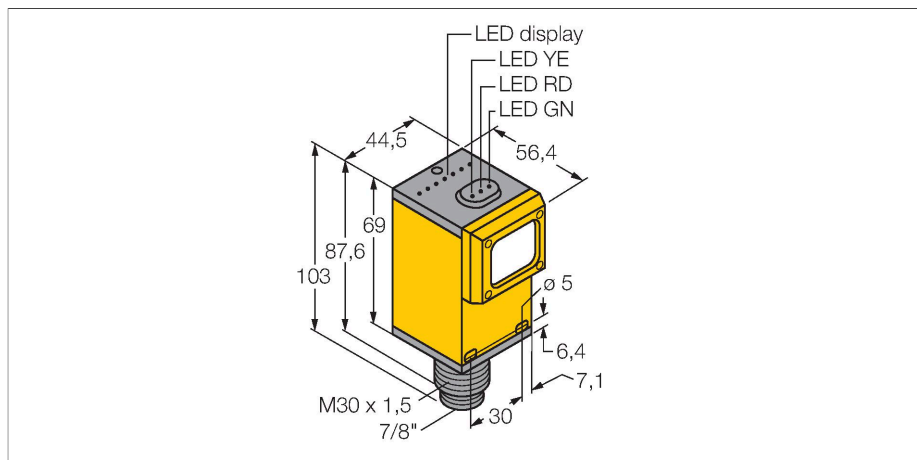


# Q45BW13DQ

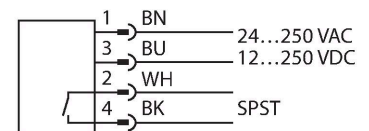
## Photoelectric Sensor – Diffuse Mode Sensor



### Features

- Male connector 7/8"
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 12...250 VDC or 24...250 VAC
- Relay output, NO (SPST)
- Light or dark operation, adjusted via selector switch

### Wiring diagram



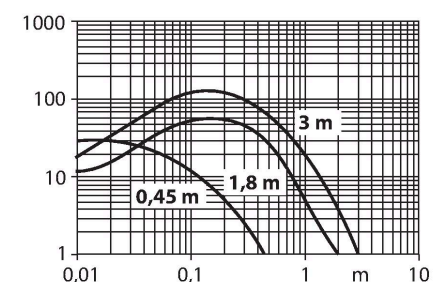
### Technical data

Type	Q45BW13DQ
ID	3054319
<b>Optical data</b>	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	880 nm
Range	0...450 mm
<b>Electrical data</b>	
Operating voltage	12...250 VDC
Operating voltage	24...250 VAC
Output function	NO contact, Relay output
Switching frequency	$\leq 33$ Hz
Readiness delay	$\leq 100$ ms
Response time typical	$< 2$ ms
Setting option	Potentiometer
<b>Mechanical data</b>	
Design	Rectangular, Q45
Dimensions	$\varnothing 30 \times 56.4 \times 44.5 \times 101.6$ mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Connector, 7/8", PVC
Number of cores	4
Ambient temperature	-25...+55 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green

### Functional principle

Like retroreflective sensors, diffuse mode sensors also contain emitter and receiver circuitry in the same housing. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the object. An object is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the object's reflectivity. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Excess gain curve  
Excess gain in relation to distance



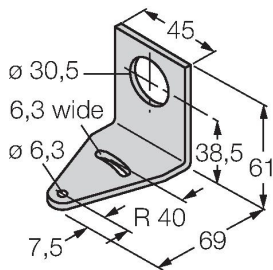
## Technical data

Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
<b>Tests/approvals</b>	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA

## Accessories

SMB30A

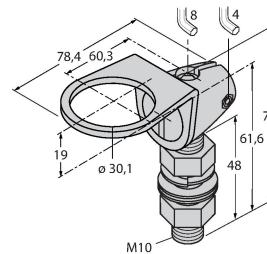
3032723



Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

SMB30FAM10

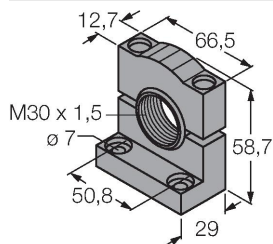
3011185



Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm

SMB30SC

3052521



Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable