

ON45E235

Optical sensors • Auto-reflective sensor

Sensor Optical, diffuse reflection, 58x38x20mm, red light unpolarized, point, teach-in, Sn: 60-600, 10-30V diagnostic coverage, PNP/NPN NC/NO, M12 connector 4-pin, IP69K, V4A+PMMA



Optical sensors function contactlessly. They detect objects independent of their characteristics (e.g., shape, color, surface structure, material). The basic operating principle is based on the transmission and reception of light. There are three different versions: 1. The through-beam sensor consists of two separate devices, a transmitter and a receiver that are aligned with one another. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. With the retro-reflective sensor, the transmitter and receiver are located in one device. The emitted light beam is reflected back to the receiver by a reflector that is to be mounted opposite the device. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. With the diffuse reflection sensor, the transmitter and receiver are in one device. The emitted light beam is reflected by the object that is to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its status.

Electrical features

Response/decay time	0.5ms
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M12
Type of switching output	PNP/NPN
Rated switching current	100mA
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	40mA
Number of pins	4
Switching distance	60 - 600mm
Switching frequency	1000Hz
Voltage drop	3V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.5ms
Operating voltage (DC)	10 - 30V
Interference suppression	Yes
Output functions	Switching point

Mechanical features

Design	Cuboid
Width	20.2mm
Height	57.8mm
Storage temperature	-25 - 60°C
Length	37.7mm
Degree of protection (IP)	IP69K
Volume	Medium
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel 1.4404
Ambient temperature	-25 - 60°C

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	630nm

Other features

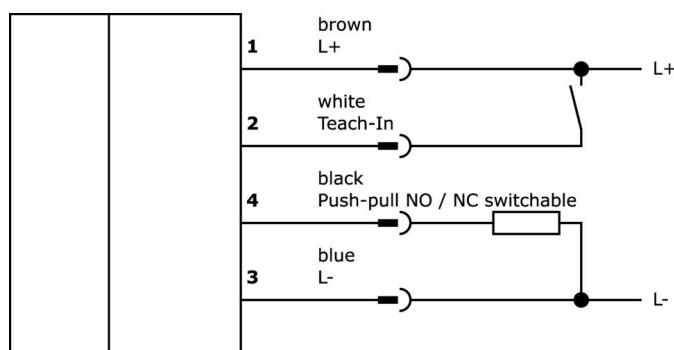
Ambient temperature	-25 - 60°C
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Classification

ETIM 8	EC002717 Retro-reflective sensor
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More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	100 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection

Installation

Mounting / installation may only be carried out by a qualified electrician!

Disposal**Safety warnings**

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

Never use these devices in applications where the safety of a person depends on their functionality.

For suitable connection and mounting accessories, please refer to our website www.ipf-electronic.com.

Dimensional drawing