Jewell Instruments presents both analog and digital inclinometers (tilt sensors) that utilize MEMS capacitive technology. Each are capable of measuring positive and negative inclination (angle) from ±1° to ±90° in one and two axis configurations. You can get the exact sensor required for your application by choosing the angle range, bandwidth, analog or digital electrical output and more.

FEATURING: Precision MEMS Inclinometers

Jewell Instruments provides both standard and custom solutions for a diverse group of industries, such as: aerospace, medical, industrial, telecommunications, and oil market. We manufacture a majority of our components in-house and work closely with our customers, maintaining control over the entire development processes. Our legacy of experience and success, and the expertise of our engineering teams, mean our customers benefit from extensive resources at their disposal.

Custom Application-Specific Solutions

Jewell Instruments provides both standard and custom solutions for a diverse group of industries, such as: aerospace, medical, industrial, telecommunications, and oil market. We manufacture a majority of our components in-house and work closely with our customers, maintaining control over the entire development processes. Our legacy of experience and success, and the expertise of our engineering teams, mean our customers benefit from extensive resources at their disposal.

Connecting Experience, Quality, and Expertise

For over 60 years, Jewell Instruments has provided commercial and industrial sensors and controls, meters and avionics, and industrial test equipment solutions to a range of global markets. Our ISO 9001:2008 certification ensures that our customers receive products and systems with the dependability and reliability that their applications demand. Jewell Instruments’ experienced engineering team works with customers to produce high-quality, reliable products that meet or exceed their requirements.

Exceptional Customer Service

We specialize in reliability, value, and responsiveness. Cooperation and joint planning between our engineering groups and our clients drive our customer care experience. We view our engineering and manufacturing teams to solve problems, improve applications, shorten lead-times and bring more value to our products and services. Superb customer support is the cornerstone of our many successful, long-term customer relationships.

Jewell Facilities

Jewell offers two, fully modernized manufacturing facilities, one in Manchester, New Hampshire and one in Barbados, West Indies.

Reliable, High Performance Products — Exceptional Service

Other Product Groups Available:

- MEMS Accelerometer Selector Guide
- Force-Balanced Precision Inclinometer Selector Guide
- Electrolytic Tilt Sensors and Accessories Selector Guide

Jewell Instruments is a world leader in the manufacture and distribution of accelerometer and tilt sensors (also known as sensors, and precision solenoids. From sales and design through manufacturing, testing and delivery, and support, Jewell Instruments offers complete customer care and engineering expertise. We have two fully modernized manufacturing facilities, one in Manchester, New Hampshire and one in Barbados, West Indies, to handle the most stringent manufacturing requirements with a cost-competitive advantage.
**Analogue Sensors**

- **Features & Benefits**
  - **Resolution:** 0.05°
  - **Temperature Range:** −40°C to +85°C
  - **Angling:** ±90°
  - **Angular Range:** ±100°
  - **Angular Resolution:** ±0.001°
  - **Output Options:** Digital RS232, RS485 or TTL
  - **Tolerances:** ±0.006°

- **Applications**
  - **Industrial Measurement & Control**
  - **Drill Rig Alignment**
  - **Radar and Vehicle Platform Leveling**
  - **Antenna Position Control**
  - **Offshore Platform Pits-Roll Measurement**

- **Performance Specs**
  - **Static/Dynamic**
    - **Angular Range:** ±100°
    - **Resolution:** ±0.001°
    - **Temperature Rating, Storage:** −40°C to +85°C
    - **Vibration Resistance:** 100g @ 10-1000Hz
    - **Impact Resistance:** 50 g @ 11ms, 3 times/axis
    - **Electromagnetic Compatibility:** EN61000 and GBT17626
    - **Output Type:** Digital RS232, RS485 or UART TTL

- **Notes:**
  - **Output Options:** Analog 0-5V, 0.5-4.5V & 4-20mA
  - **Zero Temp Coefficient:** ±0.006°/°C
  - **Resolution:** <0.0005°
  - **Minimal Thermal Drift:** Resolution: ±0.002°/°C (Zero), ±0.02°/°C (Zero), ±0.0001°/°C (Zero)
  - **Minimal Drift:** Resolution: ±0.0005°/°C (Zero)
  - **Base Angle:** 0.01°

- **Environmental & Electrical**
  - **Emitters:** Anodized Aluminum
  - **Enclosure:** Anodized Aluminum
  - **Dimension:** 9.8 x 60 x 60 mm
  - **Weight:** 100g
  - **Power Requirements:** 9.8 V DC & 80 mA

- **Output:**
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA

**Digital Sensors**

- **Features & Benefits**
  - **Resolution:** 0.05°
  - **Temperature Range:** −40°C to +85°C
  - **Responsiveness:** Instantaneous
  - **Angular Range:** ±180°
  - **Angular Resolution:** ±0.001°
  - **Output Options:** Digital RS232, RS485 or TTL
  - **Tolerances:** ±0.006°

- **Applications**
  - **Industrial Measurement & Control**
  - **Drill Rig Alignment**
  - **Radar and Vehicle Platform Leveling**
  - **Antenna Position Control**

- **Performance Specs**
  - **Static/Dynamic**
    - **Angular Range:** ±180°
    - **Resolution:** ±0.001°
    - **Temperature Rating, Storage:** −40°C to +85°C
    - **Vibration Resistance:** 100g @ 10-1000Hz
    - **Impact Resistance:** 50 g @ 11ms, 3 times/axis
    - **Electromagnetic Compatibility:** EN61000 and GBT17626
    - **Output Type:** Digital RS232, RS485 or UART TTL

- **Notes:**
  - **Output Options:** Analog 0-5V, 0.5-4.5V & 4-20mA
  - **Zero Temp Coefficient:** ±0.006°/°C
  - **Resolution:** <0.0005°
  - **Minimal Thermal Drift:** Resolution: ±0.002°/°C (Zero), ±0.02°/°C (Zero), ±0.0001°/°C (Zero)
  - **Minimal Drift:** Resolution: ±0.0005°/°C (Zero)
  - **Base Angle:** 0.01°

- **Environmental & Electrical**
  - **Emitters:** Anodized Aluminum
  - **Enclosure:** Anodized Aluminum
  - **Dimension:** 9.8 x 60 x 60 mm
  - **Weight:** 100g
  - **Power Requirements:** 9.8 V DC & 80 mA

- **Output:**
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA
  - **Base Signal:** 9.8 V DC & 80 mA