

DPS4 – Heated Dew Point Chilled Mirror Hygrometer w/ Pressure Transducer

Application: The DPS4 is a heated hygrometer that is used to measure the moisture content of gases when the dew point temperature is greater than the ambient temperature. The sampling system is heated to prevent condensation of vapors into liquids thus preventing normal operation. The DPS4 in place of the DPS3 when the moisture content expressed in PPMv is required, and not just dew point. Pressure affects dew point so if you know the pressure of the sample gas plus the dew point, you can convert the measurement into PPMv. This is especially useful in applications where the pressure constantly varies. By making the conversion from dew point to PPMv, you will always know the actual moisture content of the measured gas.

The DPS4 features an on-board pressure transducer and can convert the dew point measurement at the chilled mirror to be expressed as PPMv, Grains/ Lb or Grains / Kg.

The unit will also display Dew Point and Pressure.

Applications include Furnace, Plastic Blow Molding, Heat Treat, Compressed Air Systems (before after cooler), engine exhaust, Nuclear fuel rod processing, and fluidized beds.

If you want the DPS4 without the pressure transducer, we suggest that you consider the DPS3 which offers more standard features.

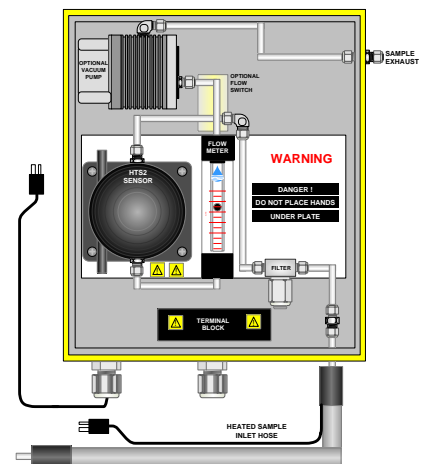
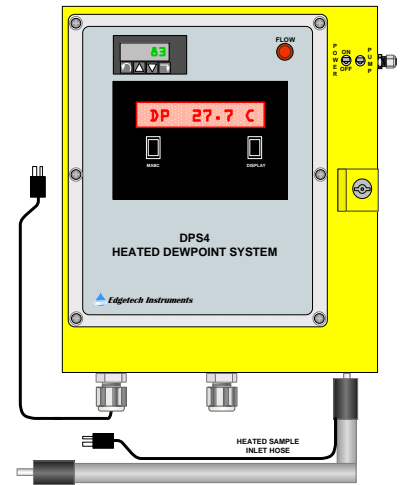
Description: The **Model DPS4** is a High Temperature Heated Dew Point System consisting of a heated sampling package plus a separate analyzer control module based on the COM.AIR electronics package. The analyzer control module is housed within a IP65 Plastic enclosure and is isolated from the heated DPS4 sampling enclosure (NEMA 4). The heated sampling package is provided with temperature control and is adjustable at the temperature control module located on the electronics package enclosure door. The temperature controller ensures the sampled gas remains hotter than the process to prevent condensation during measurement.

The system includes: 4-20mA or 0-5VDC output, Relay alarm output, Self-diagnostics capable of continuous unattended operation, +/-0.25°C accuracy, with certificate of traceability to N.I.S.T., Integrated flow meter (0.5 to 5scfh), Industrial duty terminal block for easy electrical installation, filter, and **3 foot heated sample input hose**. The system can be configured to monitor sample flow conditions. The standard configuration is set up for measuring a non-corrosive, positive pressure sample gas. An optional vacuum pump may be selected for extraction from atmospheric pressure process points.

Sensors: The standard system features the **HTS2 2-stage chilled mirror sensor with aluminum body** and is designed with capability to measure dew points up to 95°C / 203°F (depression range of 60°C). You can also choose the **HTS3 three stage chilled mirror sensor with aluminum body** or the **HTX3** chemically resistant – SS body chilled mirror sensor. Both models offer a depression range of 95°C. The HTX3 is designed for measurement in aggressive chemical background gasses.

Options: The standard system is available with many options depending on the application requirements

1. **Flow Switch** may be added to detect loss of sample flow. It is available as a SPST dry contact or can be ordered to provide a local RED Lamp when loss of flow is detected.



2. **Vacuum Pump** is available to provide sample extraction from non-pressurized systems. An ON-OFF power switch is provided when the pump is ordered.
3. **UNIVAC** This feature allows you to ship a single model to accommodate 110 or 220 VAC power installation. It provides universal power input (110 or 220 VAC) configurable at the time of installation in the field. It features an on-board power transformer and power selection switch. The USER must select the appropriate power at the switch setting and wire according to the instructions. The DPS series analyzers come with standard power configurations as 110 or 220 VAC as specified in your order. A mains power ON-OFF switch is also provided. This option increases the size of the analyzer box. The heated sample hose will be powered by the analyzer control unit and will operate on 110 vac.
4. **MAINS POWER SWITCH** is optional when UNIVAC is not ordered.
5. **CART** System is mounted on a cart to allow you to share the system at many points.
6. **DA** Adds a Second Alarm relay which is usually configured for "Clean Mirror" notice
7. **RS** Adds the option board to provide RS232 output
8. **TAG** SS tag attached to the unit. Laser Etched, 2 lines- customer provided info
9. The standard unit includes a **heated sample hose**. The standard length is 3 feet (1m) but optional lengths are available. It will follow the power configuration of the main system: 110 or 220 VAC unless the UNIVAC option is chosen. In this case, it is powered by the main analyzer control module which always converts to 110 vac.

Notes:

1. The temperature controller is adjustable and should be set to 5° warmer than the sampled gas.
2. The HTS Sensors are aluminum construction and are appropriate for most non-aggressive background gases.
3. All sensors are configured for the heated sampling system and **do not include fan heat exchangers**.
4. The standard DPS4 is configured for 1-100 psig sample pressure operation.
5. Adjustment of the sample flow meter may be required during initial set up of the DPS4 to your process.

TO ORDER THE DPS4:

1. Select Sensor and mirror type: HTS2, or HTS3, or HTX3
2. Select Power 110 or 220 VAC or universal input power option
3. Select Options such as Vacuum Pump
4. Identify Pressure Transducer Range (PSIA): 0-25, 0-100 (standard), or 0-250 PSIA
5. List as separate line items : Accessories, Calibration Packages, ...



For Ex: **DPS4** - **HTS2SS** - **110** - **VPH** - **25**
 \$6,765 + \$2,450 + \$0 + \$550 + \$0 = \$9,765.00
Base Price *for a DPS4-HTS2SS-110-VPH-25*

1. Select Sensor/ Mirror:

Chilled Mirror Selection		Description	Depression	Mirror Adder \$		
				STD	ENH	MAX
HTS2	Two Stage, Al Body, Convection Air Cooled- No Fans, Flow Thru Sampling	60°C	\$2200	\$2450	\$2640	
HTS3	Three Stage, AL Body, Convection Air Cooled- No Fans, Flow Thru Sampling	70°C	\$5,198	\$5,448	\$5,638	
X3	3 Stage, Panel Mount, SS Body, Convection Air Cooled- No Fans, Flow Thru	65°C	\$5,500	\$5,750	\$5,940	

Applications CM Configuration	General Purpose Gases	Acids	Caustics	Salts	Organics	Nuclear Application	High Temperature
STD: Chrome	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
D Not recommended

STEP 2: SELECT POWER:

110	110VAC 50/60HZ power requirement (power switch optional)	\$ 0.00
220	220VAC 50/60Hz power requirement (power switch optional)	\$ 0.00
UNIVAC	Optional Universal VAC power Option: Provides a built-in power transformer that allows you to select between 110 or 220 VAC power input. Includes Mains Power Switch, Power Selector switch, Power Transformer, and expanded mains power terminal block.	\$ 950.00

STEP 3: SELECT OPTIONS:

-PSW	Mains Power Switch (standard unit does not include power switch)	\$ 199.00
-VPH	Vacuum Pump, includes power switch for pump	\$ 550.00
-FS	SS Sample Flow Switch, provides SPST dry contact of loss of flow, Normally Open	\$ 250.00
-DA	Second Alarm relay (usually configured for "Clean Mirror" notice)	\$ 165.00
-RS	RS232 output	\$ 275.00
-FSL	Sample Flow Switch and Lamp	\$ 350.00
-CART	System mounted on a cart	\$ 1,500.00
-TAG	SS tag attached to the unit. Laser Etched, 2 lines- customer provided info	\$ 125.00
-FIL	Filter kit: includes 1/4T compression fittings and additional elements; rated for 0.1 micron particulate	\$ 165.00
-DX	Additional box of elements. Qty. 3	\$ 83.00

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

HTUBE-TF-1/4-3-115	Heated 1/4 inch Teflon Tubing, 3 feet long, 115 VAC-21 Watts	\$ 400.00
HTUBE-TF-1/4-10-115	Heated 1/4 inch Teflon Tubing, 10 feet long, 115 VAC-70 Watts	\$ 700.00
HTUBE-TF-1/4-15-115	Heated 1/4 inch Teflon Tubing, 15 feet long, 115 VAC-105 Watts	\$ 950.00
HTUBE-TF-1/4-3-230	Heated 1/4 inch Teflon Tubing, 3 feet long, 230 VAC-84 Watts	\$ 450.00
HTUBE-TF-1/4-10-230	Heated 1/4 inch Teflon Tubing, 10 feet long, 230 VAC-280 Watts	\$ 750.00
HTUBE-TF-1/4-15-230	Heated 1/4 inch Teflon Tubing, 15 feet long, 2230 VAC-420 Watts	\$ 1,000.00

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

