



## Thru-beam sensor (pair)

### OBE35M-R202-SK6



- Version for universal voltages
- Medium design with versatile mounting options
- Degree of protection IP67
- Mounting on full metal sockets
- Very bright, highly visible light spot
- Highly visible LEDs for Power ON and switching state
- Easy to use
- Image is generic for this device type and may deviate from the specific variant



## Function

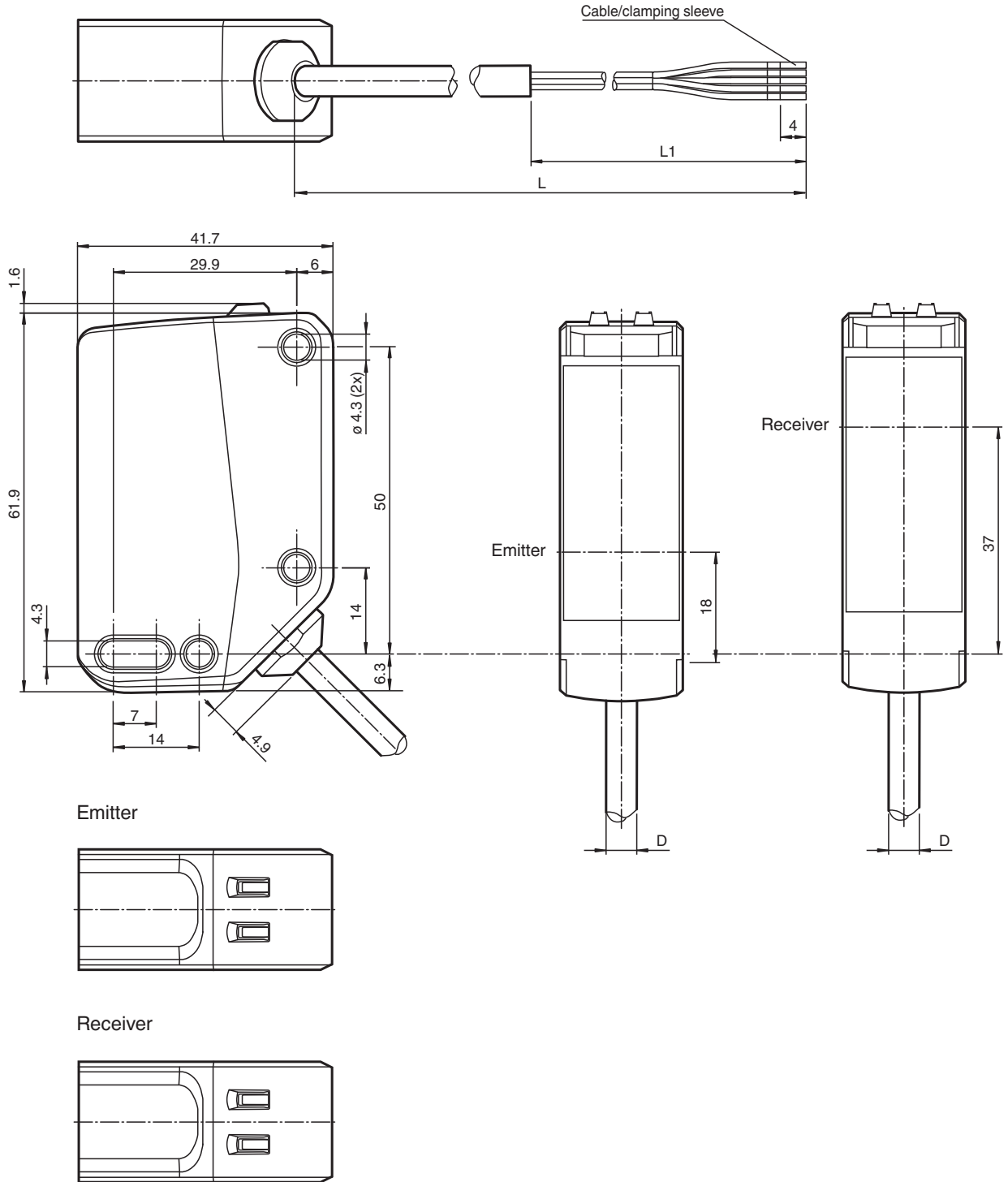
The optical sensors of this series for applications in standard automation have a modern housing design. The sensors are characterized by the many mounting options, easy handling and highly visible LED status indicators. The integrated full metal bushings ensure long-term secure and dimensionally stable mounting.

Due to the integrated all-voltage power supply, the sensors can be operated in the range of 24 ... 240 V AC/DC.

## Dimensions

Drawing is generic for this device type and may deviate from the specific variant.  
For the number of cores refer to connection diagram.

Dimensions



Technical Data

System components	
Emitter	OBE35M-R202-SK
Receiver	OBE35M-R202-K6
General specifications	
Effective detection range	0 ... 35 m
Threshold detection range	47 m
Light source	LED
Light type	modulated visible red light

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

## Technical Data

LED risk group labelling		exempt group
Transmitter frequency		F1 = 8.2 kHz
Diameter of the light spot		approx. 1200 mm at a distance of 35 m
Opening angle		2 °
Ambient light limit		EN 60947-5-2 : 40000 Lux
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		422 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Operation indicator		LED green: power on
Function indicator		Yellow LED: Permanently lit - light path clear Permanently off - object detected Flashing (4 Hz) - insufficient operating reserve Flashing (8 Hz) - fault detected, the outputs maintain the status
Control elements		none
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	24 ... 240 V DC (-30 °C ≤ T <sub>amb</sub> ≤ 60 °C) 24 ... 240 V AC (10 °C ≤ T <sub>amb</sub> ≤ 60 °C) 30 ... 240 V AC (-30 °C ≤ T <sub>amb</sub> ≤ 60 °C)
No-load supply current	I <sub>0</sub>	Emitter: ≤ 15 mA Receiver: ≤ 30 mA at 24 V Operating voltage
Protection class		II
Rated insulation voltage	U <sub>i</sub>	250 V
Rated impulse withstand voltage	U <sub>imp</sub>	2500 V
Power consumption	P <sub>0</sub>	Emitter: ≤ 0.35 VA Receiver: ≤ 0.75 VA
Fuse		Safety fuse ≤ 2 A (slow-blow) according to IEC 60127-2 Sheet 1 Recommendation: after a short circuit, check that the device is functioning correctly.
<b>Output</b>		
Switching type		Q - BK: normally-open / dark-on /Q - GY: normally-closed / light-on C - WH: Common
Signal output		Relay, 1 alternator
Switching voltage		max. 240 V AC/DC
Switching current		max. 2.5 A , see section characteristic curve
Switching power		DC: max. 95 W AC: max. 600 VA
Usage category		DC-12 , DC-13 , AC-12 u. AC-140
Switching frequency	f	25 Hz
Response time		≤ 20 ms
<b>Conformity</b>		
Product standard		EN 60947-5-2 , EN 60947-1
<b>Approvals and certificates</b>		
UL approval		E87056 , cULus Listed
<b>Ambient conditions</b>		
Ambient temperature		-30 ... 60 °C (-22 ... 140 °F) , fixed cable -20 ... 60 °C (-4 ... 140 °F) , movable cable not appropriate for conveyor chains
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Pollution degree		3
<b>Mechanical specifications</b>		
Degree of protection		IP67
Connection		2 m fixed cable
<b>Material</b>		
Housing		PC (Polycarbonate)
Optical face		PMMA
Mass		Emitter: approx. 90 g receiver: approx. 120 g

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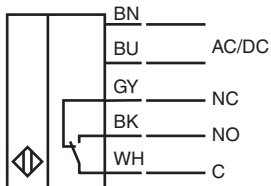
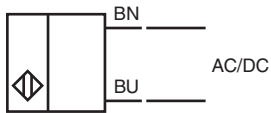
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## Technical Data

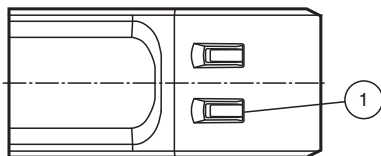
Dimensions	
Height	62 mm
Width	20 mm
Depth	42 mm
Cable length	2 m

## Connection



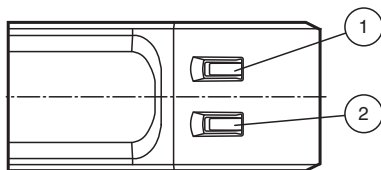
## Indication

### Emitter



1	Operation indicator	GN
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### Receiver

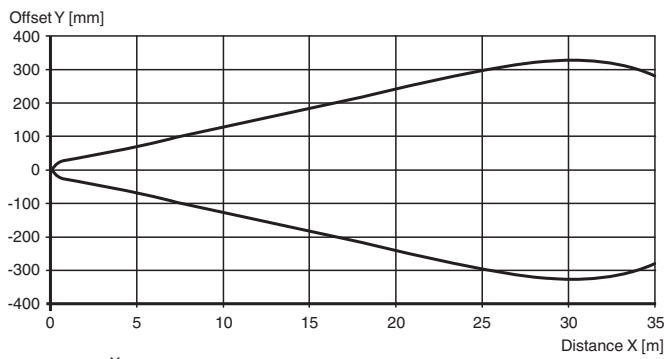


1	Signal indicator	YE
2	Operation indicator	GN

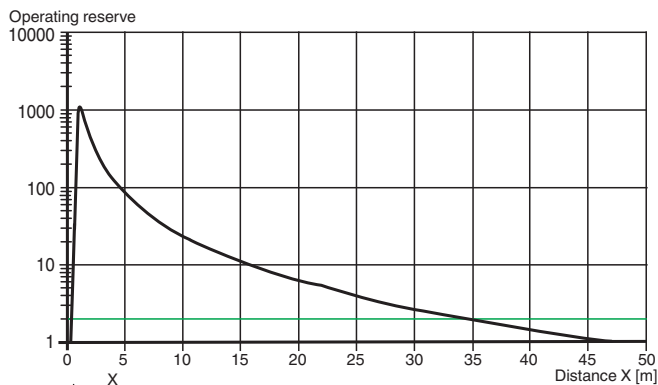
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**Characteristic Curve**

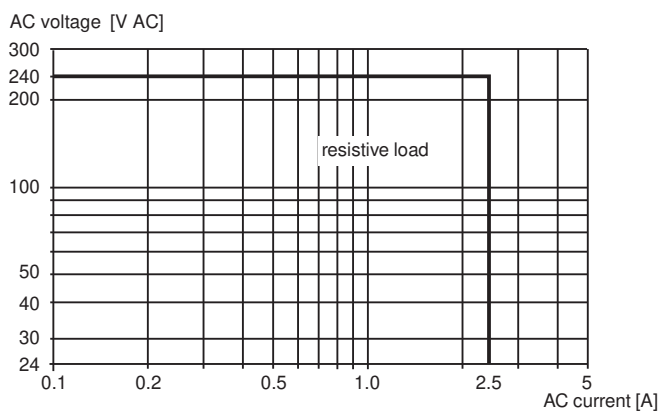
**Characteristic response curve**



**Relative received light strength**

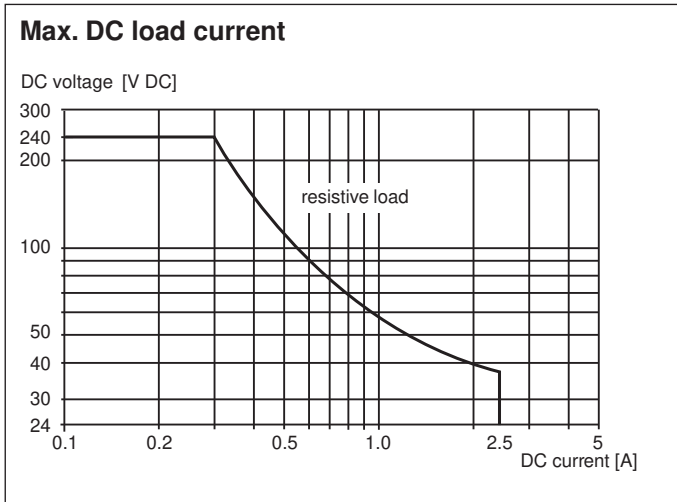


**Max. AC load current**



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### Characteristic Curve



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