

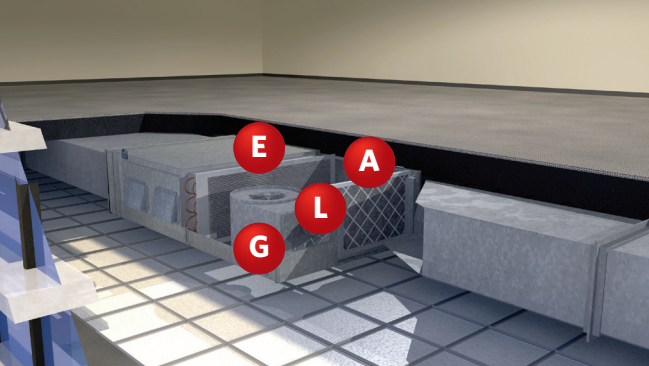
SENSOR AND SWITCH SOLUTIONS FOR HVAC APPLICATIONS



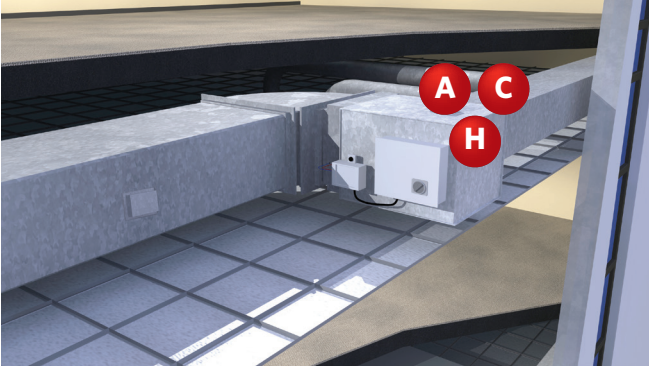
Work Smarter with Honeywell Switches and Sensors

Due to the high cost of energy, Heating Ventilation and Air Conditioning (HVAC) systems need to be efficient, accurate, and reliable. Honeywell's broad line of sensors and switches covers HVAC control, monitoring, temperature, and more while maintaining energy efficiency and accuracy. Honeywell provides industry-leading products with the latest technology that are easy to install and maintain while providing precise, dependable performance.

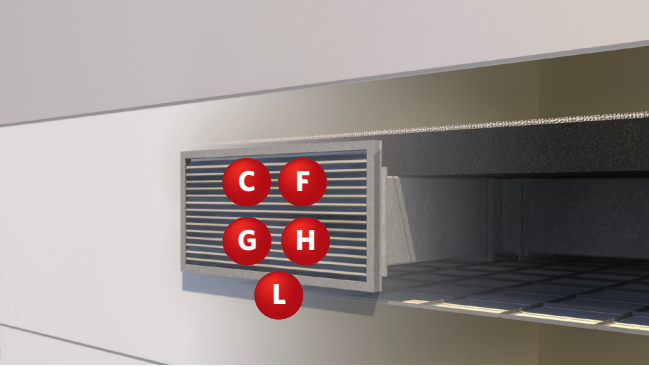
AIR FILTER, COOLING COIL & FAN/BLOWER



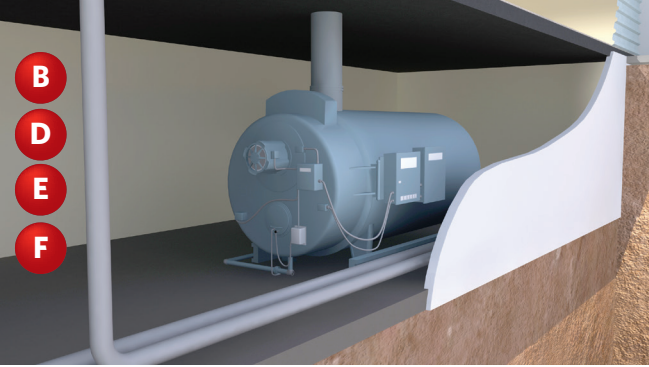
DUCT WORK, VAV & REMOTE TRANSMITTER



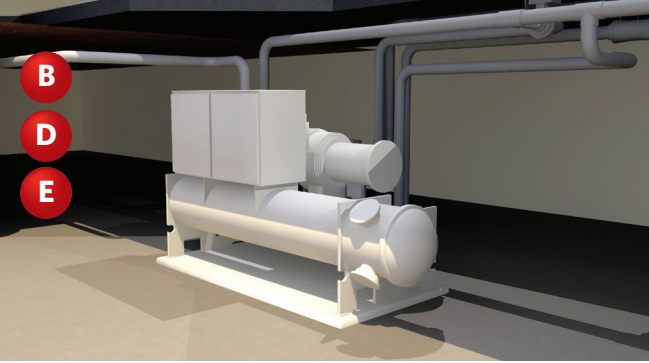
DAMPER



BOILER & HEATING SYSTEM



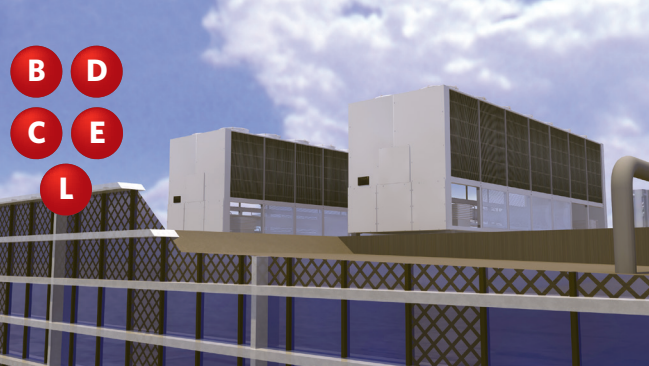
CHILLER



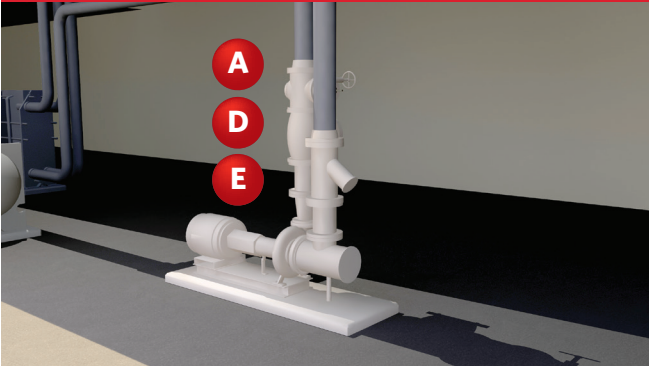
SAFETY MONITORING & MANAGEMENT



AIR CONDITIONING & COOLING TOWER



PUMP



	Measures airflow and clogged filter detection A Board Mount Pressure Sensors: TruStability™ SSC Series, DPR Series; Basic ABP Series, ABP2 Series
B	Last line of defense, prevents dangerous pressure buildup Pressure Switches: LE Series; 5000 Series
C	Adjusts ventilation rates and senses CO & CO₂ Carbon Monoxide Sensors: ECOSURE X Series Carbon Dioxide Sensors: CRIR Series
D	Monitors system performance for proper environmental control Heavy Duty Pressure Transducers: MIP Series
E	Monitors temperature Packaged Temperature Sensors: R300 Series, 6655 Series, 500 Series, LTP Series
F	Provides high-performance mechanical switching MICRO SWITCH Switches Large Premium Basic: BZ, BM, WA, WM, YM, BA, YA, MK, MT, TB, 10/12BS, AC, & DT Series V-Basic Miniature: V3, V7, V15, V19 & V15W Series Explosion-Proof: V15W2 Series Subminiature: ZD, ZM, ZM1, ZW, ZX Series
G	Enable efficient control of the electric motors that drive fans, blowers and pumps Hall-effect/MR Sensor ICs: SS361RT/SS461R, SS30AT/SS40A, SS40F/SS40G, SS42R, APS00B, SS490; AMR quadrature VM821Q1
H	Measures and monitors airflow Airflow Sensors: AWM1000 Series
I	Provides energy management, amperage draw status, and kilowatt consumption Current Sensors: CSNX25 Series
J	Controls power and other functions MICRO SWITCH Toggle Switches: NT, MT Series MICRO SWITCH Pushbuttons: AML Series MICRO SWITCH Rocker Switches: TP Series Push-pull/E-Stop Switches; Key Switches
K	Provides temperature control or over-temperature protection Commercial Thermostats: 2450 Series, 2455 Series
L	Panel access detection MICRO SWITCH Panel-Mount Basics: DP/DM Series

SENSORS AND SWITCHES FOR USE IN HVAC

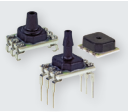
PRESSURE SENSORS AND TRANSDUCERS



- Board Mount Pressure Sensors, TruStability™ SSC Series**
- High accuracy, performance, reliability and long-term stability
 - Pressure range: ±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH₂O to ±150 psi
 - Accuracy: ±2 %FSS (temp compensated: -20°C to 85°C)



- Board Mount Pressure Sensors, TruStability™ DPR Series**
- High accuracy, ruggedized packaged pressure sensor
 - Ranges: ±1.6 mbar to ±50 mbar | ±160 Pa to ±5 KPa | ±0.5 inH₂O to ±20 inH₂O
 - Accuracy: ±1.25 %FSS (temp compensated: -20°C to 70°C)



- Board Mount Pressure Sensors, Basic ABP Series**
- High accuracy, great value pressure measurement solution
 - 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)

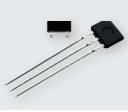


- Board Mount Pressure Sensors, Basic ABP2 Series**
- High accuracy, wide pressure and temperature range, excellent great value
 - Pressure range: ±2.5 mbar to ±20 bar | ±250 Pa to ±2 MPa | ±1 inH₂O to ±290 psi
 - Accuracy: ±1.5 %FSS (temp compensated: -40°C to 110°C)

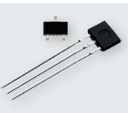


- Heavy Duty Pressure Transducers, MIP Series**
- Compatible with a wide range of fluids and gases (all refrigerants)
 - Pressure range: 1 bar to 70 bar | 15 psi to 1000 psi
 - Excellent over-pressure and and burst pressure protection

HALL-EFFECT/MAGNETORESISTIVE SENSOR ICs



- Bipolar Hall-Effect Position Sensor ICs, SS30AT/SS40A**
- Sensitive bipolar magnetics respond to alternating North and South poles
 - Miniature (SS40A) and subminiature (SS30AT) sizes fit small spaces
 - Durable design with built-in reverse voltage protection



- Latching Hall-Effect Digital Sensor ICs, SS361RT/SS461R**
- Small, versatile digital Hall-effect devices operated by magnetic field
 - Enhanced sensitivity often allowing use of less expensive magnets
 - Low voltage: 3 V operation promotes energy efficiency



- Bipolar, Low-Cost Hall-Effect Sensor ICs, SS40F/SS40AF**
- Miniature construction in plastic package
 - Low power consumption (5 mA max at 4.5 Vdc) for energy efficiency
 - Bipolar magnetic for ring magnet applications; High speed operation range



- Linear Hall-Effect Sensor ICs, SS490 Series**
- Small size with low power consumption; Quad Hall sensing element
 - Single current sinking or current sourcing linear output
 - Rail-to-rail operation provides more usable signal for higher accuracy



- AMR 4-Pin Quadrature Sensor Integrated Circuit (VM821Q1)**
- Integrated quadrature sensor IC; Pole size independent operation
 - 4-pin quadrature, open collector outputs; Zero speed operation
 - -40°C to 150°C operating temperature range



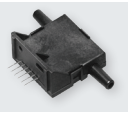
- Magnetoresistive High-Res Magnetic Displacement Sensor ICs, APS00B**
- Cost-effective, space-efficient solution for high volume OEM designs
 - Wide, angular range allows measurements of ±90° without additional components
 - Measures only field direction; virtually unaffected by shock & vibration
 - Low power consumption (5 V at 4 mA Vdc) promotes energy efficiency

CURRENT SENSORS



- Closed Loop Current Sensors, CSNX25 Series**
- Current sensing up to 1275 A (depending on product listing)
 - Measures ac, dc, and impulse currents; Competitive cost/performance ratio
 - Rapid response and high overload capability
 - Industrial operating temperature range, small size, and weight

AIRFLOW SENSORS



- Signal Conditioning Airflow Sensors, AWM1000 Series**
- Accurate, repeatable airflow sensing; Cost-effective, micro-bridge technology
 - Bi-directional sensing capability
 - Low differential pressure sensing

GAS SENSORS



- Carbon Dioxide Gas Sensor, CRIR-M1 Series**
- Single channel, non-dispersive infrared (NDIR) sensor for detecting CO₂
 - Small size; maintenance free for normal indoor applications
 - Enhanced long term stability
 - Higher accuracy: ±40 ppm ±3 % of reading



- Carbon Monoxide Gas Sensor, ECOSURE X**
- Cost-effective two-electrode electromechanical cell designed for the detection of carbon monoxide i a domestic/residential CO detection, industrial fire detection and ventilation control
 - Suitable for use in BS, EN, UL, LPC, VDS and TÜV accredited products

FOR MORE INFORMATION

Honeywell Sensing Solutions services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit automation.honeywell.com/hss or call:

USA/Canada	+302 613 4491	Latin America	+1 305 805 8188
Europe	+44 1344 238258	Japan	+81 (0) 3-6730-7152
Singapore	+65 6355 2828	Greater China	+86 4006396841

Honeywell Sensing Solutions

830 East Arapaho Road
Richardson, TX 75081
www.honeywell.com

PACKAGED TEMPERATURE SENSORS AND THERMOSTATS



- Immersion Packaged Temperature Sensors, R300 Series**
- One-piece passive, resistive temperature device (RTD), high temperature probe
 - Excellent reliability, response time, and accuracy
 - Working temperature range of -40 °C to 275 °C [-40 °F to 527 °F], continuous



- Surface Packaged Temperature Sensors, 500 Series**
- Broad portfolio of air/gas, liquid, and surface temperature probes
 - Small, easy-to-install assemblies; Wide variety of housing styles and materials
 - Enhanced reliability, precision, sensitivity, and stability for greater flexibility



- Air, Surface Packaged Temperature Sensors, 6655 Series**
- Thermistor-based NTC temperature sensors
 - For use in surface/pipe temperature applications in non-condensing environments
 - Small size; variety of packages, R-T curves, termination styles, and housing materials



- Commercial Thermostats, 2450 Series, 2455 Series**
- Affordable, robust, customizable
 - Small size with no programming required
 - Operating temperature range of 0 °C to 260 °C [32 °F to 500 °F]

MICRO SWITCH BASIC SWITCHES



- MICRO SWITCH Large Basic Switches, BZ, BM, WA, WM, YM, BA, YA, MK, MT, TB, 10/12BS, AC, & DT Series**
- Low operating force and differential travel; Current rating ranges from 15 A to 25 A
 - Long mechanical life up to 20,000,000 cycles at 95 % survival
 - Two independent single-pole double throw circuits in one housing and actuator (DT)



- MICRO SWITCH V-Basic Miniature Switches, V19 Series**
- RoHS/REACH/Cal Prop65 compliant
 - UL/CSA, cUL, ENEC, CQC certifications enable global design acceptance
 - 5 A, 16 A: electrical ratings for design flexibility; > 1M mechanical operations



- MICRO SWITCH V-Basic Miniature Switches, V15 Series**
- Designed from 10K to 50K operations at a full load or 5M for mechanical life
 - World-wide package size acceptance; Current rating ranges of 10 A and 26 A
 - UL/CSA, cUL, ENEC, and CQC approvals



- MICRO SWITCH Explosion-Proof Basic Switches, V15W2 Series**
- Approved for use in Zone 2 hazardous locations; IP67 equivalent
 - UL, cUL, ENEC, CQC, IEC Ex approvals; 5 A electrical rating
 - Longer service life: over one million mechanical operations



- MICRO SWITCH Subminiature Switches, ZM/ZW/ZX Series**
- Small, lightweight, low cost, enhanced life, ample electrical capability
 - Choice of low energy or power-duty electrical ratings (gold-plated or silver contacts)
 - UL/CSA, cUL, ENEC, and CE approvals



- MICRO SWITCH Snap-in Panel Mount Basic Switches, DM/DP Series**
- Attractive, rugged snap-in design allows these switches to be easily installed
 - Choice of momentary, push-pull, or pullto-cheat actions
 - UL 508 for industrial control equipment

MICRO SWITCH TOGGLE SWITCHES



- MICRO SWITCH Toggle Switches, NT Series**
- ISA 12.12.01 certified; designed for use near flammable hydrocarbon refrigerants
 - Quick-connect spade terminals; UL191 electrical rating
 - Sealed to NEMA 3, 3R, 4, 13, and IP67

MICRO SWITCH ROCKER SWITCHES



- MICRO SWITCH Rocker Switches, TP & AML Series**
- 1, 2, or 4 poles; • 2- or 3-actuator positions with maintained or momentary action
 - Standard silver alloy contacts or gold-plated contacts
 - Above panel or flush panel mounting; Step-base design & barriers between poles

MICRO SWITCH PUSHBUTTON SWITCHES



- MICRO SWITCH Pushbutton Switches, AML Series**
- Pushbuttons, paddles, rockers and indicators for coordinated panel appearance
 - Less than 1.75 inch panel depth; Furnished lighted or unlighted
 - Available with momentary or alternate action (push-on and push-off)

OPERATOR CONTROLS



- Key and Rotary Switches**
- Key, lever or knob action; 2-, 3-, or 4-position switching
 - Environmentally sealed; UL listing offered
 - Robust design with o-rings, weep holes and overmolded keys



- MICRO SWITCH Push-Pull/E-Stop Switches**
- Vibration frequency from 18 Hz to 1000 Hz; UL and CE certified listings offered
 - Self-cleaning, sliding contacts deliver outstanding reliability
 - Dual O-ring design protects the contact chamber by isolating it from moisture

PRESSURE SWITCHES



- Premium and Economy Pressure Switches, LE Series**
- Medium and low pressure switches; Life cycle rating: up to 2 million; IP67 sealing
 - Set point factory set or field adjustable 0.24 bar to 310.26 bar [3.5 psi to 4500 psi]
 - Variety of pressure ports, electrical terminations and compatibility with many media



- Extended Duty Pressure Switches, 5000 Series**
- Durable construction, compact size and enhanced set point integrity
 - Factory set, but capable of field adjustment
 - 0.5 psi to 150 psi with gold contacts; #8/32 screws, 1/4 in blade & Metripack