



LINEAR FORCE AND
ROTARY TORQUE SENSORS

Platform and Product Overview

Linear Force and Rotary Torque Sensors

Honeywell's force and torque sensors are often ideal for a number of measurement and feedback applications on aircraft. These sensors measure the forces applied by the pilot or co-pilot to the elevator, aileron, and rudder flight control systems. Sensor output is used both by auto-pilot and flight data recorder.

Force is measured using integral load cells, and conditioned using internal electronics prior to transmission to the flight data recorder. A mechanism in each sensor allows the device to continue to function as a control linkage in the unlikely event of sensor failure.



Control Rod Force Sensor - A proven design for harsh environments, this sensor group features a sensing element gauged with an accurately calibrated metal foil strain gauge.

Torque Sensor - This input quadrant torque sensor provides a zero-backlash interface and slip ring cable exit. Its sensing element utilizes a load cell gauged with metal foil strain gauges.

In both sensors, a secondary load path integral to the sensor ensures proper function of flight controls in all potential failure modes.

Features

- Sensors designed to replace existing flight control linkages and control cable quadrants
- Designed to eliminate the need to incorporate a secondary load path or increase component count aboard the aircraft to measure the pilot/co-pilot forces
- Strain gage-based sensors
- Multiple sensing technologies
- No moving parts
- ac or dc excitation versions available
- Various measurement ranges available
- Integral signal conditioning electronics

Benefits

- Flexibility in output format
- Potential for lower-cost assemblies
- Smaller cross-sectional area
- Enhanced reliability - typical MTBF data between 120,000 hours and 200,000 hours

Potential applications

- Rudder, aileron, and elevator input force
- Actuator force and autopilot feedback
- Weight measurement
- Active sidestick force sensing

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this catalog is for reference only. DO NOT USE this document as a product installation information.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

Your Honeywell representative:

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Sales and Service

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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