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...68 °Fdp)
- Global explosion / flameproof certification
- Accuracy ±1 °Cdp (±1.8 °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, UKCA 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, UKCA & 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/UKCA
- 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 ±1 °Cdp (±1.8 °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...+20 °Cdp (-166...+68 °Fdp) range
- Moisture scaling – dew point, ppm_V, ppm_W

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...+20 °C (-166...+68 °F) dew point; -100...+20 °C (-148...+68 °F) dew point	0...1000 ppm_W capability – factory configured to customer-required range and application
Accuracy	±1 °C (±1.8 °F) dew point (+20...-60 °C / +68...-76 °F); ±2 °C (±3.6 °F) dew point (-60...-110 °C / -76...-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	
Electrical Specifications		
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	**Dew point:** -110...+20 °C (-166...+68 °F); **Moisture content in gas:** 0–3000 ppm_V; **Non-standard:** mg/m^3, lbs/MMSCF natural gas	**Moisture content in liquid:** 0...1000 ppm_W capability – factory configured to customer-required range and application
Supply voltage	14...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_W over the temperature range 0...+50 °C (+32...+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
Compliances	CE & UKCA	
Operating Specifications		
Operating temperature	-40...+60 °C (-40...140 °F)	
Compensated Temperature Range	-20...+50 °C (-4...+122 °F) NOTE: The transmitter accuracy statement is only valid for the temperature range -20/+50 °C (-4/+122 °F)	
Storage Temperature	-40...+60 °C (-40...+140 °F)	
Operating pressure	45 MPa (450 barg/6527 psig) maximum	
Flow rate	1...5 Nl/min mounted in standard sampling block; 0...10 m/sec direct insertion	0.1...0.3L/min through Easidew sample block 0.1...1m/s direct insertion
Mechanical Specifications		
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 *	**ATEX/UKCA:** **IECEx:** **cQPSus:**	**Standard: Aluminium** II 2 GD Exdb ia IIC T6 Gb EX tb IIIC T80°C Db IP66 Tamb -20 °C...+70 °C Exdb ia IIC T6 Gb Ex tb IIIC T80 °C Db IP66 Tamb -20 °C...+70 °C CLS I, Div1, GRPS ABCD T6 CLS II & 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
		Optional: 316 stainless steel II 2 GD Exdb ia IIC T6 Gb EX tb IIIC T80 °C Db IP66 Tamb -20 °C...+70 °C Exdb ia IIC T6 Gb Ex tb IIIC T80 °C Db IP66 Tamb -20 °C...+70 °C CLS I, Div1, GRPS ABCD T6 CLS II & III, Div1, GRPS EFG Tamb = -20 °C...+70 °C IP66 **TR CU EX-Certificate:** 1Ex d ia IIC T6 Gb X Ex tb IIIC T80 °C Db X Tamb -20 °C...+70 °C (Russia, Belarus, Kazakhstan)
Russian pattern approval	Russia (GOST-R), Kazakhstan (GOST-K)	
Canadian pressure vessel cert	C.R.N. - all Canadian provinces	
Oxygen service	**Optional**: Cleaned for enriched oxygen	
Housing material	**Standard:** Aluminium (copper free), epoxy and polyurethane powder coated, blue RAL 5009 **Optional:** 316 stainless steel (supplied with BS EN 10204 3.1 material certificate if option F2 requested)	
Housing moisture protection	**Optional:** Electronics Conformal Coating	
Filter (sensor protection)	**Standard:** Stainless steel sintered guard (for protection against fine particulate >80µm) **Optional:** 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	**Aluminium:** 1.6kg (3lb 8oz); **316 stainless steel:** 2.4kg (5lb 5oz)	
Electrical connections	Dual 3/4" NPT gland	
Programmable display meter range	**Optional:** -1999...+9999	
Programmable display decimal point	**Optional:** 0...3 decimal places	
Display meter overload limits	**Optional:** 3.6 mA and 20.4 mA	
Programmable display meter scales	**Optional:** °C, °F, %, No Scale	
Stainless Steel tags	**Optional:** 316 stainless steel tags (70 x 25mm / 2.76 x 1in)	
Diagnostic conditions (factory programmed)	**Conditions:** Sensor fault, Under-range dew point, Over-range dew point	**Output:** 23 mA, 4 mA, 20 mA

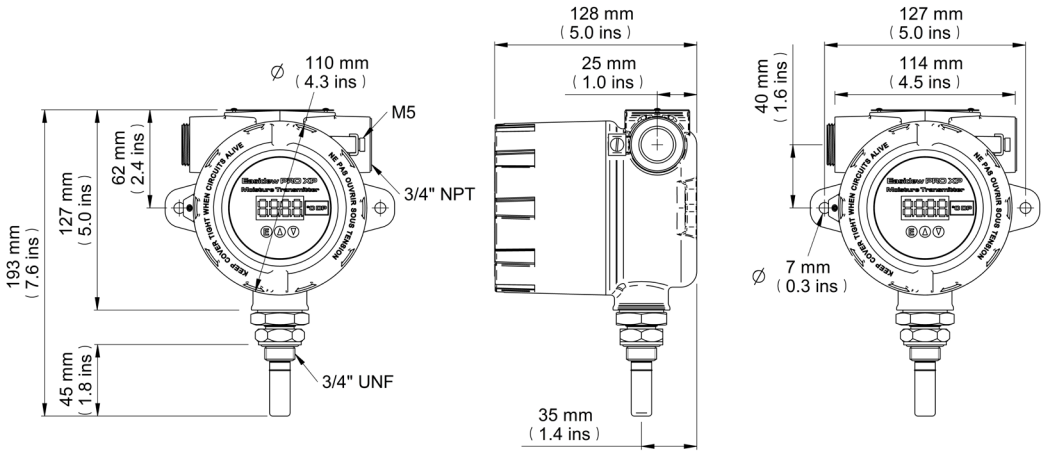
** The end user has a responsibility to ensure that when installed in the Hazardous Area, the system is compliant with relevant local and international installation Standards for the use of equipment in explosive atmospheres.*

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

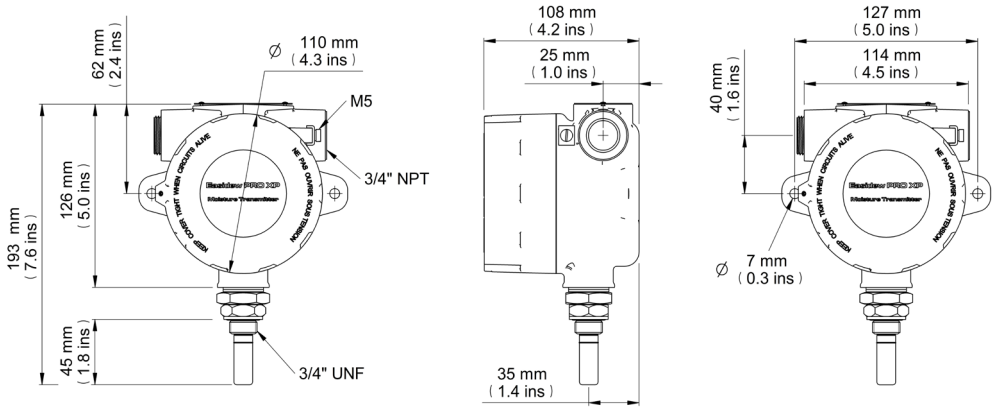
Easidew PRO XP

Product Dimensions

Easidew PRO XP Display



Easidew PRO XP



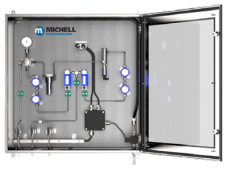
Related Process Products

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

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