MD900-T
Digital Clinometer

The biaxial model MD900-T is an economical digital clinometer with powerful firmware features. User programmable settings include AUTO-zero (tare), baud and output rate, sample averaging, and more. Output is RS232 or RS422 (RS485 full duplex). The MD900-T easily integrates with a variety of GPS receivers, and supports Trimble TCM, NMEA XDR, BAE, and Ashtech output protocols. Units ship standard with 6-ft. hook-up cable and 100-240VAC power transformer. Use the MD900T for industrial pitch and roll measurement, marine piling, dredging and construction systems, platform leveling, geotechnical monitoring and more.
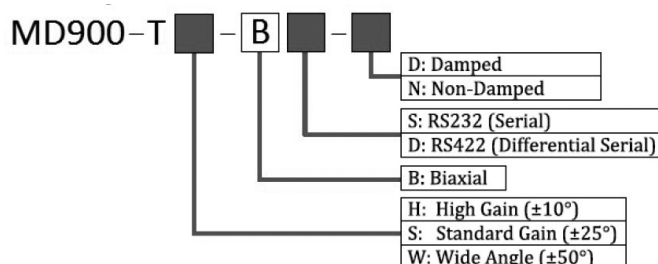
SPECIFICATIONS

	High-Gain	Standard	Wide-Angle
Angular Range	±10°	±25°	±50°
Resolution	0.002°	0.004°	0.01°
Repeatability	0.01°	0.01°	0.02°
Non-Linearity	1%	1%	1%
Output	RS232, RS422 (RS485 full duplex)		
Output Format	NMEA XDR, Trimble TCM, BAE, Ashtec compatible, Simple (default: X, Y, Temp., S/N)		
Baud Rate	9600 (default), 19200, 28800, 57600, 115200, 230400		
Channels	X-tilt, Y-tilt, Temperature, Serial No.		
Kz Coefficient (deg/C)	<10 arcsec/°C (typical)		
Ks Coefficient (%/C)	0.03%/°C (typical)		
Time Constant	0.15 sec		
Natural Frequency	7 Hz		
Power	7-28 VDC @ 30mA, 250 mV ripple max, reverse polarity protected		
Environmental	-40 to +85 C operating and storage. 100% humidity, IP65		
Dimensions	120 x 80 x 60 mm, 0.55 kg (1.2 lb.)		
Materials	Diecast aluminum, painted		

Specifications subject to change without notice on account of continued development
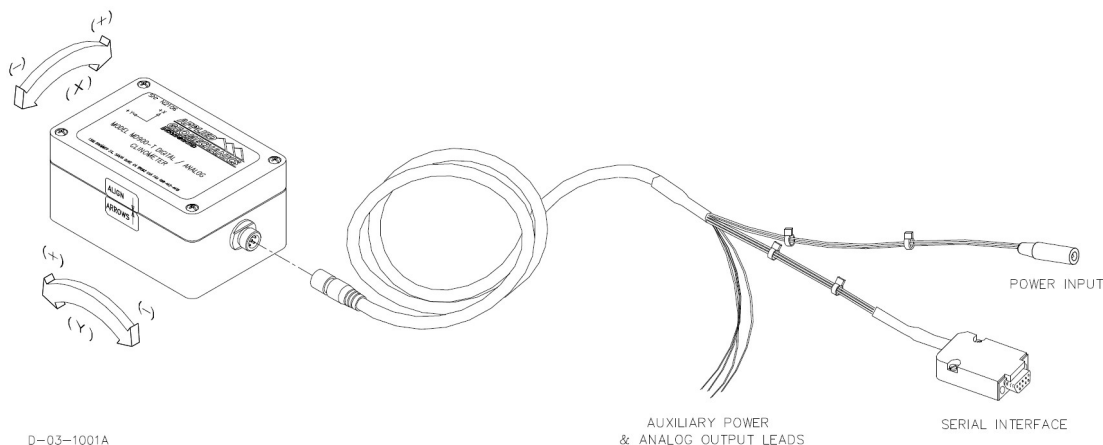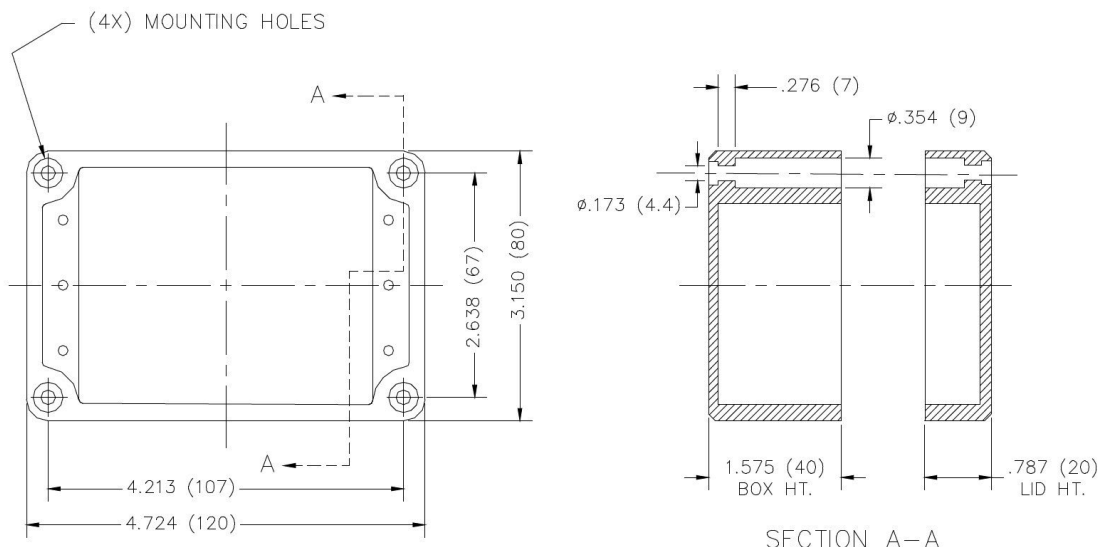
ORDERING CODE

MD900-T ☐ – B ☐ – ☐

- D: Damped
- N: Non-Damped
- S: RS232 (Serial)
- D: RS422 (Differential Serial)
- B: Biaxial
- H: High Gain (±10°)
- S: Standard Gain (±25°)
- W: Wide Angle (±50°)

ORDERING CODE
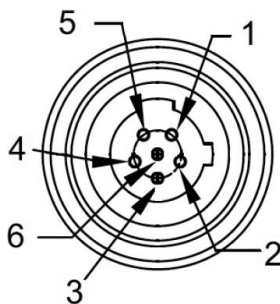
P/N	Description
84033	Extra 6-ft Cable Assembly, RS232 Output, w/ DB9-sub Connector
84080-01	Extra 6-ft Cable Assembly, RS422 Output, w/ DB9-sub Connector
70369	6-conductor cable (specify total length on order)
00254-02	Transformer, 100-240VAC to 12VDC
81439	Mounting bracket for vertical surfaces
84051	Mounting plate for horizontal surfaces

MD900-T DIGITAL CLINOMETER ENCLOSURE AND MOUNTING HOLES DIMENSIONS

SECTION A—A

D-03-1001A

AUXILIARY POWER
& ANALOG OUTPUT LEADS

SERIAL INTERFACE

POWER INPUT

CABLE WIRING AND PIN-OUTS

6-Socket Female Connector Face View

RS232 Wiring

6-socket female	Wire Color	Function	DB9 Pin-out
1	Red-White	GND	5
2	Red	V+ (Power)	--
3	Green-Yellow	Analog X Out	--
4	Red-Yellow	RxD (RS232)	3
5	Red-Black	TxD (RS232)	2
6	Red-Blue	Analog Y Out	--

RS422 Wiring

6-socket female	Wire Color	Function	DB9 Pin-out
1	Red-White	GND	1
2	Red	V+ (Power)	--
3	Green-Yellow	Rx-(RS422)	9
4	Red-Yellow	Rx+ (RS422)	8
5	Red-Black	Tx+ (RS422)	4
6	Red-Blue	Tx- (RS422)	5

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