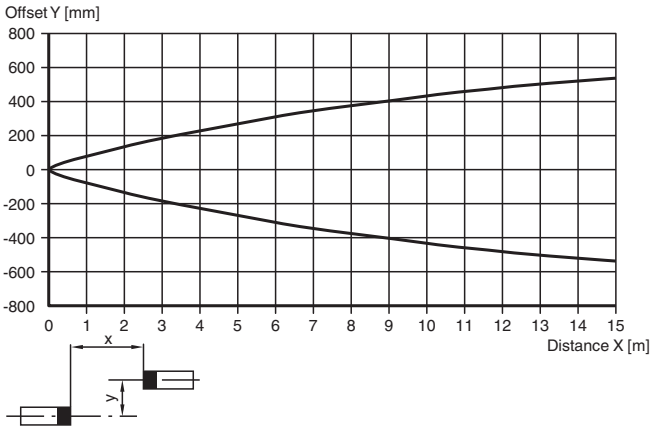


1	Operating display	green
2	Signal display	yellow
3	Receiver	

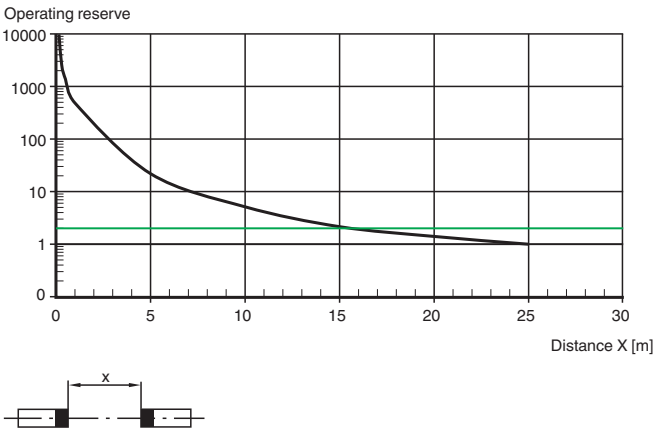
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Characteristic Curve

Characteristic response curve



Relative received light strength



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