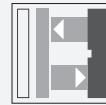




Triangulation sensor (BGS)

OBT20-R2-E0



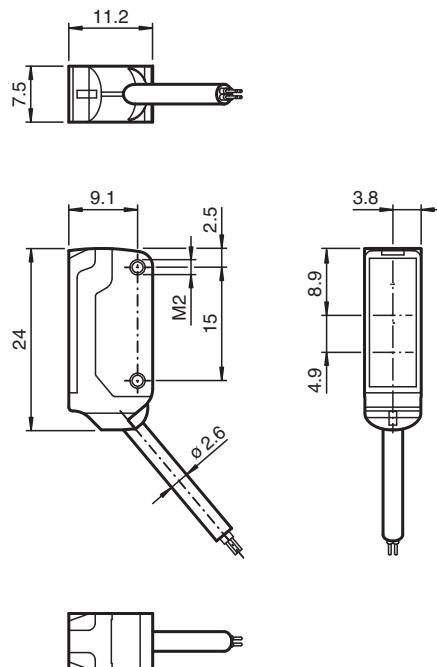
- High-performance miniature photoelectric sensors
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Extremely small light spot for very high switching point accuracy
- Highly visible light spot, even on dark materials
- Precision detection of objects within the defined sensing range, almost irrespective of the color

Triangulation sensor with background suppression for standard applications, miniature design, 20 mm detection range, red light, light on, PNP output, fixed cable with M8 plug



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.

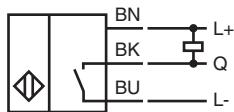
Dimensions



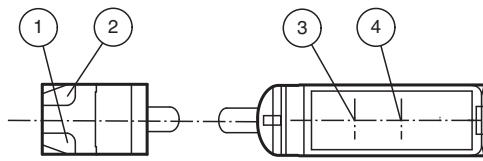
Technical Data

General specifications		
Detection range	4 ... 20 mm	
Reference target	standard black, 100 mm x 100 mm	
Light source	LED	
Light type	modulated visible red light , 630 nm	
Black-white difference (6 %/90 %)	< 5 % at 20 mm	
Angle deviation	approx. 2 °	
Diameter of the light spot	approx. 2 mm at a distance of 20 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 ON: lights when object is detected	
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC , class 2
No-load supply current	I ₀	< 10 mA
Protection class	III	
Output		
Switching type	NO contact	
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 50 mA , resistive load	
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		
EAC conformity	TR CU 020/2011	
UL approval	E87056 , 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	2 m fixed cable	
Material		
Housing	PC/ABS and TPU	
Optical face	glass	
Cable	PUR	
Installation	Fixing screws , 2 x M2 allen head screws included with delivery	
Mass	approx. 20 g	
Cable length	2 m	

Connection



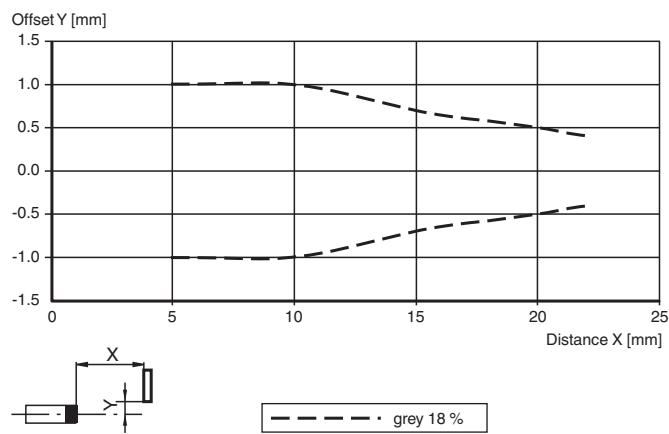
Assembly



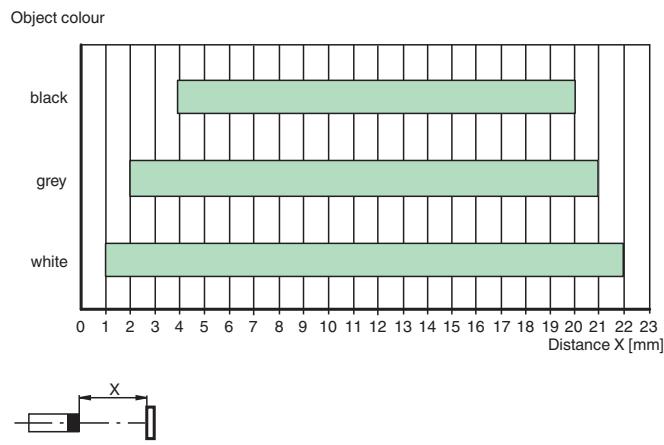
1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

Characteristic Curve

Characteristic response curve



Detection ranges



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