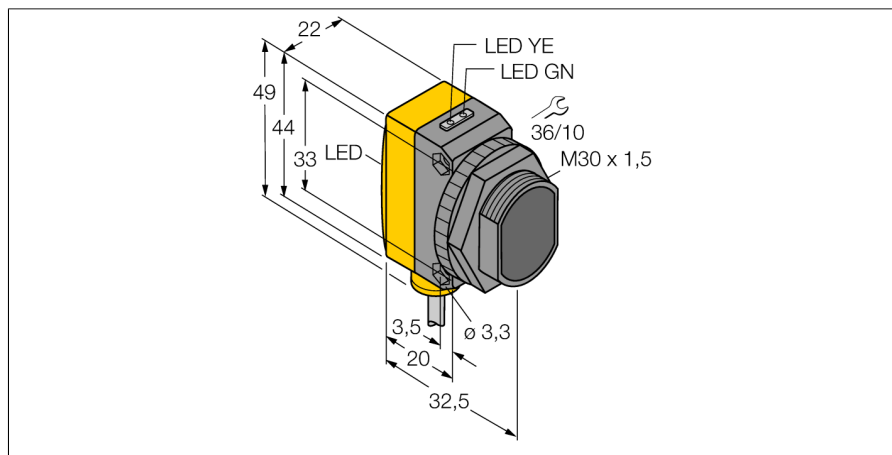


Photoelectric Sensor

Diffuse Mode Sensor with Fixed-Field Background Suppression

QS30FF400 W/30



Type	QS30FF400 W/30
ID	3073206

Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	Red
Wavelength	680 nm
Range	0...400 mm

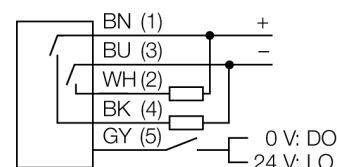
Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 150 mA
No-load current I_0	≤ 35 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 250 Hz
Readiness delay	≤ 100 ms
Response time typical	< 2 ms

Mechanical data	
Design	Rectangular with thread, QS30
Dimensions	Ø 30 x 35 x 22 x 49 mm
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	5
Core cross-section	0.5 mm ²
Ambient temperature	-20...+70 °C
Protection class	IP67

Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation

Wiring Diagram

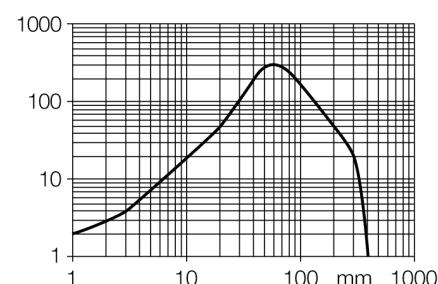


Functional principle

Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The sensor electronics determine whether the reflecting object is within or outside the measuring range. These sensors come with a fixed cut-off point.

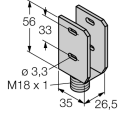
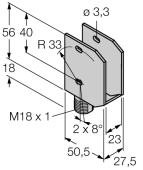
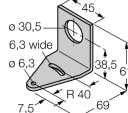
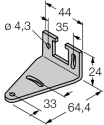
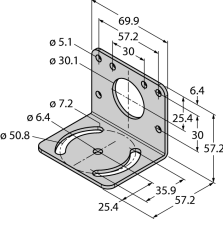
Excess gain curve

Excess gain in relation to the distance



Tests/approvals	
MTTF	177 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE

Accessories

Type code	Ident no.		Dimension drawing
SMBQS30Y	3002811	Protective housing, stainless steel, for QS30 series	
SMBQS30YL	3072741	Protective housing with safety glass panel, stainless steel, for QS30 series	
SMB30A	3032723	Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread	
SMBQS30L	3002809	Mounting bracket, stainless steel, for QS30 series	
SMB30MM	3027162	Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment	

Accessories

Type code	Ident no.		Dimension drawing
SMB30SC	3052521	Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable	