

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

Mechanical features

Design	Cuboid
Width	15 mm
Height	50 mm
Length	40 mm
Degree of protection (IP)	IP67
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	680 nm

Other features

Reference medium / object	AO000007
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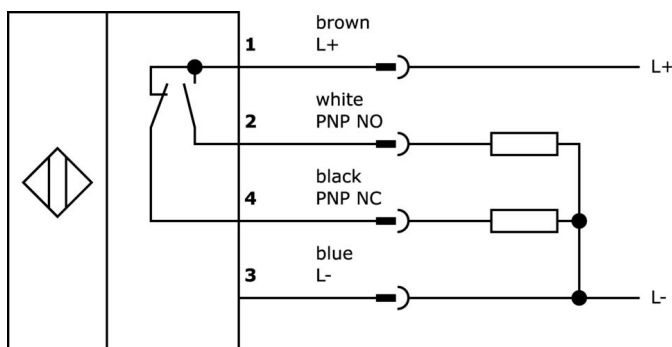
Classification

ETIM 8	EC002717 Retro-reflective sensor
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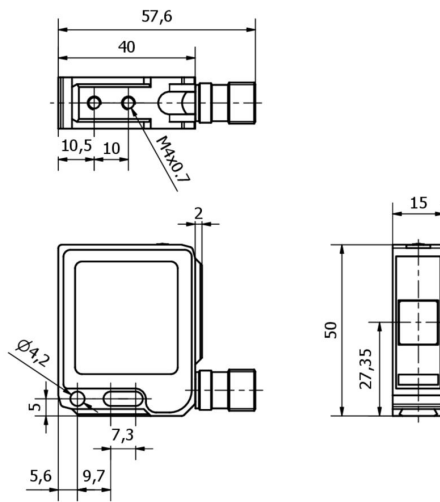
More

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



Dimensional drawing



Extract accessories program

VK000041



Adaption, M12 Female (socket) 4pin Straight, M8 Male (connector) 4pin Straight, 24V, -25-85°C, IP67, Oil and cooling lubricants, Welding area

AO000004



accessories optical, reflector, Ø20mm 6high, Self-adhesive, PMMA+PMMA, Polarized

AO000005



accessories optical, reflector, Ø40mm 7high, Self-adhesive, PMMA+PMMA, Polarized

AY98A607



accessories sensor, Teflon cap, Ø16mm 16long, inner thread 12, Polytetrafluorethylene (PTFE)

VK003020



Cable socket, angular, self-assembly, screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

VK003024



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

VK030F21



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm², 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F25



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK200321



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 250V, -40-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

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.