

OR120106

Optical sensors • Retro-reflective sensors

Optical sensor, reflex, M12x1 50 long, polarized red light, spot, Sn: 1500, 10–35 V DC, PNP NO, 2 m PVC cable, IP67, chrome-plated brass + glass, with polarizing filter

including Nut, Toothed washer



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
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	200 mA
Readiness delay	20 ms
No-load current	15 mA
Residual ripple	20 %
Switching distance	0 - 1500 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Clock frequency of the transmitter	15 kHz
Scanning function	Dark switching
Decay time	0.5 ms
Operating voltage (DC)	10 - 35 V
protection functions	short circuit protection reverse polarity protection

Mechanical features

Number of cores	3
Conductor cross-section	0.34 mm ²
Design	Cylinder, screw-thread
Diameter	12 mm
Thread length	50 mm
Thread pitch	1 mm
Cable length	2 m
Length	50 mm
Maximum tightening torque	10 Nm
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	M12
Ambient temperature	-25 - 55 °C
Line diameter	5 mm

Optical features

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

Other features

Reference medium / object	AO000007
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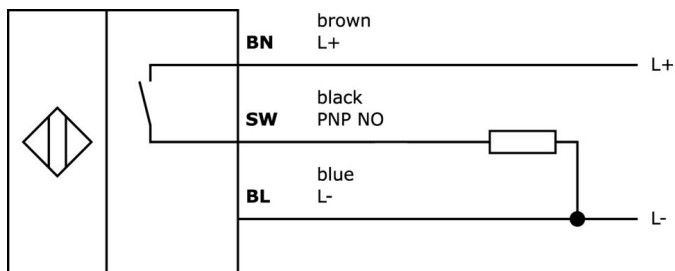
Classification

ETIM 8

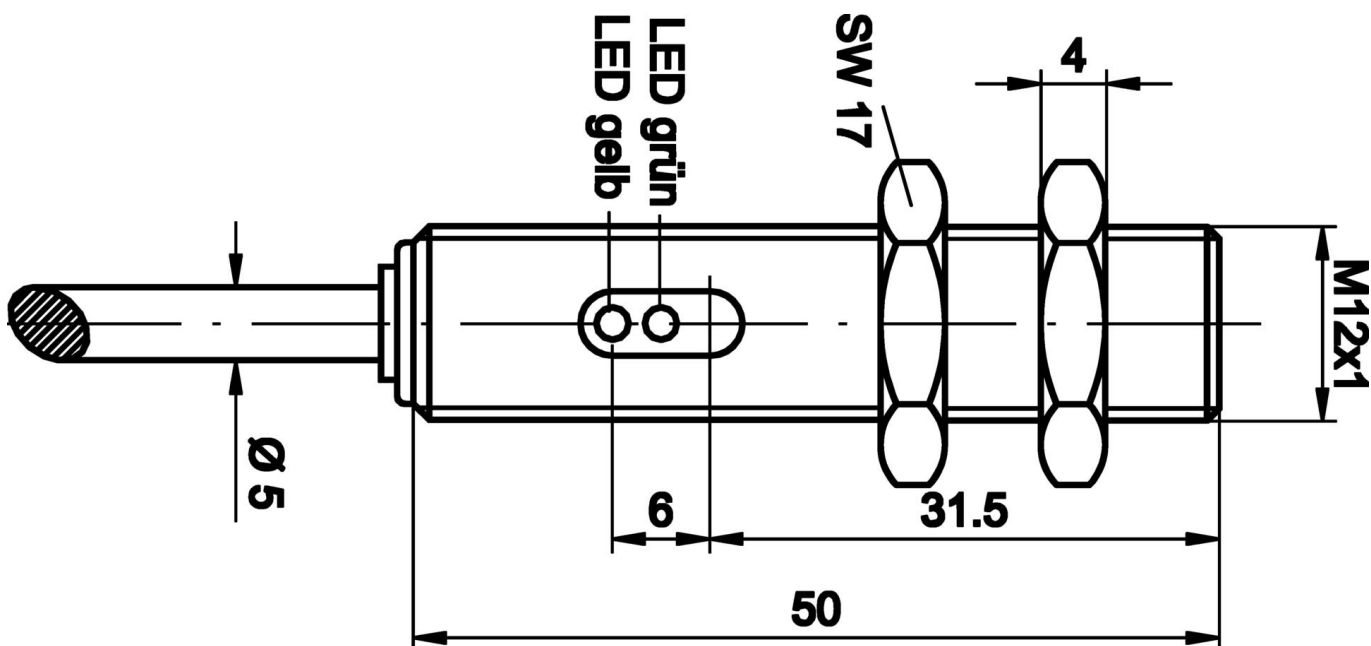
More

IPF Product Group	100 optical sensors
packaging dimensions	200 x 150 x 20 mm
gross weight	110 g
customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AY000025



accessories, Hexagon nut, M12x1,
Wrench size 17mm, Brass Nickel-
plated

AY000032



accessories sensor, Ø12mm,
Aluminum, For sensor 12mm, for
Wall mounting, Screw mounting

AY000162



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

AY000159



Accessories sensor, mounting
tube, Ø12mm 200long, aluminum
anodized/anodized

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

AO000004



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

AO000005



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

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

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.