

## Smart Sensors Inductive Displacement Type ZX Series

# Smart Sensor Series

Smart Sensors: Linear Laser Type  
ZX-L Series



Broader Range, Even Smarter

Smart Sensors: High-precision Contact Type  
ZX-T Series



Contact Types for High-Precision Measurement

For details, look here.

<http://www.fa.omron.co.jp/product/sensor/>

(Available only in Japanese now)

### OMRON Corporation Industrial Automation Company

Sensing Devices Division H.Q.  
Application Sensors Division  
Shiokoji Horikawa, Shimogyo-ku,  
Kyoto, 600-8530 Japan  
Tel: (81)75-344-7068/Fax: (81)75-344-7107

### Regional Headquarters

**OMRON EUROPE B.V.**  
Sensor Business Unit,  
Carl-Benz-Str. 4, D-71154 Nufringen,  
Germany  
Tel: (49)7032-811-0/Fax: (49)7032-811-199

**OMRON ELECTRONICS LLC**  
1 East Commerce Drive, Schaumburg, IL 60173  
U.S.A.  
Tel: (1)847-843-7900/Fax: (1)847-843-8568

**OMRON ASIA PACIFIC PTE. LTD.**  
83 Clemenceau Avenue,  
#11-01, UE Square,  
239920 Singapore  
Tel: (65)6835-3011/Fax: (65)6835-2711

**OMRON (CHINA) CO., LTD.**  
Room 2211, Bank of China Tower,  
200 Yin Cheng Road (M),  
Shanghai, 200120 China  
Tel: (86)21-5037-2222/Fax: (86)21-5037-2200

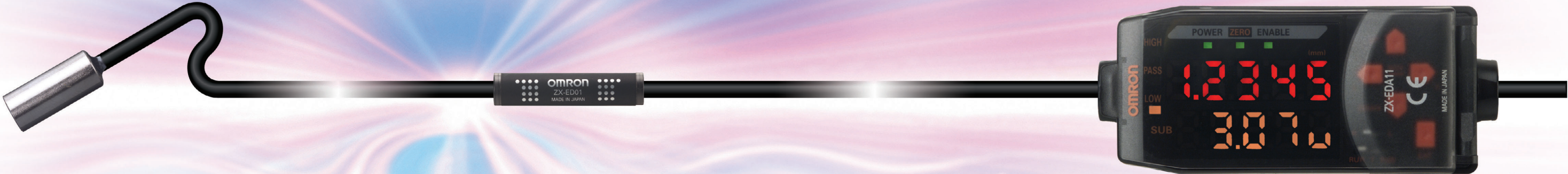
This document provides information mainly for selecting suitable models.  
Please read the Instruction Sheet or Manual for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

Authorized Distributor:

## New Smart Sensors with Eddy Current Method Now Available in Flat and Heat-resistive Types!



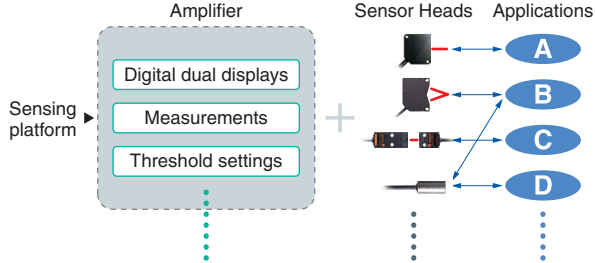
# New Inductive Displacement Sensors for Even More Applications



## The Concept behind Smart Sensors

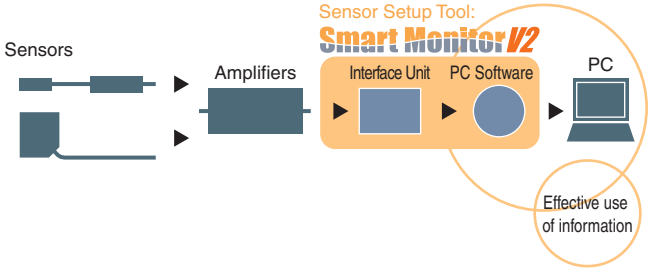
### Smart

A host of remarkable functions inside a compact body. OMRON's sensing platform meets a wide range of diverse applications with a wide selection of heads employing different detection methods.



### Stylish

The ZX-series Sensor Setup Tool, SmartMonitor V2, enables connecting to a personal computer (PC). A new style for digital sensing.



### Tough and Compact for a Wide Variety of Applications

Series Expanded to Include Flat Types and Heat-resistive Types that Can Tolerate 200°C



**Smart Sensors**  
Inductive Displacement Type ZX Series

# Applications with Smart Style!

Functions to Support a Wide Variety of Applications

Minute Gap Detection

**Delay Hold**  
(One-shot)  
Starts sampling after a specified time delay from the timing signal to obtain a stable sampling point. Can be used to avoid bounding during machine startup.

**Previous Value Comparison**  
(Long time)  
Gradual changes in measurements due to machine temperature changes or other factors can be ignored and only sudden changes detected and judged.

Height and Step Detection

**Automatic Teaching**  
When automatic teaching is executed, the maximum and minimum values for the sensing object are measured and displayed on the Amplifier Unit. Automatic teaching is useful when there is no standard sensing object.

**Average Hold**  
When the average hold function is executed, the average value for the sampling period is calculated and displayed on the Amplifier Unit. The average hold function is useful for when the surface of the sensing object is not uniform.

Vibration and Surface Movement Measurements

**Peak-to-peak Hold**  
Measures the difference between the maximum and minimum values during the sampling time and displays it on the Amplifier Unit. The peak-to-peak hold function enables easy measurement of surface movement and eccentricity.

Heat Resistance

**Resists 200°C**  
Achieves temperature characteristics of 0.1%FS/°C. Can be used to detect the solder level of solder baths for precision products.

## Variations for Smart Style!

Various Sensor Heads for All Applications

**More Efficient Maintenance**  
Complete Compatibility between Sensor Heads and Amplifier Units  
The Amplifier Unit can be used as is when replacing damaged Sensor Heads or changing the Sensor Head for a differential measurement distance.

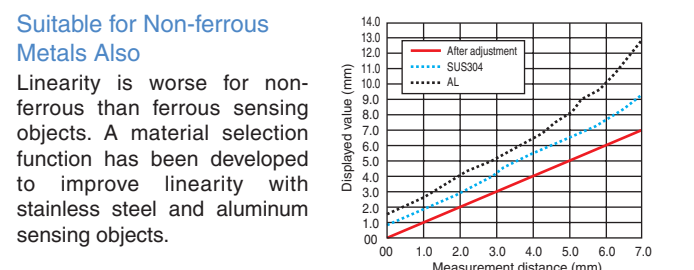
**Wide Selection of Sensor Heads**  
Flat and Heat-resistant Types Added to Series  
Suitable for applications with limited space for installation or requiring heat resistance.

Models with stainless steel Protective Spiral Tubes are also available.

Sensor Head Cords Extensible to 10 m  
The distance between the Amplifier Units and Sensor Heads can be extended to 10 m by using a ZX-XC□A Cable (sold separately).

### Complete Range of Useful Functions

**Simple Linearity Adjustment** Patent Pending  
Adjustments using the adjustment knob are no longer required to adjust linearity. Linearity adjustment is completed simply by teaching at 0%, 50%, and 100% of the measurement distance, greatly reducing setting time.



### Sensor Setup Tool Smart Monitor V2 for ZX-series Smart Sensors

SmartMonitor V2 is the latest version of the Smart Monitor and is capable of making settings and logging data for ZX-L-series and ZX-E-series Sensors.

**Data Logging and Waveform Display**  
Logs detected data. Also displays data in waveform during logging.

**Sensor Settings**  
Settings difficult to make on the Amplifier can be made simply while browsing the function menus.

**Waveform Monitoring**  
Waveforms can be easily monitored and threshold values can be set just by dragging and dropping.

**One-shot Waveform**  
High-speed waveforms can be obtained and displayed in one-shot operation.

**Easy Resolution Display** Patent Pending  
The resolution can be displayed simply by detecting the workpiece to be tested. It is easy to learn the margin for threshold values with this resolution display, allowing accurate judgements about whether detection is possible.

**Calculation Settings without Digital Panel Data** Patent Pending  
The calculation results from two Sensors can be displayed on the Amplifier for one Sensor simply by placing a Calculating Unit between the Amplifier Units. The required parameters need to be input only into one Amplifier Unit.

## Advance to Smart Style!

Advanced Functions for Any Application

**Mutual Interference Prevented for up to 5 Sensors**  
Multiple Sensors may be used in confined spaces for gap measurements or multiple-point measurements. Mutual interference between up to 5 Sensors can be prevented simply by connecting Calculating Units to eliminate the need for timing signals on the user side.

## Success with Smart Style!

Advanced functions made simple. That is the essence of Smart Style.