OT18E253

OPTICAL SENSORS • DIFFUSE REFLECTION SENSORS WITH INTENSITY DIFFERENCIATION

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.

MECHANICAL FEATURES

Ambient temperature	-25 °C ... 55 °C
Degree of protection (IP)	IP67
Housing design	Cylinder, screw-thread
Housing material	PBT
Material of optical surface	PMMA
Reflector included in the scope of delivery	-
Sensor length	81.5 mm
Thread length	43 mm
Thread pitch	1 mm
Thread size, metric	18
With interchangeable lens	-

ELECTRICAL FEATURES

Alarm output	-
Decay time	0.5 ms
Equipment protection class	Protection class 3
High repeat accuracy	-
Hysteresis	10 %
Interference suppression	-
Max. output current	100 mA
Max. switching distance	600 mm
No-load current	35 mA
Number of pins	4
Number of switching outputs	2
Operating voltage	10 V ... 30 V
Pre-failure message	-
Readiness delay	60 ms
Response time	0.5 ms
Reverse polarity protection	+
Scanning function	Light-/dark-on mode
Sensing range	40 mm ... 600 mm
Setting procedure	Manual adjustment
Short-circuit protection	+

ELECTRICAL FEATURES

Suitable for safety functions	-
Switching frequency	1000 Hz
Type of electrical connection	Connector M12
Type of switching function	Exclusive-OR
Type of switching output	NPN
Voltage drop	2 V
Voltage type	DC
With communication interface, RS-232	-
With LED display	+
With monitoring function of downstream devices	-
With other analog output	-
With restart lock	-
With time function	-

OPTICAL FEATURES

Light source	Infrared light
Wavelength of the sensor	880 nm
Light exit	Axial
Light beam form	Point
Small light beam diameter	-
Line scanner	-

OTHER FEATURES

Feeding technology	+
For gloss queries	-
Is line scan camera	-

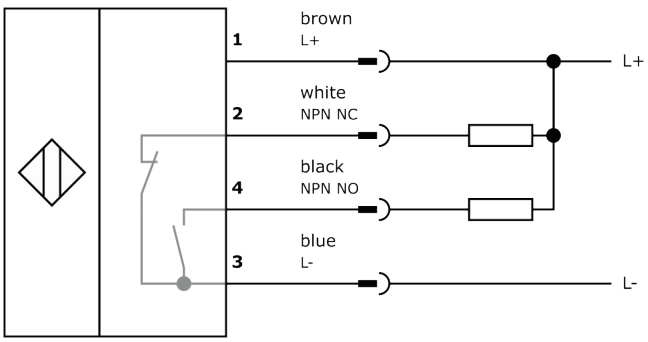
Other

Packaging dimensions	77.0mm x 25.0mm x 123.0mm
Shipping weight	0.06kg
Tariff code	85365019

Classification

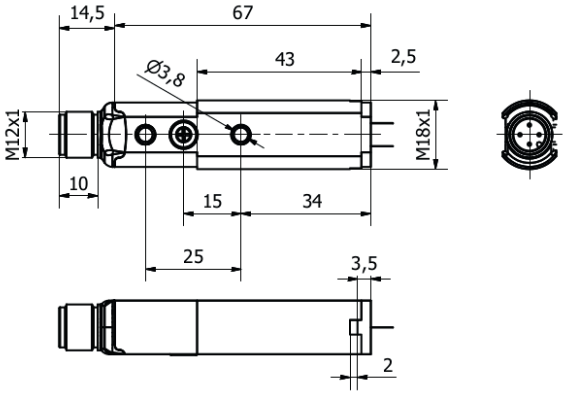
ipf product group	700
eClass 8.0	27270903
eClass 9.0	27270903
eClass 9.1	27270903
ETIM-5.0	EC001821
ETIM-6.0	EC001821
ETIM-7.0	EC001821

Connection



ipf electronic gmbh • Kalver Straße 25 - 27 • 58515 Lüdenscheid | Tel +49 2351 9365-0 • Fax +49 2351 9365-19 | info@ipf.de • **www.ipf.de**

Dimensional drawing



Installation

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

Disposal

Software

Please download the software or driver required for operating your new device on our homepage: www.ipf.de

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.
LED lighting systems can generate intensive UV radiation, which can damage your eyes in case of improper use. The manufacturer cannot be held responsible for damages that result from improper use or connection.