

OT590500

Optical sensors • Diffuse reflection sensors with background suppression

sensor optical, diffuse-reflection sensor, 68x68x26mm, Sn: 200-1000, 12-24V DC, 2x PNP+NPN NC/NO, Clamp, IP67, Plastic ABS+Plastic PC, 0.25kHz, Infrared light, Point, Manual adjustment

including 1x Screwdriver



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	2ms
Number of switching outputs	2
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Clamped terminal connection
Type of switching output	PNP/NPN
Rated switching current	100mA
Setting procedure	Manual adjustment
Relative hysteresis	10%
Short-circuit protection	Yes
No-load current	45mA
Switching distance	200 - 1000mm
Switching frequency	250Hz
Voltage drop	1V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Operating voltage (DC)	12 - 24V
Dead zone	0 - 100

Mechanical features

Design	Cuboid
Width	26mm
Height	68mm
Length	68mm
Shock resistance	50g
Degree of protection (IP)	IP67
Vibration resistance	55Hz
Volume	Large
Active area material of sensor	Plastic (PC)
Housing material	Plastic (ABS)
Strong vibration / motion	Yes
Ambient temperature	-25 - 55°C

Optical features

Light source	Infrared light
Light beam form	Point
Wavelength of the sensor	880nm

Other features

Operational mode	Foreground suppression / background suppression
Reference medium / object	Material with 90% reflectivity
Ambient temperature	-25 - 55°C

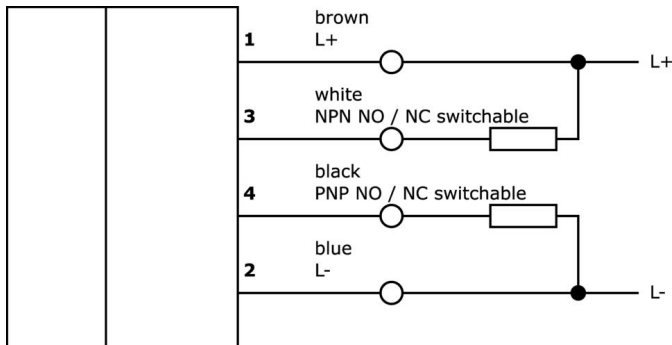
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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More

IPF Product Group	100 optical sensors
packaging dimensions	160 x 99 x 60 mm
gross weight	151 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

