

PT230320

Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse-reflection sensor, 50x50x23mm, Sn: 5-1000, 12-30V DC, PNP, NC/NO, M12-connector 4pin, IP67, plastic ABS+plastic PMMA, red light, dot, manual adjustment



Optical sensors operate without contact. They detect objects regardless of their nature (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmission and reception of light. Three variants are distinguished: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its state. 2. in the case of 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 state. 3. with the diffuse-reflection sensor, the transmitter and receiver are located 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 state.

Electrical features

Response/decay time	0.5ms
Number of switching outputs	1
Display	LED-Anzeige
Type of switching function	Normally open/normally closed
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	100mA
Readiness delay	300ms
Equipment protection class	Protection class 2
Operating voltage (DC)	12 - 30V
Setting procedure	manuelle Einstellung
Short-circuit protection	Yes
No-load current	30mA
Number of pins	4
Relative hysteresis	12%
Switching distance	5 - 1000mm
Switching frequency	1000Hz
Scanning function	Light-/dark-on mode
Dead zone	0 - 5
Reverse polarity protection	Yes

Mechanical features

Design	Cuboid
Width	23mm
Sensor width	23mm
Height	50mm
Storage temperature	-20 - 80°C
Length	50mm
Degree of protection (IP)	IP67 / IP69k
Ambient temperature	-20 - 60°C
Material of optical surface	PMMA
Housing material	Plastic ABS

Optical features

Laser class	Class 1
Light source	Laser diode, red light
Light spot range	mm ²
Light beam form	Point
Triangulation	Background suppression
Wavelength of the sensor	655nm

Other features

Operational mode	Background suppression
Reference medium / object	Material with 90% reflectivity

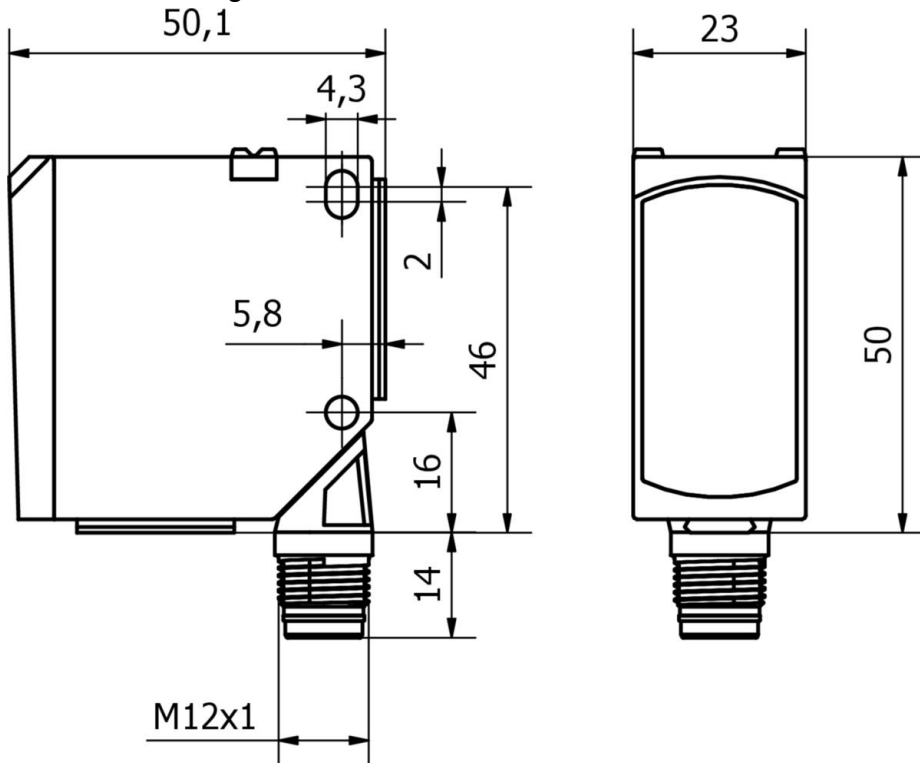
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
eClass 7.0	27270904
eClass 7.1	27270904
eClass 8.0	27270904
eClass 9.0	27270904
eClass 9.1	27270904

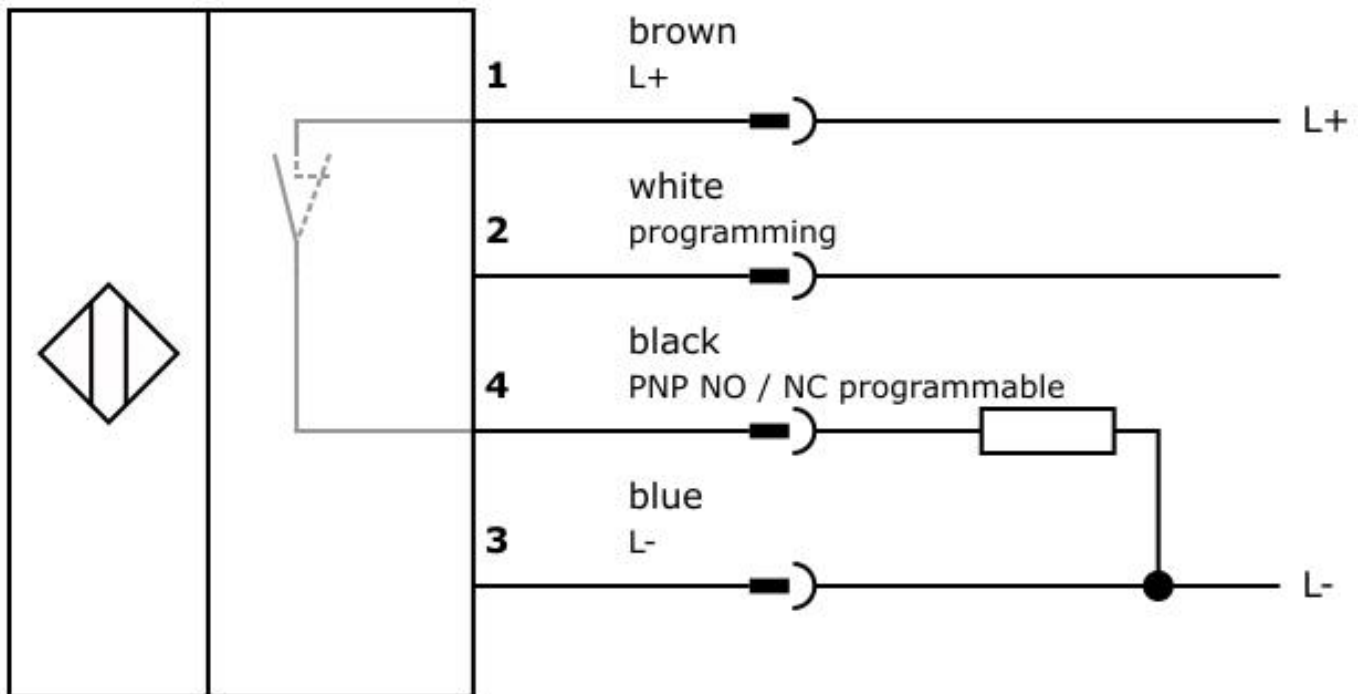
More

IPF Product Group	160 laser sensor
packaging dimensions	91 x 60 x 30 mm
gross weight	53 g
Customs tariff number	85365019
WEEE number	40951076
ATEX-compliant	No

Dimensional drawing



Connection



Installation



Mounting / installation may only be carried out by a qualified electrician!

Disposal



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.

For suitable connection and mounting accessories, please refer to our website www.ipf-electronic.com.