

Sensors



Sensing solutions— versatile, robust and innovative



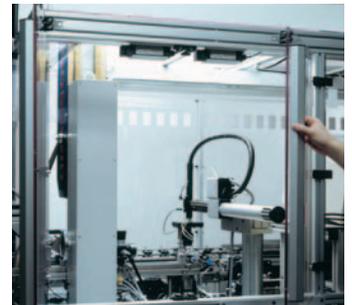
More than just products—real solutions to tough applications

Eaton offers sensor solutions in inductive, photoelectric and capacitive designs, as well as mechanical limit switches, proximity sensors and even electrical current/voltage switches. Regardless of whether the application is in the machine building sector, packaging technology, the food industry or materials handling, Eaton sensor solutions are used wherever positions have to be measured accurately and reliably.

Eaton delivers what you should expect from a business partner: quick answers, durable products and intelligent solutions. A partner who understands that building a good relationship is just as important as supplying the right products—that is Eaton.

EATON

Powering Business Worldwide



Inductive sensors—the standard for industrial applications



Different series for every situation

Inductive proximity switches are rugged products for detecting the presence of metal objects. Eaton provides five different product series in cylindrical, cube or pancake designs in a variety of sizes. The product range starts with the OEM-focused E57 Global Series and goes up to the extreme performance and programmability of iProx.®

E52 Series and E56 Series—long sensing ranges in industry-standard sizes

The E52 cube sensors and the E56 pancake sensors offer maximum sensor performance in industry-standard housing sizes.

Several housing styles are available. All models include the best potting compound in their class, making them shock resistant and moisture repellent. Both product series are protected to IP66/67.

Both the E52 Series and the E56 Series use auto-configure output technology on their DC models. This allows the sensor to automatically adapt to their wiring connection—either NPN (sinking) or PNP (sourcing).

The Global Series—the right fit for OEMs

The Global Series with protection to IP67 is designed for reliable use in standard and OEM applications. Offered with standard nickel-plated brass housings, these sensors are available in 8, 12, 18 and 30 millimeter tubular housings for flush or surface mounting. They are available in DC or AC types, and NPN or PNP connections are possible. An LED indicates the output status (active, inactive). They can be supplied as required with a cable or with a standard M12 connector.

iProx and E57 Premium+ Series—for extra performance

These two series cover the high end of the inductive sensor range.

In a stainless steel housing with diameters from 4 to 30 millimeters in normal or short barrels, they offer optimum noise immunity, and a 360° LED visible from any angle for output status indication. The iProx version can be adapted to the application by software, thus ensuring the perfect sensor for very specific needs.

Capacitive sensors—for detecting non-metallic targets



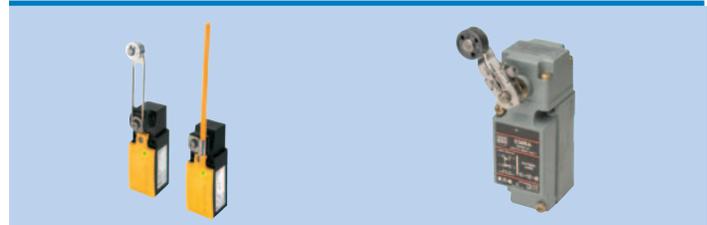
Capacitive proximity switches are used wherever non-metallic objects have to be detected. They are therefore used for liquid level control, and for sensing granulated or powdered material.

Sensors of the E53 Series

The capacitive sensors with 18 or 30 millimeter plastic housings can detect both non-metallic and metallic objects.

DC and AC types are available, as well as NPN or PNP connection types. An LED shows the output status (active, inactive). They can be supplied as required with a cable or with a standard M12 connector.

Mechanical limit switches—proven and reliable



LS-Titan—metal or plastic

Mechanical limit switches are used wherever positions have to be indicated simply and reliably or where a safety disconnect is required to protect people from dangerous machinery. The LS-Titan switches are available in either plastic or a rugged metal design. Exchangeable operating heads enable use in a wide range of applications. Electronic safety limit switches round off the offering.

E50—robust quality

The modular E50 Series limit switch with metal housing and unmatched mechanical sealing properties is specially designed for use in aggressive environments and offers protection from cleaning chemicals, lubricants, cutting fluids, coolants or similar. A large LED indicator shows the switching state and allows simple adjustment. Vertical or horizontal operating heads with pressure and rotary functions and a large number of operating rods provide a wide range of solutions.

Photoelectric sensors—versatility with light



Optical sensors— with Perfect Prox technology

Photoelectric sensors come in several product series to meet a wide range of different requirements. Different optical modes are available in every product range—retroreflective, polarized reflex, thru-beam, diffuse and Perfect Prox® modes.

Sensors with Perfect Prox technology provide the user with a highly convenient technology for background rejection. Simply place in the right position, and the sensor will scan all target objects reliably, irrespective of the color, reflectance, contrast or surface shape, while background objects outside the target range are ignored. With more than 30 Perfect Prox models available, there is always one that optimally suits your application.

The Comet Series— for unmatched versatility

The Comet Series offers everything required of a photoelectric sensor line. All optical modes are provided, and even fiber-optic and clear-object detection models are available.

To ensure a simple and flexible setup, the sensors offer visible light beams, light or dark operation, gain adjustment, short-circuit protection, optical crosstalk immunity, and a host of wiring and electrical configurations. An 18 millimeter diameter polyurethane housing completely encapsulates the internal electronics. This design offers outstanding protection from moisture (IP67) and chemicals, as well as from severe vibration and shock.

E58 Series— sealed to perfection

The 18 or 30 millimeter stainless steel housings of the E58 Series were specially designed to prevent leakage problems. The housing materials and its proven mechanical seal make it a sensor that is well-suited to high pressure, high temperature washdown or steam cleaning. The products of this series are resistant to cleaning chemicals, lubricants, coolants and similar substances. In addition to its rugged design, the E58 Series offers unmatched optical performance for reliable detection in harsh environments, as well as a high resistance to vibration and shock. Whether the critical requirement is the long range of a thru-beam or reflex sensor, or the precise background rejection of Perfect Prox technology, the E58 always masters the task it is given.

Models with two-, three- or four-wire circuits, DC or AC, NPN or PNP output, cable or plug connections make it possible to meet any requirements.

SM Series— with TargetLock

The SM Series ensures the most convenient setup possible and is designed for optimum performance in a compact size. The microprocessor-controlled TargetLock™ system ensures fast sensor setup. The LED on the top of the sensor changes from OFF to short flash, long flash and finally solid ON as you approach the optimum operating point of the thru-beam, polarized reflex or diffuse reflective alignment. With TargetLock, lengthy installation times can be reduced.

The LED gives early warning of any vibration or any dust on the lens before the fault affects the entire system.

Current and voltage sensors— measure true rms current with analog outputs



CurrentWatch™ products are perfect for providing improved reliability, predictive diagnostics, feedback and monitoring for all types of electrical equipment. Simply run a conductor wire through the sensing aperture, wire the outputs to your controller, and installation is complete. With features such as split-core housings that wrap around existing wires, industry-standard outputs and self-powered models available, sensing current has never been easier.

The EVT Series VoltageWatch™ products are high-performance true rms sensors for detecting voltage in single- and three-phase installations up to 480V.

Accessories—solutions for fixing and cabling



An extensive range of mounting brackets is available for securing sensors. Furthermore, preassembled cables are also available with different lengths and connectors, as well as fiber-optic cables.

The multi-sensor terminal blocks offer a simple and safe way to connect 4, 6 or 8 sensors to a controller in one go. Together with the above-mentioned cable solutions, a system can be connected up very quickly—saving time and money. To simplify installation and troubleshooting, LEDs show the state of the power supply and the output status for each channel. The terminal blocks come in a robust design for withstanding extreme temperatures (75°C) and vibration, as well as for applications requiring protection up to IP68.

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, **visit www.eaton.com/electrical**.

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