

**TRANSPORTATION
INDUSTRY
PROVIDING
TECHNICAL SAFETY &
PRODUCTIVITY
SOLUTIONS**



Honeywell

TRANSPORT YOUR BUSINESS TO A BETTER PLACE: LEADING THE RACE

Honeywell is committed to providing the right product for your application. Whether you need a standard product or a highly customized solution, our sales and engineering teams have decades of experience in the Transportation industry. We understand your applications and work diligently to ensure we provide a solution that optimally meets your technical and financial needs. Our unique combination of a broad product portfolio, deep technical capabilities and extensive application experience culminates into a powerful ability to meet your design needs.

TABLE OF CONTENTS

| | | | | |
|--------------------------------|-----------|--|-------------------------------|-----------|
| TARS – IMU | Page 3 | | Industrial & Military Toggles | – Page 4 |
| Limit Switches | – Page 5 | | Basic Switches | – Page 6 |
| Pressure Switches and Sensors | – Page 7 | | | |
| Position Sensors | – Page 8 | | Magnetic Sensors | – Page 9 |
| Air Quality Monitoring | – Page 10 | | Proximity Sensors | – Page 10 |
| Board-Mount Pressure Sensors | – Page 10 | | | |
| Board-Mount Force Sensors | – Page 10 | | | |
| Sensor and Switch Applications | – Page 11 | | | |



TRANSPORTATION ATTITUDE REFERENCE SENSORS (TARS-IMU)

The Transportation Attitude Reference System or TARS-IMU is a packaged sensor array designed to report vehicle angular rate, acceleration, and attitude data for demanding applications in industries such as heavy-duty and off-highway transportation.

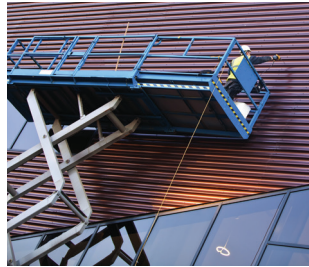


FEATURES

- Reports angular rate, acceleration, and inclination
- Ruggedized PB8 thermoplastic housing
- IP67 and IP69K certified
- Advanced filtering of raw sensor data
- Optional metal guard for added protection
- Supports 5 V and 9 V to 36 V vehicle power systems
- Operating temperature of -40°C to 85°C [-40°F to 185°F]
- Small form factor

BENEFITS

- Enables semi-autonomous vehicle operation and enhanced efficiency and productivity
- Suitable for the most demanding application and environmental conditions
- Improved positioning accuracy
- Minimizes unwanted noise and vibrations



APPLICATIONS

- Safety, productivity, and comfort functions on agricultural, mining, material handling, platform lift and construction equipment
- Cab/equipment leveling
- Tip avoidance/stability control
- Operator-assisted control

HONEYWELL OFFERS A BROAD OFFERING OF POSITION SENSORS.

View our offering by clicking here.

INDUSTRIAL-GRADE SEALED TOGGLE SWITCHES NT & MT SERIES



FEATURES

- NEMA 3, 3R, 4, 13 and IP67/68
- UL recognized, CSA certified, and CE certified
- Three popular styles of termination and many configuration options
- Larger standard metal or plastic levers
- Optional “Easy Start” threaded bushing
- MT Series – smaller behind-panel size

BENEFITS

- Environmental sealing for demanding applications
- Qualified for global use
- Configurable to your specific needs
- Well suited for gloved-hand operation.
- Quick alignment of the mounting nut to minimize any cross threading
- Enables more compact designs



MILITARY-GRADE SEALED TOGGLE SWITCHES TL SERIES



FEATURES

- MIL-DTL-3950 qualified, UL recognized, CSA certified, and CE approved
- 1-, 2-, and 4-pole, 2- and 3-position, maintained and momentary toggle action
- Optional locking levers for critical applications
- Step-design case
- Choice of silver alloy or gold-plated contacts

BENEFITS

- Designed to withstand the most demanding indoor and outdoor applications
- Qualified for global use
- Configurable to your specific needs
- Added space between terminals to prevent shorting



HONEYWELL OFFERS AN EXTENSIVE RANGE OF TOGGLES SWITCHES INCLUDING TS, MT, NT, TL, TW, AT AND ET SERIES:

View our offering by clicking [here](#).

MICRO SWITCH LIMIT SWITCHES

No limit leadership. Available with a variety of actuators, electrical specifications, terminations, circuitries and sealing ratings, Honeywell MICRO SWITCH limit switches offer superior flexibility and performance. These precision snap-action switches — sealed in rugged housings — are used to detect presence or absence in areas where physical contact is allowed.

NGC SERIES



FEATURES

- SPDT or DPDT configurable circuitry
- Snap-action, positive-break contacts
- IEC 60947-5-1, IEC 61373, EN45545-2
- NEMA 1, 4, 12, 13; IP67 sealing
- Mechanical life up to 5 million operations

14CE SERIES



FEATURES

- IP65/66/67/68 environmental sealing
- Pre-leaded or M12 four-pin connector
- 25 mm mounting centers
- 10 million actuation cycles

GLC SERIES



FEATURES

- EN 50047 footprint
- EN 45545-2 emission standard
- Sealed to IP66; NEMA/UL 1, 4, 12, and 13
- Mechanical life up to 10 million operations
- Positive opening EN/IEC 60947-5-1-3

HDLS SERIES



FEATURES

- IP65/66/67 environmental sealing
- Sintered bronze bearing on 303 stainless steel operating shaft for enhanced mechanical life up to 50 million actuation cycles
- Corrosion-resistant zinc head and body are phosphate treated and epoxy coated

HONEYWELL OFFERS A WIDE RANGE OF LIMIT SWITCHES INCLUDING NGC, 14CE, GLC AND HDLS SERIES:

View our offering by [clicking here](#).

MICRO SWITCH BASIC SWITCHES

With decades of engineering excellence in the design of snap action switches, Honeywell offers a range of products to meet market demands. No matter if you require a simple or precision on/off detection, or an electromechanical interface for pressure monitoring or to support a manual operator interface, there are options to serve numerous applications.

MINIATURE V15 SERIES



FEATURES

- Max 26 A Load
- Up to 1 million mechanical cycles
- Highly configurable

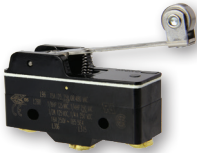
MINIATURE V15W SERIES



FEATURES

- Max 10 A load
- Up to 1 million mechanical cycles
- IP67 sealed
- Pre-cabled or terminal options

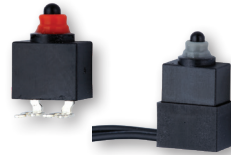
LARGE BASIC BZ/BA/BM/BE SERIES



FEATURES

- Max 25 A load
- Up to 20 million mechanical cycles
- MIL-PRF-8805 on selected listings

SUBMINIATURE HD1 SERIES



FEATURES

- Max 0.1 A load
- Up to 300,000 mechanical cycles
- IP67 sealed

HONEYWELL OFFERS AN EXTENSIVE RANGE OF BASIC SWITCHES INCLUDING BZ, V15W, V15 AND HD1 SERIES:

View our offering by clicking here.

PRESSURE SENSORS AND SWITCHES

MIP SERIES



The MIP Series offers a heavy duty, media-isolated pressure transducer in a compact, stainless steel construction for use with a wide range of media including aggressive fluids and water. The MIP Series provides a cost-competitive solution for wide-ranging potential applications in tough environments.

- Pressure range 0 psi to 175 psi
- 1 mS response time
- High freeze/thaw resistance
- Life-time rating 10 million cycles

MLH SERIES



MLH heavy duty pressure sensors are utilized in a wide range of applications and industries where proven reliability and durability is a top priority. Extensive media compatibility combined with greater than one million configurations makes MLH the ideal pressure sensing solution for demanding applications.

- Pressure ranges up to 8,000 psi (550 bar)
- Absolute, gage and sealed-gage
- Wide selection of port/connector types
- High-end stainless steel (corrosion resistance)

HONEYWELL OFFERS A LARGE PORTFOLIO OF PRESSURE SENSORS.

View our offering by clicking here.

5000 SERIES



Honeywell's 5000 Series pressure switch is specifically designed to stand up to extended duty applications. This switch is factory set but capable of field adjustment. It features a Kapton diaphragm for compatibility with a wide variety of fluids, and various terminations including a Metri-Pack connector.

- Brass or stainless steel base
- 75 psi to 150 psi
- Four set-point ranges
- 1 million mechanical cycles

LE/HP SERIES



Pressure switches form the last line of defense in many critical applications, protecting people, equipment and the environment. Extensive media compatibility combined with high proof/burst pressure ratings make Honeywell pressure switches the ideal solution for demanding applications.

- **LE/LP**, low pressure range 150 psi (10 bar)
- **ME/MH**, medium pressure range 500 psi (35 bar)
- **HE/HP**, high pressure range 4500 psi (300 bar)

HONEYWELL OFFERS AN EXTENSIVE RANGE OF PRESSURE SWITCHES.

View our offering by clicking here.

POSITION SENSING

SPEED SENSORS



SNG-Q series speed sensors are utilized to monitor and control the speed and direction of rotating equipment. Magnetic speed sensors contain no moving parts and provide superior performance and reliability.

- Speed detection 3 Hz to 20 kHz
- Wide selection of connector types
- Environmental sealing: IP69K
- Life-time rating 2 million cycles

SMART POSITION SENSORS



SMART position sensors are durable, adaptable, and lightweight, enabling enhanced accuracy in motion control and improving operational efficiency and safety. The non-contact design facilitates ease of integration in the application, promoting performance even in the harshest environments.

- Non-contact design eliminates wear & tear
- Easy to install, reducing set-up costs
- Life-time rating 35 million cycles
- Environmental sealing: IP67, IP69K

ROTARY POSITION SENSORS



RTP Series

Takes non-contact sensing to the next level by separating the magnet from the sensor body. The absence of the actuator shaft removes the wear and tear on the bearings caused by radial forces.

- Life-time rating – Infinite
- Operating range: 50° to 360°
- Supply voltage: 5 Vdc to 30 Vdc
- Environmental sealing: IP69K



RTY Series

These shaft activated products are available in two versions: an integral shaft with or without a lever.

- Life-time rating 35 million cycles
- Operating range: 50° to 360°
- Supply voltage: 5 Vdc to 30 Vdc
- Environmental sealing: IP69K

HONEYWELL OFFERS A WIDE RANGE OF POSITION SENSORS.

View our offering by clicking [here](#).

MAGNETIC SENSORS HALL-EFFECT

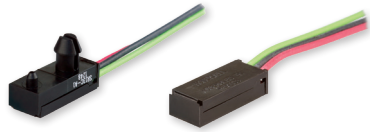
METAL



The 103SR Series Hall-effect position sensors are sealed in aluminum or stainless-steel threaded housings. Rugged non-contact sensing products use versatile, reliable Hall-effect ICs operated by a magnetic field and are designed to respond to alternating North and South poles or to South pole only.

- Digital unipolar, latching and linear magnetics
- Sealed to NEMA 3, 3R, 3S, 4, 4X, 12, 13

SNAP-IN



The SR13/15 Series packages allow quick and easy sensor installation. These devices can be installed without additional mounting hardware. The snap-in (SR13) and flat mount (SR15) packages can house any of the present SS400 Series hall-effect sensors or any similarly sized sensing elements.

- Digital unipolar or latching (SR13), unipolar (SR15)
- Sealed to NEMA 3, 3R, 3S, 4, 4X, 12, 13

PLASTIC HOUSING



The SR3/4 Series Hall-effect and AMR position sensors are sealed in plastic threaded housings. These non-contact sensing products use versatile, reliable Hall-effect or AMR ICs that are operated by a magnetic field and are designed to respond to North and South poles (alternating bipolar hall and omni polar AMR) or to South pole only (unipolar Hall).

- Sealed to NEMA 3, 3R, 3S, 4, 4X, 12, 13
- Various Bop/Brp sensitivity options

AMR SPEED & DIRECTION IC



Honeywell's Anisotropic Magnetostrictive (AMR) 2-Pin Pulse Width Modulated (PWM) Speed and Direction Sensor Integrated Circuit (IC) is designed to detect the speed and direction of a ring magnet encoder target using a unique bridge design.

- AECQ100-H qualified
- -40°C to 150°C operating temperature

HONEYWELL OFFERS A LARGE PORTFOLIO OF MAGNETIC SENSORS.

View our offering by clicking here.

AIR QUALITY MONITORING HPM SERIES



Enables the ability to more accurately and cost competitively monitor or control environmental particulate.

- Industry-leading long life of 10 years of continuous use
- Proven EMC performance enables the ability to perform more accurately in a variety of tough industrial environments

HONEYWELL OFFERS A NUMBER OF PARTICULATE SENSORS.

View our offering by clicking here.

PROXIMITY SWITCHES GAPS SERIES



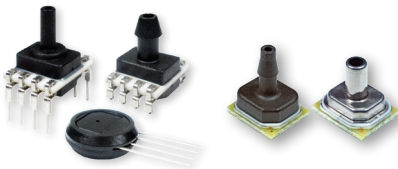
Environmentally rugged: Fully hermetic packages provide long-term reliability in very harsh environments by eliminating the potential for contamination of the sensor from the application environment.

- Integral Health Monitoring Capability: Optional third output state to indicate the health of the sensor (whether it is healthy or failed).

HONEYWELL OFFERS AN WIDE VARIETY OF PROX SENSORS.

View our offering by clicking here.

BOARD-MOUNT PRESSURE HSC, SSC, ABP2 SERIES

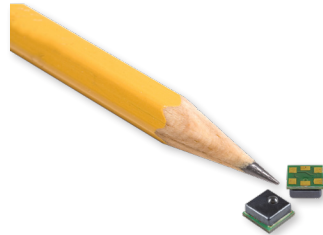


Utilize a specialized piezoresistive, micro-machined, sensing element which allows part interchangeability and enhanced performance, reliability and accuracy.

HONEYWELL OFFERS A BREADTH OF BOARD-MOUNT SENSORS.

View our offering by clicking here.

BOARD-MOUNT FORCE FMA SERIES



Measure the addition or backup of force, meaning the resistance of silicon-implanted piezoresistors will increase when flexed under applied force.

HONEYWELL OFFERS A WIDE RANGE OF FORCE SENSORS.

View our offering by clicking here.

SENSOR AND SWITCH APPLICATIONS



| PRODUCT | APPLICATIONS |
|---------------------------------|--|
| Hall-effect sensor ICs | Wheel speed, power seat motor Cam/crankshaft |
| Inertial measurement unit (IMU) | Vehicle angular rate, acceleration, and inclination |
| Key switch Smart key | On/off Operator-specific functionality |
| Limit and basic switch | Back-up alarm Machine and cab position Jib, outrigger position Brake switch |
| Current sensor | Battery management systems and charging infrastructure |
| Board-mount products | Filter clogging Fuel level detection |
| Particle sensor | Environmental particle detection |
| Pressure sensor | Hydraulic/brake system Fuel level Outrigger load |

| PRODUCT | APPLICATIONS |
|---|--|
| Pressure switch | Hydraulic/engine oil sensing Brake monitoring Airflow monitoring |
| Rotary Hall-effect position sensor Linear Hall-effect sensor | Jack position Power steering control Stability control Throttle position |
| Rotary position sensor SMART position sensor | Boom and steering angle sensing Gear position Throttle by wire Vehicle and load position |
| Speed sensor Speed & direction sensor | Wheel speed Hydraulic pump speed Cam/crankshaft speed Turbo speed RPM/MPH/speedometer Forward/reverse sensing |
| Thermostat | Fan control Fire suppression sensing |
| Toggle and rocker switch | Manual operator switch |

SERVING THE TRANSPORTATION INDUSTRY



Heavy Duty On and Off Road



Agricultural



Material Handling Equipment



Mining and Construction



Power Generation



Rail



Aerial Lifts



Electrification



Cranes

FOR MORE INFORMATION

Honeywell Advanced Sensing Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit [our website](#) or call:

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