Telemecanique Sensor’s **OsiSense™ XUY** photoelectric sensors are really innovative for fast and smart integration in conveyor systems.

**Fast, modular & best installation time:**
The sensor is mounted between rollers from the top. No more missing screws to mount your bracket and sensor.

**Plug & Play:** to see any package, no color effect, and no environment teaching.

**Dust protection:** special lenses and LED power to avoid dust accumulation

**Impact resistant:** unique mechanical installation embedded within the conveyor frame to prevent product damage

**Full automation integration:**
The sensor is compatible with zone controllers from current motorized roller manufacturers or with standard PLC platforms. Different connectors or cable wires are offered.

**Typical areas of application:**
- Detection of packet, boxes, pallets and letters of paper, carton or metallic material.

**Well suited for use in:**
- conveying for manufacturing facilities, warehouses, and retail distribution centers.

Watch a video and see first hand how easy the XUY Roller Sensor is to mount and operate.
Benefits

Fast and simple installation:
- No tools needed
- Easy mounting from the top
- Gain of 50% in installation and adjustment
- 3 mounting solutions (Hexagonal 7/16”, Ø 8 mm, or adhesive supports)

Full detection:
- No package color effecting sensor performance due to reliable infra-red sensing technology
- Easy direction adjustment, every 30°
- Full length detection from multiple sensors embedded within the sensor housing
- Convex lens to avoid dust accumulation

Characteristics

OsiSense™ XUY Roller Sensor
- Number of sensors: from 1 to 6 alongside the tube
- Detection mode: diffuse infrared
- Sensing distance up to 100 mm
- Dimension: Ø 12 mm, from 200 to 900 mm
- Material case / lens: aluminum / PMMA
- 3 mounting solutions with spring effect:
  - Hexagonal 7/16”
  - Ø 8 mm
  - Adhesive part
- Supply voltage: 24 V DC
- Connection: M12, 4 pins connector or cable
- Output: PNP/NPN, NO/NC programmable
- Switching frequency: 500 Hz
- Operating temperature: -10°C to 50°C
- Degree of protection: IP 40 (IP 65 on request)

Please contact Telemecanique Sensors for other length of conveyor lengths (200 to 900mm)
## Product Specification

**OsiSense™ XUY**
- XUY415N4HL2
- XUY415N4HL03M12

### Mechanical Characteristics:
- **Dimension (width)**: 415 mm, from 200 to 900 upon request
- **Number of sensors**
- **Diameter (case)**: 12 mm
- **Sensor pitch**: 84 mm
- **Connection**
- **Mounting**
- **Material**
  - Case: Aluminium and PA
  - Lens: PC

### Detection performances:
- **Detection mode**: Diffuse infrared
- **Nominal sensing distance**: 100 mm
- **Minimum object size**: 85 mm
- **Maximum flow rate**: 60 m/mn

### Electrical Characteristics:
- **Voltage limits**: 18 to 36 Volts DC (including ripples)
- **Current consumption**: 35 mA
- **Output LED**: yellow
- **Switching capacity**: 100 mA with overload and short circuit protection
- **Switching frequency**: 500 Hz

### Environmental characteristics:
- **Operating temperature**: -10°C to 50°C
- **IP class**: IP40 (IP65 upon request)

**roller conveyor sensor**
- PNP/NPN, NO/NC by cabling
- Cable 2m or remote M12 connector

**415 mm, from 200 to 900 upon request**
**4 (number of sensors is determined by the overall conveyor width)**
**12 mm**
**84 mm**
**M12 4 pins connector or cable**
**Hexagonal 7/16", Ø 8mm or adhesive**
**Aluminium and PA**
**PC**
XUY roller sensor conveyor

![Diagram of roller sensor conveyor with dimensions labeled: E1, E5, E5, E5, E5, E2. Diagram shows the roller conveyor with a sensor placed in the center with a measurement of 51.5 units from one end to another.](image-url)
**XUY 415 N 4 H L2**

<table>
<thead>
<tr>
<th>Reference</th>
<th>A</th>
<th># of Sensors</th>
<th>Es</th>
<th>E1</th>
<th>E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUY415N4HL2</td>
<td>415</td>
<td>4</td>
<td>84</td>
<td>100</td>
<td>63</td>
</tr>
<tr>
<td>200-240</td>
<td>1</td>
<td>n.a.</td>
<td>84</td>
<td>100&lt; E1&lt;120</td>
<td>90&lt; E2&lt;120</td>
</tr>
<tr>
<td>245-325</td>
<td>2</td>
<td></td>
<td></td>
<td>100&lt; E1&lt;120</td>
<td>60&lt; E2&lt;120</td>
</tr>
<tr>
<td>330-410</td>
<td>3</td>
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<td>495-575</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>580-660</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>665-755</td>
<td>3</td>
<td></td>
<td>168</td>
<td>190&lt; E1&lt;210</td>
<td>60&lt; E2&lt;210</td>
</tr>
<tr>
<td>760-900</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Functions**

- No Additional function: N
- Timer*: T
- ZPA function (zero pressure accumulation)*: Z

**Mounting Style**

- Hexagonal 7/16*: H
- Adhesive part: A
- Diameter 8mm: D

**Cabling**

- M 12x1 (D) M 1 2
- Cable 0.3 m L 0 3
- Cable 2 m L 2
- Cable 5 m L 5
- Connector M 12 with 0.3 m cable L 0 3 M 1 2

For this example, XUY415.. is available for any conveyor width from 414 to 418 mm (-1, +3 mm)

* Future capability. Call local field sales office for more information and availability.

Important Note: Not all configurations may be possible.
Photo-electric sensors
OsiSense XU Application, conveying series
For detecting packages on a roller conveyor
DC supply, solid-state output

References, characteristics

Nominal sensing distance (Sn) | 0.1 m
---|---
Function | NO/NC programmable
Connection | PNP + NPN
Cabling | Pre-cabled, L = 2 m
| Remote M12 connector, L = 0.3 m

References

4-wire | XUY 415N4HL2 (1) | XUY 415N4HL03M12 (1)

Weight (kg) | 0.075 | 0.085

Characteristics

Product certifications | CE
Type of transmission | Infrared
Operating mode | Diffuse
Nominal sensing distance | 100 mm (white paper)
Differential travel | < 25%
Degree of protection | Conforming to IEC 60529
For operation | IP 40 (IP 65 on request)
For storage | -10...+55°C
-20...+80°C
Vibration resistance | Conforming to EN/IEC 60068-2-8
For X, Y and Z:
1 mm from 10 to 42 Hz
7 mm from 42 to 55 Hz
30 mm at resonant frequency or 55 Hz
Shock resistance | Conforming to EN/IEC 60068-2-27
For X, Y and Z: 10 gn for 11 ms
Material
Case | Aluminium and PA
Lenses | PC
Rated supply voltage | 24 V with protection against reverse polarity
Voltage limits (including ripple) | 18...30 V of rated operational voltage
Switching capacity | 100 mA with overload and short-circuit protection
Voltage drop, closed state | < 2 V
Power consumption | < 35 mA
Maximum switching frequency | 500 Hz
Delay | 1 ms response
| 1 ms recovery
Indicator lights | Output state
1 yellow LED
Detection accuracy | 2 mm at 2 m/s

References of accessories

<table>
<thead>
<tr>
<th>Designation</th>
<th>Length (m)</th>
<th>Reference</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12-M12 jumper cables</td>
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</tr>
<tr>
<td>4-pin, straight connector</td>
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<td>XZ CR1511041C1</td>
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<tr>
<td></td>
<td>2</td>
<td>XZ CR1511041C2</td>
<td>0.095</td>
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<td></td>
<td>2</td>
<td>XZ CR1512041C2</td>
<td>0.095</td>
</tr>
</tbody>
</table>

(1) These sensors are adapted for use on a 414-418 mm wide conveyor frame (11, + 3 mm). Mounting accessory included with this sensor is for 7/16" hexagonal frame. Please consult Sensor Competency Center for any additional sizes, configurations, mounting, or other requirements.
**Connections, dimensions, mounting**

**Photo-electric sensors**

OsiSense XU Application, conveying series

For detecting packages on a roller conveyor

DC supply, solid-state output

### Connections

<table>
<thead>
<tr>
<th>M12 connector</th>
<th>PNP + NPN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pin n°/colour</strong></td>
<td><strong>Programmable, NO or NC output</strong></td>
</tr>
<tr>
<td>1 BN: Brown</td>
<td>4-wire</td>
</tr>
<tr>
<td>2 WH: White</td>
<td>+ 18 – 30 V</td>
</tr>
<tr>
<td>3 BU: Blue</td>
<td>NC</td>
</tr>
<tr>
<td>4 BK: Black</td>
<td>3-wire</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>NC – 0 V</td>
</tr>
</tbody>
</table>

### Dimensions (mm)

<table>
<thead>
<tr>
<th>A</th>
<th>Sensor</th>
<th>Es</th>
<th>E1</th>
<th>E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>415</td>
<td>x 4</td>
<td>84</td>
<td>100</td>
<td>63</td>
</tr>
<tr>
<td>200</td>
<td>x 1</td>
<td></td>
<td>100</td>
<td>E1&lt;120</td>
</tr>
<tr>
<td>245</td>
<td>x 2</td>
<td>84</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>330</td>
<td>x 3</td>
<td></td>
<td>60</td>
<td>E2&lt;120</td>
</tr>
<tr>
<td>415</td>
<td>x 4</td>
<td></td>
<td>190</td>
<td>E1&lt;210</td>
</tr>
<tr>
<td>495</td>
<td>x 5</td>
<td></td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>580</td>
<td>x 6</td>
<td></td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

### Mounting

**Parts for mounting the sensor**

(included with the sensor)

- 7/16" (11 mm) hexagonal frame
- Adhesive frame
- Ø 8mm frame, with adhesive mounting

**Mounting precautions**

**Recommended mounting**

- Sn (1)

**Not recommended**

### Application example

Package detection - sensor mounted between motorized rollers

(1) Sn ≤ 100 mm