# SOLUTIONS FOR HEALTHIER AIR & HVAC SYSTEMS



### Honeywell Sensors are Essential for Monitoring Air Quality and Improving HVAC Systems

Honeywell Solutions are broad – they provide accurate feedback on key environmental conditions that contribute to home and commercial building comfort, for example particulate matter, temperature, humidity and gases including CO<sub>2</sub>. They not only improve comfort in a home or commercial building, but can also increase energy efficiency. In this home, several key HVAC/home devices are featured along with the Honeywell sensors that allow them to run reliably and deliver accurate readings.

#### **HOME COMFORT**



#### Air Cleaner/Purifier

- Particle sensors
- CO<sub>2</sub> sensors
- Temperature/humidity sensors



#### Indoor Air Quality Monitors & Systems

- Particle sensors
- CO<sub>2</sub> and CO sensors
- Temperature/humidity sensors



#### Air Filter

- Particle sensors
- Airflow sensors
- Board-mount pressure sensors



#### **Gas Detectors**

CO<sub>2</sub>, CO, SO<sub>2</sub>, CO, NO and O<sub>3</sub>
 sensors



# Thermostats & Humidistats

- CO<sub>2</sub> sensors
- Temperature/humidity sensors



# Room Control & Connected Homes

- Particle sensors
- CO<sub>2</sub> sensors
- Temperature/humidity sensors

# HVAC: HEATING AND VENTILATION



# Air Conditioning SystemsParticle sensors

- CO<sub>2</sub> sensors
- Board-mount pressure sensors
- Temperature/humidity sensors



#### **Air Purifiers**

- Particle sensors
- CO<sub>2</sub> sensors
- Temperature/humidity sensors



## Boiler

- CO gas sensor
- Heavy-duty and board-mount pressure sensors
- Temperature/humidity sensors
- MICRO SWITCH basic switches



# **Demand Control Ventilation**

- Particle sensors
- CO<sub>2</sub> sensors
- Temperature/humidity sensors



#### **VAV Control**

- Board-mount pressure sensors
- Temperature/humidity sensors
- Airflow sensors



#### Refrigeration

- Heavy-duty pressure sensors and switches
- Temperature/humidity sensors
  NOR ON TRAINING
- MICRO SWITCH basic switches
- Hall-effect magnetic sensor ICs



# ENERGY EFFICIENCY, COMFORT, LOWER COSTS AND MORE ALL PACKAGED INTO TINY SENSORS & SWITCHES

#### THE INCREASING COMPLEXITY OF ENVIRONMENTAL CONTROL SYSTEMS AND DEVICES MEANS AN INCREASING NUMBER OF HIGHLY RESPONSIVE SENSORS REQUIRED.

As consumer and commercial expectations shift toward better energy efficiency, automation, lower costs and sustainability, suppliers need to be on the forefront with the latest technologies to stay competitive. Honeywell's broad sensor and switch portfolio has the product solutions needed to support our customers' next generation developments. Honeywell's broad line of sensors covers all HVAC control applications and mounting options, making Honeywell your best sensor source. From humidity/temperature sensors for heating and cooling to CO<sub>2</sub> sensors for air quality and control – and just about everywhere in-between – you can count on Honeywell sensors for the latest technology, affordability, ease of installation, accurate performance and reliability.



#### **HEAVY DUTY PRESSURE SENSORS, MIP SERIES**

- Rugged, stainless steel construction
- Ratiometric output: 0.5 Vdc to 4.5 Vdc
- Total Error Band:  $\pm 0.75$  %FSS to  $\pm 1.0$  %FSS (-40°C to 125°C) for voltage output
- Beneficial in applications where the sensor functionality and the need to know internal or external failure modes is critical



#### **BOARD MOUNT PRESSURE SENSORS. BASIC ABP2 SERIES**

- Total Error Band: As low as ±1.5 %FSS
- Liquid media option
- Small size saves room on the PCB, simplifying design
- Digital output allows the sensor to be directly plugged into the customer's circuitry without requiring major design changes



#### **BOARD MOUNT PRESSURE SENSORS, BASIC ABP SERIES**

- High accuracy, great value pressure measurement
- Pressure range: ±60 mbar to 10 bar, ±6 KPa to 1 MPa, ±1 psi to 150 psi
- Accuracy: ±1.5 %FSS (temp compensated: 0°C to 50°C [32°F to 122°F])



#### **BOARD MOUNT PRESSURE SENSORS, TRUSTABILITY™ SERIES**

- High accuracy, performance, reliability and long-term
- Pressure range: ±1.6 mbar to ±10 bar, ±160 Pa to  $\pm 1$  MPa,  $\pm 0.5$  in-H<sub>2</sub>O to  $\pm 150$  psi
- Accuracy: ±2 %FSS (temp compensated: -20°C to 85°C [-4°F to 185°F])



#### **CITY TECHNOLOGY CO SENSOR, ECOSURE X**

- Designed for unattended operation and long life: > 10 years in normal use
- Stable performance and self diagnostic function
- UL Certified UL2075
- Often used in: residential, fire detection and ventilation control applications



#### CITY TECHNOLOGY CO, SENSOR, **CRIR SERIES**

- Single channel, non-dispersive infrared technology with Automatic Baseline Correction
- UART digital interface
- Enhanced long-term stability
- Easily integrated into system designs; maintenance free for normal indoor applications



#### CITY TECHNOLOGY O2, CO, NO, NO2, SO, SO<sub>2</sub>, H<sub>2</sub>S SENSORS, 5 SERIES

- Incorporates scavenging electrode for removal of byproducts
- Electrical connection via PCB pins or solder tags
- Wide measurement range and high maximum overload



#### CITY TECHNOLOGY SO<sub>2</sub>, CO, NO, NO<sub>2</sub>, O<sub>3</sub> **SENSOR, AQ3 & AQ7 SERIES**

- High resolution with a low detection limit
- Custom-built low noise board achieves high accuracy under ppb level (AQ3)
- Individual compensation for temperature and cross sensitivity
- High correlation with control station



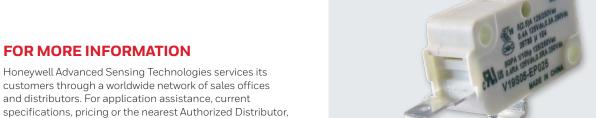
#### PARTICULATE MATTER SENSOR, **HPM SERIES**

- Laser-based sensor which detects and counts particles using light scattering
- Standard and compact sizes; Concentration range: 0 µg/m³ to 1,000 µg/m³
- Fully calibrated; EMC: Heavy industrial level IEC 61000
  Wide airflow range with custom flow ranges

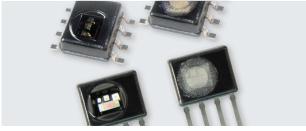


#### HONEYWELL ZEPHYR™ HIGH ACC-**URACY AIRFLOW SENSORS, HAF SERIES**

- Fast response time and high stability; High sensitivity at very low flows
- High 12-bit resolution increases the ability to sense small airflow changes



- V19: RoHS/REACH/Cal Prop65 compliant; > 1M mechanical operations
- Z: Small, lightweight, low cost, enhanced life, ample electrical capability
- BZ: Low operating force and differential travel; Current rating ranges from 15 A to 25 A



#### SENSORS, HONEYWELL HUMIDICON™ HIH6000, HIH6100, HIH7000, HIH8000

- Digital output-type relative humidity sensor; Energy efficient; ultra-small package
- Industry-leading long-term stability, reliability and relative humidity accuracy
- Lowest total cost solution; true, temperaturecompensated digital I<sup>2</sup>C or SPI output



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