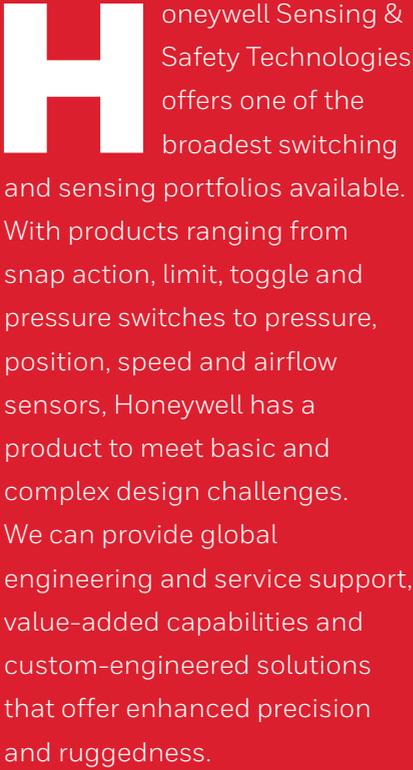


SENSOR & SWITCH SOLUTIONS

Focus Products

Honeywell



Honeywell Sensing & Safety Technologies offers one of the broadest switching and sensing portfolios available. With products ranging from snap action, limit, toggle and pressure switches to pressure, position, speed and airflow sensors, Honeywell has a product to meet basic and complex design challenges. We can provide global engineering and service support, value-added capabilities and custom-engineered solutions that offer enhanced precision and ruggedness.

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AEROSPACE & TRANSPORTATION SOLUTIONS

True engineering excellence delivers innovative, leading-edge sensors and switches that excel in rugged and harsh environments. Honeywell-patented technologies and engineered excellence delivers electromechanical systems — from discrete components to cockpit controls — with flexibility and value. The Honeywell engineering team works closely with customers to help identify the best solution to meet the specific application needs.





AERO & TRANSPORTATION SOLUTIONS

CURRENT SENSORS FOR BATTERY MANAGEMENT



CSNV Series

Advanced flux gate current sensor that Utilizes proprietary Honeywell technology for temperature compensation. incorporates AEC-Q100 qualified integrated circuits to meet higher quality and reliability requirements.

Key Specifications

- ± 700 A: Closed loop sensing
- High accuracy & low temperature drift
- Digital output: CAN bus output with configurable ID

Applications

- Current measurement for battery management systems in electrified vehicles (EV, HEV, PHEV or BEV)
- Current leakage detection and fault isolation in charging systems
- Current measurement in energy storage systems
- Fault detection in heavy industrial equipment



CSHV Series

Open-loop current sensors that use Hall-effect sensing and patented Honeywell technology to bring the best combination of performance and reliability.

Key Specifications

- High accuracy & low temperature drift
- Analog voltage output
- CE and UKCA certification; REACH and RoHS compliant
- AEC-Q100 qualified integrated circuits for higher reliability

Applications

- Current measurement for battery management systems in electrified vehicles (EV, HEV, PHEV, BEV)
- Current leakage detection and fault isolation in battery charging systems
- Current measurement in energy storage systems
- Fault detection in heavy industrial equipment

BATTERY SAFETY SENSORS FOR THERMAL RUNAWAY DETECTION



BPS Series

Automotive-grade pressure sensors designed to detect and report thermal runaway events in lithium-ion battery packs.

Key Specifications

- High accuracy & low temperature drift
- CAN communication protocol
- Wake-up output and request input for high reliability system integration

Applications

- Battery pack systems for electric vehicles and energy



BAS Series

Automotive-grade aerosol sensors that use the principle of light scattering to detect and report thermal runaway events in lithium-ion battery packs.

Key Specifications

- High accuracy & low temperature drift
- CAN communication protocol
- Aerosol threshold value of $5000 \mu\text{g}/\text{m}^3$ allows early detection of thermal runaway events

Applications

- Battery pack systems for electric vehicles and energy

AERO & TRANSPORTATION SOLUTIONS



POSITION SENSORS



Swing Angle Sensor

Non-contact rotary position sensor with sensing range up to 360°. Uses a magnetically biased dual die Hall-effect integrated circuit (IC) to sense rotary actuator movement over a set range.

Key Specifications

- Air gap tolerance of 2 mm
- IP69K sealing
- RoHS-compliant materials meet Directive 2002/95/EC

Applications

- Position and movement detection (pedals, throttles, gear shift, levers, steering, linkages and hitches) in trucks, buses, off-road vehicles, cranes and industrial/ construction/ agricultural vehicles and equipment)



RTY/RTP Series

Non-contact sensing in harsh applications. Shaft activated and non-contact body styles. Use a magnetically biased, Hall-effect integrated circuit (IC) to sense rotary movement of the actuator over a set operating range.

Key Specifications

- 35 M cycle product life (RTY); unlimited rotation (RTP)
- 8 operating ranges up to 360°
- IP69K-qualified rugged package

Applications

- See Swing Angle Sensor applications



SMART Arc CAN

Uses a ring magnet allowing ease of integration in pinned joint applications. Communication is transmitted using industry standard CAN J1939 connectivity. Designed to replace in-cylinder position sensors.

Key Specifications

- 161-mm & 220-mm outer rings
- 250 kbs & 500 kbs CAN baud rate
- 145° configuration accurately, linearity down to 0.3 %

Applications

- Front end loader and digger/ excavator boom position
- Refuse truck lift and automatic reach arm position



SMART Position Sensor

A non-contact sensing solution, providing highly accurate motion control and improving operation efficiency and safety. Utilizes magnetoresistive technology to detect the position of a magnet relative to the sensor.

Key Specifications

- Rotary, linear and arc configurations
- Air gap tolerance of 7,8 mm $\pm 2,5$ mm [0.307 in ± 0.098 in]
- Reliable, durable & easy to install

Applications

- Non-contact position sensing in aerospace, transportation and industrial applications

INERTIAL MEASUREMENT UNIT



TARS-B

Packaged sensor array designed to report vehicle angular rate, acceleration and attitude data for demanding applications in industries such as heavy-duty, off-highway transportation.

Key Specifications

- Supports 9 V to 36 V vehicle power systems
- IP67 and IP69K certified
- CAN J1939 connectivity
- Advanced filtering of raw sensor data to minimize unwanted noise and vibration promotes positioning accuracy

Applications

- Equipment control, linkage tracking, bucket control, work monitoring, vehicle stability control, operator assisted control, performance and output control, linear position



AERO & TRANSPORTATION SOLUTIONS

SPEED SENSORS



SNG-Q Series

Provides both speed and direction information. Speed is provided from digital square wave outputs; direction is provided using a quadrature output with signals 90° phase shifted from each other.

Key Specifications

- Robust electronic noise immunity
- Rated to IP69K
- High frequency switching capability
- Supply voltage range: 4.5 V to 26 V

Applications

- Hybrid electric transmissions, hybrid engines, wheel speed detection



SNDH-T Series

Dual differential Hall-effect sensor that provides speed and direction information using a quadrature output with signals 90° phase shifted from each other.

Key Specifications

- Dual differential Hall provides enhanced target resolution
- Air gap up to 2 mm [0.08 in]
- Near zero speed
- High frequency switching capability: 1 Hz to 15 kHz

Applications

- Steering position, tachometers/counters, encoders, speed and direction of gears and shafts



VRS Thrumold Series

Designed to detect engine timing and transmission speed by determining the speed and position of rotating shafts in heavy-duty, off-road and construction vehicle to help improve engine combustion process efficiency.

Key Specifications

- Configurable diameters, materials and output voltages
- Compensated operating temperature range
- Self-powered operation

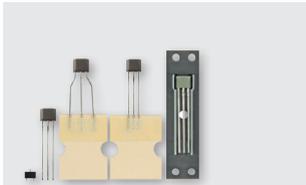
Applications

- Heavy-duty and off-road engine timing and transmission speed

AERO & TRANSPORTATION SOLUTIONS



MAGNETIC POSITION SENSOR ICs



SS360NT/SS360ST/SS460S

High sensitivity latching digital Hall-Effect sensor ICs are small, sensitive and versatile devices that are operated by the magnetic field from a permanent magnet or an electromagnet. They are designed to respond to alternating North and South poles.

Key Specifications

- Fastest response time in its class
- No-chopper-stabilization
- High sensitivity & latching magnetics
- Wide operating voltage range of 3 Vdc to 24 Vdc

Applications

- Medical equipment using electric motors



103SR Series

Include digital unipolar, latching and linear magnetic types. Available in a number of sensitivities to meet a variety of customers' application requirements

Key Specifications

- Solid state reliability: not affected by contact bounce or wear
- Meets NEMA 3, 3R, 3S, 4, 4X (stainless steel only), 12 and 13 requirements
- Digital unipolar, latching and linear magnetic options

Applications

- Motion detection in motorized medical equipment, hospital beds



MicroPower SL353 Series

Small and versatile, digital Hall-effect devices operated by the magnetic field from a permanent magnet or an electromagnet. They meet a wide range of applications with low power requirements.

Key Specifications

- Supply voltage as low as 2.2 Vdc, combined with very low average current (1.8 A typ.)
- High and very low duty cycles
- Does not require external pull-up resistor
- Non-chopper stabilized design

Applications

- Small, hand-held medical and dental equipment



SR16/SR17 Series

Hall-effect vane sensors offer side mount packages and three termination variations. Contains an internal magnet and Hall-effect sensor mounted in a twin tower configuration.

Key Specifications

- Current sinking (open collector) output
- 3.8 Vdc to 30 Vdc power supply
- Medium level magnetic switching to reduce stray field interference

Applications

- Motor control for pumps and blood analyzers



Nanopower Series SM351/SM353 Series

Designed to accommodate a wide range of applications with large air gaps, small magnetic fields and low power requirements.

Key Specifications

- Average current of 360 nA typ. (SM351LT) and 310 nA typ. (SM353LT)
- High sensitivity: 7 Gauss typ., 11 Gauss max. (SM351LT); 14 G typ., 20 Gauss max. (SM353LT)
- 1.65 Vdc to 5.5 Vdc supply voltage range

Applications

- Exercise equipment, infusion pumps, drawer position sensing, hospital beds



AERO & TRANSPORTATION SOLUTIONS

MICRO SWITCH SEALED SWITCHES



ET Series

Specialty type of toggle switch with an electrical latching mechanism. Most are designed and qualified to SAE AS55941.

Key Specifications

- Four different styles of lever actuators and three different types of electrical termination
- Temperature range: -65°C to 71°C [-85°F to 160°F]
- Terminations: lead wire, solder, screw

Applications

- Flight decks for aircraft and helicopters



AT Series

Provide a compact multi-pole toggle switch. Available as a 1-, 2-, 3-, 4-, 6-, 8-, or 10-pole design with a metal toggle lever, metal bushing and metal housing.

Key Specifications

- Available as MIL-PRF-8805
- 2- or 3-position, momentary and maintained action
- Choice of 1/4- or 15/32-inch bushings; silver or gold contacts

Applications

- Aircraft, military ground vehicles, flight controls, vehicle panel controls



EN Series

Bushing mount designed, manufactured and qualified to MIL-PRF-8805 standards. Deliver consistent and reliable operation in harsh environments on critical applications.

Key Specifications

- Highly configurable
- Circuitry options from 1PST to 6PDT
- Rugged stainless steel housing
- All-metal drive train

Applications

- Commercial and military aircraft, commercial and military ground-based equipment, off-road equipment



HM Series

Hermetically sealed. Ideal where a symbol 5 seal is required for stringent applications including a wide range of temperatures from -184°C to 260°C [-300°F to 500°F].

Key Specifications

- Sealed: MIL-PRF-8805, symbol 5 hermetic
- Stainless steel
- Solder, lead-wire termination
- Silver, gold, bifurcated gold contacts

Applications

- Designed for a variety of commercial and military aircraft as well as equipment for deep space applications (high altitude requirements)



SE/XE Series

SE Series is designed for demanding applications where water and/or particulate contaminant is present along with the potential for a wide range of temperatures. Miniature XE Series is similar to the SE Series except smaller in package size.

Key Specifications

- Sealed: MIL-PRF-8805, symbol 3
- Operating temperature range: -53°C to 105°C [-65°F to 221°F]
- Solder, lead-wire termination
- Silver, gold, bifurcated gold contacts

Applications

- Designed for precise and reliable position indication of critical applications on aircraft and military systems

AERO & TRANSPORTATION SOLUTIONS



MICRO SWITCH SWITCHES



TL Series

Precise control for on/off applications. A variety of circuitry and pole options for easy integration.

Key Specifications

- MIL-DTL-3950 qualified
- 1-, 2-, and 4-pole options
- 2- and 3-position; maintained and momentary
- Wide temperature range: -65°C to 71°C [-85°F to 160°F]

Applications

- Military and commercial aircraft; aviation ground support equipment; land vehicles; construction equipment



NT Series

Control for on/off applications. Optional flat base case design with a quick connect terminal pattern mates to a commercial-type connector.

Key Specifications

- Sealed to NEMA 3, 3R, 4, 13 and IP67/IP68
- Available in both step-base and flat-base styles

Applications

- Aerial platform lifts, platform lifts, industrial equipment, railroad locomotives, construction equipment, agricultural machinery

PROXIMITY SENSORS



HAPS & GAPS Series

General Aerospace Proximity Sensors (GAPS) and **Harsh Aerospace Proximity Sensors (HAPS)**, incorporate Honeywell patented Internal Health Monitoring functionality. Configurable, non-contact, hermetically sealed devices designed to sense the presence or absence of a target in aircraft applications.

Key Specifications

- Industry-leading indirect lightning and dielectric ruggedness
- Environmentally rugged: Fully hermetic packages
- Internal Health Monitoring Capability: Optional third output state to indicate the health of the sensor (whether it is healthy or failed)

Applications

- GAPS: landing gear, hydraulics, doors, primary surface, rear stabilizer, gen actuator, ground vehicles, airframe, rotary actuator, evacuation slides, cargo storage, turbine speed
- HAPS: TRAS, valves, engine, actuators, nacelles, canopies

RESOLVERS



HAWK Series

Converts mechanical shaft position to an electrical signal which represents the actual shaft angle. Non-contact measurement for 360° sensing, enhanced accuracy, resolution and repeatability under severe environmental conditions.

Key Specifications

- Shock: 50 g, 11 ms
- Vibration: 15 g, 10 Hz to 2000 Hz
- Operating temperature range: -50.8°C to 93.3°C [-60°F to 200°F]

Applications

- Electro-optical systems, fire control systems, gimbals position feedback, infrared systems, space vehicle solar panels, space vehicle antennae, oncology equipment, CNC/precision tooling



HEALTH CARE SOLUTIONS

Sensors are taking over the medical industry. Rising healthcare costs and an aging population are driving the need for advanced applications in medical diagnosis and treatment. Across the globe, the medical device market is expected to spike in technological development and Honeywell solutions are addressing these trends. Honeywell sensors are small in size and low in power consumption; they deliver enhanced accuracy, intelligence, reliability and robustness for medical applications.



BOARD-MOUNT PRESSURE SENSORS



TruStability™ RSC, SSC, HSC

TruStability pressure sensors provide industry leading performance and accuracy, these sensors utilise our highest accuracy sense dies and are dynamically calibrated in environmental test chambers where we cycle pressure and temperature to build up the calibration data. TruStability pressure sensors are offered wide choice pressure ranges, ports, packages, and outputs making them easy to design in.

Key Specifications

- Pressure range: 1.6 mbar to 10 bar
- Accuracy: As low as ± 0.25 %FSS TEB
- Sample rate: 2 Khz (digital)
- Operating temp range: -40°C to 85°C
- Digital I²C/SPI & analogue o/p

Medical Applications

- Ventilator, anaesthesia, dialysis, blood analysis, gas chromatography, gas flow instrumentation, nebulizers, spirometers, etc.

Non-Medical Applications

- Flow calibrators, liquid-level, gas flow instrumentation, pneumatic control, variable air volume control, clogged HVAC filter detection, barometry, etc.

HEALTH CARE SOLUTIONS



ABP2 Series

ABP2 is our newest board mount pressure sensor family, it utilises the latest sense die technology and provides excellent all-round performance, reliability, long-term stability, and value. ABP2 pressure sensors offer an extended pressure up to 12 bar, an extended temperature ranges up to 110°C and extensive media compatibility. The small form-factor, low power consumption and wide range of configuration options makes ABP2 an ideal solution for a wide range of applications.

Key Specifications

- Pressure range: 1.0 mbar to 12 bar
- Accuracy: As low as ± 1.5 %FSS TEB
- Sample rate: 200 Hz (digital)
- Operating temp range: -40°C to 110°C
- Digital I²C/SPI & analogue o/p

Medical Applications

- Dialysis, blood pressure, nebulizers, CPAP, spirometers, surgical/dental (suction), homecare products, wearables, etc.

Non-Medical Applications

- Flow calibrators, liquid-level, gas flow instrumentation, pneumatic control, variable air volume control, clogged HVAC filter detection, compressors, irrigation, fuel level measurement, barometry, etc.



MicroPressure MPR Series

MPR is our smallest board mount pressure sensor family and provides excellent all-round performance and exceptional value. MPR is temperature compensated; it's offered with 2x port options and 24-bit digital output. MPR is fully compatible with a wide variety of media (liquids and gases). The ultra-small form factor (size: 5 mm x 5 mm) and low power consumption makes MPR an ideal solution for designs that require a sensor with a small footprint

Key Specifications

- Pressure range: 60 mbar to 2.5 bar
- Accuracy: As low as ± 1.5 %FSS TEB
- Sample rate: 200 Hz (digital)
- Operating temp range: -40°C to 85°C
- Digital I²C/SPI o/p

Medical Applications

- Dialysis, blood pressure, nebulizers, CPAP, spirometers, surgical/dental (suction), homecare products, wearables, disposables, etc.

Non-Medical Applications

- Liquid-level, gas/water meters, pneumatic control, humidifiers, airbeds, washing machines, barometry, etc.



HEALTH CARE SOLUTIONS

AIRFLOW SENSORS



Honeywell Zephyr® Low Flow HAF Series

Provide a digital interface for reading airflow over specified full-scale flow and compensated temperature ranges. The thermally isolated heater and temperature sensing elements help these sensors provide a fast response to air or gas flow.

Key Specifications

- Standard flow ranges of 0 to 10, 0 to 15, 0 to 20, 0 to 50, 0 to 100, 0 to 200 and 0 SLPM to 300 SLPM, or custom flow ranges
- Fast response time (1 ms)
- High stability and sensitivity

Applications

- Anesthesia delivery machines, ventilators, ventricular assist devices (heart pumps), spirometers, laparoscopy

FORCE SENSORS



MicroForce Sensors, FMA Series

Piezoresistive-based force sensors offering a digital output for reading force over the specified full scale force span and temperature range. Fully calibrated and temperature compensated for sensor offset, sensitivity, temperature effects and nonlinearity.

Key Specifications

- Small form factor: 5 mm x 5 mm [0.20 in x 0.20 in]
- Accuracy: ± 2 %FSS typical
- SPI- or I²C-compatible digital output

Applications

- Infusion pumps, ambulatory pumps, enteral feeding pumps, kidney dialysis machines



FSA Series

Piezoresistive-based force sensors offering a ratiometric analog or digital output for reading force over the specified full scale force span and temperature range. Fully calibrated and temperature compensated.

Key Specifications

- Wide variety of force ranges
 - Newton (N): 5, 7.5, 10, 15, 20, 25
 - Pound (lb): 1, 1.5, 2, 3, 5
 - Gram (g): 500, 750
 - Kilogram (kg): 1, 2

Applications

- Ambulatory non-invasive pump pressure, infusion pumps, kidney dialysis machines, occlusion detection

HUMIDITY SENSORS



Honeywell HumidIcon™ HIH8000 Series

Digital output-type relative humidity (RH) and temperature sensors combined in the same package. These sensors provide an accuracy level of $\pm 2.0\%$ RH and a temperature accuracy level of $\pm 0.5\text{ }^\circ\text{C}$.

Key Specifications

- Industry-leading long-term stability and reliability
- $\pm 2.0\%$ RH accuracy (humidity)
- $\pm 0.5\text{ }^\circ\text{C}$ accuracy (temperature)
- $40\text{ }^\circ\text{C}$ to $125\text{ }^\circ\text{C}$ [$-40\text{ }^\circ\text{F}$ to $257\text{ }^\circ\text{F}$] operating temperature range

Applications

- Respiratory therapy, incubators, micro environments

HEALTH CARE SOLUTIONS



PARTICLE SENSORS



IPM Series

Laser-based sensor that detects and measures particle concentration using light scattering for monitoring air quality. Detection concentration range is $0\text{ }\mu\text{g}/\text{m}^3$ to $1,000\text{ }\mu\text{g}/\text{m}^3$. Engineered with Intelligent Self Calibration through a built-in algorithm to compensate for sensor drift over lifetime.

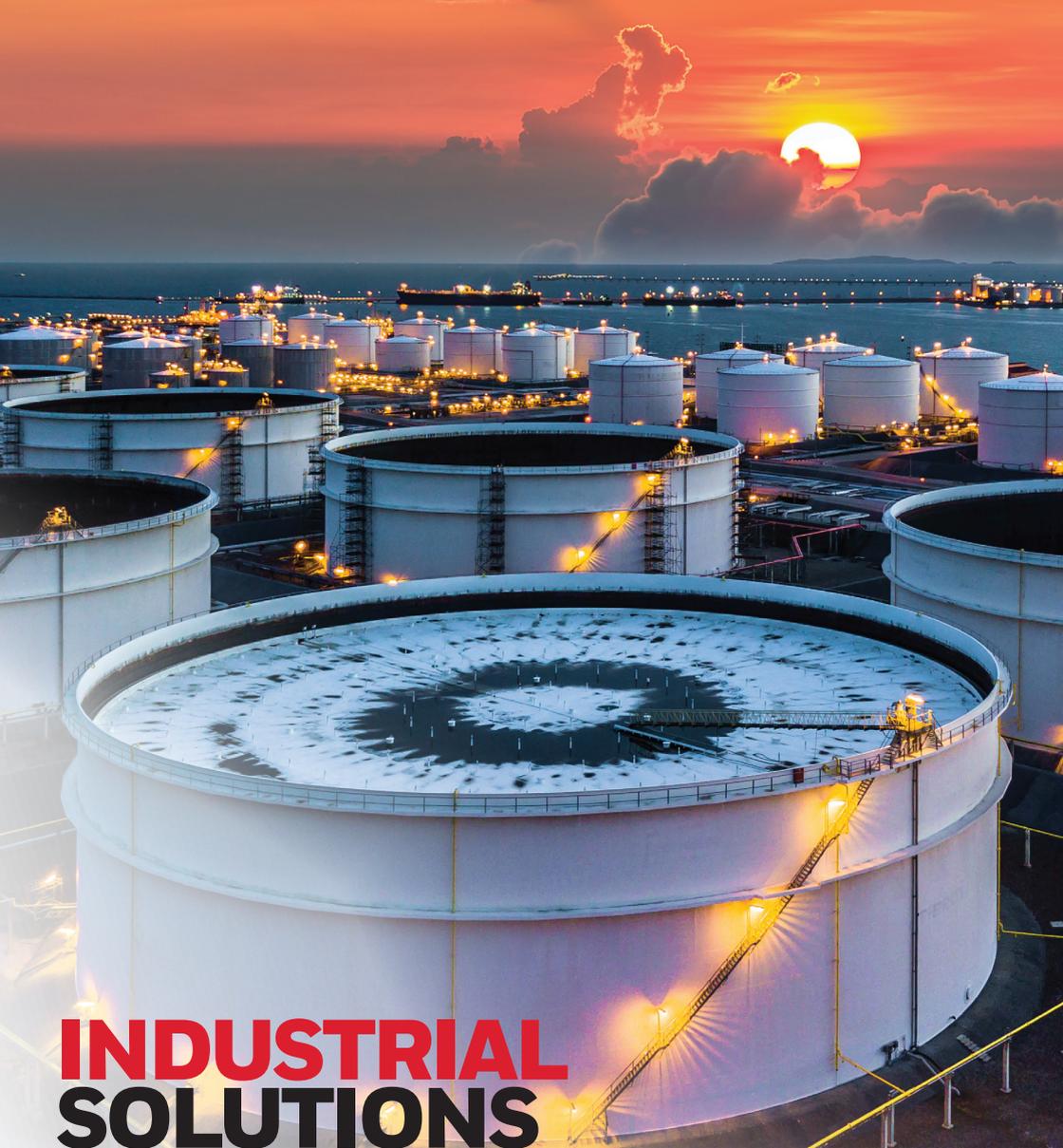
Key Specifications

- Accurate measurement based on laser scattering principle
- Highly accurate particle measurement of ($\pm 10\text{ }\mu\text{g}/\text{m}^3$) with calibrated sensor outputs
- Extremely low current consumption ($\sim 1.5\text{ }\mu\text{A}$ sleep) ensuring suitability for battery powered applications

Applications

- Air quality monitors (indoors and outdoors); air purifiers (commercial and residential); automotive cabin air purifiers; and HVAC (commercial and residential)





INDUSTRIAL SOLUTIONS

From the factory floor to the furthest distribution center, Honeywell sensors, switches, interfaces and custom assemblies offer unmatched value down the line — powerful solutions for virtually any industrial need. Enhanced accuracy, accountability and durability are built into every part or construction, improving output and endurance. Honeywell solutions are tailored for strong performance, long productivity and enhanced safety.



MICRO SWITCH LIMIT SWITCHES



914CE Series

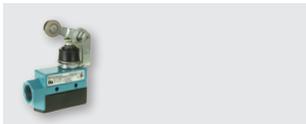
For use in North America. Incorporates fluorocarbon diaphragm sealing to meet NEMA 1, 2, 3, 3R, 4, 6, 6P and 13 as well as IP66, IP67 and IP68 requirements.

Key Specifications

- Pre-leaded (UL cable) or supplied with a M12 four-pin connector
- Wide selection of actuators and cable lengths with side & bottom exit cable/connector options
- Well suited for up to 10 million actuation cycles

Applications

- Machine tools, off-road equipment, material handling, access and mobility solutions, robotics, packaging equipment, machinery



BZE6 Series

Designed for a wide variety of indoor and outdoor applications. Electrostatic applied epoxy coating to the zinc housings enhance the durability of the product in most environments.

Key Specifications

- Small footprint with easy access to wiring terminals
- Available in a configuration suited to the application with variety of actuators, circuitries, connectivities and mounting options
- High capacity (22 A) available

Applications

- Packaging equipment, air curtains, conveyors, construction machinery and equipment, rail maintenance & agriculture equipment

INDUSTRIAL SOLUTIONS



NGC Series

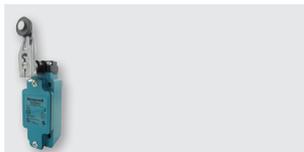
Miniature, configurable platform that allows the customer to choose SPDT or DPDT while maintaining the same housing and mounting footprint.

Key Specifications

- More than 380,000 configs
- Snap-action, positive-break contacts
- UL, CE, cUL and CCC approvals
- Low & high temperature variants

Applications

- Boom position detection, elevators and escalators, machine tools, packaging equipment, rail doors, scissor lifts



GLS Series

Modular design (heads/actuators, bodies and contact blocks) of the limit switch allows for rapid response to meet customer applications.

Key Specifications

- EN50041 & EN50047 standards
- Positive break contacts
- Standard body or plug-in body with same footprint
- Wide range of actuators, heads & bodies
- Sealed IP67, NEMA/UL 1, 4, 12, & 13

Applications

- Aerial & boom lifts, auto assembly lines and machining centers, ag equipment, conveyors, doors, material handling, machine tools, valves



HDLS Series

Modular construction allows for a wide variety of actuator styles, operating heads and electrical circuitry options. Plug-in versions greatly reduce down-time on production lines as replacement is accomplished in seconds.

Key Specifications

- NEMA 1, 3, 4, 4X, 6, 6P, 12, 13 and IP65/66/67 sealing
- All-metal drive train for consistent operating characteristics
- Exclusive teller tab ensures proper torque
- Industry-leading breadth-of-product offering: standard, harsh-duty epoxy sealed, or stainless steel
- Multiple connectivity options for international applications

Applications

- Machine tools, automotive machine tools, material handling, outdoor electromechanical structures, balers/compactors, conveyors, food and beverage, power plants, off-road equipment, agricultural equipment, valves, transportation hubs



INDUSTRIAL SOLUTIONS

MICRO SWITCH LIMIT SWITCHES



SZL-VL-S Series

Designed for use in applications where limited mounting space is available. Design enhances ease of wiring with ample wiring space, and has an optional cable gland.

Key Specifications

- Direct opening contacts (side rotary)
- IP67 sealing
- CCC/CE/cULus approvals

Applications

- Scissor/boom position detection, vehicle accessibility lifts, escalators/motorized walkways, machine tools, packaging and ag equipment



SZL-WL Series

General purpose limit switches that is cost effective and may be used in a wide range of applications. Designed for world-wide use.

Key Specifications

- EN50041 mounting
- Metal housing; IP67 sealing
- 30 mm x 60 mm mounting centers
- UL/CE/CSA approvals

Applications

- Conveyors, assembly lines, automated metal removing machines, electric valves, dampers, fume hoods, HVAC/R, position/leveling control

MICRO SWITCH HAZARDOUS AREA SWITCHES



BX Series

Designed for applications in hazardous or explosive environments requiring a rugged, durable switch virtually anywhere in the world.

Key Specifications

- Two rugged designs: aluminum or corrosion-resistant stainless steel
- UL, CSA, ATEX (CE), UKEX (UKCA), IEC Ex, INMETRO, NEPSI Ex, & KOSHA/KTL
- IP67, NEMA 1, 3, 4, 6, 13

Applications

- Grain elevators, control valves, drilling, pipelines, petrochemical/chemical, water treatment, paint booths, conveyors, pulp & paper, waste handling



LSX Series

Designed for adverse environments. Approved for use in hazardous locations and NEMA classified atmospheres.

Key Specifications

- Extensive variety of actuation heads & non-sparking actuators
- Field adjustability (CW-CCW operation)
- NEMA 1, 3, 4, 6, 13

Applications

- See BX Series

PRESSURE SWITCHES



5000 Series

Specifically designed to stand up to extended duty applications. Factory set but capable of field adjustment. 1/8 -27 NPT male thread connector. Terminal options: #8-32 screws, 1/4 in blade, 280 Series Metri-Pack.

Key Specifications

- Set point range: 75 psi to 150 psi
- Operating pressure: 150 psi, 250 psi
- Burst pressure: 4000 psi

Applications

- CNC, compressors/boilers, food & beverage, generators, HVAC/R equipment, pneumatic equipment, presses/punches, pressure washers, water pumps

RTD SENSORS



HEL-700

Designed to monitor or control critical temperatures. Provide a linear change in resistance versus temperature, combining high linearity, stability, accuracy, and wide temperature range.

Key Specifications

- 100 Ohm or 1000 Ohm platinum RTD
- -75°C to 500°C
- TFE Teflon or fiberglass alumina tube with leadwires

Applications

- HVAC, instrument and probe assemblies, process control, motor windings, battery packs, ovens

MICRO SWITCH BASIC SWITCHES



BZ Series

Large snap-action switch for a variety of applications. Internal flat-spring design is ideal for applications requiring precision switch characteristics & long life.

Key Specifications

- Available with differential travel less than 0,0254 mm [0.001 in]
- Mounts on standard 25,4 mm centers
- Wide selection of integral actuators
- UL, CSA, CE and ENEC; MIL-PFR-8805 (select listings)
- 49,3 mm L × 17,5 mm W × 24,1 mm H [1.94 in × 0.69 in × 0.93 in]

Applications

- Building controls, doors, lifts, semi-trucks and trailers, valves, timers, food service equipment, irrigation equipment, medical instrumentation



V15W Series

Miniature, sealed basic switches feature industrial-grade performance (IP-rated sealing and 10 A electrical rating).

Key Specifications

- Sealed plunger and sealed wire leads conforms to the IP67
- Many different switch characteristics, actuators and terminations; thousands of potential configurations
- Silver alloy or gold-plated silver alloy contacts
- Prelead 300 mm wire option

Applications

- Food packaging plants, ATVs, off-road vehicles, garbage & salt trucks, buses, vending machines, golf carts, medical equipment, fork lifts, riding mowers

INDUSTRIAL SOLUTIONS



ZD/ZW Series

Sealed subminiature snap-action switch. Designed to accommodate a wide range of temperature requirements.

Key Specifications

- SPDT, SPNC, or SPNO options
- Power-duty switching with silver contacts or logic-level with gold-plated contacts
- Pre-leaded wires sealed to IP67
- Integral sealed pin plunger
- Various levers and variety of terminations

Applications

- Electric window control, seat belt latch detection, latch detection, lawn tractors, watercraft, snowmobiles, security systems



V7 Series

Premium miniature basic switches. Designed for long-term reliability, up to 10 million cycles. Requires as little as 0,15 N to operate for extremely sensitive applications or an operating force of almost 4 N [14 oz] where higher forces are required.

Key Specifications

- Wide variety of electrical ratings: 0.1 A up to 25 A
- Available with pin plungers or different styles of integral levers
- Certified by CSA, CE and UL
- SPDT, SPNC or SPNO options

Applications

- Vending machines, household appliances, pressure switch assemblies



INDUSTRIAL SOLUTIONS

MICRO SWITCH SAFETY SWITCHES



1CPS Series

Single-head cable pull. Intended for use in applications where the cable span is 76 m [250 ft] or shorter.



2CPS Series

Dual-head cable pull. Intended for use in very long cable runs of 152 m [500 ft] or shorter.

Key Specifications

- Direct opening action of NC contacts
- 1CPS: 1NO/1NC, 2NO/2NC, 1NO/3NC, or 4NC contact configs
- 2CPS: 2NO/2NC, 1NO/3NC, or 4NC contact configurations
- Internal mechanism latches on both slackened cable (push) and pulled cable
- Large wiring cavity with straight-through wiring

Applications

- Long conveyor systems, conveyor systems with a high amount of vibration or wide temperature swings, perimeter guarding in hose-down conditions, packaging equipment, assembly lines



2CCP Series

Provides an economical switching solution for an easily accessible emergency stop function along conveyors and machines.

Key Specifications

- Dual direction
- Improved design for LED and tension windows
- Updated design to easily and economically replace faceplate
- All options in one package size

Applications

- Long conveyor systems, post and parcel facilities, food & beverage or pharmaceutical production, packaging equipment, assembly line, cement and asphalt production, chemical processing, mining, power plants



HEAVY-DUTY PRESSURE SENSORS



MLH Series

Amplified. As low as ± 2 %FSS TEB. Gage & sealed. 304L SS port, Haynes 214 alloy diaphragm.

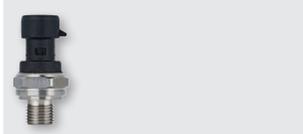
Key Specifications

- 6 bar to 550 bar; 0 psi to 8000 psi
- Six standard output options

Applications

- Compressors, cylinder tanks, HVAC, hydraulics, oil & gas, refrigeration, anesthesia, blood & chemistry analyzers, gas chroma-tography, O₂ concentrators, ventilators

INDUSTRIAL SOLUTIONS



MIP Series

Media isolated. Amplified. As low as ± 0.75 %FSS TEB. Absolute, sealed gage. Stainless steel.

Key Specifications

- 1 bar to 60 bar; 15 psi to 870 psi
- Ratiometric output: 0.5 Vdc to 4.5 Vdc
- 4 mA to 20 mA output
- Accuracy: ± 0.15 %FSS BFSL
- Diagnostics option

Applications

- Pumps (water, hydraulic fluids), compressed air, process (food, beverage, oil, gas, steam), medical, gasoline, diesel fuel, engine oil, brake fluid, coolants, CNG



PX3 Series

Amplified. ± 1 %FSS typ. TEB. Absolute, sealed gage. Uses piezoresistive sensing technology with ASIC signal conditioning in a brass housing and Metri-Pack 150, DIN, or cable harness electrical connections.

Key Specifications

- 1 bar to 50 bar; 15 psi to 700 psi
- Ratiometric output: 0.5 Vdc to 4.5 Vdc or 0.33 Vdc to 2.97 Vdc
- 4 mA to 20 mA output
- Multiple configuration possibilities
- Optional diagnostics mode

Applications

- Refrigerant pressure monitoring, dry air system pressure, process controls and automation, dry air system monitoring, hydraulic, brake and engine oil fluid pressure; air brake pressure



INDUSTRIAL SOLUTIONS

PRESSURE TRANSDUCERS



FP5000

Media-isolated piezoresistive silicon pressure sensor offering multiple output options (0 V to 5 V, 0 V to 10 V or 4 mA to 20 mA). Configurable gage/absolute pressure transducers.

Key Specifications

- 0.36 psig/a to 5,000 psig/a
- ± 0.1 % full-scale accuracy.
- Multiple electrical and pressure connections
- Zero adjustment potentiometer

Applications

- Test stands, R&D test labs, hydraulic & pneumatic systems, leak detection, manufacturing mold pressure control, pump/compressor control, liquid level measurement, oil & gas process control, fluid flow, valve testing



TJE

All-welded stainless steel sensors built for rugged applications that require high accuracy and measurement stability.

Key Specifications

- 0.1 % accuracy
- 0.0025 %FS/°F temperature effect
- 1 psig/a to 60000 psig/a range
- mV/V, 4 mA to 20 mA, 0 Vdc to 5 Vdc, or 0 Vdc to 10 Vdc output

Applications

- Engine & transmission test stands, fluid pump pressure, fuel line pressure and fuel/air ratio, brake assembly test, air bag system fill, pressure brake testing, hydraulic & pneumatic systems



434, 435, 437

Wing Union/Hammer Union pressure sensors designed for use with Wecco® 1502 fittings for both offshore and land-based oil and gas applications.

Key Specifications

- Pressure range 0 to 5000 psi; 0 to 6000 psi; 0 to 10000 psi; 0 to 15000 psi; 0 to 20000 psi; 0 to 350 bar; 0 to 400 bar; 0 to 700 bar; 0 to 1000 bar; 0 to 1350 bar
- High accuracy ± 0.1 %FSS BFSL (435); standard accuracy ± 0.2 %FSS BFSL (434/435/437)
- Standard and wide apertures

Applications

- Acidizing, choke manifold, fracturing and cementing, measurement while drilling (MWD), mud pumps/mud logging, new well development and extraction, oil and gas drilling, service and cement trucks, standpipe, stimulation, well head measurement



Model 41

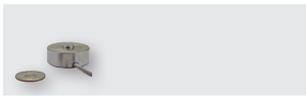
Tension/compression precision low profile load cell. All-welded, stainless steel pancake load cells. Either bonded foil or foil strain gauge technology with accuracies from 0.10 % up to 0.04 %.

Key Specifications

- 0.1 % accuracy; 5 lb to 500000 lb
- mV/V output (standard): 4 mA to 20 mA and 0 Vdc to 5 Vdc (optional)
- Double diaphragm design
- Intrinsically safe available (2N only)

Applications

- Tube mills, extruding processes, weighing, fuel consumption in vehicles, oil production, engine horsepower testing, CMP and other wafer processing applications



Model 53

Miniature load cell. Designed to fit into systems with limited space or tight clearances. Bonded, foil strain gauge transducers for cost efficient production.

Key Specifications

- 5 lb to 50K lb; Stainless steel
- Mini footprint
- Button-style design
- mV/V output

Applications

- Cable tension, electromechanical parts testing



TORQUE TRANSDUCERS



Model QWFK-8M

Engineered for minimum size and to achieve 0.1% maximum non-linearity. Four bonded strain gages are positioned on a special machined portion of the transducer to effectively measure even the slightest torque motion.

Key Specifications

- 25 in-oz to 300 in-lb
- 0.1 % non-linearity and hysteresis
- Compact size
- High frequency

Applications

- Motor dynamometers, tire braking, twist and friction skid test measurements, small component, switch and product testing



Model 1700

Non-contact amplified rotary torque transducers are suitable for laboratory applications as well as industrial environments because of their compact size and multiple mounting options.

Key Specifications

- 0.02 Nm to 1500 Nm capacity
- 0.25% accuracy
- Built-in instrumentation amplifier (± 10 V output-1; standard)

Applications

- ac and dc motors, generators, loaders, kilns, rotating temperature measurements



TMS9250

Provides a non-contact torque measurement through digital telemetry on rotating parts. Fully digital, wireless design. Enables higher integrity of the torque data capture through higher resolution, higher sensitivity, faster response, and no mechanical interferences.

Key Specifications

- 0.05% full scale, total system accuracy
- Shaft-to-shaft compatible
- 50 ft-lb to 200000 ft-lb [100 Nm to 271164 N-m] capacity
- High torsional stiffness

Applications

- Powertrain testing; engine, engine diagnostics, cold engine; transmission, driveshaft, & rear axle differential; dynamometer; brakes; wheel hub; continuous track, heavy equipment; oil & water pump testing; turn up/turn down gear box testing; motor/generator testing

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 acknowledgment 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 that Honeywell, in its sole discretion, 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.**

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- The information presented in this document is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

For more information

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