

OR210421

Optical sensors • Retro-reflective sensors

sensor optical, reflective, 50x40x15mm, Polarized red light, Point, Manual adjustment, Sn: 4000, 10-35V DC, PNP NC/NO, Rotatable M12-connector 4pin, IP67, PBTP+PMMA, With polarizing filter



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
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	M12 plug connector, rotatable
Type of switching output	PNP
Rated switching current	200mA
Readiness delay	50ms
Setting procedure	Potentiometer
Short-circuit protection	Yes
No-load current	20mA
Number of pins	4
Reaction time	0.5ms
Residual ripple	20%
Switching distance	0 - 4000mm
Switching frequency	1500Hz
Voltage drop	2V
Clock frequency of the transmitter	15kHz
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.5ms
Operating voltage (DC)	10 - 35V
With polarizing filter	Yes
Output functions	Switching point

Mechanical features

Design	Cuboid
Width	15mm
Height	50mm
Length	40mm
Degree of protection (IP)	IP67
Volume	Medium
Active area material of sensor	Plastic (PMMA)
Housing material	PBT
Ambient temperature	-5 - 55°C

Optical features

Light source	Polarized red light
Light beam form	Point
Wavelength of the sensor	680nm

Other features

Reference medium / object	AO000007
Ambient temperature	-5 - 55°C

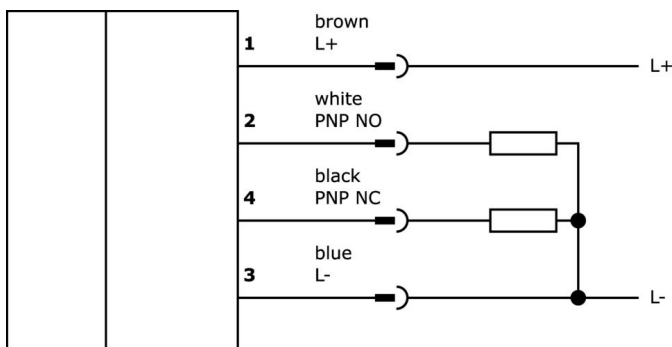
Classification

ETIM 8	EC002717 Retro-reflective sensor
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More

IPF Product Group	100 optical sensors
packaging dimensions	210 x 180 x 15 mm
gross weight	46 g
Customs tariff number	85365019
WEEE number	40951076
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

