

**Aerospace and Defense**

**Honeywell**



SENSING AND CONTROL

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

# Aerospace and Defense

**Customers know Honeywell Sensing and Control (S&C) by two simple words: “Problem solved.”**

For more than 55 years, Honeywell S&C has solved the most demanding aerospace and defense switch and sensor problems. Simply put, we're the global leader in designing, manufacturing and delivering individually customized and cost-effective solutions. The Honeywell legacy of innovation, commitment to quality and tradition of excellence courses through every product and person in our S&C business.

Our products are designed for the long haul — for the harshest conditions in the air, on the ground or deep underwater — with performance-grade switch and sensor

Headquartered in Golden Valley, Minnesota, and with strategic engineering and manufacturing Centers of Excellence worldwide, Honeywell S&C is one of six Honeywell ACS divisions. Our breadth of products and solutions, global service and sourcing, deep engineering expertise and top technology make us your best value — by far. And our corporate tradition of delivering quality and innovation is why we're the leader in cost-effective sensor and switch solutions.

technology meeting and exceeding the demands of ground systems and ordnance. What's more, we set the pace with the most robust lineup of products available, from MICRO SWITCH™ limit, toggle and pressure switches to position, thermal, speed and pressure sensors. And while each part measures up to basic and complex application requirements, we also create tailored-to-you solutions to meet your needs — all engineered to heighten precision and ruggedness.

**Cockpit designers:** We deliver pilot and operator interface products, from discrete components to integrated sensor assemblies. **Structures design engineers:** We provide landing gear systems, discrete components and position sensing solutions. **Systems engineers:** We offer world-class thinking and design capabilities through our corps of highly qualified engineers and product staff. **MRO operations:** We provide expert repair and overhaul support, as well as components for owner-operated systems.



Honeywell S&C's engineering expertise, technology resources and service capabilities add up to unprecedented value. While we offer global sourcing and support, we work closely with each customer to add connectors to a sensor or switch, to build better flap and throttle selectors for cockpit control, operator interface equipment or military ground equipment, to develop superior stabilator indicators for military helicopters — to make each solution work better for you.

Global service, sourcing and manufacturing.

Industry-leading engineers.

Value-added assemblies and solutions.

Construction to your needs.

Honeywell S&C is the one-stop, full-service, globally competitive answer. That's why we're unparalleled as the gold standard, and unquestioned as your best value.



# For innovation that's well apart, there's only Honeywell.

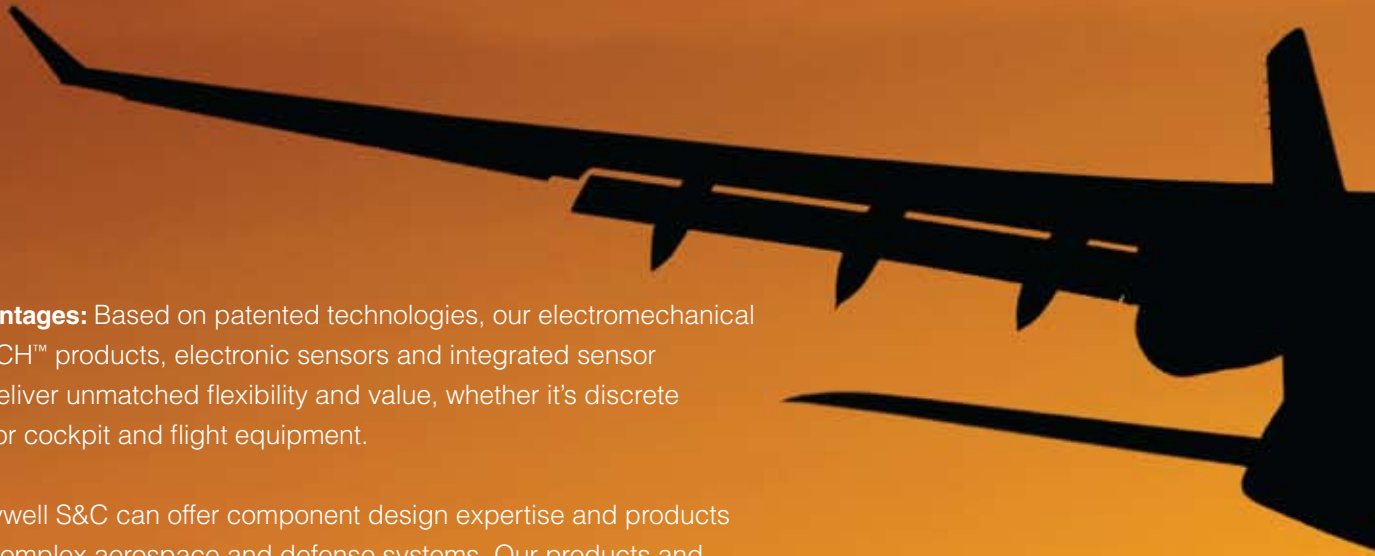
Honeywell S&C offers insight unavailable with our competitors:

**Extraordinary Experience:** For more than five decades, we've provided key components and customized equipment to the aerospace, defense and avionics industries — from all major aircraft OEMs to foreign and U.S. government agencies.

**Global Footprint:** Our global footprint and integrated supply chain ensure your needs are always met rapidly and readily. Honeywell S&C's network of facilities can optimize service orders of one piece or hundreds of integrated designs.

**Turnkey Advantages:** Based on patented technologies, our electromechanical MICRO SWITCH™ products, electronic sensors and integrated sensor assemblies deliver unmatched flexibility and value, whether it's discrete components or cockpit and flight equipment.

In fact, Honeywell S&C can offer component design expertise and products for the most complex aerospace and defense systems. Our products and expertise are highly complementary to systems and subsystem designs. What's more, our engineering and project management teams provide strong business relationships with key industry players, switch and sensing technology with integrated assembly, and top-of-the-line aerospace and military-qualified MICRO SWITCH™ electromechanical switches. We even maintain every relevant approval: ISO 9000; 2000; AS 9100; QS 9000; EASA21 sub-part G; EASA 145; ISO 14000; FAA-certified Repair Station; JAA-certified Repair Station.



BOYNE CITY



NEWHOUSE



**Boyne City, Michigan, U.S. Facility:** Our centrally-located facility provides complete switching and sensing platform products, plus full life-cycle support — including repair and overhaul services, technical publications, spare sales and sustaining engineering, plus AOG and customer support. In addition, our **Newhouse, Scotland, U.K. Facility** offers unsurpassed overhaul and repair services.





# Virtually every plane in the air flies with Honeywell Sensing and Control products.

That's because we're technology and application experts, with a robust lineup of OEM materials stocked through point-of-use, distribution and global channels. Because of our advancements, planes have been able to fly higher and further, making us the key supplier within aerospace and defense industries. And because every Honeywell S&C application comes complete with unfailing support:

## PRODUCTS AND TECHNOLOGIES

*Best-in-class engineering ...*

**Cockpit Indicators:** Typical sizes range from one to three inches in diameter, with dial, pointer and range markings designed to meet almost any customer requirement. Night vision is a specialty, as well as designs for wedge lighted, backlit or unlit solutions.

**Operator Interface:** Greater operator efficiency and smaller space footprint, from control boards and panels to flap selectors and pilot controls.

**Pilot Controls:** From our global engineering Centers of Excellence, we create superior operator interface solutions — from landing gear systems to integrated panel assemblies and switch components.

**Position Sensors:** Found in numerous commercial aircraft, our position sensors utilize proven sensing element designs to deliver lower TCO, while the design modularity allows ready customization. We specialize in current aircraft application products requiring linear,

non-linear, redundant and quad-redundant sensing to resolve quality or reliability issues. Our design experience includes sensors for measuring pilot flight control, flap skew, slat, engine valve, aisle stand and surface position measurement.

**Pressure Sensors:** Civilian and military aircraft and engine manufacturers rely on us — from bleed air, fuel, engine oil and hydraulic fluid pressure measurement to products for pilot input, force, servo-loop feedback and payload measurement.

**Pressure Switches:** Our gauge, absolute and differential discrete measurement switches are designed to meet our customers' needs — whether configured as normally opened or normally closed, or with multiple connector options.

**Repair and Overhaul:** We are the original innovator of many key components for various aviation applications, and our world-class MRO facilities continue to support our products — decades after delivery.

**Torque and Force Sensors:** Honeywell delivers, from axial force and rotary torque sensors used for pilot input force measurement and servo-loop feedback, to overload protection and payload measurement. Our expert engineers develop sensing elements and signal conditioning electronics integrated into load-path components, such as control and tie rods, plus other linkage devices. Safety options include dual load path, high limit load and high gauge factor, plus redundant channels.



## AEROSPACE AND AVIATION POTENTIAL APPLICATIONS

We offer applications expertise in complex components and subsystems, with many subsystems performing for the life of the aircraft — even under extreme temperatures and high vibration environments. Products include control rod force sensing, flight control, rotary actuation and hardware, MICRO SWITCH™ limit switches, general purpose proximity sensors, linear actuation and control rods.

- **Flap selectors** — system design and assembly
- **Overhead and panel switches** — MICRO SWITCH™ sealed and unsealed toggle, rocker and pushbutton switches and fire pull switches
- **Doors and slides** — MICRO SWITCH™ sealed switches and proximity sensors
- **Thrust reversers** — MICRO SWITCH™ sealed switches and proximity sensors
- **Gear** — Landing gear uplocks, downlocks, weight-on-wheel systems, brake system load cells, hydraulic booster pump load cells and hydraulic motor and pump torque sensors
- **Bomb and missile racks** — pressure switches, proximity sensors, MICRO SWITCH™ hermetically- and environmentally-sealed switches
- **Flight surface feedback** — RVDTs, LVDTs, custom assemblies of switches and sensors
- **Bleed air valves** — MICRO SWITCH™ hermetically-sealed switches
- **Precision position sensing** — Resolvers and potentiometers

## ARMORED GROUND VEHICLES, ORDNANCE SYSTEMS

Best-in-class engineering and applications experience in ...

- **Operator interface**
  - Toggle, pushbutton and rotary switches
  - Control panel components
  - Resolvers
  - Foot switches
  - Fire control switches
  - Gear selectors
- **Structures**
  - Doors, hatch switches and proximity sensors
  - Ammunition loading systems
  - Safety and arming switches
  - Lighting for ground vehicles



**When it's mission critical, you can't have a supplier flying blind.**

That's why our half-century of expertise in aerospace, avionics and defense is indispensable, our technology exceptional. Utilize Honeywell S&C's industry relationships, and let our project engineers create custom-crafted aerospace and military-qualified technology for you. Whether you've known us as Sensotec, Lebow, Bendix, Sperry, Elmwood, MICRO SWITCH™, Courter, SenSym or HOBBS, you've known us as the unquestioned leader. Trust Honeywell, in the air and on the march.

**Products and Technologies:**

Patented designs include: Operator interface switches and assemblies • Pressure sensors and switches • Position sensors • Torque and force sensors • Pilot controls • Cockpit indicators • Repair and overhaul

**Potential Applications:**

Custom designs include: Operator interface and integrated panel controls • Environmentally-sealed limit switches • Pressure switches and sensors • Armored fighting vehicles • Self-propelled • Ordnance • Marine • Lighting for military ground vehicles • Aircraft engine • Landing gear

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847  
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