



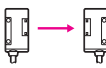
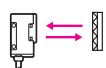
Be sure to read *Safety Precautions* on page 10.



## Ordering Information

### Built-in Amplifier Photoelectric Sensors

Red light  Infrared light

| Sensing method           | Appearance                                                                                        | Connection method | Sensing distance                                                                                       | Functions                                                                                                                                                                                           | Model                                                           |                                                                 |
|--------------------------|---------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
|                          |                                                                                                   |                   |                                                                                                        |                                                                                                                                                                                                     | NPN output                                                      | PNP output                                                      |
| Through-beam Sensors *1  | Horizontal<br> | Pre-wired         |  7 m                | ---                                                                                                                                                                                                 | <b>E3S-AT11 2M</b><br>Emitter E3S-AT11-L<br>Receiver E3S-AT11-D | <b>E3S-AT31 2M</b><br>Emitter E3S-AT31-L<br>Receiver E3S-AT31-D |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        |  Turbo<br> External Diagnosis | <b>E3S-AT21 2M</b><br>Emitter E3S-AT21-L<br>Receiver E3S-AT21-D | <b>E3S-AT41 2M</b><br>Emitter E3S-AT41-L<br>Receiver E3S-AT41-D |
|                          | Vertical<br>   | Pre-wired         |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AT16</b><br>Emitter E3S-AT16-L<br>Receiver E3S-AT16-D    | <b>E3S-AT36</b><br>Emitter E3S-AT36-L<br>Receiver E3S-AT36-D    |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        |  Turbo<br> External Diagnosis | <b>E3S-AT61 2M</b><br>Emitter E3S-AT61-L<br>Receiver E3S-AT61-D | <b>E3S-AT81 2M</b><br>Emitter E3S-AT81-L<br>Receiver E3S-AT81-D |
|                          |                                                                                                   | Pre-wired         |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AT71 2M</b><br>Emitter E3S-AT71-L<br>Receiver E3S-AT71-D | <b>E3S-AT91 2M</b><br>Emitter E3S-AT91-L<br>Receiver E3S-AT91-D |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AT66</b><br>Emitter E3S-AT66-L<br>Receiver E3S-AT66-D    | <b>E3S-AT86</b><br>Emitter E3S-AT86-L<br>Receiver E3S-AT86-D    |
| Retro-reflective Sensors | Horizontal<br> | Pre-wired         |  2 m<br>(100 mm) *2 |  Turbo<br> External Diagnosis | <b>E3S-AR11 2M</b>                                              | <b>E3S-AR31 2M</b>                                              |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AR21 2M</b>                                              | <b>E3S-AR41 2M</b>                                              |
|                          | Vertical<br>   | Pre-wired         |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AR16</b>                                                 | <b>E3S-AR36</b>                                                 |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        |  Turbo<br> External Diagnosis | <b>E3S-AR61 2M</b>                                              | <b>E3S-AR81 2M</b>                                              |
|                          |                                                                                                   | Pre-wired         |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AR71 2M</b>                                              | <b>E3S-AR91 2M</b>                                              |
|                          |                                                                                                   | Connector (M12)   |                                                                                                        | ---                                                                                                                                                                                                 | <b>E3S-AR66</b>                                                 | <b>E3S-AR86</b>                                                 |

\*1. Through-beam Sensors are normally sold in sets that include both the Emitter and Receiver. Orders for individual Emitters and Receivers are accepted.

\*2. Values in brackets are the minimum required distance between the Sensor and Reflector.

| Sensing method             | Appearance                                                                                      | Connection method | Sensing distance   | Functions                                                                                                                                                            | Model       |             |
|----------------------------|-------------------------------------------------------------------------------------------------|-------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|
|                            |                                                                                                 |                   |                    |                                                                                                                                                                      | NPN output  | PNP output  |
| Diffuse-reflective Sensors | Horizontal<br> | Pre-wired         | 100 mm (wide view) | ---                                                                                                                                                                  | E3S-AD13 2M | E3S-AD33 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD23 2M | E3S-AD43 2M |
|                            |                                                                                                 |                   | 200 mm             | ---                                                                                                                                                                  | E3S-AD11 2M | E3S-AD31 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD21 2M | E3S-AD41 2M |
|                            |                                                                                                 |                   | 700 mm             | ---                                                                                                                                                                  | E3S-AD12 2M | E3S-AD32 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD22 2M | E3S-AD42 2M |
|                            |                                                                                                 | Connector (M12)   | 100 mm (wide view) | ---                                                                                                                                                                  | E3S-AD18    | E3S-AD38    |
|                            |                                                                                                 |                   | 200 mm             |                                                                                                                                                                      | E3S-AD16    | E3S-AD36    |
|                            |                                                                                                 |                   | 700 mm             |                                                                                                                                                                      | E3S-AD17    | E3S-AD37    |
|                            | Vertical<br>   | Pre-wired         | 100 mm (wide view) | ---                                                                                                                                                                  | E3S-AD63 2M | E3S-AD83 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD73 2M | E3S-AD93 2M |
|                            |                                                                                                 |                   | 200 mm             | ---                                                                                                                                                                  | E3S-AD61 2M | E3S-AD81 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD71 2M | E3S-AD91 2M |
|                            |                                                                                                 |                   | 700 mm             | ---                                                                                                                                                                  | E3S-AD62 2M | E3S-AD82 2M |
|                            |                                                                                                 |                   |                    |   | E3S-AD72 2M | E3S-AD92 2M |
|                            |                                                                                                 | Connector (M12)   | 100 mm (wide view) | ---                                                                                                                                                                  | E3S-AD68    | E3S-AD88    |
|                            |                                                                                                 |                   | 200 mm             |                                                                                                                                                                      | E3S-AD66    | E3S-AD86    |
|                            |                                                                                                 |                   | 700 mm             |                                                                                                                                                                      | E3S-AD67    | E3S-AD87    |

### Accessories (Order Separately)

#### Insert-type Long Slit

| Name      | Slit width       | Sensing distance | Minimum sensing object (typical) | Model   | Quantity                                       | Remarks                             |
|-----------|------------------|------------------|----------------------------------|---------|------------------------------------------------|-------------------------------------|
| Slits     | 0.5 mm × 11.1 mm | 500 mm           | 0.2-mm dia.                      | E39-S46 | 1 of each for Emitter/Receiver (4 Slits total) | Slits can be used with the E3S-AT□□ |
|           | 1 mm × 11.1 mm   | 1.1 m            | 0.4-mm dia.                      |         | 1 of each for Emitter/Receiver (2 Slits total) | Through-beam Sensor. → Page 10      |
| Supporter | 2 mm × 13.6 mm   | 2.5 m            | 0.8-mm dia.                      |         |                                                |                                     |

#### Mutual Interference Prevention Filters

| Sensing distance | Model  | Quantity                                         | Remarks                                                      |
|------------------|--------|--------------------------------------------------|--------------------------------------------------------------|
| 2.4 m            | E39-E6 | 2 of each for Emitter/Receiver (4 Filters total) | Can be used with the E3S-AT□□ Through-beam Sensor. → Page 11 |

#### Reflectors/Other Accessories

| Name                                | Sensing distance (typical)      | Model   | Quantity | Remarks                                                          |
|-------------------------------------|---------------------------------|---------|----------|------------------------------------------------------------------|
| Reflectors                          | 2 m (100 mm) *<br>(rated value) | E39-R1  | 1        | Provided with E3S-AR□□ Retro-reflective Sensor.                  |
| Small Reflectors                    | 1.3 m (100 mm) *                | E39-R3  | 1        | ---                                                              |
|                                     | 600 mm (70 mm) *                | E39-R4  | 1        | ---                                                              |
| Tape Reflectors                     | 450 mm (100 mm) *               | E39-RS1 | 1        | Enables MSR function.                                            |
|                                     | 700 mm (100 mm) *               | E39-RS2 | 1        |                                                                  |
|                                     | 900 mm (100 mm) *               | E39-RS3 | 1        |                                                                  |
| Optical Axis Confirmation Reflector | ---                             | E39-R5  | 1        | Used to check optical axis for the E3S-AT□□ Through-beam Sensor. |

Note: When using any Reflector other than the provided one, use a sensing distance of approximately 0.7 times the typical value as a guide.

\* Values in brackets are the minimum required distance between the Sensor and Reflector.