## MAKING SENSE OF SENSING

Cutting Edge Sensing Technology for the Connected World



## **SENSE THE OPPORTUNITIES**

From medical to transportation, from industrial to aerospace, sensors are everywhere. These foundational devices collect the essential data customers need to make informed decisions and take action.

Honeywell is a leading global supplier of custom-engineered sensors, switches, machine safeguarding and other devices offering enhanced precision, repeatability and durability to a variety of original equipment manufacturers. We are taking the next step to advance our sensing technology by adding cutting-edge intelligence capabilities from the Internet of Things and cloud-based computing to our sensors.

## BASIC PRESSURE SENSOR ABP2 SERIES

Honeywell Basic ABP2 board-mount pressure sensors provide outstanding performance and value. Our extensive portfolio is offered with a wide choice of ports, package types, outputs and pressure ranges. ABP2 sensors support an extended pressure and temperature range and can be utilised in a wide range of medical, industrial and commercial applications.



#### **FEATURES**

- Great performance and value
- Pressure range: 10 mbar to 12 bar
- Compensated temperature: -40° to 110°C
- Extensive portfolio (>20K configs)
- Analogue & digital (I<sup>2</sup>C/SPI)
- Evaluation/sample kits

#### BENEFITS

- Enhances equipment performance/ accuracy
- Used in for medical, industrial and consumer applications
- Ideal for portable equipment and battery-powered applications
- Reduces design-in time and costs



#### MEDICAL

- Ventilators
- Anesthesia machines
- · Kidney dialysis machines
- Sleep apnea equipment
- Nebulizers
- Spirometers
- Surgical/dental(suction)



#### **INDUSTRIAL**

- Gas flow instrumentation
- HVAC filter detection
- Air quality meters
- Pressure meters
- Compressors
- · Liquid level
- Vacuum equipment



#### COMMERCIAL

- Washing machines
- Dish washers
- · Coffee machines
- Humidifiers
- Air beds

## MICROPRESSURE MPR SERIES

Honeywell MicroPressure is a small-form factor amplified board-mount pressure sensor with digital output. Temperature compensated and fully compatible with a wide variety of media (liquids and gases), the MPR is offered with 2x port options. The small-form factor, low power consumption and low cost makes it an ideal solution for new designs.



#### **FEATURES**

- Pressure range: 60 mbar to 2.5 bar
- Small-form factor: 5 mm x 5 mm
- Digital output: I2C or SPI
- Liquid media compatible
- Long port: tubes
- Short port: manifold mount

#### **BENEFITS**

- Enhances equipment performance
- Enables new designs and applications
- Ideal for portable equipment and battery-powered applications
- Reduces design-in time and costs





#### **MEDICAL**

- Sleep apnea equipment
- Nebulizers
- Spirometers
- Blood pressure monitors
- Surgical/dental(suction)
- Disposable pressure transducers

#### **INDUSTRIAL**

- Gas flow instrumentation
- Boiler application
- Pressure meters
- Liquid level
- Vacuum equipment

#### **COMMERCIAL**

- Washing machines
- Dish washers
- Coffee machines
- Humidifiers
- Air beds

## **BOARD-MOUNT PRESSURE** TRUSTABILITY® SERIES

Honeywell TruStability board-mount pressure sensor family provides industry-leading performance, accuracy, reliability and value. The extensive portfolio is offered with a wide choice of ports, package types, outputs and pressure ranges. Used in a wide range of medical and industrial applications, TruStability sensors are endorsed by leading OEMs.



#### **FEATURES**

- High accuracy & performance
- Extensive portfolio (>100K configs)
- · Amplified: RSC, HSC, SCC & DPR
- Unamplified: TSC & NSC
- Analogue & digital (I<sup>2</sup>C/SPI)
- Evaluation/sample kits

#### **BENEFITS**

- Enhances equipment performance/ accuracy
- Used in medical industrial and other applications
- Ideal for portable equipment & batterypowered applications
- Reduces design-in time and costs



- **MEDICAL** Ventilators
- Anesthesia machines
- · Kidney dialysis machines
- · Diagnostic equipment
- · Laboratory equipment
- Spirometers



#### **INDUSTRIAL**

- Gas flow instrumentation
- HVAC filter detection
- · Air quality meters
- Pressure meters



#### **OTHER**

- Drones
- Airflow probes
- Military/marine equipment

## MICRO FORCE FMA SERIES

Honeywell MicroForce is a small-form factor amplified board-mount force sensor with digital output. The small-form factor, low power consumption and low cost makes it an ideal solution for new designs.



#### **FEATURES**

- Force range: 5 N to 25 N
- Small-form factor: 5 mm x 5 mm
- Digital output: I2C or SPI
- Coupling: metal ball

#### **BENEFITS**

- Enhances equipment performance
- Enables new designs and applications
- Ideal for battery-powered applications
- Reduces design-in time and costs



#### **MEDICAL**

- Volumetric infusion amua
- Ambulatory infusion pump
- Endoscopy
- Diagnostic equipment
- · Laboratory equipment
- Medical robots



#### **INDUSTRIAL**

- Industrial robots
- Automation equipment
- Non-invasive liquid flow measurements
- Weight measurements



#### OTHER

- Test equipment
- Tension control
- Coffee machines

# HEAVY-DUTY PRESSURE TRANSDUCERS 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.



#### **FEATURES**

- Rugged, stainless steel construction
- Ratiometric output: 0.5 Vdc to 4.5 Vdc
- Operating temperature: -40°C to 125°C
- Total Error Band ±0.75 %FSS to ±1.0 %FSS (-40°C to 125°C)
- Industry-leading accuracy: ±0.15 %FSS BFSL
- Long-term stability: ±0.25 %FSS

#### **BENEFITS**

- Provides true measurement performance over the compensated temperature range: small error promotes system uptime and efficiency
- Operates reliably in the presence of electromagnetic fields
- Hermetically welded design supports almost any media without the use of an internal seal



# HVAC & PROCESS &

- Heat pumps
- Chillers
- Refrigerant systems

REFRIGERATION

- Variable refrigerant flow (VRF) systems
- Discharge and suction pressure monitoring
- Variable speed and HVAC
- Compressor oil pressure monitoring
- Condensor fan control



## INDUSTRIAL

- Pumps (water and hydraulic)
- Agriculture & irrigation
- Water meters
- Gas leak detection
- Machinery (hydraulic, water, air)
- Air compressors
- Water heater and boilers
- Waste and water management
- Liquid level measurement



#### **TRANSPORTATION**

- Engine oil
- Brake booster
- Air brakes
- Air conditioning/HVAC
- Air/vacuum systems
- Transmissions
- Crank case pressure
- Air suspension
- Occupant detection
- LPG & CNG tank pressure
- Marine and railway equipment

### **PARTICULATE MATTER SENSORS**

Particle sensors play a critical role in measuring the quality of air we breathe to help protect health and wellbeing.



#### **FEATURES**

- Laser-based light scattering particle sensing
- Concentration range: 0 μg/m³ to  $1,000 \, \mu g/m^3$
- Accuracy: ±15 %
- <6 s response time

#### **BENEFITS**

- Accurate and cost-effective monitoring of particulate matter
- Proven EMC performance provides accuracy in a variety of industrial environments
- Ten year operational life provides long term stability for continuous use
- Response time of <6 s responds to environmental conditions in real time



#### **HVAC**

#### Commercial & Residential

- Air conditioners
- · Air quality monitors
- · Demand controlled ventilation
- HVAC performance analysis



#### **ENVIRONMENTAL** MONITORING

- Weather stations
- · Automotive cabin air purifiers and monitoring
- Public information displays
- · Handheld air quality detectors



#### CONSUMER **PRODUCTS**

- Indoor air quality monitors
- Air purification
- Air conditioners
- Baby monitors

## HIGH SENSITIVITY HALL-EFFECT SENSORS

A suitable alternative to reed switches in applications where traditionally used.



#### **FEATURES**

- 7 Gauss typical sensitivity
- Surface mount SOT-23 housing
- Stable over entire operating temperature range
- · Solid state technology
- · Plastic-molded housing
- Ultra low power 360 nA version

#### **BENEFITS**

- Similar or higher sensitivity
- Smaller than equivalent reed switches
- More reliable magnetic characteristics
- · Does not wear out over time
- More robust than glass bulbs
- Suitable for battery operated devices



### FLOW SENSING, INCLUDING SMART UTILITY METERS

- Counting mechanism
- Anti-tamper switches
- Solenoid valves with embedded flow meter



## BUILDING ACCESS AND SECURITY

- Door/window alarm sensors
- Smart home connected applications
- · Smart handles
- · Digital key locks



## WHITE GOODS AND POWER TOOLS

- Door/lid position detection
- Liquid level and flow monitoring for washing machines and dishwashers
- Selector switch on battery operated light appliances/DIY and gardening power tools

#### Honeywell Advanced Sensing Technologies

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