

## PE120120

### Laser sensors • Through-beam sensors receivers

sensor laser, Through-beam sensor receiver, M12x1 75long, aperture Ø1mm, Sn: 5m, 12-32V DC, PNP/NPN Push-pull, 0-10V, Connector M12 4pin, IP67, Brass Nickel-plated+Plastic PK, Polarity free red light

including 2x Nut



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.

#### Electrical features

|                               |  |
|-------------------------------|--|
| Resolution                    | 0.02mm                                     |
| Type of switching function    | Schließer (NO bei PNP) Öffner (NC bei NPN) |
| Type of analog output         | 0 - 10V                                    |
| Type of electrical connection | Connector M12                              |
| Type of switching output      | Push-pull                                  |
| Rated switching current       | 100mA                                      |
| Short-circuit protection      | Yes  |
| No-load current               | 30mA                                       |
| No-load current, receiver     | 30mA                                       |
| Number of pins                | 4  |
| Switching distance            | 0 - 5000mm                                 |
| Switching frequency           | 25000Hz                                    |
| Voltage drop                  | 2V   |
| Scanning function             | Light-/dark-on mode                        |
| Reverse polarity protection   | Yes  |
| Absolute repeat accuracy      | 0.02mm                                     |
| Operating voltage (DC)        | 12 - 32V                                   |

**Mechanical features**

|                                |                        |
|--------------------------------|------------------------|
| Design                         | Cylinder, screw-thread |
| Aperture diameter              | 1mm                    |
| Thread length                  | 45mm                   |
| Thread pitch                   | 1mm                    |
| Storage temperature            | -20 - 85°C             |
| Length                         | 75mm                   |
| Surface                        | nickel-plated          |
| Degree of protection (IP)      | IP67                   |
| Active area material of sensor | Plastic (PK)           |
| Housing material               | Brass                  |
| Thread dimension               | M12                    |
| Ambient temperature            | -20 - 50°C             |

**Optical features**

|                          |                         |
|--------------------------|-------------------------|
| Filter                   | Interference filter     |
| Light source             | Polarity free red light |
| Light beam form          | Point                   |
| Wavelength of the sensor | 670nm                   |

**Other features**

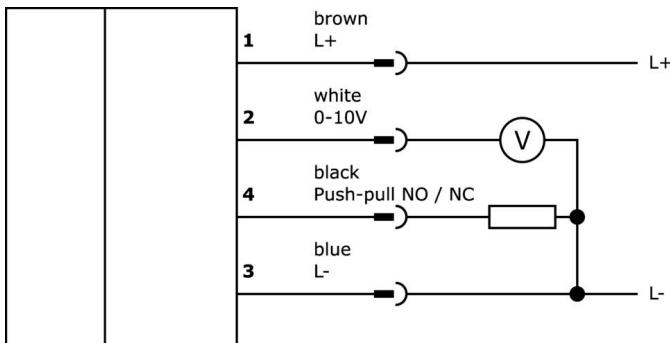
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|---------------------|------------------------------|
| Scope of delivery   | Receiver                     |
| Ambient temperature | -20 - 50°C                   |
| Version             | Through-beam sensor receiver |

**Classification**

|        |  |
|--------|--|
| ETIM 8 | EC002716 Through-beam photoelectric sensor |
|--------|--|

**More**

|                       |                  |
|-----------------------|------------------|
| IPF Product Group     | 160 laser sensor |
| packaging dimensions  | 123 x 77 x 25 mm |
| gross weight          | 40 g             |
| Customs tariff number | 85365019         |
| WEEE number           | 40951076         |
| POP-compliant         | Yes              |
| Reach-compliant       | Yes              |
| RoHS-compliant        | Yes              |

**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](http://www.ipf-electronic.com).

**Dimensional drawing**