

MODEL PDM75-X3SF – Portable DewMaster Dew Point Hygrometer

APPLICATION: The **Model PDM75-X3SF -Portable DewMaster** Dew Point Hygrometer is a low dew/frost point (**down to -70°C DP**) precision hygrometer housed within a robust portable plastic carrying case. It offers the same features of our standard table top DewMaster but within a transportable package. Because of its portability and many configuration options, the PDM75 may be used in many types of applications including field testing of remote compressed gas/ dryer systems, leak checking high purity gas systems, testing furnace atmospheres, testing air brake systems, backup hygrometers for metrology labs - calibration labs, scientific study, HVAC test cells, engine test cells, pharmaceutical process plants, process control, aeronautics, high purity welding, Environmental chambers, wind tunnels, and many more. Use it where ever you need a DewMaster in a portable, field use configuration.



DESCRIPTION: The PDM75 now is **available with the X3SF chilled mirror sensor**. This positions the PDM75 as the best in class, low dew point, portable hygrometer on the market. Using air cooling (at 23°C room temperature) via the super fan heat exchanger, the PDM75 can measure down to **-70°C dewpoint** (equivalent to **-65°C Frost Point** at STP). The Edgetech Instruments PDM75 offers precision dew point measurement in a robust, transportable carrying case. The PDM75 may be configured to measure positive pressure gas samples or can be configured to measure from atmospheric pressure (in this case, the vacuum pump option should be selected). Precisely controlled by ETI's chilled mirror sensing technology, each unit comes with a NIST traceable calibration certificate. Each PDM75 features a quick couple sample port connector and integral sample flow meter. The sample flow meter is always located downstream of the sensor. Units configured with a vacuum pump feature a valved flow meter for fine tuning of the sample flow past the sensor. There are terminal block positions to access alarm relays, analog outputs, and digital communications (USB).

Options include:

- Models for positive pressure or vacuum pump
- Addition of a pressure transducer will automatically convert Dew Point to PPMv
- Addition of Temperature probe if you need to convert to RH%

The Model PDM75-X3SF Dew Point Hygrometer comes complete with Automatic Balance Cycle (ABC), Programmable Balance Cycle (PABC), Manual Balance Cycle (MABC), real time clock w/date, measurements in $^{\circ}\text{C}$ or $^{\circ}\text{F}$, scalable voltage and current outputs, RS232, two programmable alarms, Control Servo for Mirror temperature overrides (Heat and Cool), VAC Power Cord, One year warranty and instruction manual.

Choosing the pressure transducer option can be used to convert the PDM75 into a high precision, wide operating range trace moisture analyzer. In this configuration, the system can be used to measure processes that begin in ambient level moisture levels and purge down to sub-PPMv. This can be monitored real time with no damage done to the chilled mirror sensor.

The system is NIST Traceable with the following accuracies:

- Relative Humidity ($\pm 0.5\%$)
- Temperature ($\pm 0.1^{\circ}\text{C}$)
- Dew point ($\pm 0.2^{\circ}\text{C}$)

Measurements are available to the User in °C/°F or %RH, voltage and current outputs, RS232. Temperature Range 7 to 85°C, RH range 10-95% @ a temperature range from 50°C to 85°C, 20%RH @ 35°C. For lower RH or special configurations, please consult factory.

TO ORDER THE PDM75-X3SF:

- a. Determine positive pressure sample flow or vacuum pump to extract a gas sample
 - b. Determine type of measurement: DewPoint, Relative Humidity, Pressure, Temperature. The AT temperature probe is required for Relative Humidity. If the sample pressure varies, you may want to consider the Pressure Transducer option that automatically converts Dew Point reading to PPMv.
 - c. Determine the material chemical resistance of the X3SF mirror.
1. Select Positive Pressure Sampling or Vacuum Pump (extract gas sample from ambient pressure source)
 2. Select Mirror Type: STD (Chrome-Standard), ENH (Stainless Steel – Enhanced) or MAX (Platinum)
 3. Select Options AT temperature sensor (for RH% units) or Pressure Transducer (for conversion to PPMv)
 4. Select Country so that we can match up the proper power cord
 5. List as separate line items additional choices such as Accessories, Calibration Packages, and Ext Warranty.

STEP 1: Choose pressure configuration

PDM75-X3SF – PP:	PDM75-X3SF configured for Positive Pressure Sample Flow. Includes quick couple sample connector (female, Male port fitting supplied loose) and sample flow meter (non-valved flowmeter). Rated for samples up to 400 PSIG.	\$3,750.00
PDM75-X3SF – VP:	PDM75-X3SF configured w/ integral vacuum pump for ambient pressure Sample Flow. Includes quick couple sample port connector (female, Male port fitting supplied loose) and sample flow meter (valved flowmeter).	\$4,372.00

PDM75-X3SF-  - 
 OPTIONS COUNTRY

EXAMPLE: PDM75-X3SF-PP-STD - USA would be a PDM75-X3SF configured positive pressure sample flow, with an X3SF fan cooled CM sensor w/ chrome mirror, for use in the USA. **\$3,750 + \$6,000 = \$9,750.00**

Notes:

1. The PDM75 offers many features that allow the User to understand how the Chilled Mirror Sensor is operating. These include the ability to program an ABC or manually force maximum heating or cooling of the TEC.
2. Addition of the Pressure transducer option allows the PDM75 to be configured to automatically convert DewPoint into PPMv units. The display includes DewPoint, PPMv and pressure at the sensor.
3. There are terminal block positions to access alarm relays, analog outputs, and digital communications.

STEP 2: SELECT SENSOR/ MIRROR TYPE based on Chemical Compatibility needs

Applications CM Configuration	General Purpose Gases	Acids	Caustics	Salts	Organics	Nuclear Application	High Temperature
STD-Chrome Plated Copper	A	D	D	C	C	D	C
ENH-316 Stainless Steel	A	B	B	B	B	C	B
MAX- Platinum	A	A	A	A	A	A	A

A	Excellent
B	Very Good
C	Good

Choose Mirror		
STD	ENH	MAX
\$6,000.00	\$6,250.00	\$6,440.00

STEP 3: Choose Options:

-ATDM	Air temperature probe, stainless steel sheath with 10ft cable and connector (add \$4/ft for additional lengths)	\$ 231.00
-PTDM	Pressure Transducer, 0 to 25PSIA or 0-150PSIA, or 0-300PSIA automatic pressure compensation.	\$1,485.00
-SA/0.1	0.1°C Special accuracy, traceable to NIST (Certified)	\$ 660.00
-SA/0.15	0.15°C Special accuracy, traceable to NIST (Certified)	\$ 550.00

STEP 4: State Country where the unit will be operated for proper power cord: USA, CN, FR, DE, JP, CA, BR,...

LIST ACCESSORIES/ SPARE PARTS/ SPECIAL SERVICES AS SEPARATE LINE ITEMS:

511 SS Tag	STAINLESS STEEL IDENTIFICATION TAG, can be riveted or wire fastened to the instrument, CUSTOM ETCHED PER CUSTOMER REQUIREMENTS 1" High x 2" Wide x 16 gage SS Tag, Laser Etched, ¼ inch high lettering, 3 lines Advanced Graphic Engraving (includes 2 tags)	\$ 125.00
FIL	Filter kit: includes 1/4T compression fittings and additional elements; rated for 0.1 micron particulate	\$ 165.00
DX	Filter Element Kit, Qty 3	\$ 83.00
O-RING	Replacement O-Ring kit for the X3SF sensor	\$ 75.00

Extended Warranty/Calibration Options: Please list as separate line items:

3EXTW	3 Year Extended Warranty includes repairs covered in the warranty statement	10% of TOTAL PRICE
3YNIST1P	3 NIST Traceable Calibrations for the price of 2 (1 Parameter)	\$ 1,210.00
3YNIST2P	3 NIST Traceable Calibrations for the price of 2 (2 Parameters)	\$ 1,430.00