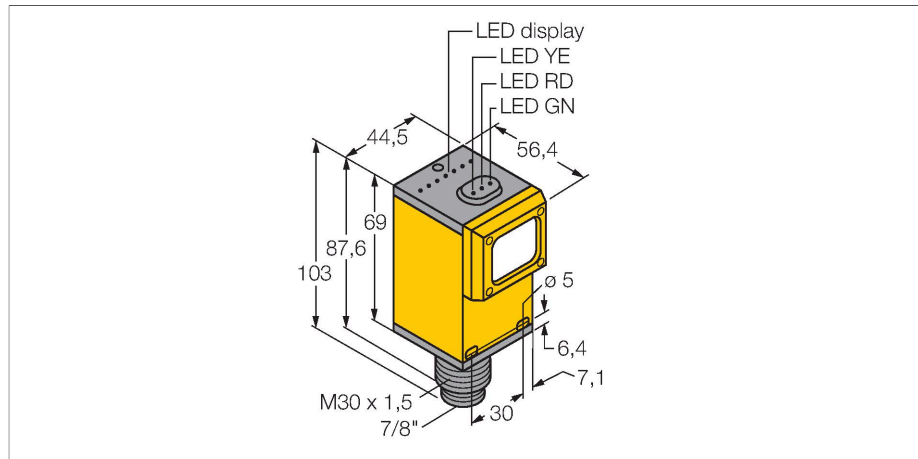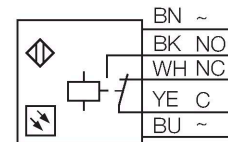# Q45VR2LPQ
Photoelectric Sensor –   Retroreflective Sensor with Polarizing Filter

Features

- Male connector 7/8"
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90…250 VAC
- Relay output, changeover (SPDT)
- Light or dark operation, adjusted via selector switch
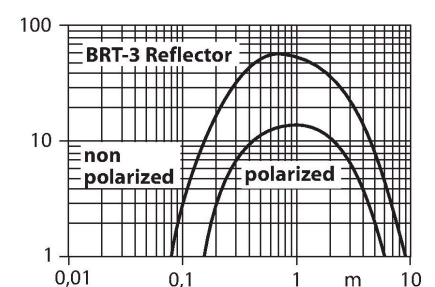
Wiring diagram

Technical data

Type	Q45VR2LPQ
ID	3037001
Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	yes
Light type	Red polarized
Wavelength	680 nm
Range	150…6000 mm
Electrical data	
Operating voltage	90…250 VAC
No-load current	≤ 50 mA
Output function	Complementary contact, Relay output
Readiness delay	≤ 100 ms
Response time typical	< 15 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular, Q45
Dimensions	Ø 30 x 56.4 x 44.5 x 101.6 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Connector, 7/8", PVC
Number of cores	5
Ambient temperature	-40…+70 °C
Protection class	IP67
Special features	keep/defer

Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.
Excess gain curve
Excess gain in relation to the distance

Technical data

Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
Tests/approvals	
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

Accessories

Dimension drawing	Type	ID	
	BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20…+60 °C