Sherborne **Sensors**



Applications

Ordnance Aiming Systems

Rail track monitoring

Optical sighting equipment

Seismic and civil engineering analysis

Precision platform level control

Variable temperature environments

DSIC Series

Digital Servo, Single / Dual Axis Inclinometer

Features

- Industry-standard RS485 output
- 19-bit analog to digital conversion
- 9 to 18 or 18 to 36 Vdc unregulated supply options
- Dynamic filtering, fast response& high vibration rejection
- Built-in temperature sensing and active compensation
- User-configurable output bandwidth

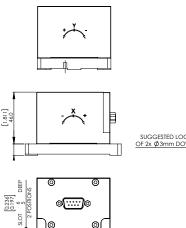
Benefits

- High accuracy closed-loop force balanced sensor technology
- Extremely robust designed to with stand shocks in excess of 1000g
- Extremely high resolution and low hysteresis of less than 0.001°

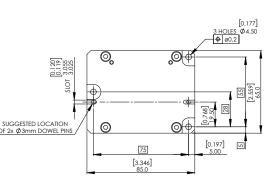
Electrical Connections

Pin 1	Supply +
Pin 2	Supply -
Pin 3	Data +
Pin 4	Data -
Pin 5	Factory setup, do not use
Pin 6	Factory setup, do not use
Pin 7	Factory setup, do not use
Pin 8	Not Connected
Pin 9	Not Connected

SIDE VIEW



PLAN VIEW





Specifications

Specifications by Range @ 20°C		±5°	±15°	±60°
Resolution (see note 1)	Degrees		0.001	
Accuracy (see note 2)	Degrees		0.08	
Frequency Response	Hz (max)		20	
Cross-axis Sensitivity	% FRO (max)		0.2	
Repeatability (see note 3)	Degrees		0.008	

Digital Specifications

Representation		Sine of angle
Measurement update rates	Hz	1, 2, 5, 10, 20, 50, 60 or 100
Communication (RS485)		ASCII
Bus Speeds (RS485)		2400, 4800, 9600, 19k2, 38k4, 57k6, 76k8, 115k2 or 230k4

Electrical

Input Voltage	Vdc	9 to 18	18 to 36
Input Current	mA (max)	100 (single-axis) 140 (dual-axis)	50 (single-axis) 70 (dual-axis)

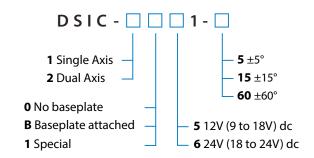
Environmental Characteristics

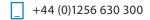
Operating Temperature Range	°C	-20 to +70
Survival Temperature Range	°C	-40 to +80
Shock		1,000g, 0.5ms, ½ sine
Environmental Sealing		IP65

Notes

- 1. Resolution is dependant on customer's equipment and enviromental conditions.
- 2. This is the absolute error of the DSI combining linearity, calibration uncertainties, and all thermal offset and sensitivity errors over the compensated temperature and measurement ranges.
- 3. Maximum deviation over 50 calibrations at constant ambient temperature.

Model Designation & Ordering Code







www.sherbornesensors.com





