

# Easidew PRO XP

## Explosion Proof Moisture Transmitter

The Easidew PRO XP transmitter is designed to reliably and accurately measure dew point or moisture content in a wide variety of gas or liquid process applications. The robust mechanical design minimizes installation time and provides a robust and reliable transmitter for all global explosion and flameproof applications. Available with the service exchange program which reduces the cost of maintenance.



### Highlights

- Measurement ranges -110 up to +20°Cdp (-166 to 68°Fdp)
- Global explosion / flameproof certification
- Accuracy  $\pm 1^\circ\text{Cdp}$  ( $\pm 1.8^\circ\text{Fdp}$ )
- 2-wire 4-20 mA output
- Traceable 13-point calibration certificate
- 450 bar (6527 psi) pressure rating
- Low cost of ownership and easy maintenance with sensor exchange program
- 3/4" UNF industry standard process connection
- EN 10204 3.1 material certification
- Moisture in gases and liquids
- Integral display meter
- Oxygen Service Cleaned

### Applications

- Natural gas processing / transmission
- Polymer production
- Biomethane gas production
- Hydrogen coolants
- LNG & LPG production
- Inert & bulk gases
- CNG production
- Hydrocarbon refinery processing
- Heat treating furnaces
- Catalyst protection



## Easidew PRO XP

### The Global Explosion Proof Transmitter

OEM system integrators and process refineries need to have one rugged transmitter in stock, which covers all their explosion-proof system needs, irrespective of worldwide location.

The Easidew PRO XP moisture transmitter is ATEX, cQPSus, IECEx and GOST globally certified within a single design for use in any North American, European or Asian zone, minimizing stock cost.

The transmitter has a wide dew-point measurement range of -110 to +20°C (-166 to +68°Fdp) dew point with industry-standard process and electrical connections.

The Easidew PRO XP incorporates the latest Michell ceramic metal-oxide moisture technology, providing stable and reliable measurements for all new and replacement moisture applications.

The unit can also be supplied with an integral 4-digit LED display, displaying the configured moisture output signal.

### Ease of Installation

Our in-house design team have developed the product mechanics to ensure the unit can be quickly and economically installed.

- Electrical industry-standard process housing with dual conduit entry
- US Industry Standard 3/4" UNF Viton® O-ring process connection
- On-site re-ranging and diagnostic communications tool
- 316 stainless steel transmitter sample block
- Transmitter mounting bracket
- 316 stainless steel housing for offshore applications (ATEX, IECEx & cQPSus approved)
- 316 Stainless Steel Tag

### Service Exchange/Recalibration Program

Michell offers 2 services for customers who want minimum downtime and sensor traceability, while maintaining the reliability of their system:

**Sensor Exchange** Customers place an order for a guaranteed, reconditioned sensor. When this arrives, they exchange it for the installed sensor which is returned to Michell, resulting in zero process downtime.

**Recalibration** Customers return their installed sensor to Michell, where they are inspected, checked and re-calibrated before being returned. This provides on-going sensor traceability for the process.

### Global Certifications

The Easidew PRO XP uniquely has worldwide explosion and flameproof certifications to ensure a single unit has global acceptability.

- Explosion-proof approval – cQPSus (US and Canada)

- Flameproof approval – ATEX
- Flameproof approval – IECEx
- Flameproof approval – TR CU Ex

### Safety and Integrity

The mechanical design considers the health and safety requirements of the end user offering an ultra-high process pressure barrier, along with meticulous levels of product traceability and quality.

- High-performance 450 bar (6527 psi) process media barrier
- No process media entry into the process housing
- Gas wetted parts BS EN 10204 3.1 material certified
- 13-point calibration certificate
- ISO 9001 quality system
- Electronics Conformal Coating
- Optional cleaning for enriched oxygen service

### Measurement Performance

The transmitter uses Michell's market-leading ceramic metal-oxide moisture technology coupled with the latest-generation sophisticated microcontroller electronics to provide accurate and stable measurement across the Easidew PRO XP product life.

- Accuracy  $\pm 1^{\circ}\text{Cdp}$  ( $\pm 1.8^{\circ}\text{Fdp}$ )
- Fast response to moisture changes

### Flexibility of Ownership

The Easidew PRO XP has a secondary RS485 communication system, which gives customers the opportunity to re-range and re-scale a unit for a variety of gas and non-polar liquid moisture measurements.

- Re-ranging 4–20 mA within the -110 to +20°Cdp (-166 to +68°Fdp) range
- Moisture scaling – dew point, ppm<sub>v</sub>, ppm<sub>w</sub>

### Speed of Supply

The transmitter is manufactured within Michell's world-leading high-volume moisture transmitter manufacturing centre in the United Kingdom, which ensures reliability and repeatability of delivery and field supported by a network of Michell's global service centres.

- Calibration manufacturing system is traceable to NPL and NIST standards

### Integral Display

The Easidew PRO XP EX2 has an integral display meter providing local indication of the transmitted analog output in the configured moisture scale.

### System Customization

If your application requires a customized solution, we have a design and manufacturing capability to cover your requirements.

Technical Specifications

Performance Specifications	Easidew PRO XP for Gases	Easidew PRO XP LQ for Liquids
Measurement range	-110 to +20°C (-166 to +68°F) dew point; -100 to +20°C (-148 to +68°F) dew point	0 to 1000 ppm <sub>w</sub> capability – factory configured to customer-required range and application
Accuracy	±1°C (±1.8°F) dew point (+20 to -60°C / +68 to -76°F); ±2°C (±3.6°F) dew point (-60 to -110°C / -76 to -166°F)	
Response time	5 mins to T95 (dry to wet)	
Repeatability	0.5°C (32.9°F) dew point	
Calibration	Traceable 13-point calibration and certificate	
<b>Electrical Specifications</b>		
Output signal	4–20 mA (2-wire connection, current source); User configurable over range	
Output	Dew point or moisture content	Moisture content
Analog output scaled range	<b>Dew point:</b> -110 to +20°C (-166 to +68°F); <b>Moisture content in gas:</b> 0–3000 ppm <sub>v</sub> ; <b>Non-standard:</b> mg/m <sup>3</sup> , lbs/MMSCF natural gas	<b>Moisture content in liquid:</b> 0 to 1000 ppm <sub>w</sub> capability – factory configured to customer-required range and application
Supply voltage	14 to 28 V DC	
Load resistance	Max 250 Ω @ 14 V (500 Ω @ 24 V)	
Current consumption	23 mA max, depending on output signal	
Saturation constants (for moisture in liquids measurements only)	6-point look-up table for saturation constants up to 1000 ppm <sub>w</sub> over the temperature range 0 to +50°C (+32 to +122°F); saturation constants for 8 common liquids can be programmed into the Easidew PRO XP LQ via the application software; alternatively the user can program saturation constants manually	
CE conformity	Approved	
<b>Operating Specifications</b>		
Operating temperature	-40 to +60°C (-40 to 140°F)	
Compensated Temperature Range	-20 to +50°C (-4 to +122°F) NOTE: The transmitter accuracy statement is only valid for the temperature range -20/+50°C (-4/+122°F)	
Storage Temperature	-40 to +60°C (-40 to +140°F)	
Operating pressure	45 MPa (450 barg/6527 psig) maximum	
Flow rate	1 to 5 NI/min mounted in standard sampling block; 0 to 10 m/sec direct insertion	0.1 to 0.3L/min through Easidew sample block 0.1 to 1m/s direct insertion
<b>Mechanical Specifications</b>		
Ingress protection	IP66 in accordance with standard BS EN 60529:1992; NEMA 4 protection in accordance with standard NEMA 250–2003	
Explosion and flameproof area certificates *	<p><b>ATEX:</b></p> <p><b>Standard: Aluminium</b> II 2 GD Exd [ia] IIC T6 Gb Ex tb IIIC T80°C Db IP66 Tamb -20°C to +70°C</p> <p><b>IECEx:</b></p> <p>Exd [ia] IIC T6 Gb Ex tb IIIC T80°C Db IP66 Tamb -20°C to +70°C</p> <p><b>cQPSus:</b></p> <p>CLS I, Div1, GRPS ABCD T6 CLS II &amp; III, Div1, GRPS EFG CLS I, Zone 1, AEx/Ex db [ia] IIC T6 Gb CLS I, Zone 21, AEx/Ex tb IIIC T80°C Db</p> <p><b>INMETRO (Brazil):</b></p> <p>Zone 21, AEx/Ex tb IIIC T80°C Tamb = -20°C to +70°C IP66 [Approval codes as per IECEx]</p>	<p><b>Optional: 316 stainless steel</b> II 2 GD Exd [ia] IIC T6 Gb Ex tb IIIC T80°C Db IP66 Tamb -20°C to +70°C</p> <p>Exd [ia] IIC T6 Gb Ex tb IIIC T80°C Db IP66 Tamb -20°C to +70°C</p> <p>CLS I, Div1, GRPS ABCD T6 CLS II &amp; III, Div1, GRPS EFG Tamb = -20°C to +70°C IP66</p> <p><b>TR CU EX-Certificate:</b> 1Ex d [ia] IIC T6 Gb X Ex tb IIIC T80°C Db X Tamb -20°C to +70°C (Russia, Belarus, Kazakhstan)</p>
Russian pattern approval	Russia (GOST-R), Kazakhstan (GOST-K)	
Canadian pressure vessel cert	C.R.N. - all Canadian provinces	
Oxygen service	<b>Optional:</b> Cleaned for enriched oxygen	
Housing material	<b>Standard:</b> Aluminium (copper free), epoxy and polyurethane powder coated, blue RAL 5009 <b>Optional:</b> 316 stainless steel (supplied with BS EN 10204 3.1 material certificate if option F2 requested) (ATEX, IECEx & cQPSus)	
Housing moisture protection	<b>Optional:</b> Electronics Conformal Coating	
Filter (sensor protection)	<b>Standard:</b> Stainless steel sintered guard (for protection against fine particulate >80µm) <b>Optional:</b> HDPE guard (for protection against fine particulate >10µm)	
Process connection and material	3/4" – 16 UNF with recessed Viton® O-ring; 316 stainless steel; Optional O-ring: Kalrez **	
Weight	<b>Aluminium:</b> 1.6kg (3lb 8oz); <b>316 stainless steel:</b> 2.4kg (5lb 5oz)	
Electrical connections	Dual 3/4" NPT gland	
Programmable display meter range	<b>Optional:</b> -1999 to +9999	
Programmable display decimal point	<b>Optional:</b> 0 to 3 decimal places	
Display meter overload limits	<b>Optional:</b> 3.6 mA and 20.4 mA	
Programmable display meter scales	<b>Optional:</b> °C, °F, %, No Scale	
Stainless Steel tags	<b>Optional:</b> 316 stainless steel tags (70 x 25mm / 2.76 x 1in)	
Diagnostic conditions (factory programmed)	<b>Conditions:</b> Sensor fault, Under-range dew point, Over-range dew point	<b>Output:</b> 23 mA, 4 mA, 20 mA

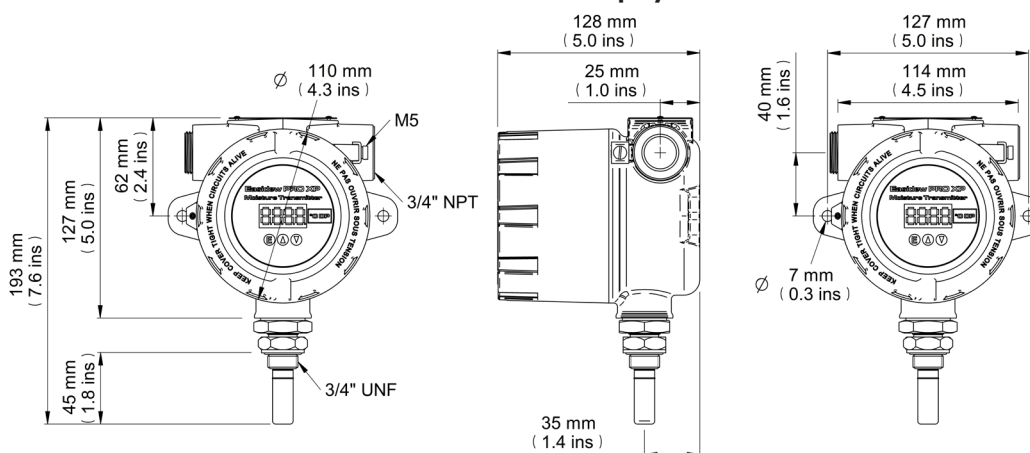
\* The end user has a responsibility to ensure that when installed in the Hazardous Area, the system is compliant with relevant local and international installation Standards for the use of equipment in explosive atmospheres.

\*\* Kalrez O-ring is non standard and available at an additional cost detailed on the price list

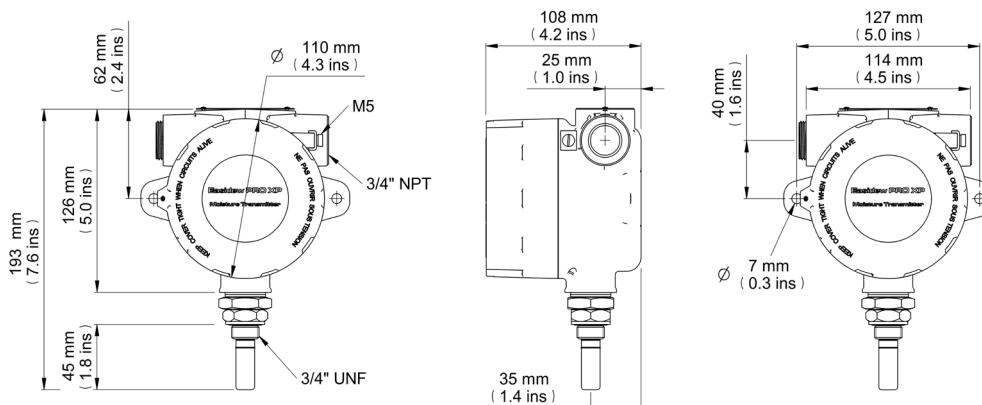
# Easidew PRO XP

## Product Dimensions

### Easidew PRO XP Display



### Easidew PRO XP



## Related Process Products



**Easidew PRO I.S.**  
I.S. Dew-Point Transmitter



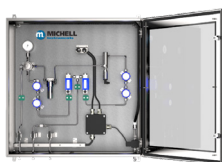
**MDM300 I.S. Portable**  
Dew-Point Hygrometer



**Minox i**  
Intrinsically Safe Oxygen Transmitter



**QMA601**  
Process Moisture Analyzer



**ES70**  
Sampling System



**TDL600**  
Process Moisture Analyzer



**Promet EExd**  
Process Moisture Analyzer



**XTP601**  
Oxygen Analyzer

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Michell Instruments adopts a continuous development programme which sometimes necessitates specification changes without notice.  
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