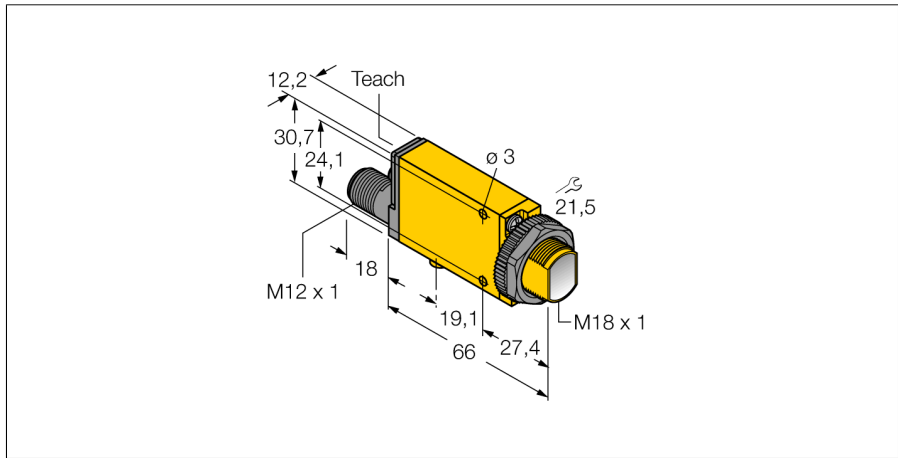
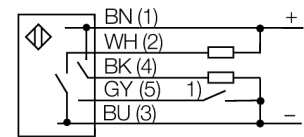


**Photoelectric sensor
diffuse mode sensor
SME312DVQD**



- Male M12 x 1, 5-pin
- Protection class IP67
- Teach-in function
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light/dark operation

Wiring diagram



1) external programming line

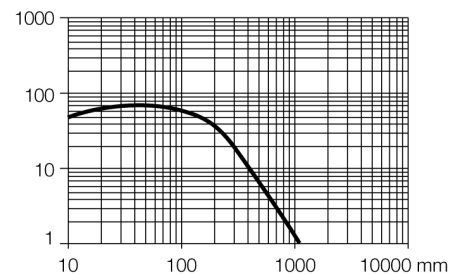
Type code	SME312DVQD
Ident no.	3060335
Operating mode	diffuse mode sensor
Light type	red
Wavelength	650 nm
Range	0...1100 mm
Ambient temperature	-20...+70 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _s
No-load current I ₀	≤ 45 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	1 kHz
Readiness delay	≤ 100 ms
Overcurrent release	> 220 mA
Design	rectangular, Mini Beam Expert
Dimensions	84 x 12.3 x 30.7 mm
Housing material	plastic, PBT, yellow
Lens	plastic, acrylic
Connection	male, M12 x 1
Protection class	IP67
Power-on indication	LED green
Switching state	LED yellow
Excess gain indication	LED red flashing

Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects a sufficient amount of light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target. 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 the distance

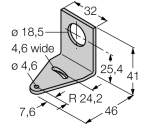
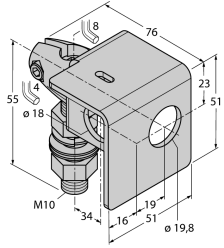
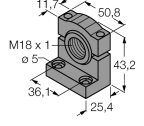
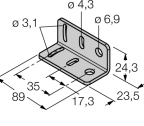
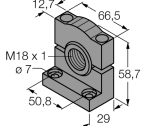


Photoelectric sensor
diffuse mode sensor
SME312DVQD

TURCK

Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB18A	3033200	Mounting bracket, stainless steel, for sensors with 18 mm thread	 <p>Technical drawing of the SMB18A mounting bracket. Dimensions include: top width 32, hole diameter $\phi 18.5$, hole offset 4.6, hole diameter $\phi 4.6$, hole offset 25.4, hole diameter $\phi 4.6$, hole offset 7.6, radius R 24.2, and total width 46.</p>
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	 <p>Technical drawing of the SMB18AFAM10 mounting bracket. Dimensions include: top width 76, hole diameter $\phi 18$, hole offset 55, hole diameter $\phi 18$, hole offset 4, hole diameter $\phi 18$, hole offset 8, hole diameter $\phi 18$, hole offset 51, hole diameter $\phi 18$, hole offset 19, hole diameter $\phi 18$, hole offset 16, hole diameter $\phi 18$, hole offset 51, hole diameter $\phi 18$, hole offset 19.8, and thread M10.</p>
SMB18SF	3052519	Mounting bracket, PTB black steel, for sensors with 18 mm thread	 <p>Technical drawing of the SMB18SF mounting bracket. Dimensions include: top width 50.8, hole diameter $\phi 18$, hole offset 11.7, hole diameter $\phi 18$, hole offset 43.2, hole diameter $\phi 18$, hole offset 36.1, hole diameter $\phi 18$, hole offset 25.4, and thread M18 x 1.</p>
SMB312B	3025519	Mounting bracket, stainless steel, for MINI-BEAM NAMUR	 <p>Technical drawing of the SMB312B mounting bracket. Dimensions include: top width 89, hole diameter $\phi 3.1$, hole offset 35, hole diameter $\phi 4.3$, hole offset 17.3, hole diameter $\phi 6.9$, hole offset 24.3, hole diameter $\phi 6.9$, hole offset 23.5, and thread M18 x 1.</p>
SMB3018SC	3053952	Mounting bracket, PTB black, for sensors with 18 mm thread	 <p>Technical drawing of the SMB3018SC mounting bracket. Dimensions include: top width 66.5, hole diameter $\phi 18$, hole offset 12.7, hole diameter $\phi 18$, hole offset 58.7, hole diameter $\phi 18$, hole offset 50.8, hole diameter $\phi 18$, hole offset 29, and thread M18 x 1.</p>

Photoelectric sensor
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Wiring accessories

Type code	Ident no.	Description	Dimension drawing
WKC4.5T-2/TEL	6625028	Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	
RKC4.5T-2/TEL	6625016	Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	