

T233/T235 Series

DC-Operated 2 axis, Gravity-Referenced Servo Inclinometer



Features

- Rugged, compact, high accurate dual axis (X/Y)
- Input ranges $\pm 1^\circ$ to $\pm 90^\circ$, °
- Total electrical isolation between axes
- Vdc output signal ± 5 Vdc
- Self test on both axes
- Silicone oil and electrical damping
- Temperature Sensor Output (AD592)

Applications

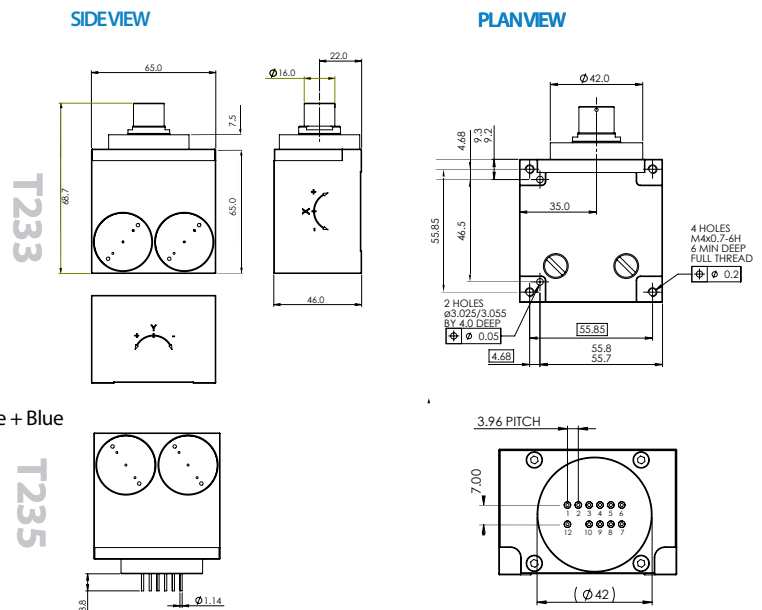
- Radar and Satellite platform levelling
- Oil platform levelling
- Two axis machine tool levelling
- Structural monitoring
- Aerospace Application
- Wind turbine Tilt Control

Benefits

- Precise and Accurate
- High reliability
- -18 to 70°C operating range
- High accuracy (Micro Radian Resolution)
- Manufactured to ADS 1000D standard

Electrical Connections

	T235	T233	Cable Colour
Pin 1	+15Vdc	+15Vdc	Red
Pin 2	0V	0V	Black
Pin 3	-15Vdc	-15Vdc	Brown
Pin 4	X-Axis O/P	X-Axis O/P	Yellow
Pin 5	X-Axis O/P 0V	X-Axis O/P 0V	Orange
Pin 6	Y-Axis O/P	Y-Axis O/P	White
Pin 7	Y-Axis O/P 0V	Y-Axis O/P 0V	Grey
Pin 8	X-Axis Self Test	X-Axis Self Test	Blue
Pin 9	Y-Axis Self Test	Y-Axis Self Test	Violet
Pin 10	Self Test 0V	Self Test 0V	Green
Pin 11	Not Connected	Temp Sensor O/P	Pink or White + Blue
Pin 12	Temp Sensor O/P	Not Connected	



Specifications

Specifications by Input Range @+20°C

		+1°	+3°	+14.5°	+30°	+90°
Output Standardisation	% FRO (max)			±1		
Output Impedance	Ohm			<10		
Output Noise (DC to 10kHz)	V _{rms} (max)			0.005		
Non-linearity (see note 2)	% FRO (max)	0.05	0.05	0.02	0.02	0.05
Non-Repeatability	% FRO (max)	0.04	0.02	0.004	0.002	0.001
Resolution	arc seconds	0.1	0.2	1.0	2.0	4.0
Bandwidth -3 dB Frequency	Hz, nom	10	15	30	40	55
Sensitive Axis-to-Case Misalignment	deg (max)	±0.1	±0.15	±0.25	±0.5	±1.0
Cross-axis Sensitivity (see note 3)	% FRO (max)			±0.2		
Zero Offset (see note 4)	Volts dc (max)	±0.05	±0.04	±0.03	±0.02	±0.02
Thermal Zero Shift	%FRO/°C (max)	±0.05	±0.03	±0.01	±0.005	±0.003
Thermal Sensitivity Shift	%Reading/°C (max)	±0.04	±0.03	±0.01	±0.006	±0.006
Temperature Sensor Output	µA/°K			1		

Electrical

Full Range Output (FRO) (see note 1)	Volts dc			±5		
Excitation Voltage	Volts dc			±12 to ±18		
Current Consumption	mA (nom)	±25	±25	±15	±15	±15

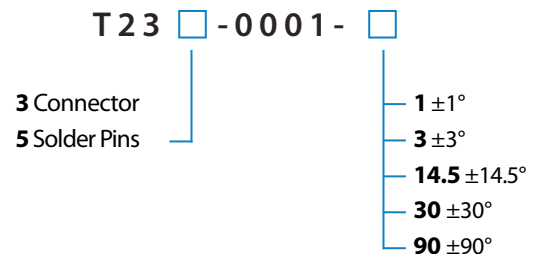
Environmental Characteristics

Operating Temperature Range °C		-18 to 70
Survival Temperature Range °C		-40 to 70
Shock		1250g, 0.5msec, ½ sine

Notes

1. Full Range Output is defined as the full angular excursion from positive to negative, i.e. ±90° = 180°.
2. Non-linearity is determined by the method of least squares.
3. Cross-axis Sensitivity is the output of unit when tilted to full range output angle in cross axis.
4. Zero offset is specified under static conditions with no vibration inputs

Model Designation & Ordering Code



Please specify Mating Connector 3CON-037F if required.

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