

OTQ80475

Optical sensors • Diffuse reflection sensors with intensity differentiation

Optical sensor, diffuse reflection sensor, 25x16x8mm, Sn: 20–200, 10–30 V DC, 1x PNP exclusive-OR, 4-pin M8 connector, 0.2 m PVC cable, IP67, ASA+PMMA plastic, unpolarized red light, point, teach-in



- / Suppression of mutual interference
- / plastic housing
- / Setting by teach-in
- / M8 plug connection

Intensity differentiation visible red light

Optical sensors operate contactless. They detect objects regardless of their characteristics (e.g., shape, color, surface texture, material). Their basic principle of operation 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	0.25 ms
Number of switching outputs	1
Display	Operating mode display: LED green Switching state display: yellow LED
Type of switching function	Exclusive-OR
Type of electrical connection	Cable connector M8
Type of switching output	PNP
Rated switching current	50 mA
Setting procedure	Teach-In
No-load current	40 mA
Number of pins	4
Switching distance	20 - 200 mm
Switching frequency	2000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Decay time	0.25 ms
Operating voltage (DC)	10 - 30 V
Dead zone	0 - 20
Electrical connection	Cable connector M8 4-pin 4-wire 0.2m
Operating voltage	10-30VDC
ardTEEL_Schutzfunktionen	Short circuit protection Reverse polarity protection

Mechanical features

Number of cores	4
Conductor cross-section	0.08 mm ²
Design	Cuboid
Width	8 mm
Height	25.1 mm
Cable length	0.2 m
Length	15.8 mm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Plastic ASA
Material of cable sheath	Plastic (PVC)
Ambient temperature	-25 - 50 °C
dimensions	15.8x8x25.1mm

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	644 nm
Light spot diameter at the start of the measuring range	4.2 mm
Light spot diameter at the end of the measuring range	16 mm

Other features

Range of functions	Störunterdrückung
Reference medium / object	Material with 90% reflectivity

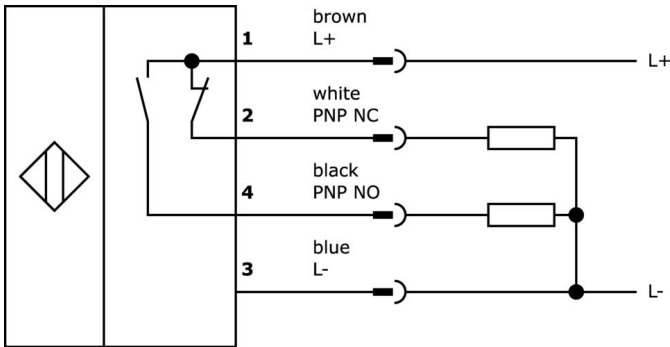
Classification

ETIM 8

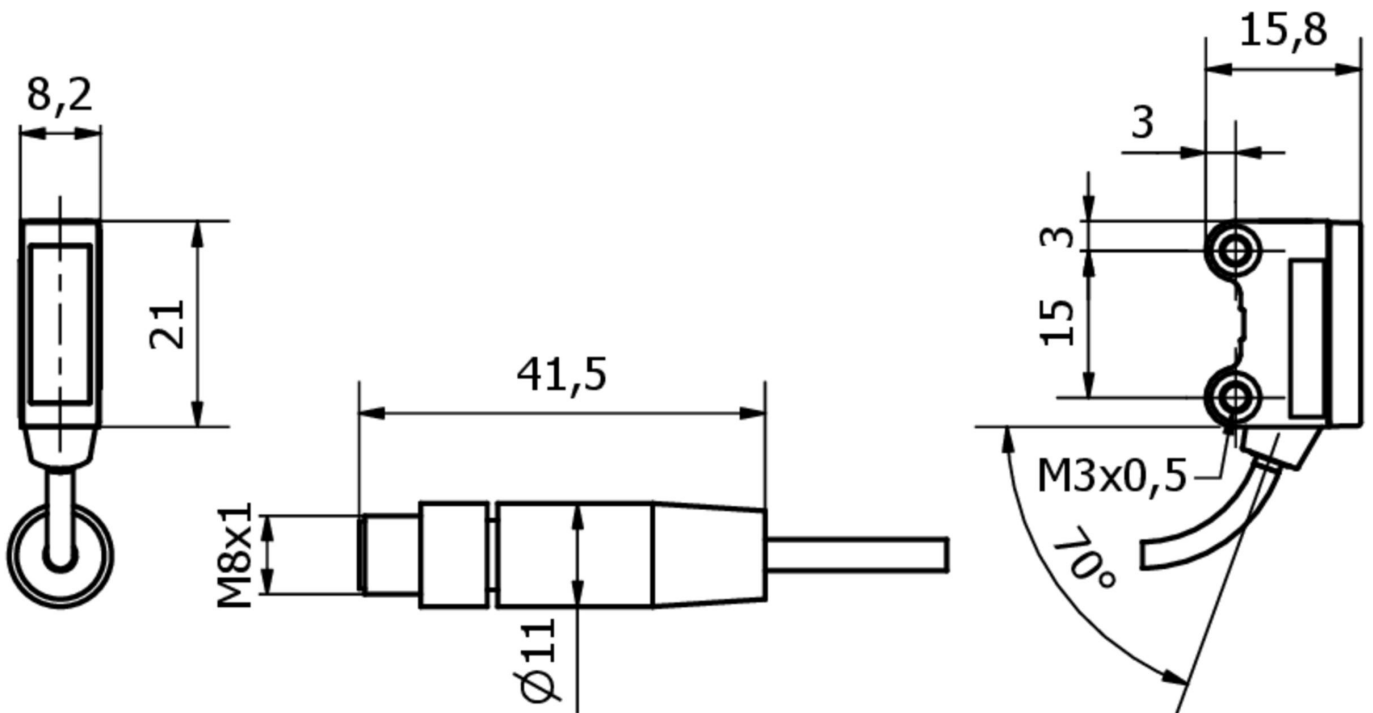
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	34 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

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

AO000075



accessories optical, Mounting angle bracket, M3x0.5 12long, Mounting material for sensor brackets, Steel

AO000076



accessories optical, Mounting angle bracket, M3x0.5 13long, Mounting material for sensor brackets, Steel

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

VK200371



Connection cable, 2m, M8 socket 4-pin angular, free cable end, 4x0.34mm², PUR (polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK200375



Connection cable, 2m, M8 socket 4-pin straight, free cable end, 4x0.34mm², PUR (polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, suitable for trailing chain and torsion resistant, oils 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.