## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>AX-70TN</th>
<th>AX-130TN</th>
<th>AX-200TN</th>
<th>AX-100TF</th>
<th>AX-200TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Infrared beam interruption detection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum detection range</td>
<td>20m (70ft.)</td>
<td>40m (130ft.)</td>
<td>60m (200ft.)</td>
<td>30m (100ft.)</td>
<td>60m (200ft.)</td>
</tr>
<tr>
<td>Maximum arrival range</td>
<td>200m (700ft.)</td>
<td>400m (1300ft.)</td>
<td>600m (2000ft.)</td>
<td>300m (1000ft.)</td>
<td>600m (2000ft.)</td>
</tr>
<tr>
<td>Interruption period</td>
<td>Selectable between 50, 100, 250, and 500m sec.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Selectable Beam Frequency

- 10.5 - 28V DC

### Power Supply

- Current consumption (transmitter + receiver): 38mA (max.)
- 41mA (max.)
- 48mA (max.)
- 44mA (max.)
- 48mA (max.)

### Alarm Period

- 2sec. (±1) nominal

### Alarm Output

- N.C. 28V DC, 0.2A (max.)
- N.C./N.O. 28V DC, 0.2A (max.)
- N.C. 28V DC, 0.2A (max.)

### D.C. Output

- 4 channel

### Operating Temperature

- -35°C to +60°C (-31°F to +140°F)

### Operating Humidity

- 95% max.

### Alignment Angle

- ± 90° Horizontal, ± 5° Vertical

### Mounting

- Wall and pole mounting

### Weight (transmitter + receiver)

- 650g (22.9oz.)
- 700g (24.7oz.)

### Housing Protection (EN 60529)

- IP65

---

**Dimensions:** mm (inches)

### Options

- **HU-3:** Heating Unit
  - Heating unit for severe low temperature conditions
  - 24V DC/AC, 420mA max.
  - 1 set (2 units)

- **BC-3:** Back Cover
  - Can be used to cover mounting pole.
  - 1 set (2 units)

- **PSC-3:** Pole Side Cover
  - Cover for installing 2 units to 1 pole.
  - 1 set (2 units)

---

**The Best Short Range Photoelectric Detector**

AX-TN/TF series is a compact photoelectric detector with "the IP65 durability", and "stable detection performance".

These features reduce false alarms drastically caused by outdoor severe environmental changes and provide a wide range of applications.
OPTEX succeeded to strengthen the basic performance and ability of photoelectric detector to reduce false alarms under severe outdoor environments.

The best short range photoelectric detector from OPTEX

- **IP65 structure with high sealing rubber packing**
  - Rubber packing is used for all conceivable points where water or dust may penetrate, such as wiring holes, wire ports and the outer chassis. Prevention from dust, bugs and water delivers performance with higher reliability against false alarms and breakdowns.

- **Rubber packing**
  - Used for all conceivable points where water or dust may penetrate, such as wiring holes, wire ports and the outer chassis. Prevention from dust, bugs and water delivers performance with higher reliability against false alarms and breakdowns.

- **Lighting protection**
  - An improved Electro-Magnetic Interference surge absorber and high surge resistive relay has been installed to protect from lightning surges and maintain stable operation.

- **AX-100/200TF only**
  - Selectable beam frequencies
    - The selectable beam frequencies can be used to avoid unwanted crosstalk that can occur when using multiple photo beams for long distance or beam stacking applications.
  
  1. **Long distance stacking**
  
  2. **Two beam long distance**

- **D.Q. Circuit**
  - D.Q. circuit (environmental disqualification) sends a trouble signal when the beam strength is below an acceptable level due to heavy fog, rain, snow or other changes in the installation site. The trouble signal output continues as long as the beam strength is below an acceptable level.

- **4 step alarm indicator LED** for fast & accurate optical alignment
  - The alignment condition is visually displayed on the LED. It shows the alignment condition by using 4 different processes to achieve accurate and easy alignment before fine tuning.

- **Anti-frost hood cover**
  - A hood is installed to prevent frost forming on lower beams. It also makes the maintenance easy because the surface of the cover is flat.

- **High grade spherical lens**
  - The high grade spherical lens creates more sharply defined & precise infrared beams compared to ordinary fresnel lenses.

- **A.G.C. (Automatic Gain Control) Circuit**
  - A.G.C. circuit continually monitors for gradual changes in the signal’s strength caused by changing weather conditions. It adjusts the sensitivity accordingly to maintain the proper signal level for the current environmental conditions.

- **99% beam blocking stability**
  - Enables stable operation with as much as 99% loss of beam energy caused by heavy rain, dust storms, fog or snow.

- **High grade spherical lens**
  - The high grade spherical lens creates more sharply defined & precise infrared beams compared to ordinary fresnel lenses.

- **Easy angle adjustment**
  - Allows the installer to finely adjust the beam easily.
    - (Horizontally ±90° with hand)
    - (Vertically ±5° with screwdriver)

- **Adjustable beam interruption period**
  - The beam interruption time can be adjusted to fit any application. For example, when protecting a wall or fence, a longer interruption time will catch intruders.

- **Lightning protection level**
  - Will remain stable against over 14kV of lightning surge.

- **Lightning Surge Voltage Level**
  - Conventional Detector
  - AX Series

- **Wiring hole**
  - Rubber packing
  - Dust-tight.
  - No ingress of dust.
  - International Protection Code.
    - Shows the degrees of protection provided by enclosures.

- **Waterproof**
  - Protected against water jets from any direction.

- **5 degrees of water conditions were used to evaluate the protection against water**
  - Tests were conducted using a water jet stream that applied 12.5 liters/min of water at a distance of approximately 3 meters for roughly 3 minutes. This test was directly applied to the chassis of the AX-TN and TF series.
  - The tests resulted with the AX-TN/TF unit undamaged due to the highly durable IP65 rated structure. It aids in the prevention of water damage to the unit while keeping the detector operating accurately in outdoor environments.

- **4 step alarm indicator LED for fast & accurate optical alignment**
  - The alignment condition is visually displayed on the LED. It shows the alignment condition by using 4 different processes to achieve accurate and easy alignment before fine tuning.

- **Lighting protection level**
  - Will remain stable against over 14kV of lightning surge.

- **Lightning Surge Voltage Level**
  - Conventional Detector
  - AX Series