

Schaevitz® T233/T235

DC-Operated 2 axis, Gravity-Referenced Servo Inclinometer

Features

- Compact dual axis (x and y)
- Each axis fully conditioned offering a complete operating system
- Ranges $\pm 1^\circ$ to $\pm 90^\circ$
- Total electrical isolation between axes
- High accuracy specification Input voltage ± 15 VDC; output signal ± 5 VDC
- Self test on both axes
- Silicone oil and electrical damping
- Temperature Sensor Output (AD592)

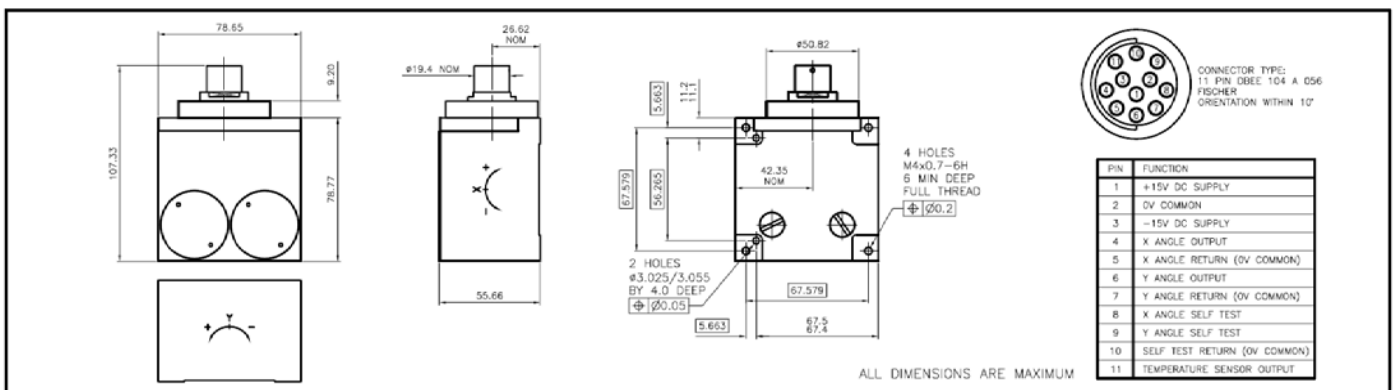
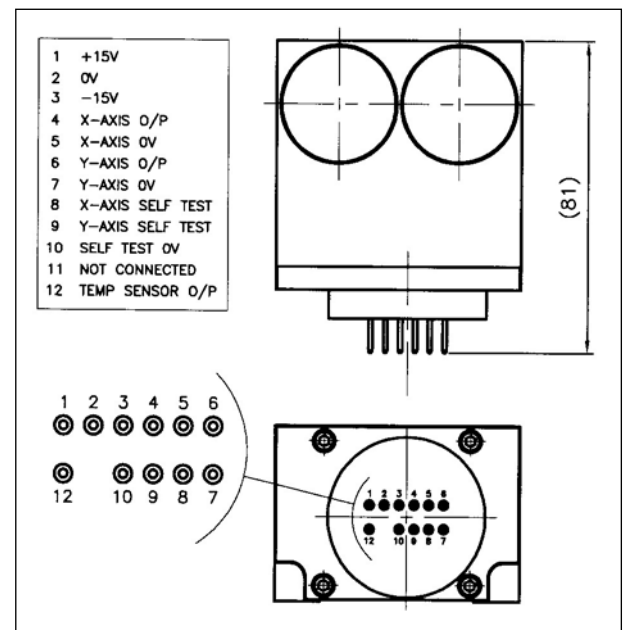


Applications

- High Accuracy, robust levelling systems
- Oil platform levelling
- Satellite antenna platform levelling
- Any industrial application where 2 axis levelling is required

T233 and T235

The T233 and T235 are high precision 2 axis (x and y) gravity referenced servo inclinometers suitable for both military and industrial applications. Both axes have a similar high specification to the single axis LSO Series. Any alignment problems with single axis units, when used for x and y measurements, are removed by the precision housing of the T233 Series with the accurately positioned dowel holes.



Schaevitz® T233/T235

DC-Operated 2 axis, Gravity-Referenced
Servo Inclinometer



Environmental Characteristics

Operating Temperature Range	°C	-18 to 70
Survival Temperature Range	°C	-40 to 70
Constant Acceleration Overload	g	50
Shock Survival		1250g, 0.5msec, ½ sine
Vibration Endurance		35g rms, 20 Hz to 2000 Hz sinusoidal
Environmental Sealing		IP65

Specifications by Range @ 20°C

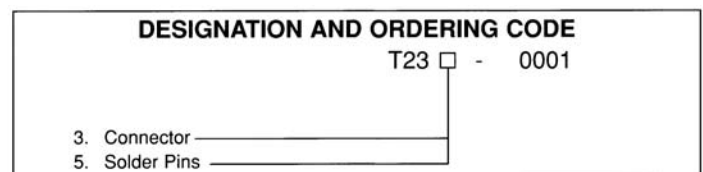
Range		±1°	±3°	±14.5°	±30°	±90°
Excitation Voltage	Volts dc			±12 to ±18		
Current Consumption	mA (nom)	±25	±25	±15	±15	±15
Full Range Output (FRO) (see note 1)	Volts dc			±5		
Output Standardisation	% FRO (max)			±1		
Output Impedance	Ohm			<10		
Output Noise	V rms (max)			0.005		
Non-Linearity (see 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	%Reading/°C (max)	±0.04	±0.03	±0.01	±0.006	±0.006
Temperature Sensor Out	µA/K			1		

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

How to Order

Specify model type with appropriate range e.g. T233-0001-30 denotes a Two Axis Inclinometer of range ±30°, fitted with 12-way receptacle.



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