

## Distance-settable Photoelectric Sensor TOF Laser Sensor

# E3AS-F Series

### Optimal sensing distance (50 to 1,500 mm) for use on conveyor lines

- Wide sensing distance of 50 to 1,500 mm\*, enabling use on any conveyor line width
- Time of flight (TOF) type sensors for use with any type of conveyed object
- Compact body can be mounted anywhere
- (Metal body (SUS316L), Plastic body type (PBT/PC))
- Teaching method allows anyone to set optimal threshold values
- Manufactured using Omron's proprietary laser sealing method (IP67/IP69K/IP67G)
- Antifouling coatings reduce the cleaning frequency on the lens.
- IO-Link reduces time required for startups and changeovers

\* The sensing distance of the E3AS-F1500 series.



Refer to *Safety Precautions* on page 9.



For the most recent information on models that have been certified for safety standards, refer to your Omron website.

## Ordering Information

### Sensors [Refer to *Dimensions* on page 11.] SUS 316L Body

Infrared light

| Connection method                    | Sensing distance (white paper) | Output            | Model                   |                                |                                 |
|--------------------------------------|--------------------------------|-------------------|-------------------------|--------------------------------|---------------------------------|
|                                      |                                | IO-Link baud rate | NPN output<br>---       | PNP output<br>COM2 (38.4 kbps) | PNP output<br>COM3 (230.4 kbps) |
| Pre-wired (2 m) <sup>1</sup>         |                                |                   | E3AS-F1500IMN 2M        | E3AS-F1500IMD 2M               | E3AS-F1500IMT 2M                |
| M8 Connector                         |                                |                   | E3AS-F1500IMN M3        | E3AS-F1500IMD M3               | E3AS-F1500IMT M3                |
| M8 Pre-wired Connector               |                                |                   | E3AS-F1500IMN-M3J 0.3M  | E3AS-F1500IMD-M3J 0.3M         | E3AS-F1500IMT-M3J 0.3M          |
| M12 Pre-wired Connector <sup>2</sup> |                                |                   | E3AS-F1500IMN-M1TJ 0.3M | E3AS-F1500IMD-M1TJ 0.3M        | E3AS-F1500IMT-M1TJ 0.3M         |
| Pre-wired (2 m) <sup>1</sup>         |                                |                   | E3AS-F1000IMN 2M        | E3AS-F1000IMD 2M               | E3AS-F1000IMT 2M                |
| M8 Connector                         |                                |                   | E3AS-F1000IMN M3        | E3AS-F1000IMD M3               | E3AS-F1000IMT M3                |
| M8 Pre-wired Connector               |                                |                   | E3AS-F1000IMN-M3J 0.3M  | E3AS-F1000IMD-M3J 0.3M         | E3AS-F1000IMT-M3J 0.3M          |
| M12 Pre-wired Connector <sup>2</sup> |                                |                   | E3AS-F1000IMN-M1TJ 0.3M | E3AS-F1000IMD-M1TJ 0.3M        | E3AS-F1000IMT-M1TJ 0.3M         |

### PBT Body

| Connection method                    | Sensing distance (white paper) | Output            | Model                   |                                |                                 |
|--------------------------------------|--------------------------------|-------------------|-------------------------|--------------------------------|---------------------------------|
|                                      |                                | IO-Link baud rate | NPN output<br>---       | PNP output<br>COM2 (38.4 kbps) | PNP output<br>COM3 (230.4 kbps) |
| Pre-wired (2 m) <sup>1</sup>         |                                |                   | E3AS-F1500IPN 2M        | E3AS-F1500IPD 2M               | E3AS-F1500IPT 2M                |
| M8 Connector                         |                                |                   | E3AS-F1500IPN M3        | E3AS-F1500IPD M3               | E3AS-F1500IPT M3                |
| M8 Pre-wired Connector               |                                |                   | E3AS-F1500IPN-M3J 0.3M  | E3AS-F1500IPD-M3J 0.3M         | E3AS-F1500IPT-M3J 0.3M          |
| M12 Pre-wired Connector <sup>2</sup> |                                |                   | E3AS-F1500IPN-M1TJ 0.3M | E3AS-F1500IPD-M1TJ 0.3M        | E3AS-F1500IPT-M1TJ 0.3M         |
| Pre-wired (2 m) <sup>1</sup>         |                                |                   | E3AS-F1000IPN 2M        | E3AS-F1000IPD 2M               | E3AS-F1000IPT 2M                |
| M8 Connector                         |                                |                   | E3AS-F1000IPN M3        | E3AS-F1000IPD M3               | E3AS-F1000IPT M3                |
| M8 Pre-wired Connector               |                                |                   | E3AS-F1000IPN-M3J 0.3M  | E3AS-F1000IPD-M3J 0.3M         | E3AS-F1000IPT-M3J 0.3M          |
| M12 Pre-wired Connector <sup>2</sup> |                                |                   | E3AS-F1000IPN-M1TJ 0.3M | E3AS-F1000IPD-M1TJ 0.3M        | E3AS-F1000IPT-M1TJ 0.3M         |

1. Models with 5-m cable length are also available with "5M" suffix. (Example: E3AS-F1500IMN 5M/E3AS-F1500IPN 5M)

2. The Pre-wired Connector (M12) is Smartclick Connector.

## E3AS-F Series

### Accessories (Sold Separately)

#### Sensor I/O Connectors (Sockets on One Cable End)

(Models for Connectors / Pre-wired Connectors)

A Sensor I/O Connector is not provided with the Sensor. Order separately.

#### Round Water-resistant Connectors XS3F-M8 series

| Appearance                                                                                                                                                                                                                                  | Cable specification | Cable diameter (mm) | Cable connection direction | Cable length (m) | Sensor I/O Connector model number |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|----------------------------|------------------|-----------------------------------|
| M8 Connector<br><br>Straight type<br><br><br><br>Right-angle type<br><br> | PVC cable           | 5 dia.              | Straight                   | 2                | XS3F-M8PVC4S2M                    |
|                                                                                                                                                                                                                                             |                     |                     |                            | 5                | XS3F-M8PVC4S5M                    |
|                                                                                                                                                                                                                                             |                     |                     | Right-angle                | 2                | XS3F-M8PVC4A2M                    |
|                                                                                                                                                                                                                                             |                     |                     |                            | 5                | XS3F-M8PVC4A5M                    |

**Note:** 1. The XS3W (Socket and Plug on Cable Ends) is also available. Refer to *XS3W-M8/XS3F-M8 Series Datasheet* (Cat. No. G140).

2. The connectors will not rotate after they are connected.

3. The cable is fixed at an angle of 180° from the sensor emitter/receiver surface.

#### Round Water-resistant Connectors XS5 series

| Appearance                                                                                                                                                                                                                                                  | Cable specification | Cable diameter (mm) | Cable connection direction | Cable length (m) | Sensor I/O Connector model number |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|----------------------------|------------------|-----------------------------------|
| M12 Smartclick Connector<br><br>Straight type<br><br><br><br>Right-angle type<br><br> | PVC robot cable     | 6 dia.              | Straight                   | 2                | XS5F-D421-D80-F                   |
|                                                                                                                                                                                                                                                             |                     |                     |                            | 5                | XS5F-D421-G80-F                   |
|                                                                                                                                                                                                                                                             |                     |                     | Right-angle                | 2                | XS5F-D422-D80-F                   |
|                                                                                                                                                                                                                                                             |                     |                     |                            | 5                | XS5F-D422-G80-F                   |

**Note:** 1. The XS5W (Socket and Plug on Cable Ends) is also available. Refer to XS5 on your Omron website for details.

2. The connectors will not rotate after they are connected.

3. The cable is fixed at an angle of 180° from the sensor emitter/receiver surface.