

OT181405

Optical sensors • Diffuse reflection sensors with intensity differentiation

sensor optical, diffuse-reflection sensor, M18x1 50long, Sn: 40-600, 10-35V DC, 2x NPN Anticoincidence, Cable 2m PVC, IP67, Brass Chrome-plated+Glass, 1kHz, Polarity free red light, Point, Manual adjustment

including 2x Nut, 2x Toothed washer



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
Number of switching outputs	2
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Cable
Type of switching output	NPN
Rated switching current	200mA
Readiness delay	60ms
Setting procedure	Manual adjustment
Relative hysteresis	10%
Short-circuit protection	Yes
No-load current	20mA
Line diameter	5mm
Switching distance	40 - 600mm
Switching frequency	1000Hz
Protection class	III
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

Mechanical features

Number of cores	4
Conductor cross-section	0.25mm ²
Design	Cylinder, screw-thread
Thread length	50mm
Thread pitch	1mm
Cable length	2m
Length	50mm
Maximum tightening torque	20Nm
Surface	Chrome-plated
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Brass
Material of cable sheath	Plastic (PVC)
Thread dimension	M18
Ambient temperature	-25 - 55°C

Optical features

Light source	Polarity free red light
Light exit	axial
Light beam form	Point
Wavelength of the sensor	660nm

Other features

Feeding technology	Yes
Reference medium / object	Material with 90% reflectivity
Ambient temperature	-25 - 55°C

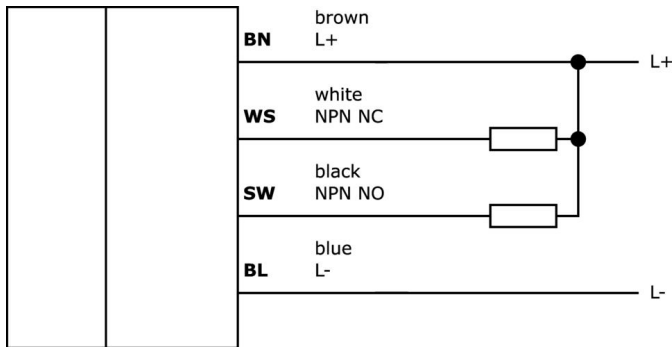
Classification

ETIM 8	EC001821 Light sensor energetic
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More

IPF Product Group	100 optical sensors
packaging dimensions	210 x 180 x 200 mm
gross weight	124 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.