

Sensorex®

# High performance digital & analogue servo-inclinometer SX41100



## Characteristics

- Analogue & digital output (configurable on PC)
- Configuration and display software
- Designed for use in severe environments (shocks, vibrations, electro-magnetic perturbations)
- Very good long term stability
- High performances
- Conform to CE norm EN 61326
- Oil damped with servo mechanism

## Applications

- Civil structural monitoring
- Crane and offshore platform safety
- Roadway and track levelling
- Ordnance aiming systems

Meggitt (Sensorex) SX41100 high-performance analog/ digital servo-inclinometers provide an output signal proportional to the angle of measurement, with choice of  $\pm 5V$  analog or 4-20mA, and RS 232 or RS 485 digital outputs, and a maximum linearity error specification of less than  $\pm 0.02\%$  FS as standard.

Series units feature built-in active digital temperature compensation for reliable operation over an operating temperature range of  $-40^{\circ}C$  to  $+85^{\circ}$ .

Incorporation of an inertial mass with servo feedback, optical position pick-up and friction free mounting allows the Meggitt (Sensorex) SX41100 series to provide high accuracy with excellent long term stability and reliability.

Because the inertial mechanism is oil immersed, units have high shock and vibration resistance with a good damping factor. Units also operate from a 9-to-30VDC unipolar power supply and feature IP65 sealing.

They are delivered with software and digital data transmitted in ASCII format, allowing for direct communication with a standard PC with user-selectable inertial measurement data acquisition and display parameters.

## Meggitt Sensing Systems

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



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## Specifications

Outputs	4-20mA & RS232/485 MODBUS	±5VDC & RS232/485 MODBUS
Power supply	9/30VDC	9/30VDC
Consumption	< 60 mA	< 35mA
Bandwidth	0.01 Hz à 10 Hz adjustable	0.01 Hz à 10 Hz adjustable
Non linearity error	< 0.02% of FS	< 0.02% of FS
Non repeatability & hysteresis	< 0.005% of FS	< 0.005% of FS
Cross axis sensitivity	< 0.005 g/g	< 0.005 g/g
Resolution	0.002% of FS (digital output) & 0.01% of FS (analogue output ; due to noise)	
Noise on signal output	< 2µA (3Hz to 300kHz)	< 1mVrms (3Hz to 300kHz)
Zero thermal drift	50ppm/°C (0.005% of FS/°C)	50ppm/°C (0.005% of FS/°C)
Sensitivity thermal drift	100ppm/°C (0.01% of measure/°C)	100ppm/°C (0.01% of measure/°C)
Operating temperature	-40°C to +85°C	
Storage temperature	-55°C to +85°C	
Electro-magnetic compatibility	NF EN 61326 (industry)	
Vibrations	10g / 20Hz to 2000Hz	
Shocks	500g / 1ms	
Protection	IP 65	

## Selection guide

Range	Reference (current output)	Reference (voltage output)
±1°	690041112	690041115
±3°	690041122	690041125
±5.75°	690041132	690041135
±8°	690041102	690041105
±14.5°	690041142	690041145
±30°	690041152	690041155
±69°	690041162	690041165

## Options

Designation	Reference
5 meter axial shielded cable - M12 female connector, 8pins	494 700 741
Axial female plug for shielded cable, 8 pins	490 534 221

## Contact

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**MEGGITT**  
smart engineering for  
extreme environments