

Photoelectric Sensor

Diffuse Mode Sensor with Fixed-Field Background Suppression

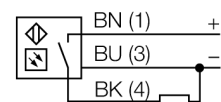
TM18AP6FF25Q5

Type	TM18AP6FF25Q5
ID	3042058
Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	Red
Wavelength	660 nm
Range	0...25 mm
Electrical data	
Operating voltage U_a	10...30 VDC
No-load current I_0	≤ 25 mA
Short-circuit protection	yes/Cyclic
Reverse polarity protection	yes
Output function	NO contact, light operation, PNP
Switching frequency	≤ 220 Hz
Readiness delay	≤ 100 ms
Response time typical	< 3 ms
Mechanical data	
Design	Tube, TM18
Dimensions	$\varnothing 18 \times 30 \times 30 \times 41$ mm
Housing material	Metal, Zinc Die-Cast with Nickel-Plating
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M12 $\times$ 1, 0.15 m, PVC
Number of cores	4
Core cross-section	0.5 mm ²
Ambient temperature	-40...+70 °C
Protection class	IP67 IP69
Special features	
	Encapsulated Wash down
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing
Tests/approvals	
MTTF	448 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, UL



- Cable with male end M12 $\times$ 1, 4-pin, PUR, 150 mm
- Protection class IP67
- Ambient temperature: -40 °C...+70 °C
- Metal housing
- Operating voltage: 10...30 VDC
- PNP switching output, light operation

Wiring Diagram

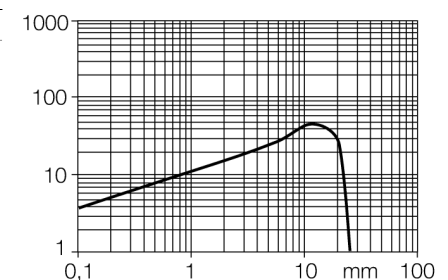


Functional principle

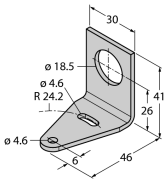
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance



Accessories

Type code	Ident no.		Dimension drawing
SMBT18Y	3069554	mounting bracket, rectangular, for sensors with 18 mm thread, 15.3 mm cable feedthrough or M12 x 1 male	
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	
SMBAMS18P	3073134	Mounting bracket, stainless steel, for sensors with 18 mm thread	