

OT370501

Optical sensors • Diffuse reflection sensors with background suppression

Optical Sensor, Diffuse Reflection Sensor, 36x25x14mm, Sn: 15-450, 10-30V DC, -30-70°C, 2x PNP/NPN push-pull, 5 m PVC cable, IP67 / IP69k, V4A+PMMA, 1 kHz, unpolarized red light, spot, manual setting



Optical sensors operate contactless. They detect objects regardless of their characteristics (e.g., shape, color, surface texture, material). Their basic operating principle is based on the transmission and reception of light. There are three versions: 1. The through-beam sensor consists of two separate devices—a transmitter and a receiver—that are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated into the receiver changes its status. 2. In a reflective light barrier, the transmitter and receiver are housed in a single device. The transmitted light beam is reflected toward the receiver by a reflector mounted opposite it. As soon as the light beam is interrupted, the switching output integrated into the device changes its status. 3. In a diffuse reflection sensor, the transmitter and receiver are housed in a single device. The emitted light beam is reflected by the object to be detected. As soon as the receiver detects the reflected light, the switching output integrated into the device changes its status.

Electrical features

Response/decay time	0.5 ms
Number of switching outputs	2
Display	LED display
Type of switching function	Normally closed (NC for PNP) Normally open (NO for NPN) Normally open (NO for PNP) Normally closed (NC for NPN)
Type of electrical connection	Cable
Type of switching output	Push-pull
Rated switching current	100 mA
Readiness delay	300 ms
Setting procedure	Manual adjustment
Operating principle	background suppression
No-load current	15 mA
Number of pins	4
Residual ripple	15 %
Switching distance	15 - 450 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Operating voltage (DC)	10 - 30 V
Electrical connection	Cable tail 4-pole 5m
Operating voltage	10-30VDC
protection functions	short circuit protection reverse polarity protection

Mechanical features

Number of cores	4
Wire cross section	0,2 mm ²
Conductor cross-section	0.2 mm ²
Design	Cuboid
Width	14 mm
Height	35.4 mm
Cable length	5 m
Storage temperature	-40 - 70 °C
Length	25 mm
Degree of protection (IP)	IP67 / IP69k
Material of optical surface	Plastic (PMMA)
Housing material	stainless steel 1.4404
material of cable sheath	plastic (PVC)
Ambient temperature	-40 - 70 °C
dimensions	25x14x35.4mm

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	645 nm

Other features

IO-Link version	V1.1
Reference medium / object	Material with 90% reflectivity

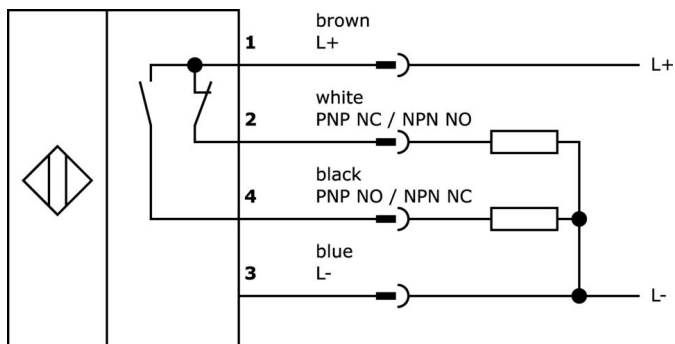
Classification

ETIM 8

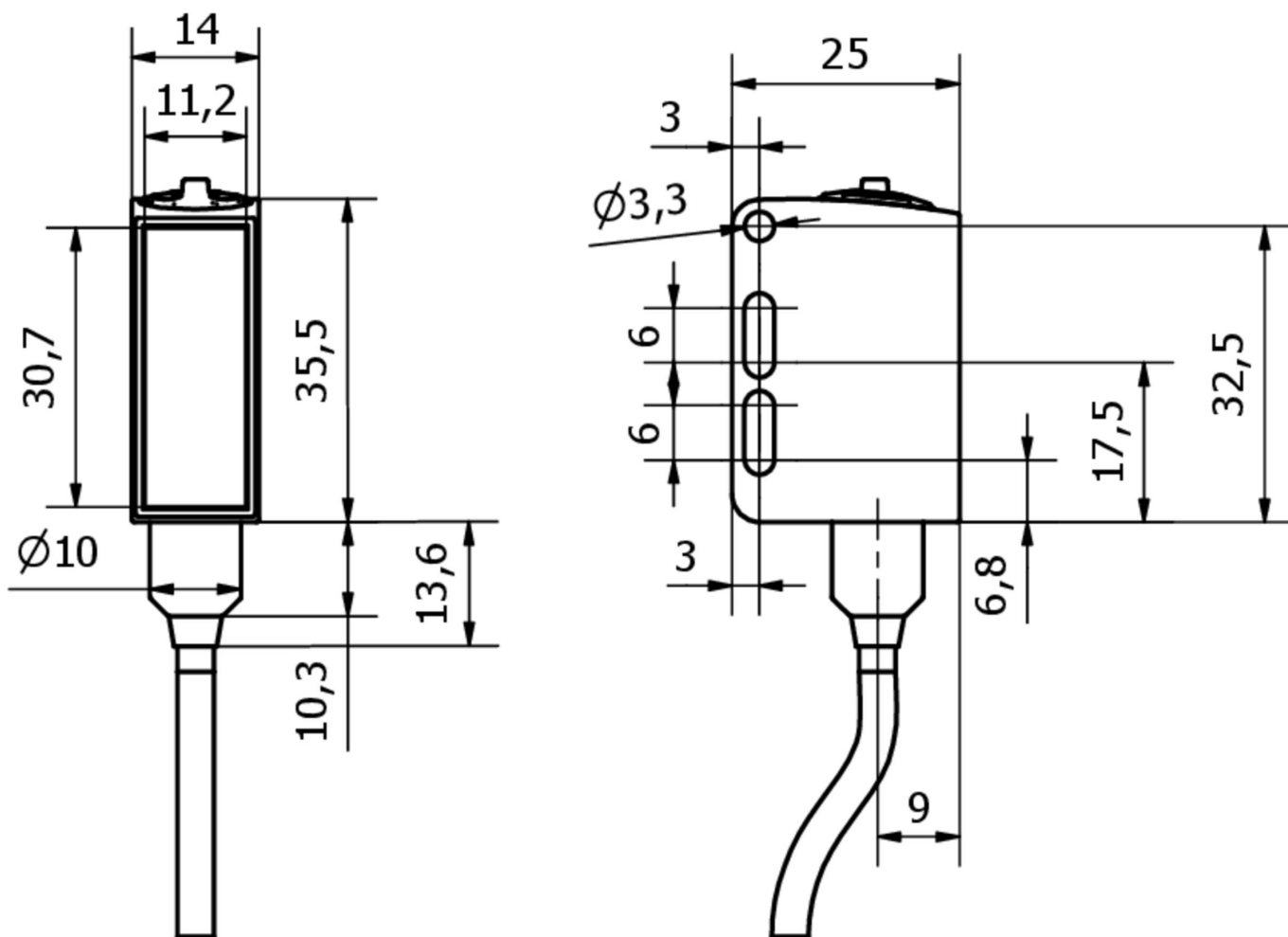
More

IPF Product Group	100 optical sensors
packaging dimensions	149 x 124 x 28 mm
gross weight	178 g
customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

VK003026



Cable connector, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Male (connector) 4pin, IP67, PBT

VK003028



Cable connector, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Male (connector) 4pin, IP67, PBT

AY000119



accessories sensor, Fixture kit, Metal, ball joint

AY000141



Plastic sheath, Ø17mm, Inner diameter 10mm, -40-250°C, Glass fiber with silicone rubber, Short-term resistance to weld spatter 1200°C, Tensile strength 400N, Flexible, Flame retardant, yard good

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.