PD70 Series - Photoelectric sensors
PD70 Series

Slim photoelectric sensor for door market

The PD70 sensors are developed for the pedestrian doors market as well as the market for industrial doors and gates. They satisfy the latest standards in Europe and North America. The sensors are designed to fit into the narrow aluminium profiles of pedestrian doors, but the strong polycarbonate housing and the long detection distance make the sensors suitable for heavy industrial doors as well. The PD70 sensors form a complete detecting package for doors in combination with our radar sensors RAD01 or RAD02 or the industrial radar sensor IRS01.

Presence detector
PD70 is a family of presence sensors designed specifically for the door and entrance market. The presence sensor has to be mounted in the doorway in order to prevent the door from closing when a person is present.

Clearly defined optics
The advanced lens geometry allows a uniform light beam over the full detecting range keeping the full +/- 5 degree beam over the entire detecting range.

Light immunity
The receiving lens system with aperture, in combination with the colour filter and the electronic filtering, offers a very high immunity to surrounding light.

High EMC performance
A robust design in relation to efficient shielding of the sensitive components in the receiver ensures an excellent EMC performance.

Harsh environments
PD70 is encapsulated in a strong polycarbonate housing, which offers an IP67 protection against rain (e.g.).

Approvals
The PD70 series is designed according to the European and North American door standards. prEN16005, EN12445, EN12453, En12978 and UL325.
**Benefits**

- Clear robust laser printing
- LED indication: Receiver: yellow for output ON, Emitter: green for power ON
- Colour code: - for easy installation, Emitter: red, Receiver: green
- Fixed cable or M8 plug
- Easy mounting: Mounting holes for self cutting 2.9 x 10 mm or M3 through hole screws. (A double-adhesive piece of tape to fix the sensor while mounting the screw is included).
- Small compact housing: 11.5 x 11.5 x 70 mm - fits into narrow aluminium door frames
- Aspherical lens design: The highly efficient aspherical lens geometry allows an increased sensing distance of up to 12 m while maintaining a wide viewing angle within the +/- 5° demand ed by the ESPE2 requirements - even at maximum distance.
- Metal shield: The sensitive components in the receiver is covered by a metal shield for high EMC immunity. Furthermore, the shield functions as aperture for the received beam.

**Applications**

- CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.

**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>Mute low</th>
<th>Mute high</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD70</td>
<td>Receiver</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NPN, NO</td>
<td>NPN, NC</td>
</tr>
<tr>
<td>Plug M8</td>
<td>PD70CNT12NO</td>
<td>PD70CNT12HC</td>
</tr>
<tr>
<td>Cable 5 m</td>
<td>PD70CNT12NOM5</td>
<td>PD70CNT12NCM5</td>
</tr>
<tr>
<td>Rated operating distance (S_o)</td>
<td>12 m</td>
<td></td>
</tr>
<tr>
<td>Rated operational voltage</td>
<td>10 to 30 V DC, Ripple included</td>
<td>≤ 20 mA</td>
</tr>
<tr>
<td>Supply current</td>
<td>≤ 16 mA</td>
<td>≤ 20 mA</td>
</tr>
<tr>
<td>Output current (I_o)</td>
<td>Continuous ≤ 100 mA</td>
<td>Short-time ≤ 100 mA (max. Load capacity 100 nF)</td>
</tr>
<tr>
<td>Voltage drop (U_d)</td>
<td>≤ 1.8 V DC @ 100 mA</td>
<td>-</td>
</tr>
<tr>
<td>Sensor protection</td>
<td>Shortcircuit, reverse polarity and transients</td>
<td>Reverse polarity and transients</td>
</tr>
<tr>
<td>Response time</td>
<td>OFF-ON ≤ 5 ms, ON-OFF ≤ 5 ms</td>
<td>Power ON (Yellow LED)</td>
</tr>
<tr>
<td>Led indications</td>
<td>Output ON [Yellow LED]</td>
<td>-</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>Operating: -25 to +55°C (-13 to +131°F), Storage: -40 to +70°C (-40 to +158°F)</td>
<td></td>
</tr>
<tr>
<td>Optical angle</td>
<td>± 5°</td>
<td></td>
</tr>
<tr>
<td>Ambient light</td>
<td>≤ 100.000 Lux</td>
<td>-</td>
</tr>
<tr>
<td>CE marking / Approvals</td>
<td>EN12445, EN12453, EN12978 / cULus (UL325), CSA-C22.2No.247</td>
<td></td>
</tr>
<tr>
<td>Overvoltage category</td>
<td>III [IEC60664/60664A; 60947-1]</td>
<td></td>
</tr>
<tr>
<td>Pollution degree</td>
<td>3 [IEC60664/60664A; 60947-1]</td>
<td></td>
</tr>
<tr>
<td>Light source</td>
<td>-</td>
<td>Infrared LED, modulated</td>
</tr>
<tr>
<td>Material</td>
<td>Housing: PC black, Backpart receiver: PC green, Backpart emitter: PC red</td>
<td></td>
</tr>
<tr>
<td>Cable / Connector</td>
<td>PVC, TX:grey/RX.black, 5 m, 3 x 0.145mm², Ø=2.9 mm / M8 - 3 pole</td>
<td></td>
</tr>
<tr>
<td>Dimensions / Weight</td>
<td>11.5 x 11.5 x 70 mm / Cable 90 g, Plug 20 g</td>
<td></td>
</tr>
</tbody>
</table>
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