

## PT140470

### Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse reflection sensor, 27x16x12mm, Sn: 22-130, 11-30V DC, 2x PNP NC/NO, M8 plug connector 4-pin, IP67, plastic ASA+PMMA, 2kHz, laser diode, red light, dot, manual setting



Optical sensors work contactless. They detect objects, regardless of their properties (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmitter and receiver of light. There are three versions: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in the reflex light barrier, the transmitter and receiver are located in one device. The transmitted light beam is reflected onto the receiver by a reflector to be mounted opposite. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. the diffuse reflection sensor has a transmitter and receiver in one device. The transmitted light beam is reflected by the object to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its status.

#### Electrical features

Number of switching outputs	2
Display	LED display
Resolution	0.2 mm
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M8
Type of switching output	PNP
Rated switching current	100 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
Laser power	1 mW
No-load current	30 mA
Number of pins	4
Switching distance	22 - 130 mm
Switching frequency	2000 Hz
Voltage drop	1.8 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Absolute repeat accuracy	0.2 mm
Operating voltage (DC)	11 - 30 V

**Mechanical features**

Design	Cuboid
Width	12 mm
Height	27 mm
Length	16.3 mm
Maximum tightening torque	0.5 Nm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Plastic ASA
Ambient temperature	-10 - 50 °C

**Optical features**

Laser class	Class 2
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	650 nm
Light spot diameter at focal point	0.2 mm
Focus distance	40 mm
Light spot diameter at the start of the measuring range	2.5 mm
Light spot diameter at the end of the measuring range	7 mm

**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	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	24 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes



**Extract accessories program**

**VK030F71**



Connection cable, 0.3m, M8 socket 4-pin angular, M8 connector 4-pin straight, 4-core, PUR (polyurethane), suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F75**



Connection cable, 0.3m, M8 socket 4-pin straight, M8 connector 4-pin straight, 4-core, PUR (polyurethane), suitable for trailing chain and torsion-resistant, oils and cooling lubricants, welding area, silicone-free

**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

**AO000073**



accessories optical, Mounting angle bracket, 22x11x27mm, Mounting material for sensor, brackets, Steel

**AY000116**



accessories sensor, Fixture kit, Metal, ball joint

**VK200371**



Connection cable, 2m, M8 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK200375**



Connection cable, 2m, M8 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**AY000162**



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

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.