MIDDLETON SOLAR

# ME01 Elevation Inclinometer

## APPLICATION NOTE

The ME01 Elevation Inclinometer is an accessory for the APT-02, AST-02, AST-03, and AST-03T Solar Trackers. The ME01 is a precision inclinometer with a U-clamp and a bubble level vial. It provides a means to continuously measure the elevation angle of a solar Tracker.


1) Place the ME01 on the horizontal axle of the Tracker as illustrated above.
2) The label on the ME01 has an arrow that should point towards the sun.
3) Adjust the angular position of the ME01 so the X-axis signal indicates the actual elevation angle, then tighten the U-clamp. The instantaneous Zenith Angle, for any location, can be determined from applications such as 'Sun and Moon Position' for the iPhone. Elevation angle = 90° – Zenith Angle.
4) The output is an analogue voltage, where zero elevation (Zenith = 90°) is approximately 2.5V.

**Specification**

| | |
|---|---|
| range | ±90° |
| accuracy (typical, at 25°C) | 0.15° |
| resolution (typical) | 0.1° |
| supply voltage & current | 8 to 30 V, 15 mA |
| signal output, X-axis | 0.5 to 4.5 V |
| wire colours | red = supply +ve<br>blue = GND, supply & signal<br>yellow = signal, X-axis |