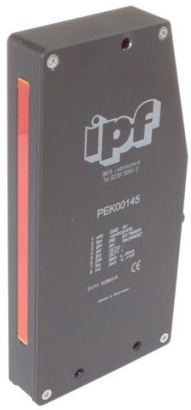
PEK00145

LASER SENSORS • LINE SENSORS RECEIVERS



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 DATA

Ambient temperature (MAX)	50 °C
Ambient temperature (MIN)	-10 °C
Degree of protection (IP)	IP54
Housing coating	Anodised
Housing design	Cuboid
Housing material	Aluminium
Material of optical surface	Glass
Reflector included in the scope of delivery	No
Sensor height	30 mm
Sensor length	170 mm
Sensor width	145 mm
Storage temperature	85 °C
Storage temperature	-20 °C

ELECTRICAL DATA

Analogue output 0 V ... 10 V	Yes
Analogue output 4 mA ... 20 mA	Yes
Equipment protection class	Protection class 3
Input (TeachIn)	Yes
Laser power	0.4 mW
Max. output current	100 mA
Measuring range	2 m
No-load current	200 mA
Number of pins	8
Number of pins of the communication interface	4
Number of pins of the communication interface, transmitter + receiver	4
Operating voltage (MAX)	26.4 V

ELECTRICAL DATA

Operating voltage (MIN)	21.6 V
Rated switching distance	2000 mm
Relative repeat accuracy	2 µm
Scanning function	Light-/dark-on mode
Setting procedure	Parameterization
Switching frequency	450 Hz
Type of analog output	0 V ... 10 V / 4 mA ... 20 mA
Type of communication interface	Connector M5
Type of communication interface, transmitter + receiver	Connector M9
Type of electrical connection	Connector M9
Type of input voltage	DC
Type of plug-in contact, communication interface	Female (socket)
Type of plug-in contact, communication interface	Female (socket)
Type of switching output	PNP/NPN
Voltage type	DC
With communication interface, RS-232	Yes
With LED display	Yes
With time function	No

OPTICAL DATA

Filter	Interference filter
Light beam form	Line
Light source	Laser diode, red light
Line sensor	Yes
Resolution	8 µm
Wavelength of the sensor	670 nm

OTHER DATA

Scope of delivery of the one-way system	Receiver

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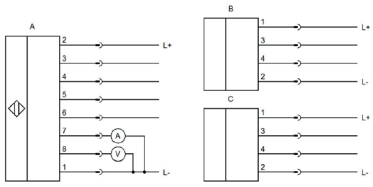
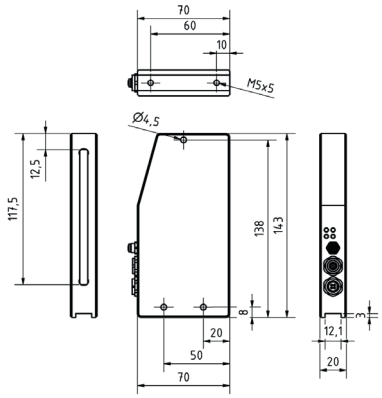
CONNECTION



Colors: A: M9: 1 = WH (white), 2 = BN (brown), 3 = GN (green), 4 = YE (yellow), 5 = GY (gray), 6 = PK (pink), 7 = BU (blue), 8 = RD (red)
Functions: A: M9: 1 = L-, 2 = L+, 3 = in 0 (ext. trigger), 4 = in 1 (teach/reset), 5 = out 0, 6 = out 1, 7 = 4-20mA, 8 = 0-10V
B: M5: 1 = L+, 2 = L-, 3 = RxD, 4 = TxD
C: M8: 1 = L+, 2 = L-, 3 = I-Control, 4 = n. c.

DIMENSIONAL DRAWING



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.