Proximity Sensors
Non-Contact Detection of Ferrous or Non-Ferrous Targets

- Inductive or Capacitive Sensors
- Special Application Models for Harsh Environments
- Cylindrical, Compact Square, and Miniature Housing Options
Proximity Sensors for Every Application

Omron is a pioneer in proximity sensors with over 50 years of factory automation experience. In 1960, Omron developed the first solid state proximity switch in the world. Since then, Omron has sold more than 200 million proximity sensors.

Omron’s proximity sensors are designed and tested to ensure a long service life and achieve maximum machine availability even in the harshest environments.

Proximity sensors provide solutions in:
- General Purpose Sensing
- Robotics
- Sensing for Packaging
- Chemical Washdown Environments
- Oil Resistant Sensing
- Automotive and Machine Tool

Key Features:
- Proximity Types: Inductive & Capacitive
- Shapes: Cylindrical, Compact Square, & Miniature Cylindrical
- Environments: Standard, Wash Down, Chemical, Oil, Welding
- DC 2-wire, DC 3-Wire, DC 4-wire (NO+NC), AC
- Pre-wired or Connector Cord Set Style

Unrivaled Detection in a Wide Range of Applications

Positioning at the welding site
Detect broken drill bits
Long distance detection of aluminum
Accurately detect mold mating
Detect instruction sheets inside paper boxes
Detect liquid inside cartons
Cylindrical Inductive

E2B Standard Environment DC 3-Wire
- Popular applications: Material handling, Conveying, Machine tools
- All-around 360° visible output indicator
- Laser-etched part numbers that do not wear off
- M8 - M30 sizes, Single or Double sensing distances, Short or Long body
- IP67 water resistance and -25°– 70°C temperature rating

E2E Standard Cylindrical DC 2-Wire, DC 3-Wire, and AC Proximity Sensors
- Popular applications: Automotive, Food/Beverage, and Packaging Industries
- DC 2-wire, DC 3-wire, AC/DC 2-wire, and AC 2-wire versions available
- Thick nickel-plated brass (NPB) barrel
- Wrench flats for easy installation
- Solid potted internal circuitry withstands shocks
- Flush mountable shielded versions
- Built-in circuit protection
- Sensor mounting and protective accessories, see Y92E
- IP67 and IP69K water resistance and -40°– 85°C temperature rating

E2A Increased Sensing Range DC Inductive
- Popular applications: Food/Beverage, Bottling, and Packaging Industries
- DC 3-wire, DC 4-wire (NO+NC)
- Extended (double) sensing distance
- Standard or Long body length
- Wide installation and connectivity range through modular concept
- IP67 and IP69K water resistance and -40°– 70°C temperature rating

For complete specifications and additional models and accessories visit www.omron247.com
Harsh Environment Cylindrical Inductive

E2FM All-Stainless Inductive Sensor Resists Abrasion and Chemicals

- One-piece 303 stainless steel face/barrel construction resists damage caused by work piece contact, scouring abrasion, and harsh chemicals
- Up to 0.8 mm thick sensing face for superior mechanical durability, wear resistance
- Operation not influenced by accumulation of aluminum or iron cutting chips and weld slag
- 20% longer sensing range (10 mm) with M30 models versus the CENELEC standard 8 mm
- Flush mountable in ferrous materials to protect sensor from side impact damage
- Thick insulation protects pig-tail lead for increased endurance in harsh environments
- IP67 enclosure rating

E2F Watertight and Chemical-Resistant Short Barrel, Plastic Body Sensors

- Polyarylate plastic housing offers good chemical resistance to acids and solvents
- Operation indicator on all models
- Short-circuit protection available on all DC and some AC models
- CE all models; UL and CSA (M18, M30 AC 2-wire)
- Sensor mounting and protective accessories, see Y92E
- IP68 watertight construction

E2E-U Oil Resistant Inductive Sensor in Cylindrical Brass Housing

The standard E2E family offers tested oil resistance on commonly used oils in the automotive industry for reliable long-life operation in automotive assembly lines.

- Oil resistant PUR cable
- M8, M12, M18 and M30 standard sizes
- IP67 (water and oil resistant)

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Harsh Environment Cylindrical Inductive

E2FQ Chemical Resistant Inductive Sensor in Cylindrical PTFE Housing

The E2FQ features a full-body fluoroplastic housing for chemical resistance (e.g. against cleaning agents used in the semiconductor industry).

- Full body fluoroplastic housing for chemical resistance
- DC 2-wire and DC 3-wire models

E2EQ Weld-Spatter Resistant DC 2-Wire Cylindrical Sensors

- Rugged fluoroplastic-coated brass barrel withstands high tightening torque
- Fluoroplastic resin face prevents weld slag build-up on sensor
- Stability and operation indicators standard
- Pre-wired and pig-tail connector models

Flat Type Inductive Sensors

TL-W Subminiature, Flat-Pack DC Sensor Fits Tight Spaces

- Space-saving mounting area, as small as 10 x 27 mm (0.39 x 1.06 in), is ideal for conveyor wall mounting
- Mounts directly onto metal base or rail
- Rugged die-cast metal or heat-resistant ABS plastic housing
- Pre-wired with 2 m (6.56 ft) length cable
- Built-in circuit protection
- DC 2-wire and DC 3-wire models
- Rated IP67 for water washdown resistance

E2S World’s Smallest Square Sensor with Built-In Amplifier

- 5.5 x 5.5 mm type allows smaller, space-saving machines and devices
- High response frequency (1 kHz) for fast machine processes
- Long sensing distance: (E2S-91, 1.6 mm) (E2S-92, 2.5 mm)
- Front and end sensing face versions match mounting needs
- DC 2-wire and DC 3-wire models
- Pre-wired with 3 m cable
- Rated IP67 for water washdown resistance

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Miniature Inductive Sensing Solutions

E2E Miniature Inductive Proximity Sensor in Cylindrical Metal Housing

The E2E Small Diameter line with housing sizes from 3 mm dia. to 5.4 mm dia. is part of the E2E family and is the ideal solution where space is crucial. The metal housing provides high mechanical protection.

- Miniature housing sizes from 3 mm dia. to 5.4 mm dia.
- Stainless steel or brass housing
- 3 kHz switching frequency

E2EC Subminiature Sensor with In-line Amplifier Offers Great Mounting Flexibility

- Small nickel-plated brass (NPB) sensing heads on 0.4 m cable fit space-confined installations
- Shielded sensing head allows the sensor to be flush mounted in metal
- Easy operation monitoring with LED indicator on the amplifier unit
- Robotic cable on DC 2-wire models withstands repeated flexing on robots and reciprocating machinery
- DC 2-wire models have cylindrical amplifiers; DC 3-wire rectangular amplifiers allow side-by-side mounting
- Normally Open (NO) circuit type stocked; Normally Closed (NC) available
- Rated IP67 (2-wire); IP64 (3-wire)

Capacitive Type Sensing Solutions

E2K-X Threaded, Cylindrical Sensor Detects Metallic and Non-Metallic Objects

- Non-contact detection of metallic and non-metallic targets including water, oil, glass, plastic and wood
- Detects level inside non-metallic containers
- Built-in amplifier switches loads up to 200 mA
- LED indicator and fixed sensitivity for simple installation
- Built-in circuit protection
- Heat-resistant ABS plastic sensor rated IP66
- Normally Open (NO) and Normally Closed (NC) available
- CE (all models), UL, CSA (AC models)
- Sensor mounting and protective accessories, see Y92E

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Capacitive Type Sensing Solutions

E2K-F Thin Rectangular Plastic DC 3-Wire Sensor Fits Tight Spaces

- Non-contact detection of metallic and non-metallic targets including water, oil, glass, plastic and wood
- Detects level inside non-metallic containers
- Thin, 10 mm (0.39 inch) body is ideal for conveyor wall mounting
- Unshielded sensor has LED indicator and fixed sensitivity for simple installation
- Built-in amplifier provides NPN switching of loads to 100 mA
- Heat-resistant ABS plastic body rated IP66

E2K-C Cylindrical Sensor Offers Adjustable Detecting Distance

- Non-contact detection of metallic and non-metallic targets including water, oil, glass, plastic and wood
- Detects level inside non-metallic containers
- Settable detection distance from 3 to 25 mm with multi-turn adjuster
- Reliably detects foamy liquids in sight glass applications
- Built-in amplifier switches up to 200 mA
- Mounting bracket included
- AC 2-wire and DC 3-wire models available
- Normally Open (NO) and Normally Closed (NC) available
- CE (all models), UL, CSA (AC models)
- Heat-resistant ABS plastic sensor rated IP66

E2K-L Capacitive Liquid Level Sensor

- Mounts directly to sight glass and bypass pipes
- Sensors unaffected by liquid color
- Fits a wide range of pipe diameters: 8 to 11 mm or 12 to 26 mm
- Built-in amplifier with indicator and sensitivity adjuster
- Sensing heads rated IP66

E2KQ-X Chemical Resistant Capacitive Sensor

- Complete fluoroplastic resin coating for superior chemical and oil resistance
- Detect ferrous and non-ferrous metals as well as other materials
- Adjustable sensitivity from 6 to 10 mm
- Built-in indicator located on cable connection face
- Rated IP66

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