

Schaevitz® T435 Series

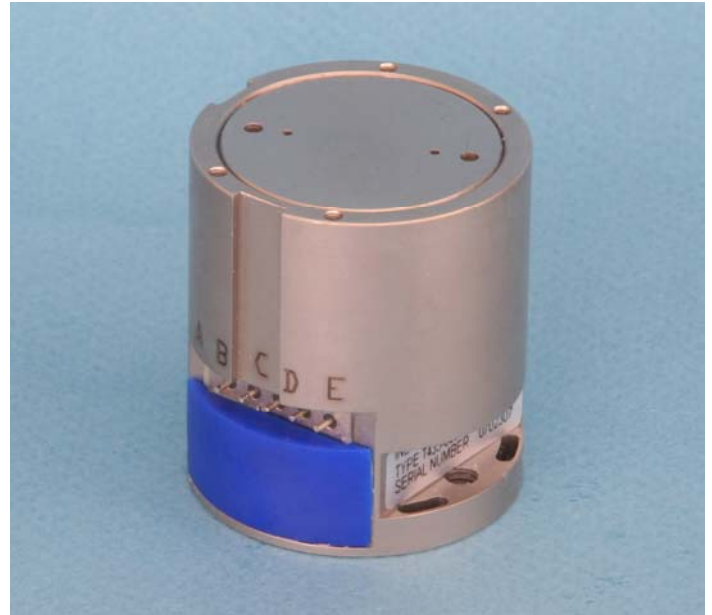
DC-Operated, Gravity-Referenced
Servo Inclinometer

Features

- Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system
- High-level DC output signal proportional to sine of the angle of tilt available
- $\pm 3^\circ$ to $\pm 90^\circ$ ranges available
- Extremely rugged, withstands 1500g shock
- Stackable for x and y measurements

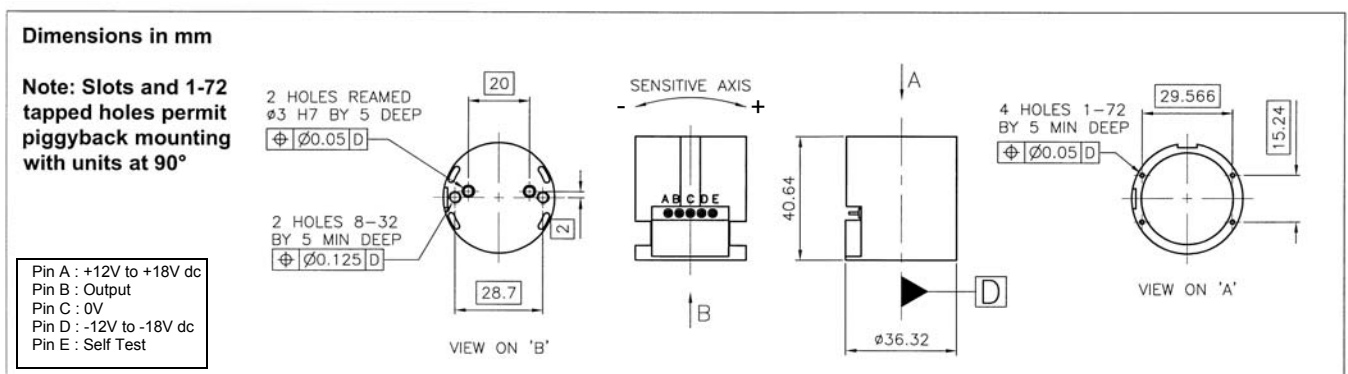
Applications

- Bore-hole mapping, dam and rock shifts and other geophysical, seismic and civil engineering studies
- Applications where space is limited



T435-0001

The T435 Series is a high precision closed loop gravity referenced servo inclinometer designed for down-hole logging or for use where overall space is limited. Measuring only 40.6mm high and less than 37mm in diameter, the T435 can be stacked for simultaneous X & Y measurement of tilt angles. Models are available in a variety of ranges. Solder pin terminations are standard.



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Environmental Characteristics

Operating Temperature Range	°C	-18 to 70
Survival Temperature Range	°C	-40 to 70
Constant Acceleration Overload	g	50
Shock Survival		1500g, 0.5msec, ½ sine
Vibration Endurance		35g rms, 20 Hz to 2000 Hz sinusoidal
Environmental Sealing		IP65

Specifications by Range @ 20°C

Range		±3°	±14.5°	±30°	±90°
Excitation Voltage	Volts dc		±12 to ±18		
Current Consumption	mA (nom)		±15		
Full Range Output (FRO) (see note 1)	Volts dc		±5		
Output Standardisation	% FRO		±1		
Output Impedance	Ω (max)		10		
Output Noise	Vrms (max)		0.002		
Non-Linearity (see note 2)	% FRO	0.05	0.02	0.02	0.05
Non-Repeatability	% FRO	0.01	0.002	0.001	0.0005
Resolution	arc seconds	0.2	1.0	2.0	4.0
-3 dB Frequency	Hz	15	30	40	55
Sensitive Axis-to-Case Misalignment	deg (max)	±0.15	±0.25	±0.5	±1.0
Cross-axis Sensitivity (see note 3)	% FRO		0.1		
Zero Offset (see note 4)	Volts dc	±0.04	±0.04	±0.02	±0.02
Thermal Zero Shift	%FRO/°C	0.03	0.01	0.005	0.003
Thermal Sensitivity	%Reading/°C	0.03	0.01	0.006	0.006

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 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. T435-0001-14.5 denotes an
Inclinometer of range ±14.5°