



ACCUSTAR® IP-66

4 to 20mA Loop Powered Clinometer

SPECIFICATIONS

- ♦ $\pm 3^\circ$ to $\pm 45^\circ$ sensing ranges
- ♦ IP-66 rated
- ♦ 4 to 20mA and analog outputs
- ♦ Zero and span adjustable
- ♦ -25° to $+60^\circ\text{C}$ temp range
- ♦ Rugged die-cast housing

The AccuStar® IP-66 is a 4 to 20mA loop powered clinometer specifically designed for industrial and outdoor applications. Rated to IP-66, the rugged die-cast, powder coated aluminum housing provides protection in the most hostile environments.

The heart of the system is a variable resistance-based tilt sensor with no moving parts. When rotated about its sensitive axis, this unique sensor provides an exceedingly linear variation in resistance, which is then electronically converted into 4 to 20mA and VDC analog outputs proportional to the angular position.

FEATURES

- ♦ Ranges from $\pm 3^\circ$ to $\pm 45^\circ$
- ♦ Rugged die-cast aluminum housing
- ♦ Dust and water tight to IP-66
- ♦ Current or voltage output
- ♦ 3m (10 ft.) long jacketed cable

APPLICATIONS

- ♦ Crane safety systems
- ♦ Machine tool angle positioning
- ♦ Barge leveling and load distribution
- ♦ Medical vehicle leveling / mobile CT & MRI
- ♦ Mining equipment
- ♦ Solar array tracking systems

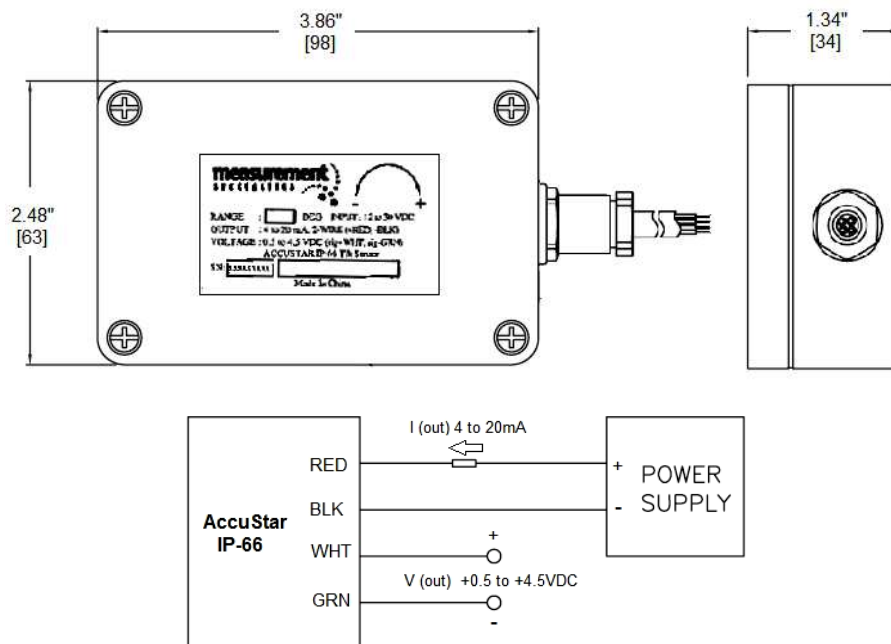
The AccuStar® IP-66 may be operated as either a 2-wire loop powered angle transmitter, or a 4-wire analog output tilt sensor. Mounting features integrated into the die cast housing, make installation onto any vertical surface easy.

PERFORMANCE SPECIFICATIONS

ELECTRICAL	
Linear range	$\pm 3^\circ$ to $\pm 45^\circ$
Input voltage (unregulated)	+12 to +30VDC (+18VDC min. required for 4 to 20mA operation)
Output*	4 to 20mA or +0.5 to +4.5VDC (see note)
Zero (level) output	12mA or +2.5VDC
Max loop resistance	500 Ω at +24VDC
LINEARITY	
Null to 10°	$\pm 0.1^\circ$
10° to 45°	$\pm 1\%$
Null repeatability	0.05 $^\circ$
Cross axis error	<1% up to 45°
Frequency response	0.5Hz @ -3db
ENVIRONMENTAL/MECHANICAL	
Operating temperature range	-25 $^\circ$ to +60 $^\circ$ C
Temp. coefficient of null	0.05 $^\circ$ / $^\circ$ C
Temp. coefficient of scale factor	$\pm 3^\circ$ & $\pm 5^\circ$ models = 0.3% / $^\circ$ C All Others = 0.1% / $^\circ$ C
Cable	Shielded cable with FEP jacket, four conductors, stranded 22 AWG, 3m (10 foot) long min..

Notes:

* Unit supplied with 4 to 20mA output calibrated. Use of the +0.5 to +4.5VDC output requires subsequent calibration!
 All values are nominal unless otherwise noted!

DIMENSIONS AND WIRING

Dimensions are in inches [mm]

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ORDERING INFORMATION

Model	Measurement range	Part Number
AccuStar® IP-66	$\pm 3^{\circ}$	72162000-003
	$\pm 5^{\circ}$	72162000-005
	$\pm 10^{\circ}$	72162000-010
	$\pm 15^{\circ}$	72162000-015
	$\pm 20^{\circ}$	72162000-020
	$\pm 30^{\circ}$	72162000-030
	$\pm 45^{\circ}$	72162000-045