

SPECIFICATIONS ODP5000

SENSOR SPECIFICATIONS

Type	High capacitance Al ₂ O ₃
Dewpoint range	-100°C to +20°C
Capacitance	15 nF to 200 nF
Accuracy	± 2°C from -100° to -20°C ± 3°C from -19° to +20°C
Repeatability	±0.5°C
Response time (For a step change from -40°C to -60°C)	63% in 90 seconds 90% in 450 seconds
Temperature range	- 10°C to +70° C, non condensing
Sample Flow range	Static to 100 m/s (linear velocity at 1 atm)
Storage temperature	- 40°C to +80° C, non condensing
SpanCheck	Sensor saturates at dewpoint above +20°C

CONTROL UNIT SPECIFICATIONS

Input Resolution	0.1°C dewpoint
Indicators	LCD with backlight, 3.5 digits and custom legends for units and mode, audio alert
Engineering units	Dewpoint in °F and °C, ppmv, gH ₂ O/m ³ , lbs H ₂ O/mm scf
Controls	4 push buttons, all settings stored in EEPROM
Output options	4-20mA, 0-24mA or voltage outputs, linear to selected engineering units, programmable span and range, 0.1°C dewpoint resolution. RS-232, baud rate 9600, resolution 0.1°C dewpoint
Isolation	Sensor is isolated from the power supply, analog output and RS-232
Alarm relays option	Two programmable alarm relays with programmable variable hysteresis, rated at 10A @240V. Failure indication programmable to trigger alarm relays.
Power requirements	100 - 240 VAC, 50 or 60 Hz, autoranging or by order 12VDC or 15-30VDC 0.5A
Connections	Pluggable screw terminal block
Temperature range of electronics	-10° to 50°C

FITTING SPECIFICATIONS

Pressure operating range Standard	34 bar (500 psi)
Optional	340 bar (5000 psi)
Mechanical connections	14mm x 1.25 mm threads and 3/4"-16 threads (other threads available)
Electrical connections	Female BNC connector
Sensor cable	Coaxial cable (75 Ω with maximum capacitance of 50 pF/m)
Maximum cable length	914 m (3000 ft)

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Line 5000



ODP5000

Orthodyne Dewpoint Transmitter

For a continuous control of moisture



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 **ORTHODYNE**
GAS CHROMATOGRAPHY

ODP5000

Orthodyne Dewpoint Transmitter

For a continuous control of moisture
-100°C to +20°C DEWPOINT

GENERAL

The Orthodyne digital Dewpoint Transmitters are designed as compact, simple and reliable instruments, which will continuously monitor air dryer performance, compressed air quality and dry gas moisture, from ambient dewpoint levels to as low as -100°C.

ELECTRONICS

The transmitter electronics take full advantage of state of the art microprocessor technology and offer many advanced intelligent features. With optional dual alarms, analog and digital outputs, the Orthodyne Dewpoint transmitters can be used as indicators, alarm units or controllers.

PROGRAMMABLE ALARM RELAYS OPTION

The two optional alarm relays can be independently programmed to switch at any dewpoint with variable hysteresis, which makes the transmitter ideally suited as an energy saving controller for desiccant dryers in "dewpoint demand" mode or safety cut off in process control, high power laser, etc. The status of the relays is shown on the display with flashing HI or LO indicators while displaying the dewpoint.

ANALOG AND DIGITAL OUTPUTS (OPTIONS)

Analog and digital outputs are isolated from the sensor. The analog current or voltage output can be programmed to span the full or a portion of the range and is linear to the selected engineering units. The RS-232 interfaces into the serial port of any PC or Mac, for a simple operation with any standard communications program.

USER FRIENDLY INTERFACE

The instrument is operated through a menu driven user interface consisting of a custom LCD display with optional backlight, and four push buttons.

Advantages

- Up to 600x more sensitive than conventional sensors
- Sensors are freely interchangeable
- Field calibration with NIST traceable reference standards
- Faster response
- Better repeatability
- Longer sensor life
- Less drift
- Negligible temperature coefficient

ENGINEERING UNITS

The user can select from the following engineering units.

Dewpoint in °C or °F, ppmv, g H₂O/m³, lbs H₂O/ million scf.

PRESSURE CORRECT FUNCTION

Results are displayed at sensor pressure or by pushing the Pressure Correct key at a user selectable alternate pressure, such as the line pressure.

SPAN CHECK IN THE FIELD

This field calibration procedure is fully automated and the user is prompted through a simple one minute procedure, which requires no additional equipment.

ERROR INDICATION

The instrument has indication for sensor open, short or electronic system failure, which can activate any of the alarm relays.

NIST / NPL TRACEABILITY OPTION

Certificates for NIST and NPL traceability are available upon request. Instruments can be recertified periodically at our laboratories.

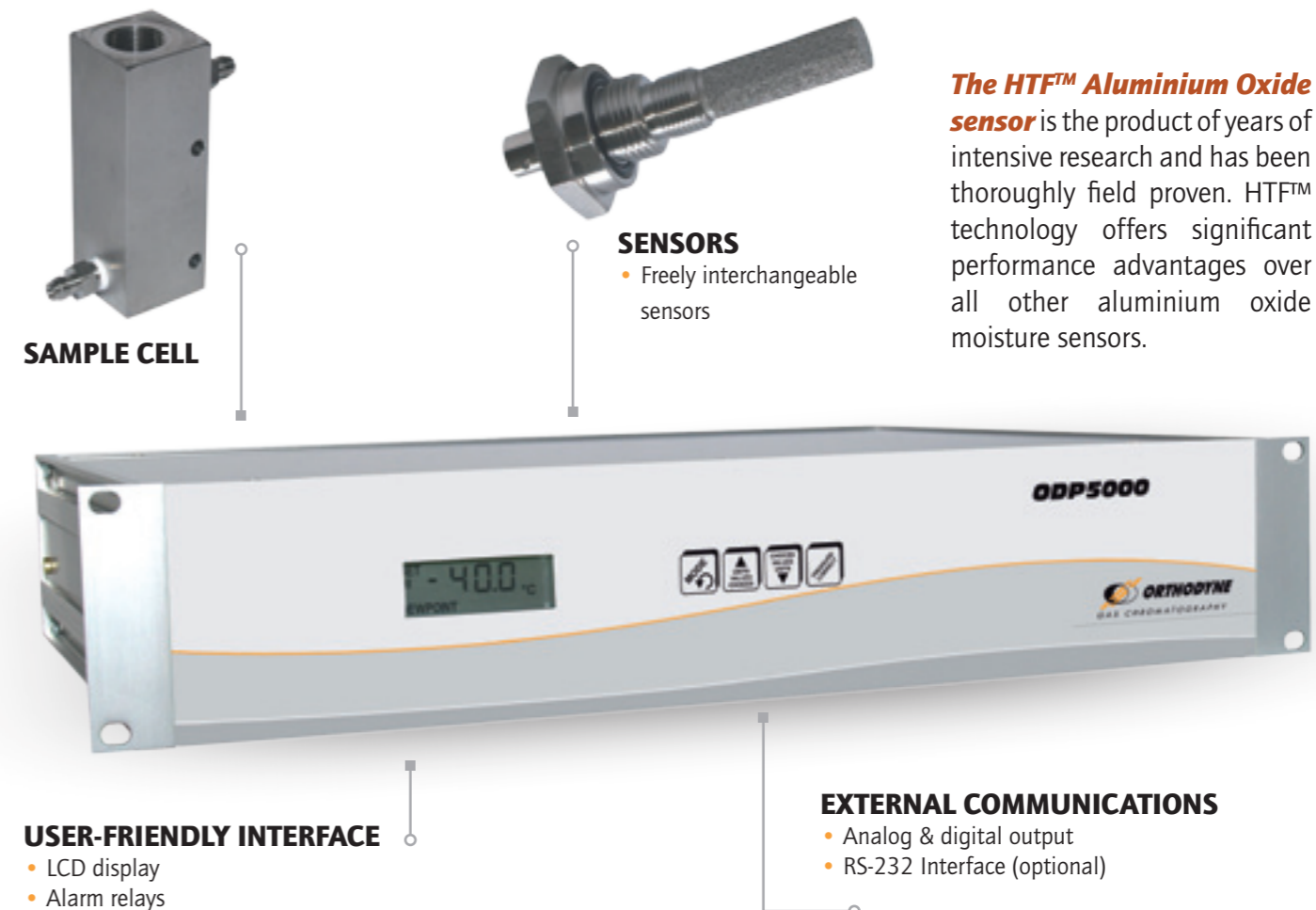
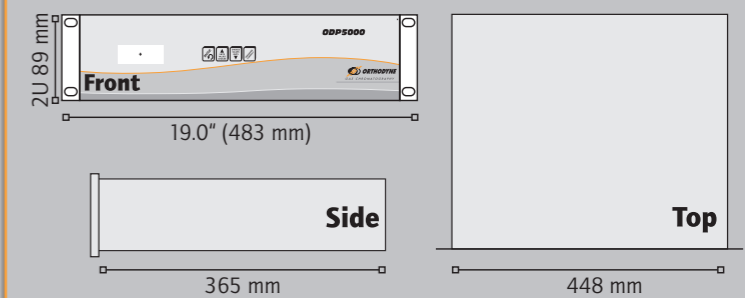
Applications

Orthodyne Dewpoint transmitters are used wherever the dewpoint in a gas is critical. Applications include:

- monitoring and control of air dryers
- plastic dryers
- welding and laser gases
- petrochemical feedstock gases
- natural gas
- clean rooms
- glove boxes
- transformer and switch gear insulation gases
- cryogenic gases
- heat treating furnaces
- industrial specialty gases and many more...

Dimensions

Standard rack mount 2U
Height > 89 mm | Depth > 365 mm | Width > 483 mm



Line 5000 - ODP5000 - Orthodyne Dewpoint Transmitter