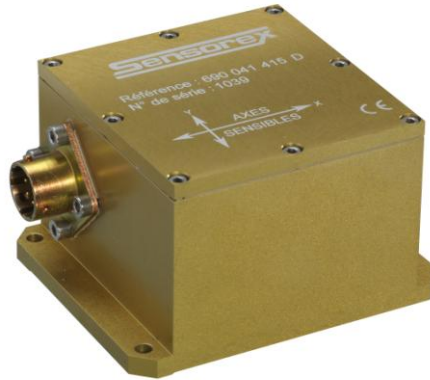


Sensorex®

# Dual axis servo-inclinometer/ accelerometer SX41400



Meggitt (Sensorex) SX41400 is a dual axis closed loop inclinometer/ accelerometer, offering angular tilt or acceleration measurements in two perpendicular axis.

Rugged, watertight IP 65 sealed housing and hydro-mechanical damping allow a very high shock and vibration resistance.

A galvanometer pendulum sensing element, combined with an optical position sensor, offers two outputs proportional to the sine of the angle of tilt.

When the instrument is submitted to a certain angle, the galvanometer pendulum tends to move in the direction of the inclination. Its position is detected and converted into a current which feeds back to the galvanometer in order to bring it back to its initial position.

This current passes through an accuracy resistor and provides the output voltage. An output amplifier gives low output impedance.

## Characteristics

- High performances
- Excellent temperature stability
- Hydro-mechanical damping for very high shock and vibration resistance
- Rugged, watertight IP65 sealed housing for severe environments
- Hybrid technology servo amplifier
- Conform to CE norm EN 61326

## Applications

- Industry :
  - Alignment of structures (rolling mills, alternators...)
  - Safety purpose (cranes, offshore platforms...)
  - Levelling (roads, railway tracks...)
  - Angular measurements
- Defense :
  - Positioning of shooting platforms, radar antennas
  - Detection of ship roll and pitch

Meggitt Sensing Systems

Our measurement product competencies:  
LVDTs | Inertial systems | Inclinometers | Accelerometers | IMU |  
MEMS sensors | Servo-inclinometer | Conditioners

**MEGGITT**  
smart engineering for  
extreme environments

Sensorex®

# Dual axis servo-inclinometer/ accelerometer SX41400

## Specifications

Outputs	±5V or 4-20 mA
Power supply	10V to 30V – 35 mA max (4-20 mA version : 55 mA max)
Consumption	Max 60 mA (for voltage output) and max 100 mA (for current output)
Bandwidth	From 4Hz to 12Hz according to range
Non linearity	< 0.05% of FS (<0.02% of FS optional except for range ±90°)
Non repeatability & hysteresis	< 0.001% of FS
Cross axis sensitivity	< 0.005 g/g
Bias	0.15% of FS max
Electrical noise	< 2 mVrms (0Hz to 1kHz)
Bias thermal drift	0.01% of FS/°C
Sensitivity thermal drift	0.01% of measure/°C
Operating temperature	-40°C to +80°C
Storage temperature	-55°C to +85°C
Network	NF EN 61326 (industry)
Vibrations	5g / 20Hz to 500Hz
Shocks	200g / 6ms
Protection	IP 65

## Selection guide

Range	Bandwidth	Reference (current output)	Reference (voltage output)
±3°	4Hz	690041485	690041489
±5.75°	4Hz	690041415	690041419
±14.5°	5Hz	690041425	690041429
±30°	6Hz	690041435	690041439
±45°	8Hz	690041445	690041449
±90°	12Hz	690041455	690041459

## Options

Special bandwidth  
Special range and output signal  
Zero offset (unipolar output)  
Linearity < 0.02% of FS (except for range ±90°)  
Integrated temperature sensor

## Contact

Meggitt (Sensorex)  
Archamps Technopôle  
196 Rue Louis Rustin  
74166 ARCHAMPS- France  
Tel: 04 50 95 43 70  
Fax: 04 50 95 43 75  
[www.sensorex.fr](http://www.sensorex.fr)  
[www.meggitt.com](http://www.meggitt.com)

Meggitt Sensing Systems

Our measurement product competencies:  
LVDTs | Inertial systems | Inclinometers | Accelerometers | IMU |  
MEMS sensors | Servo-inclinometer | Conditioners

**MEGGITT**  
smart engineering for  
extreme environments