

OT160470

Optical sensors • Diffuse reflection sensors with background suppression

sensor optical, diffuse-reflection sensor, 35x35x12mm, Sn: 15-300, 10-30V DC, 2x PNP Anticoincidence, Connector M8 4pin, IP67, Zinc die-cast+PMMA, 0.5kHz, Polarity free red light, Point, Manual adjustment



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	1 ms
Number of switching outputs	2
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M8
Type of switching output	PNP
Rated switching current	100 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	35 mA
Number of pins	4
Switching distance	15 - 300 mm
Switching frequency	500 Hz
Voltage drop	1.8 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	1 ms
Operating voltage (DC)	10 - 30 V
Interference suppression	Yes

Mechanical features

Design	Cuboid
Width	12.4 mm
Height	35 mm
Length	35 mm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Zinc die-cast
Ambient temperature	-25 - 65 °C

Optical features

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

Other features

Operational mode	Background suppression
Reference medium / object	Material with 90% reflectivity

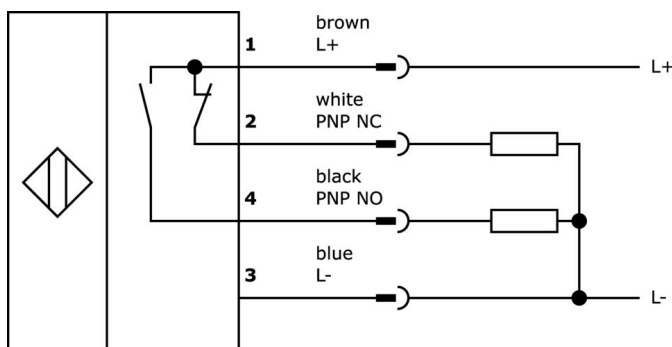
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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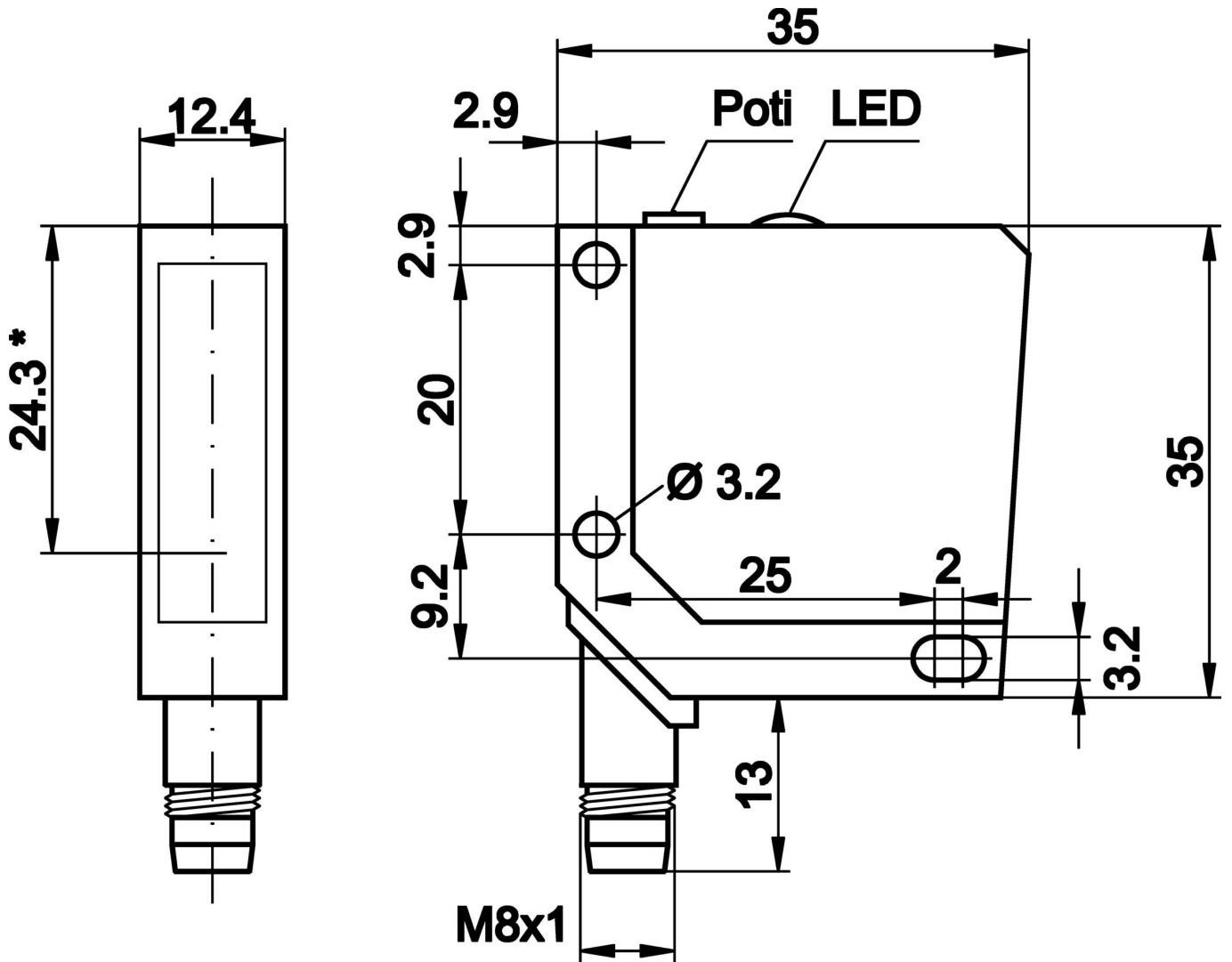
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	60 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AO000067



accessories optical, Mounting angle bracket, 34x20x26mm, Angle, Steel, 90°

AY000118



accessories sensor, Fixture kit, Metal, ball joint

VK003071



Cable socket, Angular, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

VK003075



Cable socket, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

AY000162



Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

NG400501



DC power supply, 1-phase, 125x114x40mm, 24-28V, 5A, 90-264V AC 50Hz, 90-264V AC 60Hz, 127-370V DC, screw connection, IP20, aluminum, stabilized, pulsed output voltage

VL250100



Logic module, 49x80x26mm, AND, 4fold, 10-35V DC, sensor side Clamp, control side Clamp, IP40, Plastic

VL250120



Logic module, 49x80x26mm, OR, 4fold, 10-35V DC, sensor side Clamp, control side Clamp, IP40, Plastic

VY000004



DC power supply, sensor tester, 120x26x72mm, 18V, 0.04A, Spring clamp connection 4pin, IP20, Plastic

You can find further accessories on our homepage



Installation

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



Disposal

WEEE number according to § 6 para. 3 ElektroG: 40951076

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.