



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## ANGLESTAR® PROTRACTOR SYSTEM (APS)

### SPECIFICATIONS

- ◆ Complete angle measurement system
- ◆ Battery or external powered
- ◆ Ranges:  $\pm 19.99^\circ$ ,  $\pm 45.0^\circ$  and 0 to  $+90^\circ$
- ◆ Remote sensing up to 200 feet

The AngleStar® Protractor System (APS) is a ready to use, stand-alone system for angle measurements. The system incorporates an AngleStar® ratiometric electronic clinometer, a digital LCD display, and a four foot interconnecting cable ( *cable lengths up to 200 feet are available, consult factory for details*).

This system will operate for 500 hours on one 9 volt battery (not included), or may be powered from an external power source between +9 and +15 VDC, drawing minimal current. The display may be mounted up to 200 feet from the sensor for remote sensing applications such as drilling equipment or tower crane overload protection.

There are three systems to choose from;  $\pm 19.99$  degrees with 0.01 degree resolution,  $\pm 45^\circ$  or 0-90°, both having 0.1 degree resolution.

### FEATURES

- ◆ Separate sensor and display
- ◆ Remote sensing up to 200 feet
- ◆ External power jack
- ◆ 500 hour battery life
- ◆ Integral easel stand for readout

### APPLICATIONS

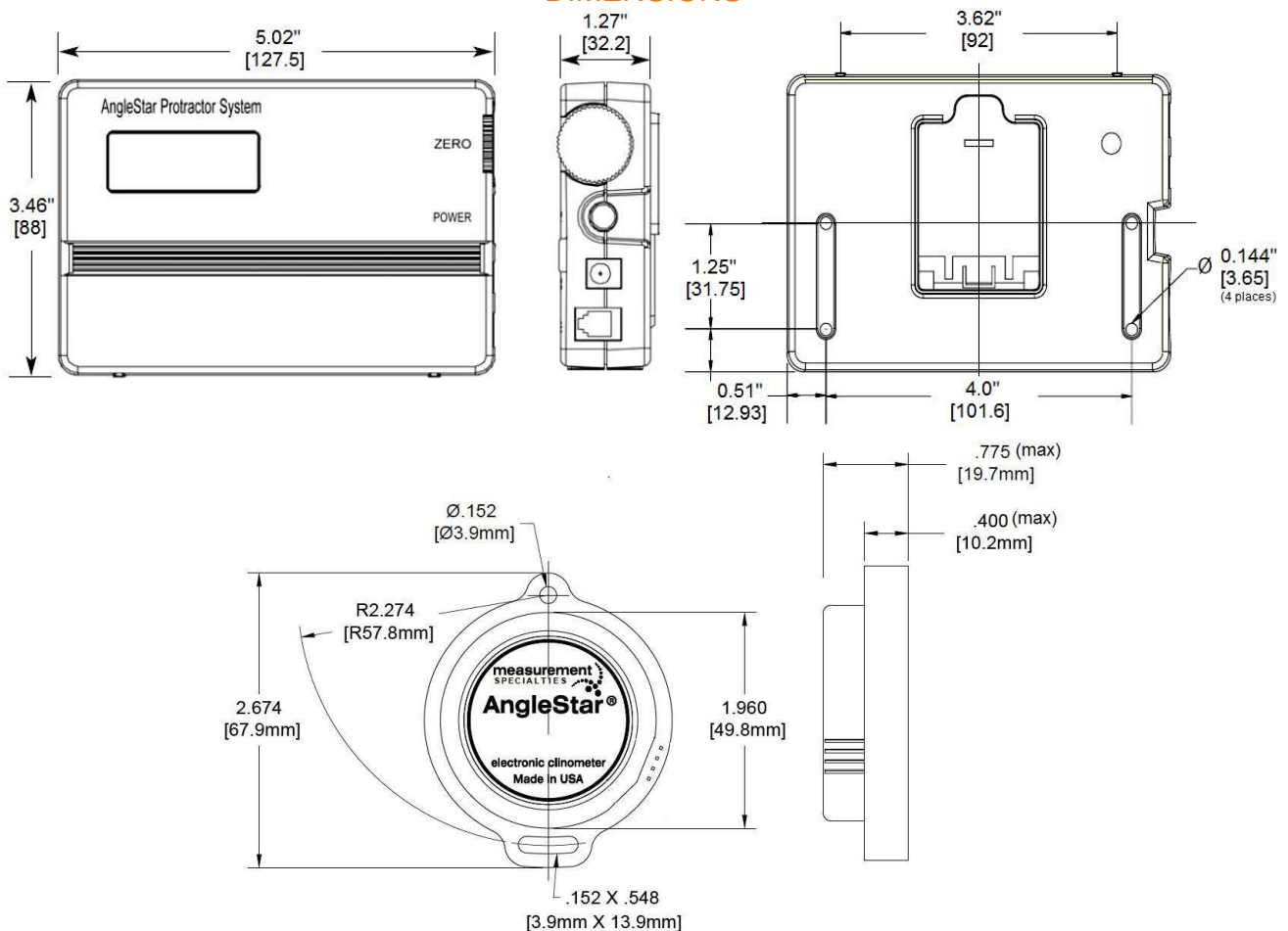
- ◆ Crane safety systems
- ◆ Crawler drill mast angle
- ◆ Antenna positioning
- ◆ Machine tool angle
- ◆ Platform leveling/monitoring
- ◆ Audio speaker array alignment

**PERFORMANCE SPECIFICATIONS**

ELECTRICAL	
Battery life	500 hours (approx.)
External power	+9 to +15VDC
Linearity	
P/N's 02160023-000 and 02160021-000 ( $\pm 19.99^\circ$ & $\pm 45^\circ$ models)	
Null to $10^\circ$	$\pm 0.1^\circ$
$10^\circ$ to $45^\circ$	$\pm 1\%$ of reading
P/N 02160025-000 (0 to $+90^\circ$ model)	
$0^\circ$ to $+90^\circ$	$\pm 2\%$ of reading
Null repeatability	$\pm 0.1^\circ$
Cross axis error	$< 1\%$
Sensor time constant	0.3 seconds
Sensor frequency response	0.5Hz
ENVIRONMENTAL/MECHANICAL	
Temperature range	$-18^\circ$ to $+55^\circ\text{C}$ (0 to $+131^\circ\text{F}$ )
Cable	Four conductors, 26 AWG, PVC jacket, 4 foot length standard

\* All values are nominal unless otherwise noted!

**DIMENSIONS**



Dimensions are in inches [mm], and are nominal unless otherwise specified

**ORDERING INFORMATION**

MODEL	MEASUREMENT RANGE	PART NUMBER
Standard	±45°	02160021-000
High Resolution	±19.99°	02160023-000
90 Degree	0 to +90°	02160025-000

OPTIONS	
NIST calibration	0216002X-400

ACCESSORIES	
10 foot cable assembly	04160001-010
20 foot cable assembly	04160001-020
30 foot cable assembly	04160001-030
40 foot cable assembly	04160001-040
50 foot cable assembly	04160001-050
100 foot cable assembly	04160001-100
150 foot cable assembly	04160001-150
200 foot cable assembly	04160001-200

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