

# DC 3-Wire/DC 2-Wire Welding Proximity Sensors

E2EW Series

INTEGRATED | INTELLIGENT | INTERACTIVE

- Exceptional sensing range\*
- Stable detection for both aluminum and iron
- 7mm full metal body†
- M12 quadruple distance models



\*Based on September 2021  
OMRON investigation.

† Equivalent sensing  
distances for iron and  
aluminum.

# Exceptional sensing range

## Equal sensing distances for iron and aluminum



- Standardize on a single sensor for iron and aluminum detection
- Reduced design work and enhance operation rates
- Reduce false detection and sensor damage with exceptional sensing distance
- Detect iron and aluminum stably in weld environments

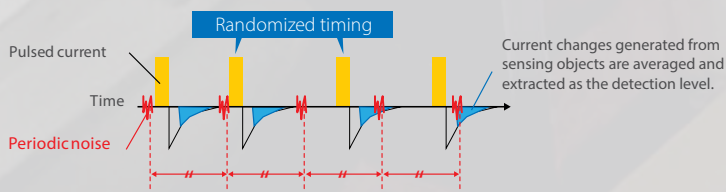


### A unique Omron technology provides equally long sensing distances for both iron and aluminum

E2EW Proximity Sensors are equipped with a unique technology for suppressing noise influence as well as the PRD\* technology. Together they reduce the influence of noise, extending the sensing distance. Furthermore, equally long distance detection for iron and aluminum is possible by adjusting the timing and time to detect current changes of sensing objects.

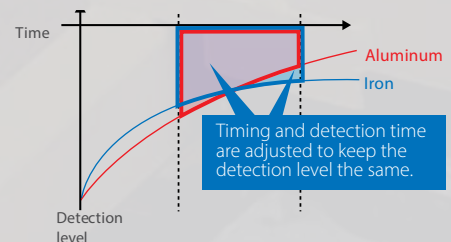
#### Technology for suppressing noise influence

Random timing of pulsed current reduces the periodic noise effect on the detection signals.



\*PRD (Pulse Response Detection) is a technology to detect current changes of sensing objects when pulsed currents are applied to coils.

#### Long sensing distances for both iron and aluminum



# Long-lasting spatter resistance

Lasts 60 times longer than previous Omron models



Click to see  
our current models

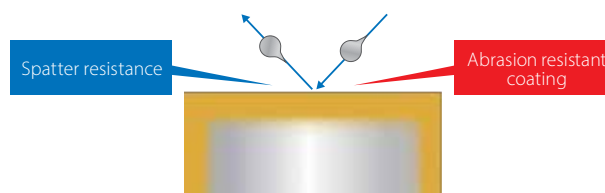


## Technologies for increasing spatter resistance



Click to watch our  
spatter resistance video

Omron has developed a better adhering, longer lasting coating to reduce the effect of abrasion on the protective coating and extend sensor life span.

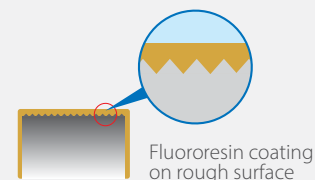
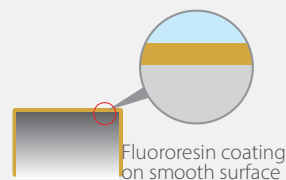


### Technologies to prevent coating abrasion

Omron's unique coating film formation technologies coupled with a specially treated base surface greatly reduces abrasion, to approximately 1/60 of previous models.

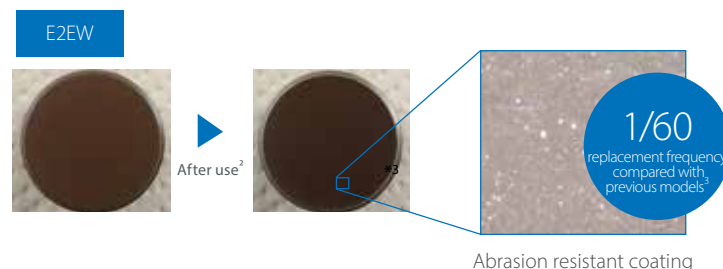
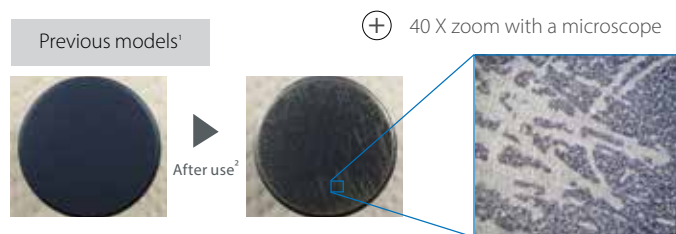
Previous models

E2EW



## Fewer sensor replacements needed

Abrasion resistant coating reduces maintenance work





# Clear status visualization

## Detection level visualization with IO-Link



## Detection level visualization

A real-time view of how the proximity sensors are detecting objects provides understanding of everyday changes in facility conditions that may not be visible to the naked eye.

\*PREMIUM Models only

### ■ Application example: Maintenance management based on spatter accumulation

Weld spatter can cause proximity sensors to malfunction.  
Monitoring detection level changes can allow for  
timely maintenance.

