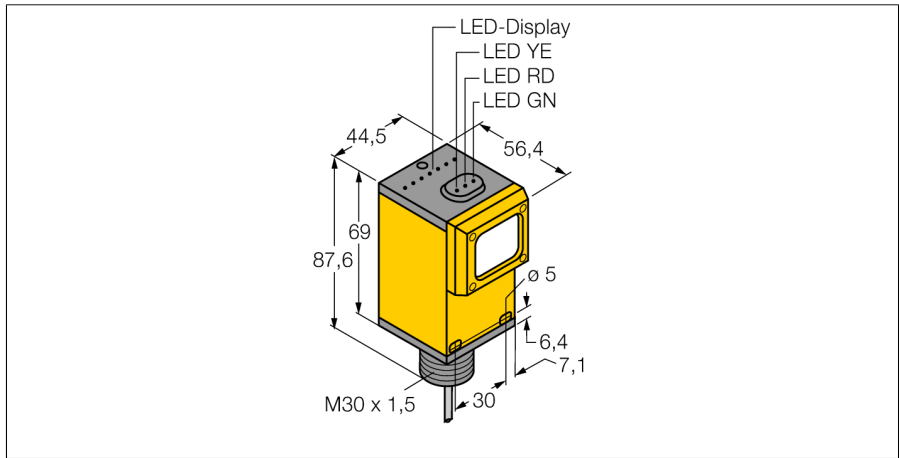
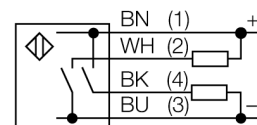


**Photoelectric sensor
opposed mode sensor (emitter/receiver)
Q45BB6R**



- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation, adjusted via switch

Wiring diagram



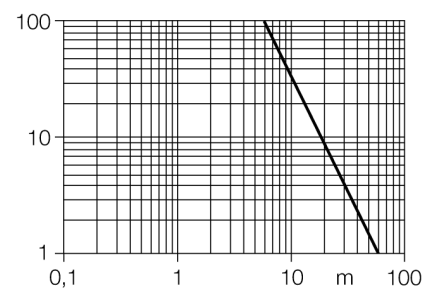
Type code	Q45BB6R
Ident no.	3036562
Operating mode	opposed mode sensor (receiver)
Range	0...60000 mm
Ambient temperature	-40...+70 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _n
No-load current I ₀	≤ 50 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 250 Hz
Readiness delay	≤ 100 ms
Overcurrent release	> 220 mA
Design	rectangular, Q45
Dimensions	56.4 x 44.5 x 87.6 mm
Housing material	plastic, PBT
Lens	plastic, acrylic
Connection	cable, PVC
Cable length	2 m
Cable cross section	4 x 0.34 mm ²
Protection class	IP67
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED green
Switching state	LED yellow
Error indication	LED green flashing
Excess gain indication	LED red

Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

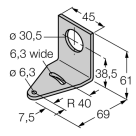
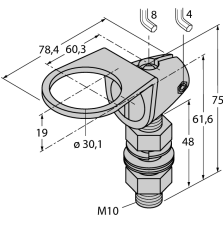
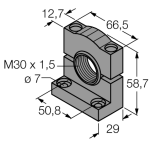
Excess gain curve

Excess gain in relation to the distance



Photoelectric sensor
 opposed mode sensor (emitter/receiver)
 Q45BB6R

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB30A	3032723	Mounting bracket, stainless steel, for sensors with 30 mm thread	 <p>Technical drawing of the SMB30A mounting bracket. Dimensions include: top width 45, hole diameter $\varnothing 30,5$, hole offset 6,3, hole width 6,3, hole diameter $\varnothing 6,3$, hole offset 38,5, hole diameter $\varnothing 6,3$, hole offset 61, hole diameter $\varnothing 7,5$, hole offset 69, and a radius R 40.</p>
SMB30FAM10	3011185	Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm	 <p>Technical drawing of the SMB30FAM10 mounting bracket. Dimensions include: top width 78,4, hole diameter $\varnothing 60,3$, hole offset 19, hole diameter $\varnothing 30,1$, hole offset 75, hole diameter $\varnothing 61,6$, hole offset 48, and a thread of M10.</p>
SMB30SC	3052521	Mounting bracket, PBT black; for 30 mm thread; with 4 screws M5 x 0.8	 <p>Technical drawing of the SMB30SC mounting bracket. Dimensions include: top width 12,7, hole diameter $\varnothing 66,5$, hole offset 58,7, hole diameter $\varnothing 7$, hole offset 50,8, and a width of 29.</p>