

E3Z PHOTOELECTRIC SENSORS

For machines that never stop



» Perfect for every environment

» Proven performance

» Unmatched reliability

Millions installed - millions relied upon in Industrial Automation

*With more than a million units sold each year,
the E3Z is among the world's most popular
and successful photoelectric sensor families.*

*And the family is still expanding to meet
growing demands from our customers in both
general purpose and specialist application
areas. You have an even wider choice
of sensors to meet the requirement of your
machines in materials handling & logistics,
food packaging, beverage bottling
or automotive applications.*

**Let the E3Z guide you - installed in airports
and metro stations worldwide.**

Also outside the industrial
Automation field the E3Z is first
choice for applications where day
by day millions of suitcases, bags or
passengers need to be detected.

Renowned for its reliability, you
will find the E3Z in access gates for
metros and airport baggage handling
systems in major cities worldwide.



E3Z - General Purpose


E3Z - Condition monitoring

E3Z - Laser

E3ZM- Stainless Steel

E3ZM- B PET sensor

E3ZM- V Mark sensor



What E3Z can do for you

- Proven stable operation...
...in changing environments
...long beyond life expectancy
...wherever your machines go
- Simplified machine design - every functionality in one housing format
- Best price/performance ratio - designed for mass production



E3Z Condition Monitoring Reduces total cost of ownership

Even the most reliable sensor can malfunction if misaligned, covered with dirt, or if cables are cut or broken. The E3Z condition monitoring series features active or passive sensor function checking and can detect malfunctions, simplifying the repair and minimizing machine downtime. Combine this sensor with Omron's Smart Slice I/O or PLCs and your machine will never fail!



E3Z General Purpose Reliable, accurate and easy to use

The E3Z General Purpose series is the perfect choice for the majority of photo-sensing applications. Its integrated and highly sensitive photo-IC, together with the automated alignment of all optical parts, results in uncompromising performance. Moreover, the series offers full flexibility with regard to mounting and connection.



E3Z sensors redefine reliability

Nothing can stop E3Z sensors because they are designed to beat whatever comes their way. For example, advanced pulse synchronization ensures continuous operation even in changing light conditions, such as artificial light and bright backgrounds. Intensive shielding prevents malfunctions due to inverter noise or wireless communications equipment. And a precision optical system with high-power LED minimizes the risk of malfunctions due to dirt or misalignment.



E3Z Laser

Ideal for precision applications

The E3Z Laser series features visible laser light for precision positioning and detection of even small objects. The high-power laser diode of the Class 1 red laser ensures a high functional reserve, while precise background suppression and low black/white error ensures accurate detection. Beam axis deviation is minimized by OMRON's unique high-precision alignment technology.



E3Z-B

The standard for bottle detection

The E3Z-B series provides simple and reliable detection of commonly used bottles or transparent objects. The LED power has been optimized for transparent PET bottles but the series provides easy adjustment by potentiometer for detecting a large variety of transparent standard objects either individually or in sets.



E3Z	E3Z Laser	E3Z-[]G	E3Z-[]J	E3Z-B
Standard object detection	Precision positioning and detection	Object detection and sensor condition monitoring	Object detection and sensor condition monitoring	Transparent bottle Detection

E3ZM - reliability and cost efficiency in stainless steel

In hygienic or harsh environments, stainless steel is the material of choice. Thanks to a new moulding technology, OMRON has made sensors with stainless-steel housings available to a broader market. With an extended sensor lifetime of up to 20 times or more compared to other plastic or metal housing sensors, the E3ZM series reduces machine downtime and service costs due to sensor malfunctions caused by aggressive agents, high-pressure washdown or mechanical damage.



Stainless-steel



E3ZM-B Enhanced PET bottle detection stability

The innovative technology of the E3ZM-B uses the polarizing effect of PET materials to achieve a higher signal margin. This ensures stable operation compensating for influences by temperature drift, bottle thickness or shape.



ECOLAB

E3ZM Sensor with stainless-steel housing

The E3ZM series has a high-grade, detergent-resistant, SUS316L stainless-steel housing manufactured by a special metal-injection-moulding process. Compact and with a high-power LED that gives an excellent performance-to-size ratio, the series is both rugged and highly suited to operation in the most demanding environments where hygiene and resistance to corrosion and wear are of paramount importance.

E3ZM	E3ZM-C	E3ZM-V	E3ZM-B
<p>Object detection in harsh environments</p>	<p>Object detection with enhanced oil resistance</p>	<p>Print-mark detection</p>	<p>PET bottle detection</p>

What E3ZM can do for you

- Longer sensor lifetime in harsh environments
- Higher protection against mechanical damage
- Cost-efficient integration into stainless-steel machine design



E3ZM-V

For reliable mark detection

The E3ZM-V series provides reliable detection of all common print marks in food packaging applications. This series features a white LED for stable detection of print marks with different colours and has an easy-to-use teach-in button or remote teach.



E3ZM-C

For enhanced oil-resistance

The E3ZM-C is an oil-resistant sensor in a stainless-steel housing that also offers the highest water resistance. Highly recommended for use in dirty and mechanically demanding environments, such as automotive assembly lines, it has an enhanced functional reserve and offers reliable detection under all circumstances. The high-visibility orange LED in the through-beam model ensures easy alignment.



Harshest conditions



Sensor condition monitoring



Electromagnetic noise immunity



Tight housing



High ambient light immunity



Robust construction

Long and reliable operation guaranteed



The E3Z family, like all Omron products, is manufactured to exceptionally high engineering standards that far exceed even the most stringent of today's international standards. Whatever the application or environment, you can take their reliability for granted.

- Rugged, water-resistant housings meet stringent ingress protection standards, such as IP67 and the even more demanding IP69K.
- High immunity to electromagnetic interference guarantees unaffected operation when exposed to stray local fields.
- Advanced circuit design gives outstanding stability under all operating conditions worldwide - even in floating-ground conditions.

Moreover, stringent quality-control procedures during manufacture ensure the exceptionally high levels of quality for which Omron is renowned. As a result, the return rate of our E3Z family is exceptionally low. This lowers both commissioning costs for new industrial installations and maintenance costs during operational life.

For more details and information about our complete portfolio, please contact your nearest Omron representative or visit www.omron-industrial.com/E3Z



Unbeatable connectivity	Application-specific models
<p>All sensors in the E3Z family have a wide connection range. Models include pre-wired, connector versions (M8 4-pin) or pigtail versions (M8 or M12 connectors).</p> 	<p>The E3Z range includes models that provide a solution for specific applications. The sensors have special features, such as extra-wide beams or anti-tampering.</p> 

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