

# T233/T235 Series

DC-Operated 2 axis, Gravity-Referenced Servo Inclinometer



## Applications

Oil platform levelling

2 axis monitoring

Satellite platform levelling

Seismic and civil engineering analysis

## Features

- Compact dual axis (X and Y)
- Ranges  $\pm 1^\circ$  to  $\pm 90^\circ$
- Total electrical isolation between axes
- High accuracy specification Input voltage  $\pm 15$
- VDC; output signal  $\pm 5$  VDC
- Self test on both axes
- Silicone oil and electrical damping
- Temperature Sensor Output (AD592) – T235 only

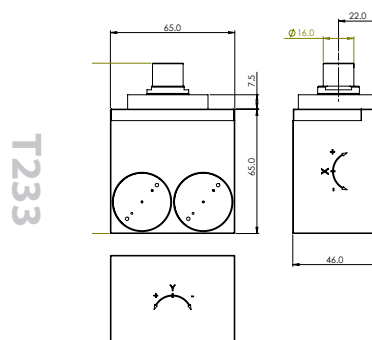
## Benefits

- High reliability
- -18 to 70°C operating range
- High accuracy

## Electrical Connections

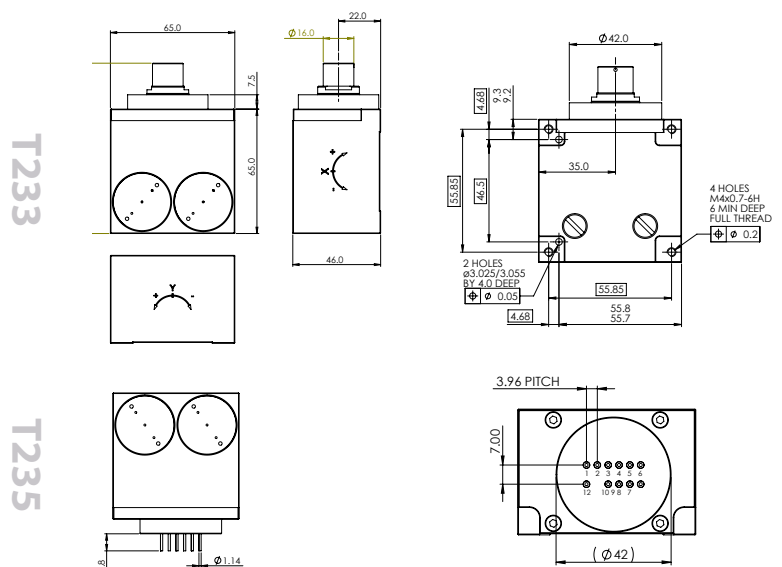
Pin 1	+15V
Pin 2	0V
Pin 3	-15V
Pin 4	X-Axis O/P
Pin 5	X-Axis O/P 0V
Pin 6	Y-Axis O/P
Pin 7	Y-Axis O/P 0V
Pin 8	X-Axis Self Test
Pin 9	Y-Axis Self Test
Pin 10	Self Test 0V
Pin 11	Not Connected
Pin 12	Temp Sensor O/P

SIDE VIEW



T233

PLAN VIEW



T235

## Specifications

Specifications by 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
-3 dB Frequency	Hz	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

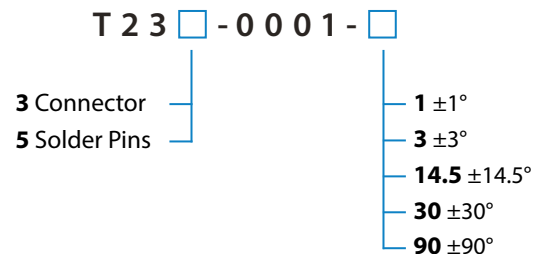
### Environmental Characteristics

Operating Temperature Range °C (°F)	-18 to 70
Survival Temperature Range °C (°F)	-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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