Dewtran® Series

Chilled Mirror Hygrometer

Figure1:Dewtran® Remote Chilled Mirror Hygrometer

Figure 2: Dewtran® Wall Mount Chilled Mirror Hygrometer

FEATURES

- Precision Accuracy
- 2 alarms (SPDT)
- Two 4-20mA outputs (configurable)
- RS232 programmable
- Two-line display
- Self-Aspirating (Wall mount configuration only)
- Data logging capabilities (optional)
- Temperature range: -40°C to + 95°C
- Can measure dew point, relative humidity, air temperature and barometric pressure (wall mount only)

APPLICATIONS

- HVAC
- CLEAN ROOMS
- ENVIRONMENTAL CHAMBERS
- PHARMACEUTICAL
- INDUSTRIAL PROCESSES
- GLOVEBOX APPLICATIONS
- SEMICONDUCTOR
- DATA STORAGE

The DewTran® Series

The DewTran® Series (patented technology) is a low cost, precision chilled mirror hygrometer that provides quick and accurate measurements of dew point, air temperature, humidity, or barometric pressure measurements. The hygrometer can be configured as a wall mount, duct mount, remote mount, or for flow through applications. User selectable, depending on options, unit displays (3 parameters) Dew Point (DP). Air temperature (T) and Relative Humidity (RH) or Barometric Pressure (BP), other units of measure are selectable (see page 3 of this spec sheet). The unit offers stable, accurate and repeatable measurements that are traceable to NIST.

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Technical Information	
Measurement Ranges	Dew Point: -40 °C to +88 °C (configuration dependent; non-condensing) Relative Humidity: 0-95% (non-condensing) Temperature: -20 °C to +95°C (remote configuration) Temperature: -10 °C to +60°C (wall mount and configurations with fan) Barometric Pressure: 10mb to 1100mb
Display	2x16 LCD Display, Shows three user selectable parameters.
Repeatability	+/- 0.05°C
Resolution	0.01 %
Output	4-20mA or RS232
Cable Length (Remote Only)	10 feet is standard. Contact factory for custom lengths. (For remote versions only).
Supply Voltage	24Vdc +/-10% @ 1.5A
Sensor	Chilled Mirror Technology
Analog Output scaled range Dew Point (4-20mA) User Selectable	-40°C to +60 °C (Factory set for Wall mount) -60°C to +100 °C (Factory set for remote units)
Operating Temperature	-25 °C to +95 °C (Remote units) -20 °C to +60 °C (Wall mount units)
Weight	< 5lbs.
Data Logging	SD 64GB, 1 sample/2 sec, Output-CSV file (optional)
Sample Flow Rate	1-3 scfh
Enclosure Rating	IP66 with AT option
Communications	RS232 Programmable
Accuracy	Dew point +/-0.2C Air Temperature +/-0.2C RH +/-1.0% (0-80%), +/-2% (>80% to 95%) Barometric Pressure +/-1.5mb

Ordering Table (More configurations available upon request)

Wall Mount Versions	
DewTran®-W	Chilled Mirror Hygrometer, wall mount version
DewTran®-W-FT	Chilled Mirror Hygrometer, wall mount version with flow through chamber
DewTran®-W-B	Chilled Mirror Hygrometer, wall mount version with barometric pressure
DewTran®-W-FT-B	Chilled Mirror Hygrometer, wall mount version with flow through chamber with barometric pressure

Remote Versions	
DewTran®-R	Chilled Mirror Hygrometer, Remote mount configuration with standard 10ft Cable tested to 85C at 85% RH
DewTran®-R-D	Chilled Mirror Hygrometer, Duct mount configuration for use with remote mount, includes mounting plate, gasket seal and mounting hardware
DewTran®-R-F	Chilled Mirror Hygrometer, Remote mount configuration with standard 10ft cable with self- aspirating fan for low flow rate applications and up to 60C max temperature
DewTran®-R-X	Remote mount configuration with standard 10ft cable and tested up to 90C at 95%RH
DewTran®-R-T	Chilled Mirror Hygrometer, Remote mount configuration with standard 10ft Cable tested to 85C at 85% RH; with air temperature probe
DewTran®-R-D-T	Chilled Mirror Hygrometer, Duct mount configuration for use with remote mount, includes mounting plate, gasket seal and mounting hardware, with air temperature probe
DewTran®-R-F-T	Chilled Mirror Hygrometer, Remote mount configuration with standard 10ft cable with self- aspirating fan for low flow rate applications and up to 60C max temperature, with air temperature probe
DewTran®-R-X-T	Remote mount configuration with standard 10ft cable and tested up to 90C at 95%RH, with air temperature probe

Note: Custom cable lengths and configurations are available. Contact factory with any questions.

Additional Options:

Part Number	Description
-SC-1-SS	Stainless steel chamber with 1/8" FNPT inlet and outlet ports
-RA-MB	Right angle mounting bracket for Dewtran, chilled mirror hygrometer.
-DL	Data logging

Note: all Dew Point and Temperature Units can be displayed in degrees C or F.
Units can also display: Absolute Pressure(mB), Parts per Million by Volume (PPMv), by weight (PPMw) Grains/Pound, grams/kilogram, Absolute Humidity (grams/M3).

Also, any request for any other unit: e.g. **Mixing Ratio, enthalpy, etc**. can be easily accommodated.
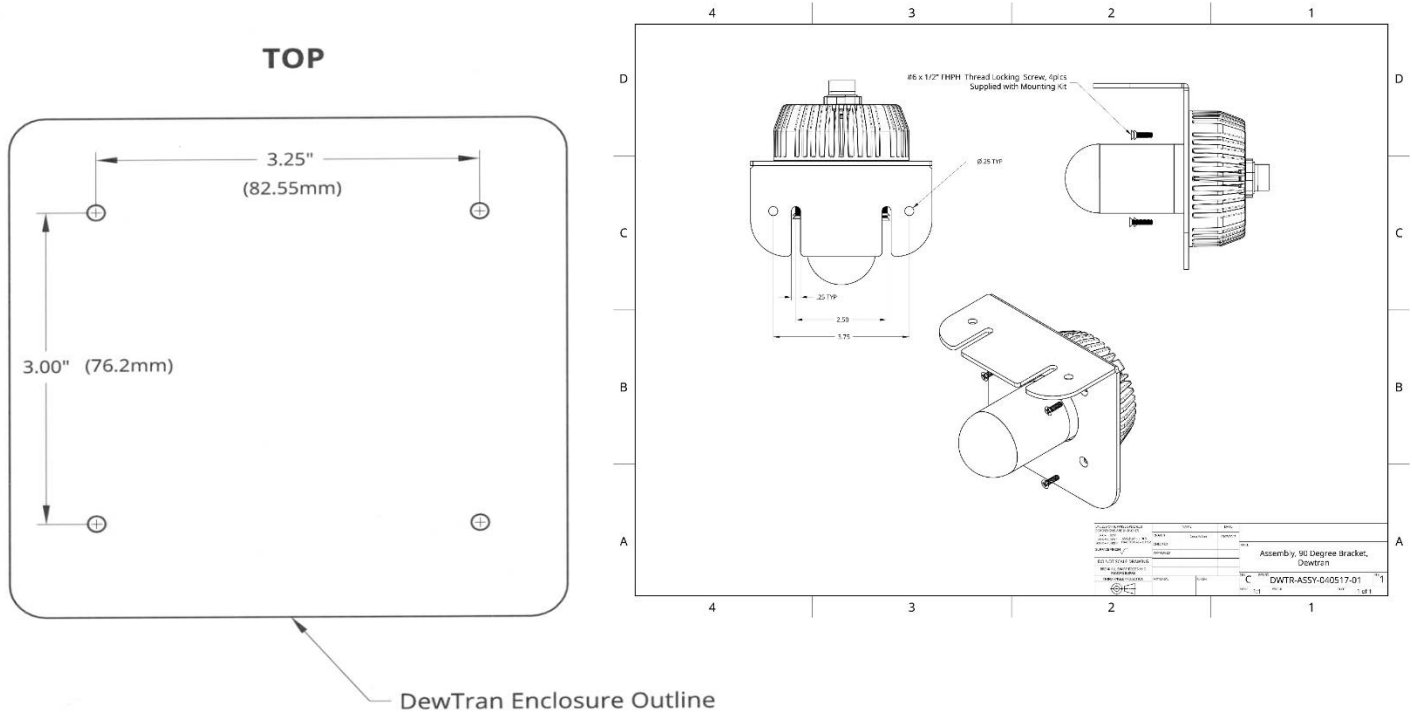
Accessories and different versions:

Figure 3: Dewtran® Sensor with right angle bracket

Dimensions

TOP

3.25"
(82.55mm)

3.00" (76.2mm)

DewTran Enclosure Outline

#6 x 1/2" FHPH Thread Locking Screw, 4pics
Supplied with Mounting Kit

Ø.25 THF

Assembly, 90 Degree Bracket, Dewtran

DWTR-ASSY-040517-01