

Oil and Gas

Honeywell



SENSING AND CONTROL

**Part Innovation.
Part Engineering.
Total Solutions.**

Oil and Gas App

Our sensors are designed and built oilfield tough - for rugged, reliable, and dependable performance out in the field.

No other quality defines success in the oil and gas business as much as a single word: reliability. It is an industry where risk is often part of the business, yet minimizing risk may make or break the project. It's a place where dependable, accurate data maximizes production. And production dictates success.

For more than 50 years, Honeywell Sensing and Control (S&C) pressure sensors, load cells, and other sensing products have been providing outstanding reliability and accuracy to make their mark in the oil and gas industry. Tough enough for many of the world's harshest land or offshore environments, and engineered to deliver consistent accuracy, Honeywell's Sensotec line of products has grown to become one of the most comprehensive offerings of sensors and measurement solutions available to the oil and gas industry.

lications



One name for reliability, ruggedness

Comprehensive portfolio

Honeywell has a wide variety of sensors, built tough to handle a broad range of applications. Wherever there is a critical measurement to be made in the oilfield, from pressure and load, to torque, displacement or other measurements, you will find Honeywell products trusted for accurate and dependable performance.

Application Knowledge and Expertise

At Honeywell, assisting in the process of matching customer needs to sensor specifications is not just a drawing board exercise. It's a real-world experience based on years of oil and gas application knowledge.

Our expertise with intrinsically safe designs, explosion-proof requirements, and approval organizations such as FM, CSA, Cenelec, ATEX and DNV give you peace of mind and superior product performance.

Quality and Reliability

Attention to design detail, rigorous manufacturing processes, and integration of high-quality materials all combine to produce Honeywell sensors which offer reliability, accuracy and long-lasting performance.



ess and versatility: Honeywell S&C

Fast Delivery

And it's not just what you get, it's how you get it. Need it fast? We'll get you the product you specify in the shortest time possible, even if it's a customized solution. Hundreds of stocked catalog products are out the door within five days or less.

Custom Engineering

Have an idea of what you need, but no "standard" part seems just right? Our engineers will design a custom solution to your specifications usually by performing minor – or sometimes major – modifications to our sensors. Quickly. In-house design, engineering, and manufacturing expertise means fast delivery for both large and small batches of custom-engineered solutions.

Calibration and Repair

Need calibration or repair of your test and measurement products? Our facilities provide repair and certified calibration services for every Honeywell test and measurement product we make. Our calibration services conform to industry procedures and/or standards such as ISO 9001:2000, A2LA to ISO/EIC 17025, ANSI/NCSL Z540-1, ISO 10012-1, MIL-STD-45662A, and ASTM E74. Need extremely fast turnaround? We offer fast-track calibration service, which takes five days or less, on many of our products. Plus, we welcome the opportunity to talk about your custom repair or calibration needs on non-Honeywell products.

Knowledge and technology resources. Reliable products and custom solutions.

TECHNOLOGIES... BEST IN CLASS ENGINEERING

Our solutions are engineered for enhanced precision, repeatability, and ruggedness – technology designed to meet even highly customized requirements.



Wing Union Pressure Sensors: Designed for use with 1502 and 2202 WECO® fittings. All-welded construction, X750 Inconel® design for corrosive environments • Potential applications include mud pressure and cementing, well stimulation, coiled tubing, MWD and wellhead measurement



Explosion Proof Pressure Sensors: For use in Class 1, Division 1, Groups A, B, C and D hazardous locations • Potential applications include B.O.P. control, hydraulic pressure measurements in many hazardous environments, tank level measurements, well flooding, casing pressure measurements, cementing, and stuffing box pressure in coil tubing



MWD Miniature Pressure Sensors: Compact size and stainless steel construction, designed to measure pressure ranges up to 30,000 psig and operating temperatures up to 400 °F • Potential applications include measurement while drilling, monitoring pressurized tools, and mud pulsation



Well Logging Tool Miniature Pressure Sensors: Miniature, rugged design is built to withstand the shock and vibration of downhole use. Optional RTD available • Potential applications include pressure measurement for downhole tools, mud pulsation, GEO steering, and formation evaluation



Power Tongs and Torque Turns Load Cells: Designed for use in power tongs or drill pipe make-up and break-out applications. Standard and custom connections are available • Potential applications include power tongs clamping force, drill pipe and drill collar torque measurement, anchor line tension, and dead line tension measurement



Intrinsically Safe Differential Pressure Sensors: Often useful for liquid level measurements, filter monitoring and flow measurements where enhanced safety is required • Potential applications include filter monitoring, tank level measurement, pipeline flow monitoring, and gas custody



Wireline and Slickline Tension Load Cells: Designed for resistance to off-axis loading errors and many harsh environmental conditions. Standard or customer specified cables and connectors are available • Potential applications include offshore and onshore, wireline and slickline load measurements, anchor line tension, and hook loads



Intrinsically Safe Gage and Absolute Pressure Sensors: Suited for a wide variety of oilfield measurements requiring gage or absolute pressure measurements. Intrinsically safe design provides an element of safety often desired in the oilfield • Potential applications include hydraulic pressure monitoring, CO₂ injection, static mud pressure measurement, wellhead control systems, and mixing tank control



Intrinsically Safe Coiled Tubing Load Cells: Low profile tension / compression load cells for mounting on coiled tubing injector stands. Features high level electrical output and noise immunity • Potential applications include monitoring tubing weight and insertion force, as an electronic replacement for a hydraulic load cell, and monitoring footpad loads of injector head jackstands



Clevis Pin Force Sensors: Designed to provide measurements of shear forces in a tongue and shackle assembly • Potential applications include mooring systems, gusset pin force in coil tubing, crane pulley and overhead drive systems, hook loads, torque tongs, and wireline tension



Digital Pressure Gages: All stainless steel, rugged drop proof-casings for accuracy, reliability and durability in the field. Can measure pressure ranges up to 60,000 psi • Potential applications include pressure testing, portable calibration, digital force measurement, and digital process pressure measurement

POTENTIAL OIL AND GAS APPLICATIONS

Using our extensive technology resources and working closely with each customer, Honeywell S&C delivers cost-effective, tailored solutions to meet a wide variety of needs. Basic or complex applications, requiring enhanced precision, repeatability, and ruggedness, custom or off the shelf products - our products are built to support the demands of the oil and gas industry.

• **Well Stimulation**

- Acidizing
- Fracturing
- CO₂ injection
- Gel mixing

• **Well Intervention**

- Coiled tubing
- Cementing
- Casing joint torque
- Well casing
- Workover

• **Well Logging**

- Wireline force
- Slickline tension
- LWD

• **Production**

- Wellhead measurements
- Subsea pressure measurement
- BOP controls
- Sucker rod
- Submersible pumps

• **Drilling**

- MWD
- Power tongs
- Torque turns
- Mud pumping
- Hook loads
- Standpipe pressure
- GEO steering
- Downhole tools
- Choke manifold pressure
- Directional drilling
- Horizontal drilling

• **Special Services**

- Options and accessories
- Calibration
- Special documentation
- Read-out and monitoring instrumentation
- Design engineering services



From pressure, torque, and load cells to acceleration and instrumentation, no other company delivers sensors for Test and Measurement applications in so many critical categories.

So whether you need one unit or several thousand, look to Honeywell for the solution – from off-the-shelf catalog components to fully customizable systems. The convenience of one call. The comfort of superior customization and quality. Only Honeywell helps you achieve your test and measurement goals globally, easily.

Products and Technologies:

- Pressure Transducers • Differential Pressure Transducers
- Load Cells • Torque Transducers • Accelerometers
- Displacement Transducers • Instrumentation • Wireless Telemetry

Potential Applications:

- Automotive • Aerospace • Oil and Gas • Test Labs
- Automation Equipment • Medical • Semiconductor Fabrication
- Power and Turbines • Propulsion Monitoring

Find out more

To learn more about Honeywell's test and measurement products, call **+1-614-850-5000**, email inquiries to **info.tm@honeywell.com**, or visit **www.honeywell.com/sensotec**

Honeywell Sensing and Control

1985 Douglas Drive North
Golden Valley, MN 55422
www.honeywell.com

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