

ON45E235

Optical sensors • Auto-reflective sensor

Sensor Optical, diffuse reflection, 58x38x20mm, red light unpolarized, point, teach-in, Sn: 60-600, 10-30V DC, PNP/NPN NC/NO, M12 plug connector 4-pin, IP69K, V4A+PMMA



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
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M12
Type of switching output	PNP/NPN
Rated switching current	100 mA
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	40 mA
Number of pins	4
Switching distance	60 - 600 mm
Switching frequency	1000 Hz
Voltage drop	3 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.5 ms
Operating voltage (DC)	10 - 30 V
Interference suppression	Yes
Output functions	Switching point

Mechanical features

Design	Cuboid
Width	20.2 mm
Height	57.8 mm
Storage temperature	-25 - 60 °C
Length	37.7 mm
Degree of protection (IP)	IP69K
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel 1.4404
Ambient temperature	-25 - 60 °C

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	630 nm

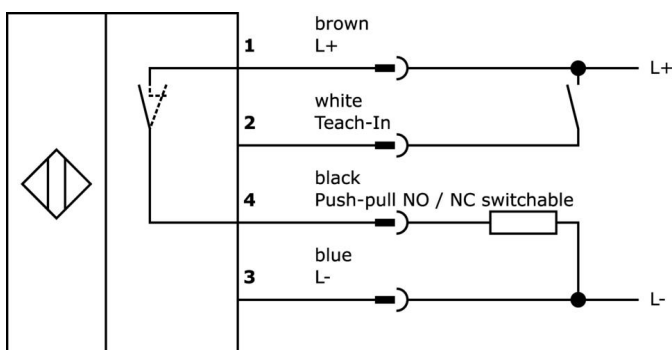
Classification

ETIM 8	EC002717 Retro-reflective sensor
--------	----------------------------------

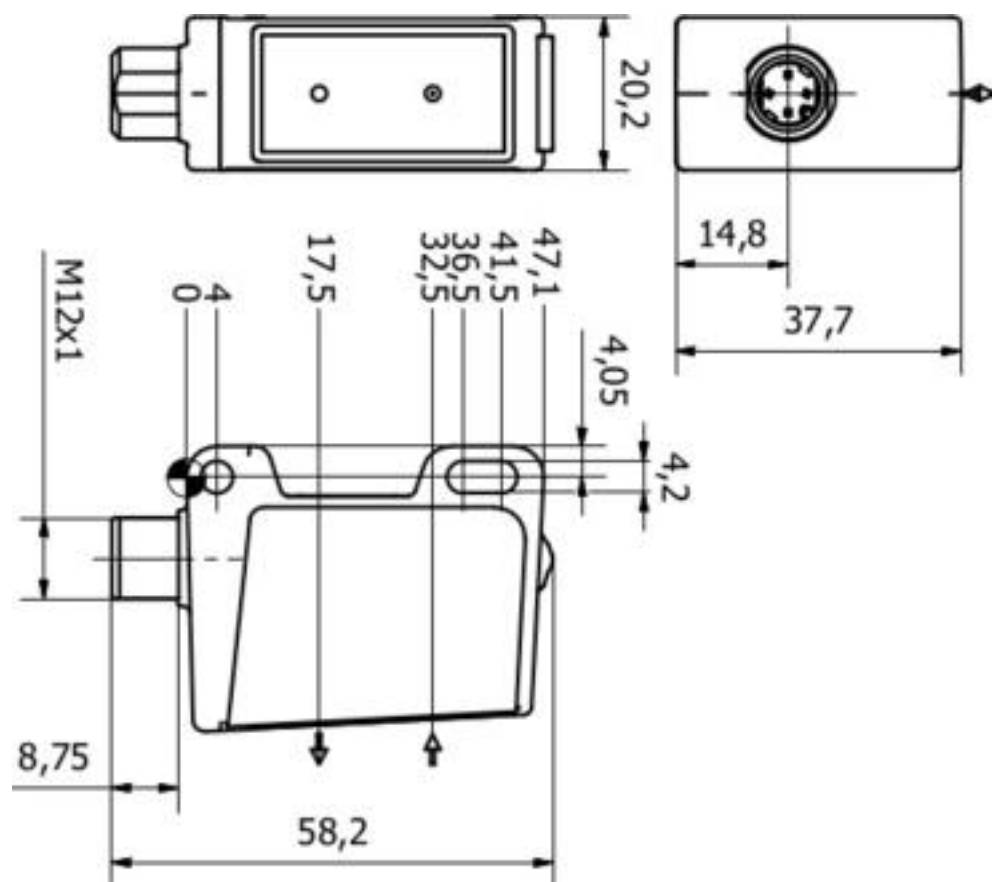
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	100 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

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

VK200325



Connection cable, 2m, M12
Female (socket) 4pin Straight, 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

VK003021



Cable socket, Angular, Suitable for
self-assembly, Screw connection,
Ø3-6.5mm, 4A, 60V, -25-90°C,
M12 Female (socket) 5pin, IP67,
PBT

VK003025



Cable socket, Straight, Suitable for
self-assembly, Screw connection,
Ø3-6.5mm, 4A, 60V, -25-90°C,
M12 Female (socket) 5pin, 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

VK030F23



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

VK030F26



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

AY000138



accessories sensor, Fixture kit,
Metal, ball joint

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.