

Transmet I.S.

Dew-Point Transmitter

For continuous dew point measurements in hazardous areas, Transmet I.S. is the ideal transmitter solution with local measurement and certified intrinsically safe design



Features

- ATEX, FM & CSA approved
- Wide measurement range
- Calibrated -100 to +20°C dew point
- Best accuracy: $\pm 1.0^{\circ}\text{C}$
- Fast response
- 30 MPa (300 Barg) pressure rating
- Rugged IP66 (NEMA 4) enclosure



Applications

- Hydrogen cooling
- CNG filling stations
- Natural gas dryers
- Natural gas storage
- Natural gas processing
- Petrochemical processes
- Industrial gas
- Welding gas

Transmet IS

Complete Dew Point Solution for I.S. Areas

Transmet I.S. is an easy to install, self-contained dew-point transmitter for the measurement of the moisture content of flammable and non-flammable gases, and has been specifically designed for use within hazardous areas. Housed in a stainless steel case, Transmet I.S. offers ingress protection to IP66 (NEMA 4X). With a wide operating range from -100 to $+20^{\circ}\text{C}$ dew point and accuracy of up to 1°C dew point it is the most complete dew-point transmitter available. Transmet I.S. has a fast response speed that gives the user a continuous measurement in real time. No configuration or calibration is necessary - Transmet I.S. is delivered configured and calibrated, ready for installation and operation.

Simplicity

Transmet I.S. measures the gas under test either by direct insertion into the gas line or by diverting a sample of the gas through its (optional) flow-through stainless steel sample housing. Once the required signal output has been selected using the internally selectable switches and Transmet I.S. has been connected to the gas sample, power source and monitoring device (through the appropriate safety barriers), it is ready to use. For certain applications pre-conditioning of the process gas may be necessary to achieve the correct pressure, or to remove particulate or entrained liquid contaminants. Michell can provide a range of standard or customised sample conditioning systems as a package with Transmet I.S.

Reliability is Vital

A dew-point transmitter must operate reliably over its total operating range, often in a demanding operational environment. Transmet I.S. has been designed to cope with extreme industrial conditions and is resistant to shock, vibration and extremes of temperature and operating pressure. Furthermore, the advanced design of the Michell Ceramic Moisture Sensor, coupled with extremely competent measurement circuitry, give Transmet I.S. a class leading accuracy, repeatability and measurement range at pressures up to 30 MPa (300 Barg) - in even the most exacting of process conditions, such as natural gas processing or catalytic reformer gas measurement.

www.michell.com

Transmet I.S.

Dew-Point Transmitter

ATEX, FM &
CSA Approved

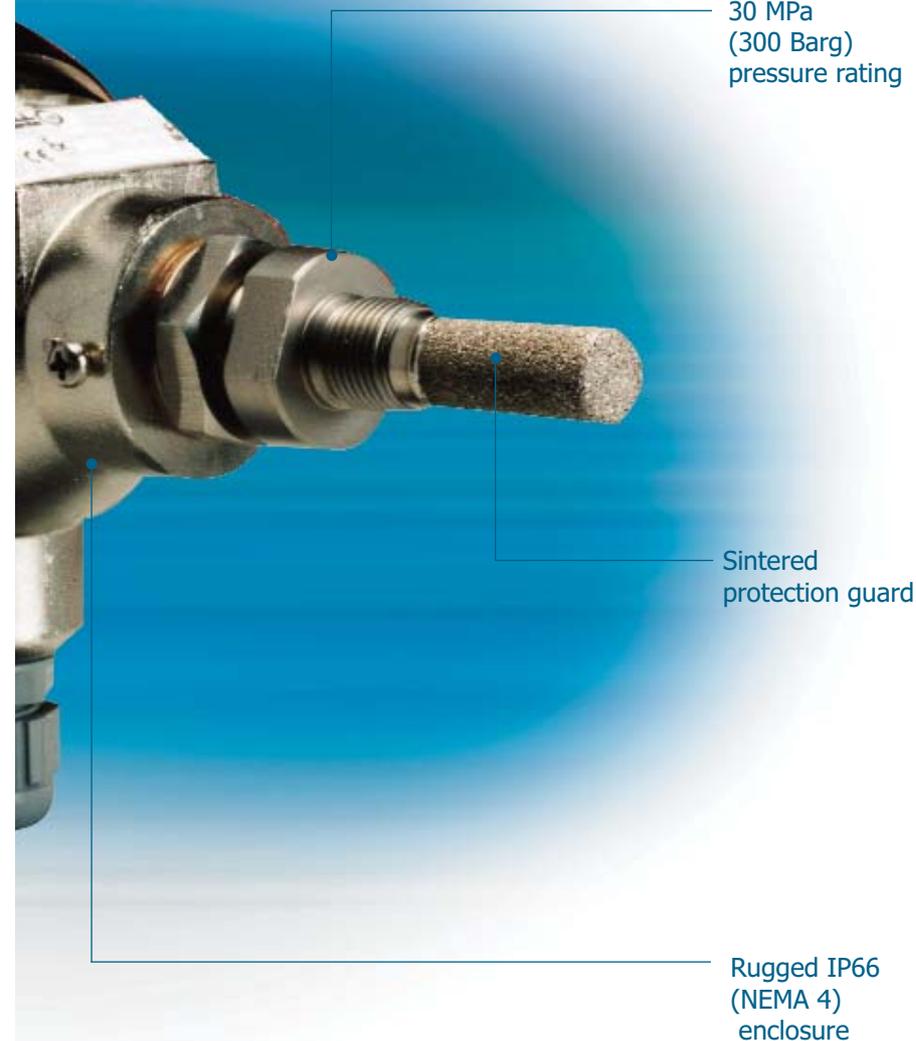
Fast response

Cable gland



Cermax I.S.

Promet I.S.



Linear Analogue Output

Transmet I.S. provides a linear analogue output, calibrated in dew point °C, corresponding to the calibrated humidity range from -100 to +20°C dew point. A simple internal switch allows the user to select either 0-20 mA or 4-20 mA configuration.

Certified Intrinsically Safe

Transmet I.S. is ATEX certified by EECS for use in hazardous areas to $\text{II 1G EEx ia IIC T4}$ when used with a pair of galvanic isolators or dual channel zener barrier for signal and power supply connections. Transmet IS has been FM listed (USA) CL1, Div1, GpA, B, C & D, T4 and CSA (Canada) certified to Ex ia (Class 1, Groups A, B, C & D). Transmet I.S. can therefore be safely used in virtually all industrial gas measurement applications.

Output Signal

Transmet I.S. can be configured by the user to give either a 0-20 mA or 4-20 mA linear signal of the measured dew point (supplied configured for 4-20 mA). This signal can be transmitted to a monitoring device - simple display or process control system - located in a safe area through the appropriate barriers. Michell can supply the necessary barrier devices or advise you on the correct selection.

Applications

Transmet I.S. can be applied to almost any air or gas dew-point measurement application situated in a classified hazardous area. Typically, Transmet I.S. will be used for the fiscal metering of natural gas dew point, of the moisture content in catalytic reformer gases, or in the measurement of hydrogen coolant for power plant stators. Transmet I.S. can also be used to measure the dew point of inert gases used in hazardous areas - compressed air systems or inert purge gases used for pipeline and vessel drying and pressure testing.

Display Option

Transmet I.S. can be connected to, and powered by, Michell's Cermet II Monitor to give local display, alarms and analogue and digital outputs. The Monitor unit must be located in a designated safe area and connected to the Transmet I.S. by the appropriate System 1 or System 2 safety barriers. Ask for our Cermet II brochure.

Cermet II I.S.

Promet EExd

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.



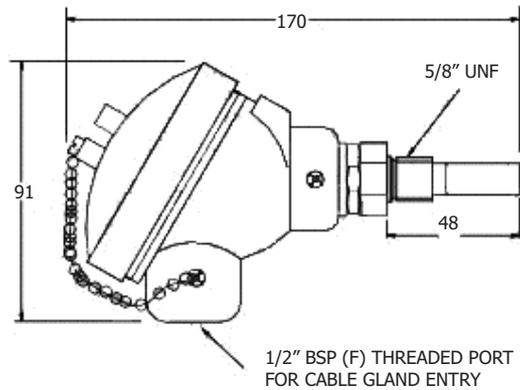
Transmet I.S.

Dew-Point Transmitter

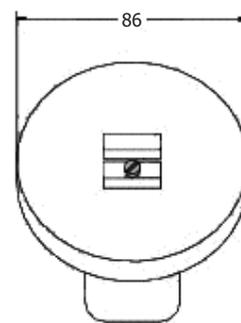
Technical Specifications

Sensor thread	5/8" UNF parallel
Case	Stainless steel
Ingress protection	IP66 (NEMA 4X)
Power	10 to 28 V regulated or unregulated DC supply. Reverse polarity protected
Outputs	Current sink Analogue 0-20 mA or 4-20 mA selectable linear corresponding to °C dew point
Measurement range	-100 to +20°C dew point
Accuracy	±1°C from +20 to -59.9°C dew point; ±2°C from -60 to -100°C dew point
Resolution	0.1°C from -80 to +20°C dew point; 1°C from -100 to -80°C dew point
Operating temp	-20 to +60°C
Storage temp	-40 to +70°C
Operating pressure	From vacuum to 30 MPa (300 Barg)
Flow rate	0-10 Nlmin ⁻¹
Gas velocity	20 ms ⁻¹ (max)
Barrier options	System 1: shunt diode barrier (I.S. earth required) System 2: galvanic isolation barrier (no earth required)
Options	Sensor sampling block, display unit (Cermet II I.S.), power supply module. A range of sampling systems are also available.

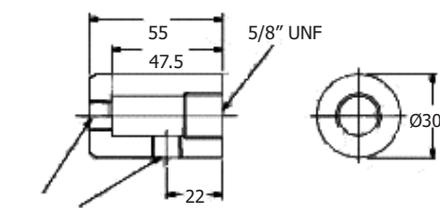
Dimensions



SIDE VIEW



PLAN VIEW



SENSOR BLOCK

(Not included as standard)

Dimensions mm

Michell Instruments Ltd
 48 Lancaster Way Business Park
 Ely, Cambridgeshire
 CB6 3NW, United Kingdom
 Tel: +44 (0) 1353 658 000
 Fax: +44 (0) 1353 658 199
 Email: info@michell.co.uk
 www: www.michell.com



Please note: The accuracy stated represents the typical variation between the instruments under test and a calibrated and corrected reference.

Please contact us for latest version: Transmet I.S.: Ref: TIS-0707

Transmet I.S.