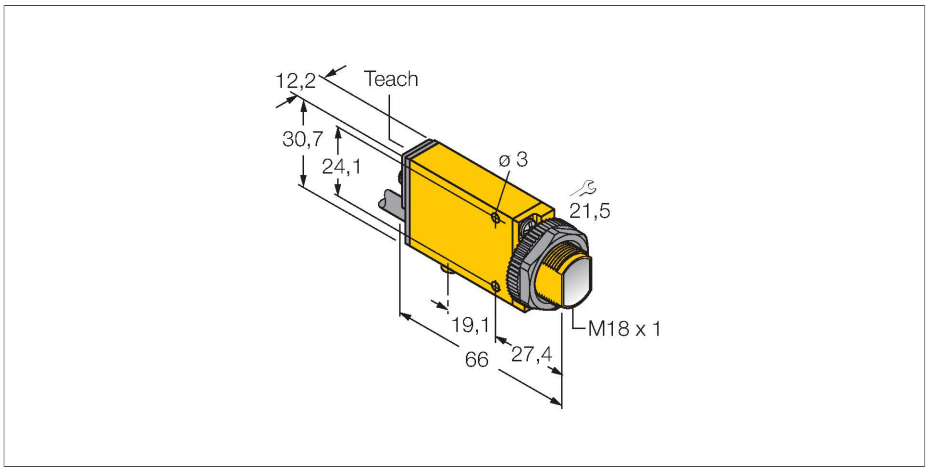
SME312DV
Photoelectric Sensor – Diffuse Mode Sensor



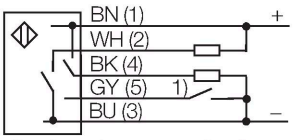
Technical data

Type	SME312DV
ID	3064083
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	Red
Wavelength	650 nm
Range	0…1100 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
No-load current	≤ 45 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	1 kHz
Readiness delay	≤ 1000 ms
Response time typical	< 0.5 ms
Overcurrent release	> 220 mA
Setting option	Push Button Remote Teach
Mechanical data	
Design	Rectangular with thread, Mini Beam Expert
Dimensions	Ø 18 x 66 x 12.3 x 30.7 mm
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC

Features

- Cable, PVC, 2 m
- Protection class IP67
- Teach-in function
- Operating voltage: 10…30 VDC
- Switching output, bipolar
- Light/dark operation

Wiring diagram

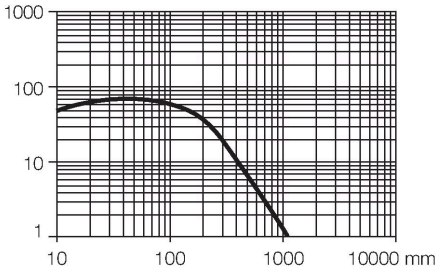


1) external programming line

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

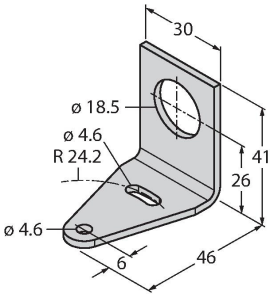


Technical data

Number of cores	5
Core cross-section	0.5 mm²
Ambient temperature	-20…+70 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Excess gain indication	LED, red, flashing
Tests/approvals	
Approvals	CE, cURus

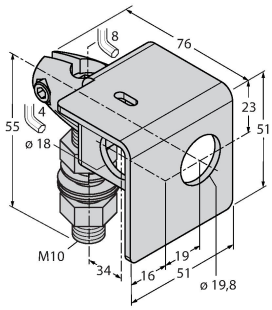
Accessories

SMB18A 3033200



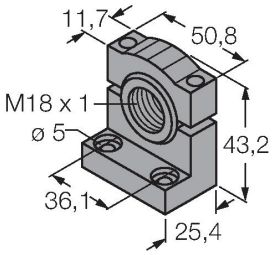
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



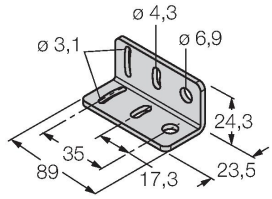
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB18SF 3052519



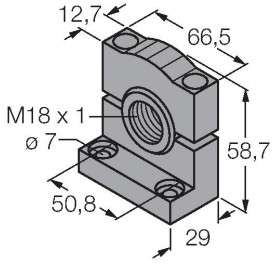
Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

SMB312B 3025519



Mounting bracket, stainless steel, for MINI-BEAM NAMUR

SMB3018SC 3053952



Mounting bracket, PTB black, for sensors with 18 mm thread