**Technical Specifications**

- **Functional principle**: Microwave module
- **Detection speed**: Min. 0.3 ms
- **Marking**: CE
- **Inclination angle**: ± 45°, in 15° increments
- **Tilt angle**: ± 45° in 15° increments
- **Detection range**: 6500 to 8000 mm (WxH) at installation height of 5000 mm and inclination angle of 45°;
  5500 to 10000 mm (WxH) at installation height of 7000 mm and inclination angle of 45°
- **Operating frequency**: 24.000 GHz–24.250 GHz K band, EC-compliant, excluding UK:
  FDC (UKA version): 24.075 GHz–24.175 GHz K band
  UK version: 24.150 GHz–24.350 GHz K band
- **Operating mode**: Radar motion sensor
- **Function indicator**: Red/green LED
- **Operating voltage**: 12–36 VDC/12–28 VAC
- **No-load current**: < 50 mA at 24 VDC
- **Power consumption**: < 20 dBm
- **Ambient temperature**: -30 °C ... 60 °C / 243 K ... 333 K
- **Switching power**: ±18°
- **Microwave module**: Radar motion sensor
- **Radar motion sensor**: 2 relay outputs, NO/NC
- **Nominal power**: Max. 0.5 AAC/1 ADC
- **Mounting bracket**: Dimensions
  - Mounting bracket with the sensor attached: 131 mm (W) x 73 mm (H) x 136 mm (D)
  - Mounting bracket without the sensor attached: 320 g (weight without cable)
- **Mounting instructions**: Screws for installation
- **Mounting height**: 7000 mm
- **Dimensions excluding securing parts**: Without mounting bracket: 151 mm (W) x 73 mm (H) x 56 mm (D)
  - With mounting bracket (180°): 151 mm (W) x 73 mm (H) x 136 mm (D)
- **Mounting the Mounting Bracket**
  - 1. Loosen the long screw on the sensor.
  - 2. Slide the sensor into the mounting bracket and secure it using the long screw.
  - 3. Set the inclination angle.
  - 4. Tighten the long screw.
  - 5. Attach the mounting bracket using the screws provided.
- **Securing the Sensor**
  - 1. Drill the holes as per the dimensional drawings.
  - 2. Attach the mounting bracket using the screws provided.
- **Connecting the Customer’s Cable**
  - 1. Connect the cable.
  - 2. Tighten the long screw.
  - 3. Loosen the long screw on the sensor.
- **Operating and Display Elements**
  - **Human-presence relay** (yellow)
  - **Human-presence relay** (white)
  - **Human-presence relay** (gray)
  - **Human-presence relay** (gray)
- **Conformities**
  - EU conformity: The product RAVE-D, RAVE-D-GB is compliant with Directive 2014/30/EU, the harmonized standard EN 60950-1, EN 301489-1, EN 301489-3, EN 300440-2. For the full Declaration of Conformity is available, download from www.pepperl-fuchs.com.
  - The CE mark indicates that the product is in accordance with the European standards.
- **Scope of Delivery**
  - 1. RAVE-D incl. connection cable
  - 2. Screws for installation
  - 3. Mounting instructions
- **Accesories**
  - RMB remote control
  - Remote control

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**Troubleshooting**

- **Fault**: Corrective action
- **Door is detected**: Reduce the sensitivity.
- **LED not lit up**: No power supply, device not functioning.
- **Remote control does not respond**: Device is locked. Switch the operating voltage off and on again. The sensor can now be configured without a code to 30 minutes.
- **Person is mistaken for a vehicle**: Neutralize the vehicle detection properties. Increase the responsiveness. If only vehicles are to be detected, reduce the sensitivity.
- **Vehicle is mistaken for a person**: Neutralize the vehicle detection properties. Increase the responsiveness.
- **Object is detected too late**: Reduce the responsiveness. Increase the sensitivity.
- **Object detection is too sensitive**: Increase the responsiveness. Reduce the sensitivity.
- **Transverse movement of people ignored**: Increase the responsiveness. Step up the human-presence detection properties.
- **False detections occurring due to interfering influences (rain, vibration, etc.)**: Increase the responsiveness. Step up the human-presence detection properties.

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**Detection Field Settings**

- **Inclination Angle**
  - 15 degrees
  - 45 degrees

**Inclined Detection Field (Tilt Angle)**

- **Mounting the fixing bracket on an incline has the following effects on the detection field:**
  - Avoid placing moving objects in the detection field (fans, plants, trees, flowers).
  - Do not cover the radar. Mechanically-operated field (fans, plants, trees, flags).
  - Avoid fluorescent lights in the detection field.

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**Safety Information**

To meet the safety requirements of EN60950-1 and UL508, the sensor must be operated from an SELV supply that is reliably limited to an output of 100 W. The output can be limited using a T2.S.5 A fuse.

This device must be installed and maintained only by qualified, trained personnel.

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**Technical Information**

- **Mounting the Mounting Bracket**
  - 1. Loosen the long screw on the sensor.
  - 2. Slide the sensor into the mounting bracket and secure it using the long screw.
  - 3. Set the inclination angle.
  - 4. Tighten the long screw.
  - 5. Attach the mounting bracket using the screws provided.

- **Connecting the Customer’s Cable**
  - 1. Connect the cable.
  - 2. Tighten the long screw.
  - 3. Loosen the long screw on the sensor.

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**Troubleshooting**

- **Fault**: Corrective action
- **Door is detected**: Reduce the sensitivity. Adjust the tilt angle. Increase the responsiveness. Step up the human-presence detection properties.
- **LED not lit up**: No power supply, device not functioning.
- **Remote control does not respond**: Device is locked. Switch the operating voltage off and on again. The sensor can now be configured without a code to 30 minutes.
- **Person is mistaken for a vehicle**: Neutralize the vehicle detection properties. Increase the responsiveness. If only vehicles are to be detected, reduce the sensitivity.
- **Vehicle is mistaken for a person**: Neutralize the vehicle detection properties. Increase the responsiveness.
- **Object is detected too late**: Reduce the responsiveness. Increase the sensitivity.
- **Object detection is too sensitive**: Increase the responsiveness. Reduce the sensitivity.
- **Transverse movement of people ignored**: Increase the responsiveness. Step up the human-presence detection properties.
- **False detections occurring due to interfering influences (rain, vibration, etc.)**: Increase the responsiveness. Step up the human-presence detection properties.
### LED Status Display

<table>
<thead>
<tr>
<th>LED Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashing red</td>
<td>Sensor initialization in progress</td>
</tr>
<tr>
<td>Green</td>
<td>Sensor ready for operation, no detection</td>
</tr>
<tr>
<td>Flashing green 3x</td>
<td>Command received from remote control</td>
</tr>
<tr>
<td>Flashing red in quick succession</td>
<td>Vehicle presence relay active</td>
</tr>
<tr>
<td>Flashing green in quick succession</td>
<td>Human presence relay active</td>
</tr>
<tr>
<td>Flashing red in quick succession</td>
<td>Vehicle presence relay and human presence relay both active</td>
</tr>
</tbody>
</table>

### Application Example 1

#### Example 1: Vehicle recognition at a door

- **Vehicle approaches:** Vehicle presence relay is activated. Door opens.
- **Person approaches:** Vehicle presence relay is not activated. Door remains closed.

#### Example 2: Door with vehicle recognition and separate entrance for people

- **Person approaches:** Vehicle presence relay is not activated. Entrance for people remains closed.
- **Vehicle approaches:** Vehicle presence relay is activated. Entrance for people opens.

#### Example 3: Door with vehicle recognition without separate entrance for people

- **Person approaches:** Vehicle presence relay is not activated. Entrance for people closes.
- **Vehicle approaches:** Vehicle presence relay is activated. Door opens halfway.

### Programming Mode

#### Starting Programming

Press and hold the MENU button for approximately two seconds. Programming mode is activated.

#### Setting the Function and Value

Press the MENU button once. The next function is selected.

Press the VALUE button once. The value is increased by 1.

#### Stopping Programming

Press and hold the MENU button for approximately two seconds. Programming mode is exited. The settings are stored.

#### Function/Setting Action LED

<table>
<thead>
<tr>
<th>Function/Setting</th>
<th>Action</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu 2s</td>
<td>Press and hold the MENU button for two seconds. Programming starts.</td>
<td>** flashes</td>
</tr>
<tr>
<td>Value</td>
<td>The current value is read out, e.g.: 1x red for function: sensitivity</td>
<td>x</td>
</tr>
<tr>
<td>Value 5x</td>
<td>Set function: Press the MENU button three times.</td>
<td>3x</td>
</tr>
<tr>
<td>Value 6x</td>
<td>6x red for function: half time for output 3x green for value: 1.0 s</td>
<td>6x 3x</td>
</tr>
<tr>
<td>Value 2x</td>
<td>Set value: Press the VALUE button two times.</td>
<td>2x</td>
</tr>
</tbody>
</table>

#### Menu 2s

| Menu 2s | Press and hold the MENU button for two seconds. Programming starts. | ** flashes |
| Value 6x | 6x red for function: half time for output 3x green for value: 3.0 s | 6x 3x |

#### Menu 3s

| Menu 3s | Press and hold the MENU button for two seconds. Programming is ended. | ** flashes |

### Overview of Adjustable Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>1</td>
</tr>
<tr>
<td>Menu 1</td>
<td>10</td>
</tr>
<tr>
<td>Suggestion value based on angle and mounting height</td>
<td>18° 30° 60° 90°</td>
</tr>
<tr>
<td>F m</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>30°</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>60°</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human presence relay</td>
<td>1</td>
</tr>
<tr>
<td>Menu 3s</td>
<td>2</td>
</tr>
<tr>
<td>Suggestion value based on angle and mounting height</td>
<td>18° 30° 60° 90°</td>
</tr>
<tr>
<td>F m</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>30°</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>60°</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

### Troubleshooting

For more information on settings, see "Troubleshooting" on the last page.

### Notice

Press for VALUE and MENU buttons together for approx. two seconds. The settings are saved.