TrafiSense is an integrated thermal sensor for vehicle and bike detection. TrafiSense does not need light to operate, instead relying on the thermal energy emitted from all objects. This allows the sensor to detect vehicles and bikes in complete darkness, over a long range, and in difficult weather conditions, resulting in reliable, 24/7 traffic detection for a wide range of applications.

www.flir.com/its

**INTEGRATED THERMAL TRAFFIC SENSOR**

TrafiSense detects wrong-way drivers in a matter of seconds. TrafiSense controls traffic signals by detecting approaching vehicles, bicycles, and pedestrians. Enhanced vulnerable road user awareness and safety.

**INTERSECTION CONTROL**

- Detect vehicles and bicycles at or near the stop bar
- Transmit detection data over contact closures or TCP/IP
- Dynamic traffic signal control
- Adapt green times to road user type
- Reduced idling time and improved traffic flow

**WRONG-WAY DRIVER DETECTION**

- Detects across multiple lanes
- Improves traffic safety
- Records thermal video sequence of wrong-way driver
- Ideal for installation on urban roads, highways, and highway entries or exits

**BICYCLE AND PEDESTRIAN DETECTION**

- Detects bicycles and pedestrians at the crossing and the curb
- Triggers warning signals to alert oncoming drivers

Enhanced vulnerable road user awareness and safety.
**System Overview**

**Detection Functionalities**
- Vehicle and bicycle presence detection
- Vehicle and bicycle counting
- Pedestrian presence detection
- Traffic data collection
- Traffic flow monitoring
- Inverse direction detection
- Queue detection

**Number of Detection Zones**
- 24 vehicle presence zones
- 8 bicycle presence regions
- 8 pedestrian zones
- 8 traffic data zones
- 8 inverse direction zones
- 6 queue zones

**Thermal Sensor**
- Resolution: QVGA (336 x 256)
- Frame Rate: 30 FPS
- Type: Longwave infrared (7–14 µm)
- Compression: H.264, MPEG-4, MJPEG

**Housing**
- Material: Aluminum
- Dimensions:
  - Vertically mounted: 17.7 x 6.3 x 4.7 in
  - Horizontally mounted: 16.1 x 7.1 x 4.7 in
- Sunshield: Optional

**Power, Outputs, and Communications**
- **Contact Closures**: 3 for ETH versions, direct or via optional ETH interface (PN 10-6075); 24 for BPL versions, 4 outputs via TI x-stream EDGE interface (PN 10-6055), up to 20 extra outputs via up to 5 4/Os xp expansion boards
  - Note: in TS2 mode, SSLC via TI x-stream EDGE and PIM module
- **Ethernet**: For communication of output state events, configuration & monitoring (streaming video)
- **Input Power**: 12-42 VDC, 12-30 VAC
- **Current Consumption**:
  - BPL: < 230 mA @ 24VDC (< 320 mA @ 24 VDC peak at startup)
  - ETH: < 130 mA @ 24VDC (< 250 mA @ 24 VDC peak at startup)
- **Power Consumption**:
  - BPL: < 5.5 W (< 7.5 W peak at startup)
  - ETH: < 3.1 W (< 6 W peak at startup)
- **PC Tool for Setup**: Traficon Configuration Tool (TCT)
- **PC Tool for Data Retrieval**: Traficon Data Tool (TDT)
- **PC Tool for Traffic Monitoring & Event Data Reporting**: FLUX

**Regulatory**
- **EU Directives**: EMC 2014/30/EU, RoHS 2011/65/EU
- **Environmental**:
  - Shock & Vibration: NEMA TS2 specs
  - Materials: Weatherproof, UV-resistant
  - Protection Grades: Housing = IP68 / Connectors = IP67
  - Temperature Range: -29°F to 165°F (-34°C to 80°C)
  - FCC: FCC part 15 Class A

<table>
<thead>
<tr>
<th>Part number</th>
<th>Field of view</th>
<th>Functionality</th>
<th>Detection distance for vehicle presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>TrafiSense ETH/BPL 390</td>
<td>ETH: 10-7045 BPL: 10-7035</td>
<td>Horizontal: 90° Vertical: 69° Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Traffic data collection and flow monitoring, Pedestrian presence, Queue detection</td>
<td>0 - 80 ft</td>
</tr>
<tr>
<td>TrafiSense ETH/BPL 345</td>
<td>ETH: 10-7044 BPL: 10-7034</td>
<td>Horizontal: 45° Vertical: 35° Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Traffic data collection and flow monitoring, Pedestrian presence, Queue detection</td>
<td>16 - 160 ft</td>
</tr>
<tr>
<td>TrafiSense ETH/BPL 335</td>
<td>ETH: 10-7046 BPL: 10-7036</td>
<td>Horizontal: 35° Vertical: 27° Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Traffic data collection and flow monitoring, Pedestrian presence, Queue detection</td>
<td>35 - 245 ft</td>
</tr>
<tr>
<td>TrafiSense ETH/BPL 325</td>
<td>ETH: 10-7047 BPL: 10-7037</td>
<td>Horizontal: 25° Vertical: 19° Vehicle presence, Bicycle presence, Inverse direction</td>
<td>100 - 300 ft</td>
</tr>
<tr>
<td>TrafiSense ETH/BPL 317</td>
<td>ETH: 10-7048 BPL: 10-7038</td>
<td>Horizontal: 17° Vertical: 15° Vehicle presence, Bicycle presence</td>
<td>145 - 400 ft</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

**Corporations**

**Corporate Headquarters**
FLIR Systems, Inc. 27700 SW Parkway Ave. Wilsonville, OR 97070 USA PH: +1 866.477.3687

**FLIR ITS**
Hospitalweg 1B B-9510 Marke Belgium PH: +32.0.56.37.22.00

**www.flir.com**
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