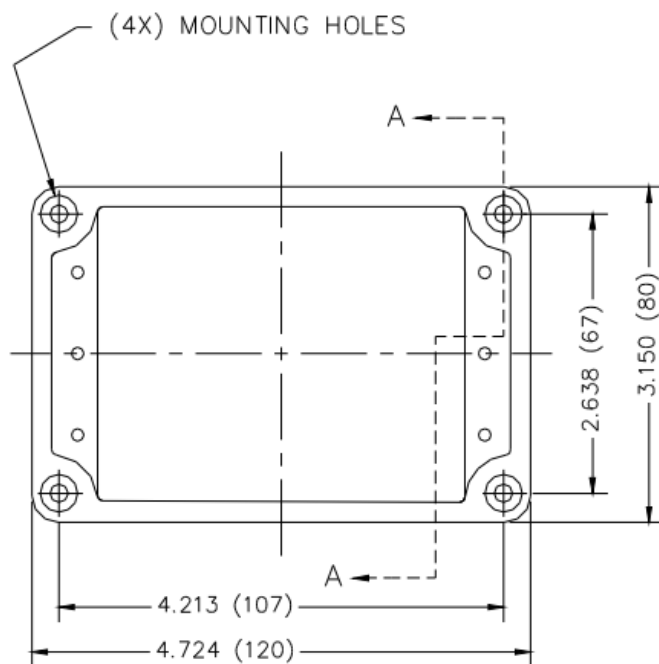


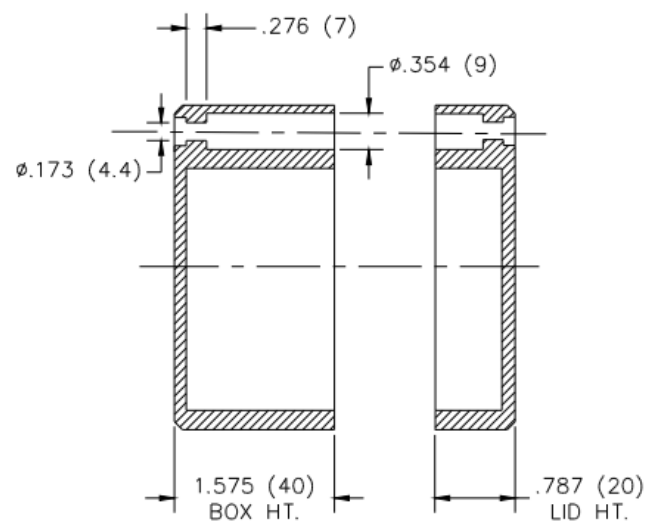
Model MD900-T Digital Clinometer

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.



APPLICATIONS:

- Industrial pitch and roll measurement
- Marine piling, dredging, and construction systems
- Platform Leveling
- Geotechnical Monitoring
- Radar platform leveling



SECTION A-A

PERFORMANCE SPECIFICATIONS

PERFORMANCE

| VERSION | High-Gain | Standard | Wide-Angle |
|--|---|-----------|------------|
| ANGULAR RANGE (°) ¹ | ±10° | ±25° | ±50° |
| SCALE FACTOR | 1.25°/mA | 3.125°/mA | 6.25°/mA |
| NONLINEARITY (%FRO) ² max | 1% | | |
| NONREPEATABILITY | 0.01° | 0.01° | 0.02° |
| RESOLUTION | 0.002° | 0.004° | 0.01° |
| TIME CONSTANT | 0.15 sec | | |
| K _Z TEMP COEFFICIENT (°/C) | <10 arcsec/°C (typical) | | |
| K _S TEMP COEFFICIENT (%/°C) | 0.03%/C (typical) | | |
| 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. | | |

ELECTRICAL & ENVIRONMENTAL

| | |
|----------------------------------|--|
| NUMBER OF AXES | 2 |
| OUTPUT IMPEDANCE (Ohms, nominal) | 270, short circuit protected |
| NATURAL FREQUENCY | 7 Hz |
| POWER | 7-28 VDC @ 30mA, 250 mV ripple max, reverse polarity protected |
| OPERATING TEMPERATURE RANGE | -40° to +85° C |
| STORAGE TEMPERATURE RANGE | -40° to +85° C |
| WEIGHT | 0.55 kg (1.2 lb.) |
| MATERIALS | Die-cast aluminum, painted |

NOTES:

1. Custom ranges available on request
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment

Specifications are subject to change without notice due to continued product development

PIN OUT:

RS232

| CONNECTOR | FUNCTION | DB9 PIN-OUT |
|--------------|--------------|-------------|
| RED-WHITE | GND | 5 |
| RED | V+ (POWER) | - |
| GREEN-YELLOW | ANALOG X OUT | - |
| RED-YELLOW | RXD (RS232) | 3 |
| RED-BLACK | TXD (RS232) | 2 |
| RED-BLUE | ANALOG Y OUT | - |

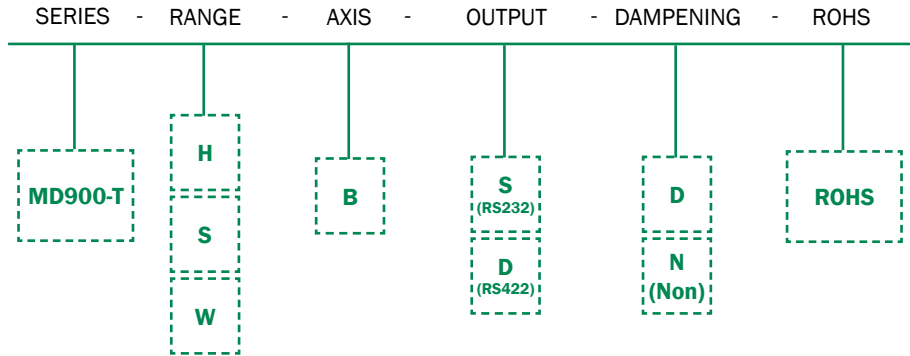
RS422

| CONNECTOR | FUNCTION | DB9 PIN-OUT |
|--------------|-------------|-------------|
| RED-WHITE | GND | 1 |
| RED | V+ (POWER) | - |
| GREEN-YELLOW | RX-(RS422) | 9 |
| RED-YELLOW | RX+ (RS422) | 8 |
| RED-BLACK | TX+ (RS422) | 4 |
| RED-BLUE | TX- (RS422) | 5 |



ORDERING INFORMATION

HOW TO ORDER Model Numbers are comprised of the series, the number of axes, and the angular range.



| MODEL # | PART # |
|--------------------|----------------|
| MD900-TS-BS-N | 98009-01-ROHS |
| MD900-TS-BD-D | 98009-10-ROHS |
| MD900-TS-BD-N | 98009-07-ROHS |
| MD900-TW-BS-D | 98009-05-ROHS |
| MD900-TW-BS-N | 98009-02-ROHS |
| MD900-TW-BD-D | 98009-11-ROHS |
| MD900-TW-BD-N | 98009-08-ROHS |
| MD900-TH-BS-D-ROHS | 98009-06-ROHS |
| MD900-TH-BS-N-ROHS | 98009-03-ROHS |
| MO900-TH-BD-D-ROHS | 98009-12-ROHS |
| MU900-TH-BD-N-ROHS | 98009-09-ROHS |
| MD900-TS-BS-D-ROHS | 98009-04-ROHS |
| MD900-TS-BS-N-ROHS | 98009-01-ROHS |
| MD900-TS-BD-D-ROHS | 98009-10-ROHS |
| MD900-TS-BD-N-ROHS | 98009-07-ROHS |
| MD900-TW-BS-D-ROHS | 98009-02-RO HS |
| MD900-TW-BS-N-ROHS | 98009-02-RO HS |
| MD900-TW-BD-D-ROHS | 98009-11-ROHS |
| MD900-TW-BD-N-ROHS | 98009-08-ROHS |

Accessories:

| PART # | DESCRIPTION |
|----------|---|
| 70369 | 6-conductor cable (specify required length on order) |
| 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 |
| 00254-02 | Transformer, 100-240VAC to 12VDC |
| 81439 | Mounting bracket for vertical surfaces |
| 84051 | Mounting plate for horizontal surfaces |