E3ZM Stainless Steel Photoelectric Sensors

- Outstanding durability and resistance to detergents and chemical wash-down
- Reduces your maintenance and replacement costs
The World’s First SUS316L Case Of This Size

Only 10.8 mm wide and 32.2 mm tall, the E3ZM has the same compact housing as E3Z and is ideally suited for installation in narrow spaces.

It comes in a world standard size and also offers a variety of mounting options and brackets, which makes it easy to use anywhere along the production line.

Shape And Markings Designed For Greater Hygiene

Due to the fewer indentations in the shape, E3ZM collects less dust and water and therefore is more hygienic.

No labels have been used in order to prevent foreign matter contaminating food products.

The E3ZM model and lot numbers are imprinted on the rear side of the sensor with a laser marker.

200 Times More Durable Than Plastic Photoelectric Sensors

Protected by a corrosion and chemical resistant SUS316L stainless steel casing, E3ZM is capable to withstand even environments where most photoelectric sensors frequently fail - such as high-temperature, high pressure jet water spray cleaning applications, typical for food processing machinery.

• Intensive testing proved that E3ZM is over 200 times MORE DURABLE than most plastic sensors.
• Its superior protective structure is IP69K compliant.

(The IP69K industrial standard means: high-pressure wash-down: 1600 – 1450PSI; 176°F water temperature; spray distance is 100 to 150 mm; duration is 2 minutes)

Undisputed Washdown Winner

While most plastic sensors fail after just one month exposed to caustic washdown chemicals, the E3ZM sensor series endures high-pressure chemical washdown 200 times longer.

E3ZM features tested resistance against the detergents commonly used in the food industry:
• Alkaline cleaner with sodium hydroxide (NaOH)
• Acid cleaner with phosphoric acid (H3PO4)
• Chlorinated disinfectant with hypochlorite (TEK-121)
• Disinfectant with hydrogen peroxide

The World’s Most Reliable Sensor Family

E3ZM, the new family of photoelectric sensors from Omron, sets a new standard for durability and reliable performance in the most harsh manufacturing environments.

Proven in intensive testing, this sensor family has unique characteristics, unsurpassed in the automation industry.

• The world’s first detergent-resistant photoelectric sensor
• The world’s most compact square metal photoelectric sensor
• Unmatched resistance to corrosive, chemical, detergent*, and disinfectant environments

*Detergent and chemical resistance is certified by Henkel-Ecolab.

The Most Compact Square Metal Sensor In The World

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Reliability Inherited From The E3Z

The new E3ZM family continues the tradition of the E3Z – the trusted photoelectric sensor series that set the standard for compact housing and reliable performance.

Now the E3ZM elevates the reputation of its predecessor to a new, higher level. The compact size, stable detection, and range of various models, upgraded with the SUS316L stainless steel casing, provide a package that outperforms any equivalent sensor on the market.

But that’s not all. All the environment-friendly features of the E3Z, such as energy-saving and resource-saving, are carried on to the E3ZM as well. That’s why in the new series you’ll find:

- Low-power circuit design
- Polyethylene packaging that can be incinerated as general waste
- Immunity to external light and noise

BGS Reflective Models

The E3ZM family features three models with different fixed sensitivity (rated sensing distances). They cover the sensing ranges of the E3Z-L61.

Through-beam Inner Aperture Models

Fine beam without attaching an external slit. This eliminates malfunctions from residual water drops, even immediately after washing.

Superior Performance And Total Reliability In The Most Harsh Factory Floor Environments

Detergent-resistant, hygienic, and extremely durable, E3ZM is engineered to endure the harsh factory floor environments of numerous industries and applications:

- Meat, fish and poultry processing
- Soda and fruit juice processing
- Dairy processing
- Food handling and packaging
- Pharmaceutical equipment

E3ZM’s superior performance is guaranteed by every component of its cutting-edge structural design. All materials are carefully selected to provide the maximum durability and resistance in IP69K compliant environments.

A Variety Of Models To Fit Any Application

Ideal Solution For The Food And Beverage Industry

A Perfect Fit For Numerous Applications:
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100 mm
150 mm
200 mm

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A Perfect Fit For Numerous Applications:

Ideal Solution For The Food And Beverage Industry

Meat slicing and similar processing

Wrapping raw food products

Weighing raw food products

A Variety Of Models To Fit Any Application
### Sensors

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Connection method</th>
<th>Sensing distance</th>
<th>NPN output</th>
<th>PNP output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through-beam</td>
<td>Pre-wired (2 m)</td>
<td>1.5 m</td>
<td>E3ZM-T61</td>
<td>E3ZM-T61</td>
</tr>
<tr>
<td></td>
<td>Connector (M8, 4 pins)</td>
<td>0.8 m (built-in)</td>
<td>E3ZM-T66</td>
<td>E3ZM-T66</td>
</tr>
<tr>
<td></td>
<td>Pre-wired (2 m)</td>
<td>Using E3ZM-R15</td>
<td>0.8 m (built-in)</td>
<td>E3ZM-T67</td>
</tr>
<tr>
<td></td>
<td>Connector (M8, 4 pins)</td>
<td>2 m (100 mm)</td>
<td>E3ZM-R66</td>
<td>E3ZM-R66</td>
</tr>
<tr>
<td>Retro-reflective with MSR function</td>
<td>Pre-wired (2 m)</td>
<td>1 m</td>
<td>E3ZM-D62</td>
<td>E3ZM-D62</td>
</tr>
<tr>
<td></td>
<td>Connector (M8, 4 pins)</td>
<td></td>
<td>E3ZM-D67</td>
<td>E3ZM-D67</td>
</tr>
<tr>
<td></td>
<td>Pre-wired (2 m)</td>
<td>10 to 100 mm</td>
<td>E3ZM-L61H</td>
<td>E3ZM-L61H</td>
</tr>
<tr>
<td></td>
<td>Connector (M8, 4 pins)</td>
<td>10 to 150 mm</td>
<td>E3ZM-L62H</td>
<td>E3ZM-L62H</td>
</tr>
<tr>
<td></td>
<td>Pre-wired (2 m)</td>
<td>10 to 200 mm</td>
<td>E3ZM-L64H</td>
<td>E3ZM-L64H</td>
</tr>
</tbody>
</table>

### Reflectors

<table>
<thead>
<tr>
<th>Name</th>
<th>Sensing distance (typical)*</th>
<th>Model</th>
<th>Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflector</td>
<td>3 m (100 mm) (rated value)</td>
<td>E39-R1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 m (100 mm) (rated value)</td>
<td>E39-R1S</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 m (100 mm)</td>
<td>E39-R2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5 m (100 mm)</td>
<td>E39-R9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.5 m (100 mm)</td>
<td>E39-R10</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 m (100 mm) (rated value)</td>
<td>E39-R1K</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5 m (50 mm)</td>
<td>E39-R3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>700 mm (150 mm)</td>
<td>E39-R51</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.1 m (150 mm)</td>
<td>E39-R52</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.4 m (150 mm)</td>
<td>E39-R53</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories

#### Connector Cables

<table>
<thead>
<tr>
<th>Compatible Sensor</th>
<th>Connector Size</th>
<th>Cable Type</th>
<th>Enclosure Rating</th>
<th>Connector Shape</th>
<th>Cable Length</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3ZM-□□□□□□□□□</td>
<td>M8</td>
<td>Four-wire</td>
<td>IP69K</td>
<td>Straight</td>
<td>2m</td>
<td>Y96E-M843D2S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y96E-M843D5S</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IP67</td>
<td>Right angle</td>
<td>2m</td>
<td>Y96E-M843R2S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y96E-M843R5S</td>
</tr>
</tbody>
</table>

#### Mounting Brackets

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Model</th>
<th>Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E39-L153</td>
<td>1</td>
<td>Metal Protective Cover Bracket*</td>
</tr>
<tr>
<td></td>
<td>E39-L86</td>
<td>1</td>
<td>(Sensor adjuster) Easily mounted to the aluminum frame rails of conveyors and easily adjusted. For left to right adjustment</td>
</tr>
<tr>
<td></td>
<td>E39-L194</td>
<td>1</td>
<td>Compact Protective Cover Bracket*</td>
</tr>
</tbody>
</table>

Note: *When using Through-beam Models, order one bracket for the Receiver and one for the Emitter. *Cannot be used for Standard Connector models.
### Ordering Information

#### Sensors

<table>
<thead>
<tr>
<th>Appearance Model</th>
<th>Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>E39-L153</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L98</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L150</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L104</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L43</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L151</td>
<td>1 set</td>
<td></td>
</tr>
</tbody>
</table>

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<td>1</td>
<td></td>
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<tr>
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<td>E39-R2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.5 m (100 mm)</td>
<td>E39-R9</td>
<td>1</td>
<td></td>
</tr>
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</table>

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</thead>
<tbody>
<tr>
<td>E39-L153</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E39-L150</td>
<td>1 set</td>
<td>(Sensor adjuster) Easily mounted to the aluminum frame rails of conveyors and easily adjusted. For left to left adjustment</td>
</tr>
<tr>
<td>E39-L151</td>
<td>1 set</td>
<td></td>
</tr>
<tr>
<td>E39-L144</td>
<td>1</td>
<td>Compact Protective Cover Bracket*</td>
</tr>
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<td>E3ZM</td>
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<td>IP67</td>
<td>Straight</td>
<td>2m</td>
<td>Y96E-M843RD2S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Right angle</td>
<td>2m</td>
<td>Y96E-M843RD5S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5m</td>
<td>Y96E-M843RD5S</td>
</tr>
</tbody>
</table>

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*1. The Reflector is sold separately. Select the Reflector model suited to the application.

*2. Values in parentheses indicate the minimum required distance between the Sensor and Reflector.

*3. Pre-wired Models with a 5-m cable are also available for these products. When ordering, specify the cable length by adding “5M” to the end of the model number (e.g., E3ZM-R5150M).

*4. M12 Connector Models are also available with three-pin connectors. When ordering, add “-M12” to the end of the model number (e.g., E3ZM-T66-M12). This does not apply to BGS Reflective Models, however, because they require 4 pins.

*5. Through-beam Models are also available with a light emission stop function. When ordering, add “-G0” to the end of the model number (e.g., E3ZM-T61-G0).
Our Commitment To You.

At Omron we embrace Continuous Improvement™ in every aspect of our business. It guides how we deliver smart solutions for your competitive advantage in plant floor productivity.

As one of the industry’s leading innovators, Omron constantly develops and launches new, integrated solutions that are designed to make machine automation easy.

For your peace of mind, all Omron products are backed up with Service Plus™ – our unique blend of customer service, training, technical and application support.

Please feel free to inquire for more information on our advanced automation solutions and request free copies of our product literature.

Contact Us Today and Let Us Bring Continuous Improvement™ To Your Production Line.

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