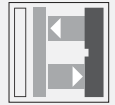


# Triangulation sensor (BGS)

## OBT150-18GM60-E4-V1



- Strong metallic housing in cylindrical shape M18 x 1
- Adjustable background suppression
- Not sensitive to ambient light
- Degree of protection IP67
- High operating distance

Triangulation sensor with background suppression



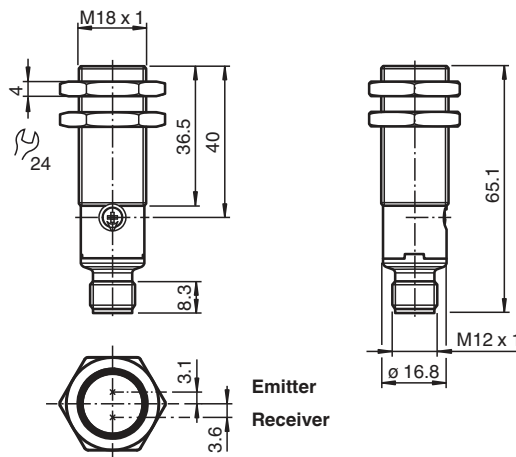
### Function

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

#### General specifications

Detection range	10 ... 150 mm
Detection range min.	10 ... 40 mm
Detection range max.	10 ... 150 mm
Adjustment range	40 ... 150 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light
Black-white difference (6 %/90 %)	< 10 % at 150 mm
Diameter of the light spot	approx. 6 mm at detection range 150 mm
Opening angle	approx. 2 °
Optical face	frontal

Release date: 2022-03-24 Date of issue: 2022-03-24 Filename: 70113328-100128\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

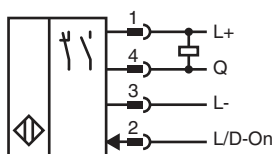
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

## Technical Data

Ambient light limit		EN 60947-5-2 100000 Lux
Hysteresis	H	< 2 %
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1058 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Operation indicator		LED green: on - power on flashing (4 Hz) - short circuit
Function indicator		LED yellow: constantly on - object detected constantly off - object not detected
Control elements		sensitivity adjustment
Control elements		light/dark on electrically switchable
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 25 mA
Protection class		III
<b>Output</b>		
Switching type		The switching type of the sensor is adjustable. The default setting is: Q - Pin4: NPN output / light-on L/D-On - Pin2: Low-active input
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 <sub>d</sub>	≤ 2 V DC
Switching frequency	f	500 Hz
Response time		≤ 1 ms
<b>Conformity</b>		
Product standard		EN 60947-5-2
<b>Approvals and certificates</b>		
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1
<b>Ambient conditions</b>		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP67
Connection		4-pin, M12 x 1 connector
Material		
Housing		brass, nickel-plated
Optical face		PMMA
Connector		plastic
Mass		approx. 23 g

## Connection



Release date: 2022-03-24 Date of issue: 2022-03-24 Filename: 70113328-100128\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

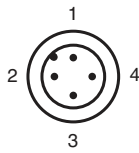
USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

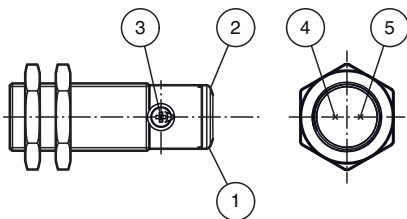
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

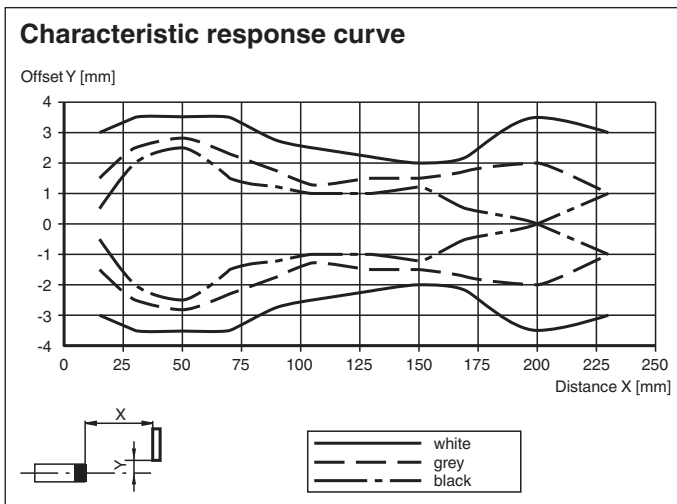
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

## Indication

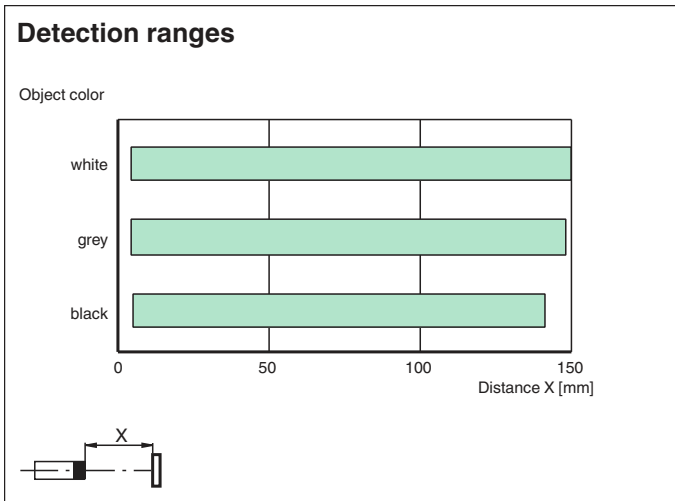


1	Operating display	green
2	Signal display	yellow
3	Sensitivity adjustment	
4	Emitter	
5	Receiver	

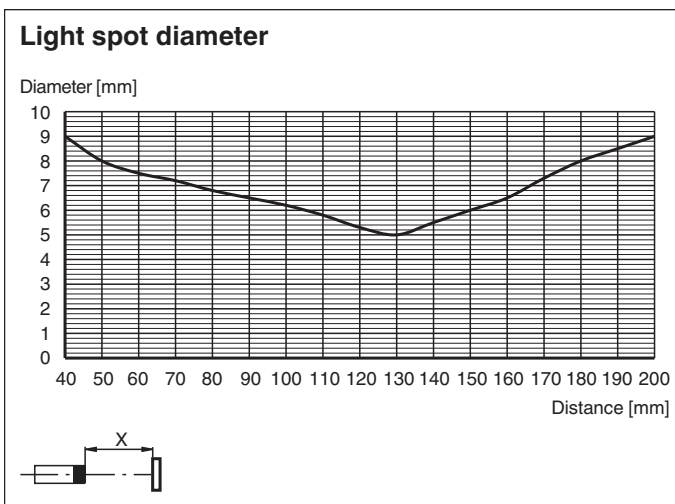
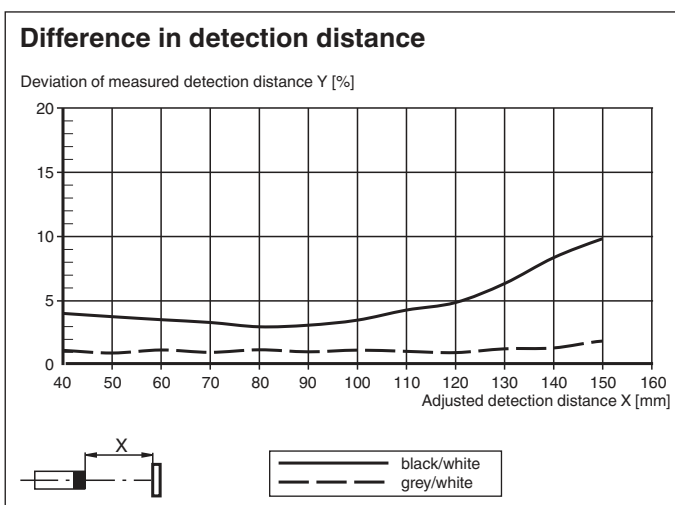
## Characteristic Curve



Release date: 2022-03-24 Date of issue: 2022-03-24 Filename: 70113328-100128\_eng.pdf



## Characteristic Curve







## Accessories

	<b>V1-W-2M-PUR</b>	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey
	<b>V1-G-2M-PUR</b>	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey

Release date: 2022-03-24 Date of issue: 2022-03-24 Filename: 70113328-100128\_eng.pdf

**Accessories**

	<b>BF 18</b>	Mounting flange, 18 mm
	<b>CPZ18B03</b>	Mounting Bracket with swivel nut
	<b>BF 18-F</b>	Plastic mounting adapter, 18 mm
	<b>BF 5-30</b>	Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm

Release date: 2022-03-24 Date of issue: 2022-03-24 Filename: 70113328-100128\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com