

Panasonic

NEW

Amplifier Built-in
Ultra-minute Photoelectric Sensor

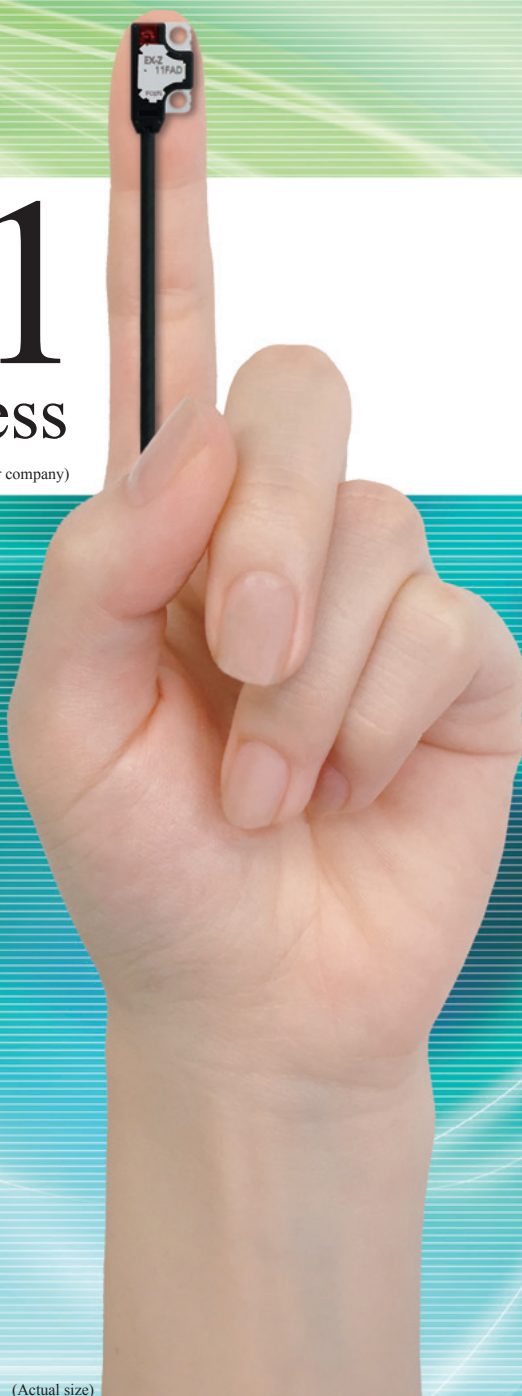
EX-Z SERIES

CE
Conforming to
EMC Directive

UL
US
Recognition

The World's **No. 1**
in Compactness

* Among photoelectric sensors with built-in amplifier, as of June 2015 (survey by our company)



(Actual size)

EX-Z SERIES

Ultra-minute Photoelectric Sensor **Amplifier Built-in**

The World's Smallest* Size

* Among photoelectric sensors with built-in amplifier, as of June 2015 (survey by our company)

Unit volume ratio reduced by about 50%*

* As compared to EX-10 series

The world's thinnest* sensor dimension of 3 mm **0.118 in** has been achieved by utilizing new semiconductor packaging technology that does not use wire bonding. The small unit size allows installation of sensors in a narrow space where only a conventional fiber sensor head could be installed before. The built-in amplifier also saves on installation space.

* Among photoelectric sensors with built-in amplifier, as of June 2015 (survey by our company)

EX-Z13□

Sensing range: 500 mm **19.685 in**
Repeatability: 0.05 mm **0.002 in** or less
Minimum sensing object:
ø1.0 mm **ø0.039 in** opaque object

EX-Z12□

Sensing range: 200 mm **7.874 in**
Repeatability: 0.03 mm **0.001 in** or less
Minimum sensing object:
ø0.5 mm **ø0.020 in** opaque object

EX-Z11□

Sensing range: 50 mm **1.969 in**
Repeatability: 0.02 mm **0.001 in** or less
Minimum sensing object:
ø0.3 mm **ø0.012 in** opaque object

Front sensing type

Approx.
50% smaller
in volume ratio
than EX-10

EX-Z1□F□

W8 × H14 × D3 mm
W0.315 × H0.551 × D0.118 in

Side sensing type

Approx.
35% smaller
in volume ratio
than EX-10

EX-Z1□

W5.5 × H15.9 × D6.5 mm
W0.217 × H0.626 × D0.256 in

Small-object sensing capability

Capable of sensing an extremely small ø0.3 mm **ø0.012 in** object without slit **EX-Z11□**

A slit is provided on the front side of the main sensor body. The sensor can detect a ø0.3 mm **ø0.012 in** object (the smallest-object sensing capability in the industry*) without using an optional slit.

* Among photoelectric sensors with built-in amplifier, as of June 2015 (survey by our company)



Built-in slit
EX-Z11□
Slit diameter: 0.3 mm **0.012 in**

Sensing of end of thin pipe

Capability to sense a small ø1.0 mm **ø0.039 in** object over long distance **EX-Z13□**

The high-brightness 4-element red LED provides strong light emission stably over a long period of time. In spite of the extremely small size, both front sensing and side sensing units can sense a small ø1.0 mm **ø0.039 in** object from a long distance of 500 mm **19.685 in**. Since the spotlight is clearly visible, the sensing position can be easily confirmed.

Clearly
visible
spotlight

