

T935

DC-Operated, Gravity-Referenced
Miniature Servo Inclinometer

Introduction

The T935 series is the next evolution of our popular and field proven T435 series. The T935 is a high precision, closed loop, gravity referenced servo inclinometer designed for use where overall space is limited. The unit can be stacked to provide dual axis X and Y measurements. Models are available in a wide variety of angle ranges. Solder pin terminations are standard.

T935 series inclinometers carry the tradition of a long and successful market history for servo inclinometers marketed under the brand. This exceptional product performance and reliability is now combined with the added benefits of extensive applications engineering support, global technical sales presence, repair, refurbishment and calibration services, and a vendor-stocking program.



Applications

- Bore Hole Mapping
- Structural Health Monitoring
- Continuous Casting Mould Alignment
- Railway Maintenance Equipment
- Mobile and Stationary Antenna Alignment

Features

- Fully self contained and compact – connect to a DC power source and a readout or control device for a complete operating system
- $\pm 1^\circ$ to $\pm 90^\circ$ ranges
- Extremely rugged, fluid filled, withstands 1500g shock
- Stainless steel construction
- Extended pins with chamfered housing edge for ease of soldering
- Laser marked part and serial number
- Stackable for X and Y measurements
- Industry Exclusive 2 Year Warranty

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Sherborne Sensors, a Nova Metrix company

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Performance Specifications by Range @ 20°C						
Range		± 1°	± 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 (DC to 10kHz)	Vrms (max)	0.002				
Non-Linearity (see note 2)	% FRO	0.08	0.05	0.02	0.02	0.05
Non-Repeatability	% FRO	0.02	0.01	0.002	0.001	0.0005
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)	±0.15	±0.15	±0.25	±0.50	±1.0
Cross Axis Sensitivity (see note 3)	% FRO	0.1				
Zero Offset (see note 4)	Volts dc	±0.08	±0.04	±0.04	±0.02	±0.02
Thermal Zero Shift	% FRO/°C	±0.05	±0.03	±0.01	±0.005	±0.003
Thermal Sensitivity	% Reading/°C	±0.05	±0.03	±0.01	±0.006	±0.006

Environmental Specifications		
EMC Directive	EN 61326: 1998	
EMC Emissions	EN 55022: 1998	30 MHz to 1 GHz
EMC Immunity	EN61000-4-2 1995 inc A1: 1998 & A2: 2001	±4 kV
	EN61000-4-3: 2002	10 V/m
	EN61000-4-4: 2004	± 1 kV
	EN61000-4-6 1996 inc A1: 2001	3 Vrms
	EN61000-4-6: 2007	10 Vrms
	EN61000-4-8: 1994 Incorporating Amendment A1: 2001	30 A/m
Constant Acceleration Overload	50g	
Shock Survival	1500g, 0.5 ms, ½ sine	
Vibration Endurance	35g RMS, 20 Hz to 2000 Hz sinusoidal	
Environmental Sealing	IP65	

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 the unit when tilted to full range angle in cross axis
4.	Zero offset is specified under static conditions with no vibration inputs

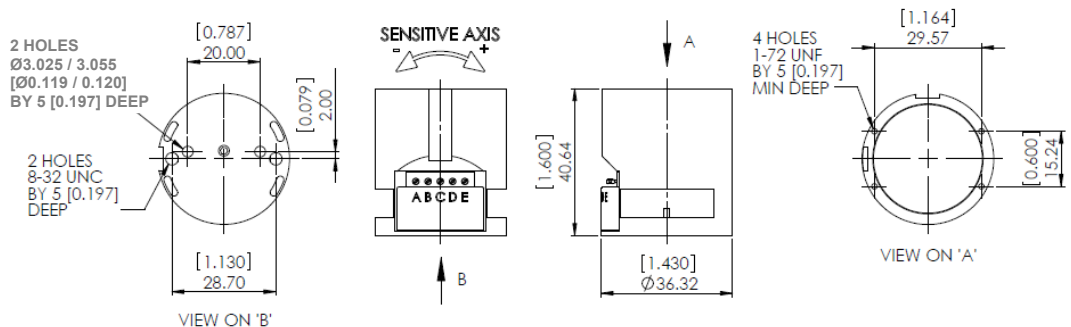
How To Order: Example T935-14.5

T935-14.5 is a standard T935 series sensor with a range of ±14.5

DIMENSIONS IN mm[INCH]

Note: Slots and 1-72 tapped holes permit piggyback mounting two units at 90° to each other

PIN A : +12V to +18V dc
 PIN B : 0V
 PIN C : -12V to -18V dc
 PIN D : Output
 PIN E : Self Test



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