

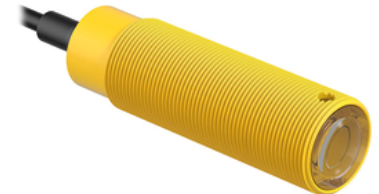
SMA30PEL

Photoelectric Sensor – Opposed Mode Sensor (Emitter)



Technical data

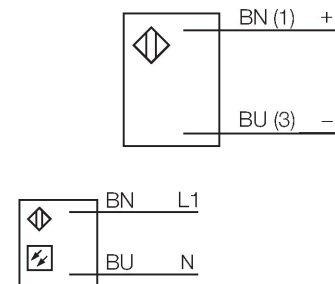
Type	SMA30PEL
ID	3027287
Optical data	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	IR
Wavelength	950 nm
Range	0...150000 mm
Electrical data	
Operating voltage	10...30 VDC
Operating voltage	12...240 VAC
DC rated operational current	≤ 20 mA
No-load current	≤ 20 mA
Readiness delay	≤ 0 ms
Mechanical data	
Design	Tube, SM30
Dimensions	Ø 30 x 102 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	2
Core cross-section	0.5 mm ²
Ambient temperature	-40...+70 °C
Storage temperature	-40...+70 °C
Relative humidity	0...90 %
Protection class	IP67
Special features	Encapsulated
Power-on indication	LED, Green
Excess gain indication	LED
Tests/approvals	
Approvals	CE, cURus, CSA



Features

- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40 °C...+70 °C
- Modulation frequency A, requires receivers with the same frequency
- Operating voltage 10...30 VDC or 12...240 VAC

Wiring diagram



Functional principle

Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims 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 objects. The excellent light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.

Excess gain curve
Excess gain in relation to distance

