T835 Series

Gravity-Referenced 3-Axis Inclinometer

Sherborne Sensors
.... the first choice in precision

Features

- *25.4mm diameter cylindrical housing with precision angular alignment feature*
- *Ranges (each axis) ±14.5°, ±30° & ±60°*
- *Supply voltage: ±15Vdc*
- *Output: ±5Vdc*
- *Solder pin electrical terminations*
- *Stainless Steel Construction, high stiffness reduces angular errors due to case flexibility*
- *Sealed to IP67 / NEMA 6*

Applications

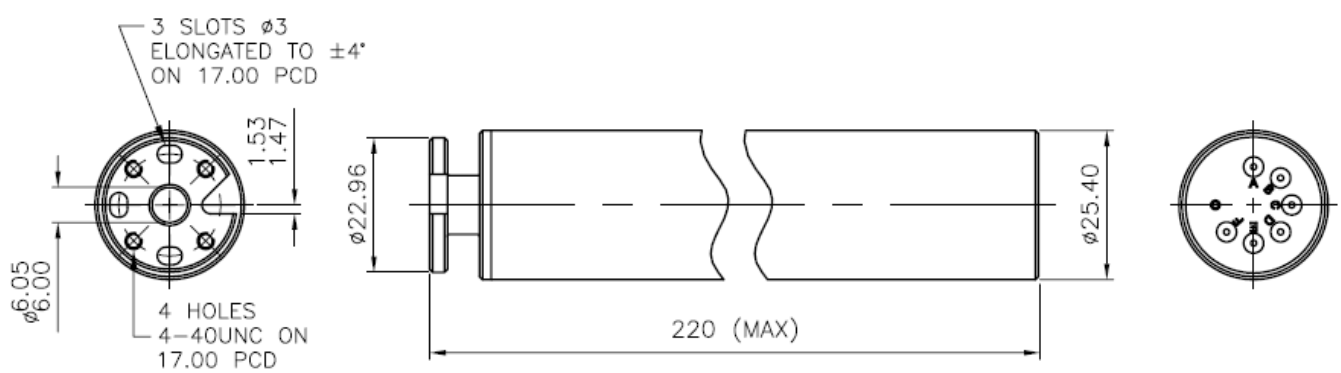
- *Bore-hole logging*
- *Seismic studies*
- *Measurements in confined areas*

WIRING DETAILS

A = -ve Supply
B = 0V Common
C = X Signal Output
D = Y Signal Output
E = Z Signal Output
F = +ve Supply
G = Case Ground

T835 Series

The T835 Series are high precision, gravity referenced, tri-axial inclinometers. The small diameter of 25.4mm is ideal for borehole applications or other space restricted areas. The unit can withstand high levels of mechanical shock without any degradation in specification and is sealed against the ingress of contaminants.



1 Ringway Centre, Edison Road, Basingstoke, Hampshire, RG21 6YH, United Kingdom
Tel: +44 (0) 870 444 0728 Fax: +44 (0) 870 444 0729 Email: sales@sherbornesensors.com
Website: www.sherbornesensors.com

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Environmental Characteristics

Operating Temperature Range	°C (°F)	-18 to 70 (-0.4 to 158)
Survival Temperature Range	°C (°F)	-40 to 70 (-40 to 158)
Constant Acceleration Overload	g	50
Shock Survival		1000g, 0.5msec, ½ sine
Vibration Endurance		20g rms, 20 Hz to 2000 Hz sinusoidal
Enviromental Sealing		IP67 / NEMA6

Specifications by Range @ 20°C (68°F)

Range		**±14.5°**	**±30°**	**±60°**
Excitation Voltage	Volts dc		±12 to ±18	
Current Consumption	mA (max)		50	
Full Range Output (FRO) (see note 1)	Volts dc		± 5 ±1%	
Output Impedance	Ohm		<10	
Non-Linearity (see note 2)	% FRO (max)	0.09	0.09	0.15
Non-Repeatability	% FRO (max)		0.02	
Resolution	arc seconds	1	2	4
-3 dB Frequency	Hz		5	
Sensitive Axis-to-Case Misalignment	deg (max)	± 0.25	± 0.5	± 1.0
Cross-axis sensitivity (see note 3)	% FRO (max)		± 0.25	
Zero Offset	mV (max)		± 50	
Thermal Zero Shift	%FRO/°C (max)	0.014	0.007	0.007
	(%FRO/°F (max))	(0.008)	(0.004)	(0.004)
Thermal Sensitivity Shift	%Reading/°C (max)		0.014	
	(%Reading/°F (max))		(0.008)	

Notes

1. Full Range Output is defined as the full angular excursion from positive to negative, i.e. ±30° = 60°.
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 angles in cross axis.

DESIGNATION & ORDERING CODE

T 8 3 5 - 0 0 0 1 - ☐

Series Number

14.5 - ±14.5°
30 - ±30°
60 - ±60°

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