

OT590500

Optical sensors • Diffuse reflection sensors with background suppression

Optical Sensor, Diffuse Reflection Sensor, 68x68x26 mm, Serial No.: 200–1000, 12–24 V DC, 2x PNP+NPN NC/NO, terminal, IP67, ABS plastic + PC plastic, 0.25 kHz, infrared light, spot, manual setting

including Screwdriver



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	2 ms
Number of switching outputs	2
Display	LED display
Type of switching function	Programmable/configurable
Type of electrical connection	Clamped terminal connection
Type of switching output	PNP & NPN, separate
Rated switching current	100 mA
Setting procedure	Manual adjustment
Operating principle	background suppression
Relative hysteresis	10 10 %
No-load current	45 mA
Switching distance	200 - 1000 mm
Switching frequency	250 Hz
Voltage drop	1 V
Scanning function	Light-/dark-on mode
Operating voltage (DC)	12 - 24 V
Dead zone	0 - 100 mm
protection functions	short circuit protection reverse polarity protection

Mechanical features

Design	Cuboid
Width	26 mm
Height	68 mm
Length	68 mm
Shock resistance	50 g
Degree of protection (IP)	IP67
Vibration resistance	55 Hz
Active area material of sensor	Plastic (PC)
Housing material	plastic (ABS)
Ambient temperature	-25 - 55 °C
environmental resistance	severe shocks/movements

Optical features

Light source	Infrared light
Light beam form	Point
Wavelength of the sensor	880 nm

Other features

Range of functions	Foreground or background suppression
Reference medium / object	Material with 90% reflectivity

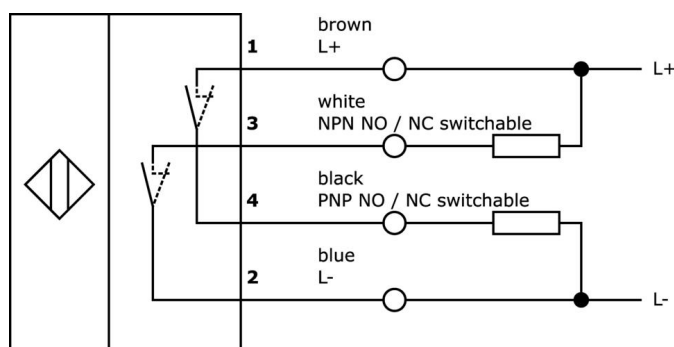
Classification

ETIM 8

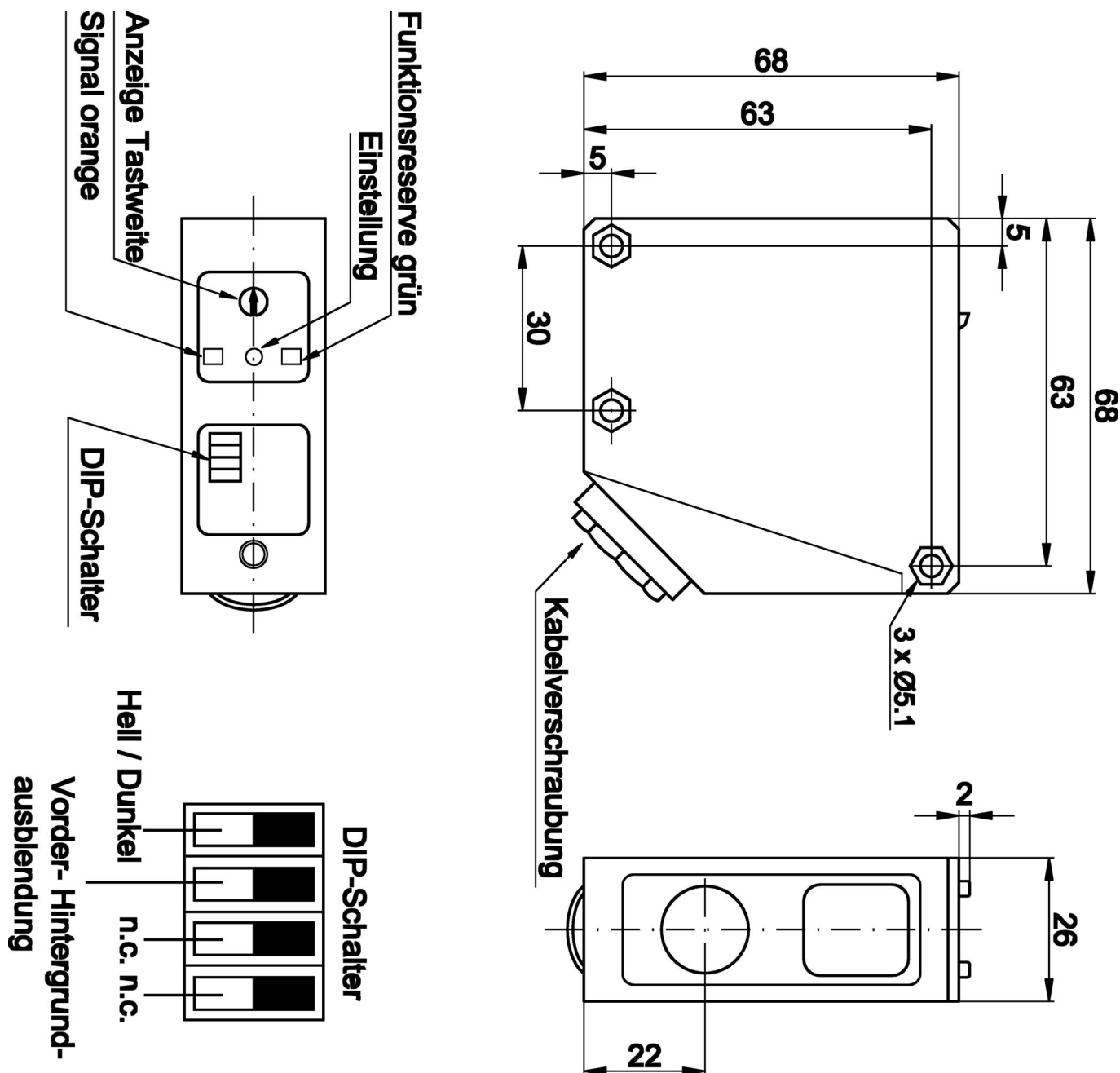
More

IPF Product Group	100 optical sensors
packaging dimensions	160 x 99 x 60 mm
gross weight	151 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

AO000038



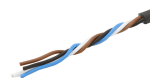
accessories optical, Mounting angle bracket, M5x0.5 29long, Mounting material for sensor, brackets, Steel, 90°

AY000143



accessories sensor, Holder, 56x55x26mm, Aluminum Anodised, ball joint

AV000018



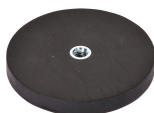
Accessories, cable, 4x0. 34mm², PUR (polyurethane), suitable for trailing chain, oils and cooling lubricants, sold by the meter

AV000118



Accessories, cable tail, 4x0. 34mm², PUR (polyurethane), shield, suitable for trailing chain, oils and cooling lubricants, sold by the meter

AY000129



Accessories, magnetic, Ø66mm, neodymium-iron-boron, inside thread M6, rubber

AY000144



accessories sensor, Adapter plate, 3x30x85mm, Stainless steel 1. 4305

AO000293



Optical Accessories, Infrared Spot Finder, Plastic, LED, Audible Alert

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.