## A875

Mini "Tuff Tilt" Digital Tiltmeter

The model 875 Mini "Tuff Tilt" Tiltmeter combines high precision and durability in a miniaturized and economical instrument package. Using MEMS technology, the 875 delivers superior measurement accuracy with virtually no long-term drift and a resolution of $0.05^{\circ}$. Output options include 0.5$4.5 \mathrm{Vdc}, 4-20 \mathrm{~mA}$ and digital RS485. All units are rated IP67 waterproof for advanced protection from the elements. Use the 875 Mini "Tuff Tilt" for structural monitoring, angle measurement and control, platform leveling, testing and research, OEM and more. This product is RoHS compliant.


| Static/Dynamic |  |  |  |
| :--- | :---: | :---: | :---: |
| Angular Range $^{1}$ | $\pm 5^{\circ}$ | $\pm 15^{\circ}$ | $\pm 30^{\circ}$ |
| Resolution $^{\circ}$ | $0.05^{\circ}$ | $0.05^{\circ}$ | $0.05^{\circ}$ |
| Output Voltage Range (Vdc) | $0.5-4.5$ | $0.5-4.5$ | $0.5-4.5$ |
| FRO Tolerance (\% max) | $\pm 0.30$ | $\pm 0.30$ | $\pm 0.30$ |
| Scale Factor (V/ ${ }^{\circ}$ ) | $0.4000 \pm 0.0012$ | $0.1333 \pm 0.0004$ | $0.0667 \pm 0.0002$ |
| SF Temp Coefficient (ppm/ ${ }^{\circ} \mathrm{C}, \mathrm{max}$ ) | $\pm 150$ | $\pm 150$ | $\pm 150$ |
| $0^{\circ}$ Output (V max @ room temp.) | $\pm 0.03$ | $\pm 0.03$ | $\pm 0.03$ |
| $0^{\circ}$ Temp Coefficient (V/ ${ }^{\circ} \mathrm{C} \mathrm{max}$ ) | $\pm 0.005$ | $\pm 0.005$ | $\pm 0.005$ |
| Non-linearity (\% FRO max) | 2 | 2 | 2 |
| Nonrepeatability ( ${ }^{\circ} \mathrm{max}$ ) | 0.002 | 0.002 | 0.002 |
| Transverse Axis Misalignment ( ${ }^{\circ}$ max) | $\pm 1$ | $\pm 1$ | $\pm 1$ |
| Relative Accuracy ( ${ }^{\circ} \mathrm{max}$ ) | 0.10 | 0.16 | 0.30 |
| Bandwidth (Hz nom) (-3 dB) | $<1$ | $<1$ | $<1$ |
| Start Up Time (Seconds max) | 5 | 5 | 5 |
| Response Time (Seconds max) | 0.3 | 0.3 | 0.3 |


| Electrical \& Environmental |  |
| :--- | :---: |
| Number of Axes | 1 or 2 |
| Input Voltage Range (Vdc max) | $9-30$ |
| Input Current (mA @ 24V max) | 15 |
| Output Noise (Vrms max) | 0.006 |
| Output Impedance (Ohms nom) | 10 |
| Operating Temperature Range $\left({ }^{\circ} \mathrm{C}\right)$ | -40 to +85 |
| Storage Temperature Range $\left({ }^{\circ} \mathrm{C}\right)$ | -50 to +105 |
| Shock (g, 1 msec, $1 / 2$-sine) | 500 |
| Weight (grams) | $210(7.4$ oz.) |
| Seal | $\mathrm{IP67}$ |
| Cable | $2 \mathrm{M}(6.6 \mathrm{ft})$, flying leads |

[^0]Wiring:
A875 SERIES


- Output is linear with change in degrees tilt.
- Zero Function:S hort green and black wires at poweron for 3 seconds and release.
- Do not short wires in operation mode.

| Wire Color | Function |
| :---: | :---: |
| Red | +Power |
| Black | Ground |
| Yellow | No Connection |
| Blue | No Connection |
| Green | Zero Cal. |
| White | X-Out |
| Brown | No Connection |
| Grey |  |

Model A875 Mini "Tuff Tilt" Dimensions
Units: Inch [MM]
Cable Length: $6.6 \mathrm{ft}[2 \mathrm{M}$ ]


STRAIGHT MOUNTING BRACKET


NOTES:

1. UNITS $\frac{[m \mathrm{~mm}]}{\mathbb{I N C H}}$
2) SENSOR IS SOLD SEPERATLY

3 PLATE SHIPS WITH MOUNTING HARDWARE.

(197)

RIGHT ANGLE MOUNTING BRACKET


HOW TO ORDER:

| Model | Part Number | Description |
| :---: | :---: | :---: |
| 875-SMB | $879851-01$ | Straight Bracket |
| 875-RAMB | $879851-01$ | Right Angle Bracket |


[^0]:    ${ }^{1}$ Custom ranges available on request product development
    *Specifications subject to change without notice on account of continued
    *Measurements are performed at room ambient temperature unless stated otherwise

