



SENSING AND CONTROL

**Part Engineering.
Part Innovation.
Total Solutions.**

Product reliability. Industry knowledge. Expertise. Standard with every order.

With more than 50,000 sensing, switching, and control products ranging from snap-action, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell Sensing and Control (S&C) has one of the broadest sensing and switching portfolios available!



Airflow sensors: Advanced microstructure technology. Sensitive and fast response to flow, amount/direction of air or other gas. Proportional output voltage. Thin-film, thermally isolated bridge structure consists of a heater and temperature sensing elements. **Often used in:** HVAC, respirators, process control, oxygen concentrators, gas metering, chromatography, leak detection equipment, medical/analytical instrumentation, and ventilation equipment.



Inertial measurement units: Senses rotation rate about roll, pitch, and yaw axes (X, Y and Z axes) and acceleration along longitudinal, lateral, and vertical axes (X, Y and Z axes). **Often used in:** agricultural and construction equipment.



Infrared sensors: IREDs, sensors, and assemblies for object presence, limit and motion sensing, position encoding, and movement encoding. Variety of package styles, materials, and terminations. **Often used in:** printers/copiers, motion control systems, metering, data storage systems, scanning, automated transaction, drop sensors, and non-invasive medical equipment.



Current sensors: Accurate and fast response. Almost no thermal drift or offset with temperature. Adjustable linear, null balance, digital, and linear current sensors. **Often used in:** variable speed drives, overcurrent protection, power supplies, ground fault detectors, robotics, industrial process control, and wattmeters.



Keyless entry sensors: Industry leading sensor responsiveness and low power usage. Utilizes coded communication via 3D low frequency/radio frequency techniques. **Often used in:** passenger vehicles, MPVs, and SUVs.



Fiber optic and liquid-level sensors: Solutions for short-haul data communications over plastic fiber, analog, and digital interfaces and duplex communication over a single fiber. Miniature, solid state liquid level devices in a variety of housing types. Normal, condensation, bubbling, and variable application types available. **Often used in:** food and beverage processing, machine tools, industrial compressors, vending machines, and appliances.



Linear position sensors: Withstands harsh chemicals and immersion into oils or water. Extended life PTFE bearings, precious metal multi-finger contact wipers, and MYSTR® conductive plastic thick-film elements. Analog output correlated to location. **Often used in:** injection molding, printing presses, cylinder positioning, gauges, and controls.



Flexible heaters: Flat, molded-to-shape, spiral wrap, transparent, composite, and high temperature configurations with single, multiple, and variable watt densities. Can be bonded parts or combined. **Often used in:** airborne valves, outdoor cameras, LCD displays, scanners, and telecommunication base stations.



Magnetic position sensors: Digital and analog Hall-effect position, magnetoresistive, Hall-effect vane, gear-tooth, and magnetic sensors. **Often used in:** speed and RPM sensing, motor/fan control, sliding doors, magnetic encoding, disc speed, tape rotation, flow-rate sensing, conveyors, ignitions, motion control/detection, power/position sensing, magnetic code reading, vibration, and weight sensing.



Force sensors: Variety of package styles and various electrical interconnects including pre-wired connectors, printed circuit board mounting, and surface mounting for flexibility. **Often used in:** infusion and syringe pumps, blood pressure equipment, pump pressure, drug delivery systems, occlusion detection, and kidney dialysis machines.



Oxygen sensors: High-accuracy oxygen measurement, without reference gas. Employ two ZrO₂ discs with a small, hermetically sealed chamber. **Often used in:** boilers, oxygen generation, exhaust gas diagnostics, service instruments, agriculture, composting, environmental oxygen, combustion systems, medical, and aerospace.



Hall-effect rotary position sensors: Vary output voltage or current in response to magnetic field changes. Honeywell's non-contacting approach provides longer life solutions. **Often used in:** trucks, off-road vehicles, industrial/construction/agricultural vehicles and equipment, cranes.



Pressure sensors - plastic silicon: Full line of industrial-grade sensors: media-isolating design, multiple ports and outlets, and electrical configurations. **Used in:** pneumatic controls, air compressors, process monitoring, hydraulic controls, VAV controls, clogged filter detection, presence/absence of flow, transmissions, and refrigeration.



Humidity sensors: Configured with integrated circuitry. Provide on-chip signal conditioning with interchangeability of $\pm 3\%$ accuracy and out-of-the-box reliability. Standardized, platform-based sensors. **Often used in:** air compressors, food and beverage packaging and processing, HVAC, printing presses, and office equipment.



Pressure sensors - stainless steel and media-isolated: Bonded strain gage technology. Very resistant to effects of shock, vibration, and hostile environments. **Often used in:** HVAC, hydraulic controls, suspensions, agricultural equipment, engines, compressors, robotics, industrial and automotive systems, pressure transmitters, process controls, and medical diagnostics.



Potentiometers and encoders: Digital and analog Hall-effect, magnetoresistive, and potentiometric devices for sensing presence of a magnetic field or rotary position. Directly compatible with other electronic circuits for application flexibility. **Used in:** audio and lighting, frequency, temperature, position, time, medical/instrumentation, computer peripherals, manual controls, joysticks, telecommunication, welding, heating, and aerospace.



Key and rotary switches: Used on machinery in harsh environments. O-rings help keep dirt and moisture out and prolong life. **Often used in:** all-terrain vehicles, golf carts, snowmobiles, scissor lifts, telehandlers, construction and marine equipment, skid loaders, agricultural equipment, material handlers.



Proximity sensors: Meet demanding temperature, vibration, shock, and EMI/EMP interference requirements. Number of housing materials and termination styles. **Often used in:** aircraft landing gear, gun turret position control, and door and hatch open/closed monitoring.



MICRO SWITCH™ limit switches: Broadest and deepest limit switch portfolio. Rugged, dependable position detection solutions. MICRO SWITCH™ heavy-duty limit switches (HDLS) and global limit switches. Hermetically and environmentally sealed switches. **Often used in:** machine tools, woodworking, textile, and printing machinery, metal fabrication, balers/compactors, forklifts, bridges, robotics, wind turbines, elevators, moving stairs, doors, dock locks/levelers, aerial lifts, cranes, conveyors, rail, shipboards, and dock side.



Speed sensors: Measures speed, position, and presence detection utilizing magnetoresistive, variable reluctance, Hall-effect, variable inductance, and Spiral technologies. **Often used in:** cam and crankshafts, transmissions, fans, pumps, mixers, rollers, compressors, industrial process control, engines/motors, wheels, and tachometers.



MICRO SWITCH™ sealed and high accuracy switches: Precision 'snap action' mechanisms. environmental, moisture, and corrosion protection. Wide variety of actuators, terminations, circuitry configurations, electrical ratings, contract materials, and operating characteristics. **Often used in:** landing gear, flap/stabilizer controls, thrust reversers, space vehicles, armored personnel carriers, de-icer controls, wingfold actuators, industrial environments, valves, and undersea.



Temperature sensors: Customized probes, thermistors, and RTD sensors. Plastic/ceramic, miniaturized, surface-mount housings, and printed circuit board terminations. **Often used in:** semiconductor protection, vending machines, power generation, hydraulic systems, thermal management, and temperature compensation.



MICRO SWITCH™ pushbutton switches: Lighted or unlighted. Wide range of electrical and display design, pushbuttons and manual switches. Many shapes, sizes, and configurations. Easy to apply, operate, and maintain. **Often used in:** control boards and panels, industrial and test equipment, computers, medical instrumentation, and aerospace.



Thermostats: Commercial and precision snap-action. Automatic or manual reset options, phenolic or ceramic housings. **Often used in:** telecommunications, battery heater controls, computers, copy machines, fax machines, food service, food carts, small and major appliances, heat and smoke detectors, and HVAC equipment.



MICRO SWITCH™ rocker switches: Wide range of electrical and display design. Many shapes, sizes, and configurations to enhance manual operation. **Often used in:** transportation, agricultural and construction equipment, test equipment, heavy-duty machinery, marine equipment, small appliances, telecom, medical instrumentation, and commercial aviation.



Trimmers: Offer superior setting capabilities. Cermet elements for stability. Square and rectangular housings. **Often used in:** voltage divider circuits and telecommunications.



Wirewound resistors: Rugged products meeting military specification standards. Honeywell Sensing and Control wirewound resistors are available in a variety of sizes and package styles that include an adjustable style. **Often used in:** harsh environments, high temperatures, and as load adjusters for power amplifiers.



MICRO SWITCH™ toggle switches: Wide range of electrical and display design. Available in many shapes, sizes, and configurations. **Often used in:** aerial lifts, construction equipment, agriculture and material-handling equipment, factory-floor controls, process control, medical instrumentation, test instruments, and military/commercial aviation.



MICRO SWITCH™ basic switches: Snap-action precision switches. Compact. Lightweight. Designed for repeatability and enhanced life. Premium and standard basic switches: standard, miniature, subminiature, hermetically sealed, and high-temperature versions. **Often used in:** vending machines, communication equipment, HVAC, appliances, electronic gaming machinery, valve controls, irrigation systems, foot switches, pressure, and temperature controls.



Pressure and vacuum switches: Feature set points from 0.5 psi to 3000 psi. Rugged components have excellent repeatability, flexibility, and wide media capability. **Often used in:** transmissions, hydraulics, brakes, steering, generators/compressors, dental air, embalming equipment, oxygen concentrators, air cleaners, fuel filters, and pool water pressure.



MICRO SWITCH™ hazardous area switches: Flame path designed to contain and cool escaping hot gases that could cause an explosion. MICRO SWITCH™ EX, BX, CX, and LSX Series. **Often used in:** grain elevators and conveyors, off-shore drilling, petrochemical, waste-treatment plants, control valves, paint booths, and hazardous waste handling facilities.



Relays: Power and logic control for factory machines and control panels. Small package design, vibration and shock resistance, and enhanced dielectric strength. Sequence control and power switching. **Often used in:** control panels, elevator panels, machine tools, and test equipment.



Solid state switches: Miniature-sized mechanical switch construction. Mounting convenience. Solid state technology. Rugged, reliable switches. Hall-effect transducer switching element with trigger and amplifier integrated on a silicon chip. Switches accept AMP or MOLEX connectors. **Often used in:** satellite dish antennas, vending machines, and appliances.



Controls: Functional, rugged, and aesthetically pleasing. Completely sealed. Potential operations: wiper speeds, headlamp controls, button, and auto-cancel options. Unique options for integrated controls. **Often used in:** snowmobiles, motorcycles, construction, material handling equipment, all-terrain vehicles, electric vehicles, forestry, agriculture, lawn and garden, and military vehicles.



MICRO SWITCH™ safety switches: For operator point-of-operation protection, access detection, presence sensing, gate monitoring, and electrical interfacing. High-quality, dependable, cost-effective solutions. **Often used in:** packaging and semi-conductor equipment, plastic-molding machinery, machine tools, printing presses, textile machines, commercial and residential elevators, escalators, chair lifts, dock locks/levelers, industrial doors, bailers, compactors, aircraft bridges, aerial lifts, telescopic handlers, refuse vehicles, and truck-mounted cranes.



Lighting products: LED, HID, incandescent, and halogen work lamps. Engineered to take shock, vibration, and extreme service conditions in stride. **Used in:** marine, oil rigs, barges, dry-docks, pleasure craft, off-highway vehicles, agriculture, construction, mining, and industrial equipment, street sweepers, de-icers, man lifts, snow-making equipment, and floor cleaners.



Monitors: Record and track total elapsed time. Parts are in-process tested for functionality and timing accuracy before shipping. Differ by power, shape, display, and data. **Often used in:** medical, office equipment, fans, furnaces, lawn and garden, generators, compressors, sport vehicles, panel assemblies, mining, golf carts, utility vehicles, aerial lifts, and on/off-highway applications.



Shifters and turn signals: May be mounted as a system or as independent units. Wide variety of operations are available: wiper speeds, head lamp controls and buttons to auto-cancel options. Built to withstand harsh environments. **Often used in:** agricultural equipment, construction, material handling equipment, motor coaches, and airport ground support equipment.



Safety light curtains: Photoelectric barriers composed of several infrared beams aligned on an emitting column and a receiving column. Different resolutions permit detection of an approaching finger, hand, limb, or body. Separate or self-contained control units, various housing sizes, resolutions, scanning ranges, and protection heights. **Often used in:** point-of-operation protection, access detection, presence sensing, gate monitoring, electrical-to-machine-circuitry interfacing, emergency stop circuits on machines, sliding door protection, conveyors, and transfer lines.

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Find out more

To learn more about Honeywell's sensing and control products, call **+1-815-235-6847**, email inquiries to **info.sc@honeywell.com**, or visit **www.honeywell.com/sensing**

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