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 minimises installation time and provides a robust and reliable transmitter for all global explosion and flameproof applications.

Highlights

- Measurement ranges -110 up to +20°Cdp (−166 up to +68°Fdp)
- Global explosion / flameproof certification
- Accuracy ±1°Cdp (±1.8°Fdp)
- 2-wire 4–20 mA output
- Traceable 13-point calibration certificate
- 6500 psig pressure rating
- 3/4" UNF industry standard process connection
- EN 10204 3.1 material certification
- Moisture in gases and liquids
- Optional integral display meter

Applications

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

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Easidew PRO XP

The Global Explosion Proof Transmitter

For OEM system integrators and process refineries there is a critical 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, cCSAus, IECEx, and GOST globally certified within a single design for use in any North American, European or Asian zone, minimizing cost of stock ownership.

The transmitter has a wide dew-point measurement range of −110 to +20°Cdp with industry-standard process and electrical connections, ensuring low installation costs.

The Easidew PRO XP incorporates the latest Michell advanced ceramic 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 only)

Global Certifications

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

- Explosion proof approval — cCSAus (US and Canada)
- Flameproof approval — ATEX
- Flameproof approval — IECEx
- Flameproof approval — TC TR Ex
- Canadian pressure vessel approved (CRN)
- EMC/RFI — 2004/108/EC EN 61326-1:2006

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 6500 psig 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

Measurement Performance

The transmitter uses Michell's market leading ceramic measurement 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
- 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 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 center in the United Kingdom, which ensures reliability and repeatability of delivery and field supported by a network of Michell's global service centers.

- 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 sensor solution, we have a specialized design and manufacturing capability to cover your requirements.
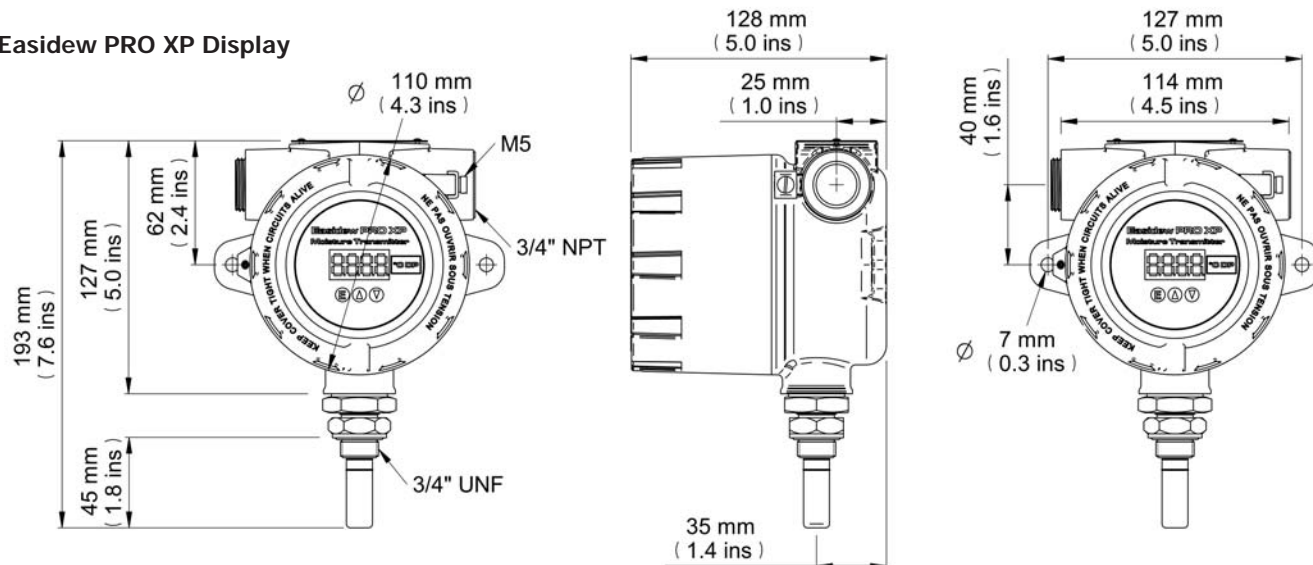

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Technical Specifications

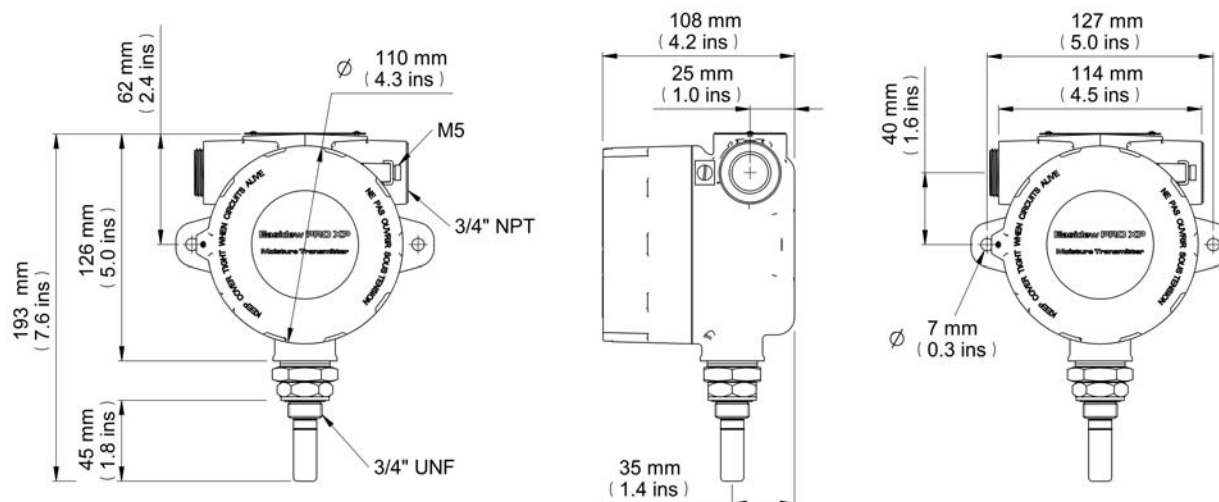| Product	Easidew PRO XP for Gases	Easidew PRO XP LQ for Liquids
Performance Specifications		
Measurement range	−110 to +20°C dew point; −100 to +20°C dew point	0 to 1000 ppm_W; Non-standard available upon request
Accuracy	±1°C dew point (+20 to −60°C); ±2°C dew point (−60 to −110°C)	
Response time	5 mins to T95 (dry to wet)	
Repeatability	0.5°C 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 to +20°C **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 Non-standard available upon request
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 table for saturation constants up to 1000 ppm_W over temperature range 0 to +50°C; saturation constants for 8 common liquids can be programmed into EAPRO XP LQ via application software; the user can also program saturation constants manually
CE conformity	2004/108/EC, 94/9/E ATEX directive	
Operating Specifications		
Operating temperature	−20 to +70°C	
Operating pressure	45 MPa (450 barg / 6526 psig) maximum	
Flow rate	1 to 5 Nl/min mounted in standard sampling block; 0 to 10 m/sec direct insertion	
Temperature coefficient	Temperature compensated across operating temperature range	
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:** II 2 GD Exd [ia] IIC T6 Gb / EX tb IIIC T80°C Db IP66 / Tamb −20°C to +70°C **IECEx:** Exd [ia] IIC T6 Gb / Ex tb IIIC T80°C Db IP66 / Tamb −20°C to +70°C **cCSA_US:** Class I, Div. 1, Groups A, B, C, D / Class II & III, Div. 1, Groups E, F, G / Class I, Zone 1 AEx/Exd [ia] IIC T6 / Zone 21, AEx/Ex tb IIIC T80°C / Tamb = −20°C to +70°C IP66 **TC TR EX-Certificate:** 1Ex d [ia] IIC T6 Gb X / Ex tb IIIC T80°C Db X / Tamb −20°C to +70°C / (Russia, Belarus, Kazakhstan)	
Russian pattern approval	**Pending:** Russia (GOST-R), Kazakhstan (GOST-K)	
Canadian pressure vessel cert	C.R.N. — all Canadian provinces	
Housing material	**Standard:** Aluminum (copper free), epoxy and polyurethane powder coated, blue RAL 5009	
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	
Weight	**Aluminum:** 1.6kg	
Conduit connections	Dual 3/4" NPTF thread	
Programmable display meter range	**Optional:** -1999 to +9999	
Programmable display decimal point	**Optional:** 0 to 3 decimal places	
Display meter overload limits	**Optional:** 3.6 mA and 20.4 mA	
Programmable display meter scales	**Optional:** °C, °F, %, No Scale	

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Easidew PRO XP

Product Dimensions

Easidew PRO XP Display

128 mm (5.0 ins)
25 mm (1.0 ins)
35 mm (1.4 ins)

127 mm (5.0 ins)
114 mm (4.5 ins)
40 mm (1.6 ins)
7 mm (0.3 ins)

110 mm (4.3 ins)
M5
3/4" NPT
62 mm (2.4 ins)
127 mm (5.0 ins)
193 mm (7.6 ins)
45 mm (1.8 ins)
3/4" UNF

Easidew PRO XP

108 mm (4.2 ins)
25 mm (1.0 ins)
35 mm (1.4 ins)

127 mm (5.0 ins)
114 mm (4.5 ins)
40 mm (1.6 ins)
7 mm (0.3 ins)

110 mm (4.3 ins)
M5
3/4" NPT
62 mm (2.4 ins)
126 mm (5.0 ins)
193 mm (7.6 ins)
45 mm (1.8 ins)
3/4" UNF

Related Process Products

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

MDM300 I.S. Portable
Dew-Point Hygrometer

Promet EExd
Process Moisture Analyzer

XTP601
Oxygen Analyzer

ES20
Compact Sampling System

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Easidew PRO XP
Order Codes

Easidew PRO XP for Gases

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A} + {Feature B} + {Feature C} + {Feature D} + {Feature E} + {Feature F} + {Feature G} + {Feature H}

Order example: EA-XP-TX + EX1 + C1 + D2 + E1 + F1 + G1 + H1
Easidew PRO XP Explosion Proof Moisture Transmitter for Gases with no display, stainless steel sintered guard, sample block, no bracket, no material certificates, aluminium housing, -110 to +20°Cdp

| EA-XP-TX | EX1 | C1 | D2 | E1 | F1 | G1 | H1 |

Base Model - for measurements in gas {Feature A}

Easidew PRO XP Explosion Proof Moisture Transmitter for Gases	EA-XP-TX

Display {Feature B}

No display	EX1
With display	EX2

Protection {Feature C}

Stainless Steel sintered guard (for protection against fine particulate >80μm)	C1
Standard HDPE guard (for protection against fine particulate >10μm)	C2

Sampling {Feature D}

No sample block	D1
Stainless Steel sample block with 3/4" UNF sensor connection	D2

Bracket {Feature E}

No bracket	E1
Pipe mounting bracket	E2

Range {Feature H}

-110 to +20°Cdp output range	H1
-100 to +20°Cdp output range	H2
Non-standard measurement range: v = zero value, w = full scale value, x = unit (C = °Cdp, F=°Fdp, P=ppmv) y = Pressure for ppmv conversion in bar/psi, z = pressure unit (PG=psig, PA=psia, BG=barg, BA=bara) blank = 0 barg/psig	(v/wx-yz)

Housing {Feature G}

Aluminium	G1
316 Stainless Steel (ATEX, IECEx approved Only)	G2

Certificates {Feature F}

No material certificates	F1
EN 10204 3.1 material certificates	F2
EN 10204 3.1 material certificates + NACE conformity	F3

Easidew PRO XP LQ for Liquids

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A} + {Feature B} + {Feature C} + {Feature D} + {Feature E} + {Feature F} + {Feature G} + {Feature H} + {Feature I}

Order example: EA-XP-LQ-TX + EX1 + C1 + D2 + E2 + F1 + G1 + H1 + I04
Easidew PRO XP LQ Explosion Proof Moisture Transmitter for Liquids with no display, SS sintered guard, sample block, mounting bracket, no material certificates, aluminium housing, 0 to 1000 ppm$_w$ in propylene

| EA-XP-LQ-TX | EX1 | C1 | D2 | E2 | F1 | G1 | H1 | I04 |

Base Model - for measurements in liquids {Feature A}

Easidew PRO XP LQ Explosion Proof Moisture Transmitter for Liquids	EA-XP-LQ-TX

Display {Feature B}

No display	EX1
With display	EX2

Protection {Feature C}

Stainless Steel sintered guard (for protection against fine particulate >80μm)	C1
Standard HDPE guard (for protection against fine particulate >10μm)	C2

Sampling {Feature D}

No sample block	D1
Stainless Steel sample block with 3/4" UNF sensor connection	D2

Bracket {Feature E}

No bracket	E1
Mounting bracket	E2

Liquids {Feature I}

Methane	I01	Butane	I06
Propane	I02	Isobutane	I07
Ethane	I03	Pentane	I08
Propylene	I04	Toluene	I09
Ethylene	I05	Cyclopentane	I10

Range {Feature H}

0-1000 ppm$_w$	H1
Programmed user-supplied values (y = ppm$_w$ zero value / z = ppm$_w$ full scale value)	y/z

Housing {Feature G}

Aluminium	G1
316 stainless steel (ATEX, IECEx approved Only)	G2

Certificates {Feature F}

No material certificates	F1
EN 10204 3.1 material certificates	F2
EN 10204 3.1 material certificates + NACE conformity	F3

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Easidew PRO XP
Order Codes

Accessories and Spare Parts

Item	Product / Description
XP-BRK	Mounting bracket
SSG	SS sintered guard replacement *(for protection against fine particulate >80µm)*
SSF-PF-10PK	Pack of 10 particulate filter cartridges *(for protection against fine particulate >0.1µm (for Sampler Kits))*
SB-34	Stainless Steel sample block with 3/4" UNF sensor connection
OR-34-PK5	3/4" O-ring for process connection *(pack of 5)*
XP-DIS-RK	Easidew PRO XP replacement display module kit

EAU-CK	B2

Base Model {Feature A}	
Easidew & Pura Universal Comms Kit	EAU-CK

Cable {Feature B}	
EA2 MiniDIN Connector 0.5m sensor lead	B1
EA PRO Block Connector 0.5m sensor lead	B2
EA2 5 Way M12 Connector 0.5m sensor lead	B3
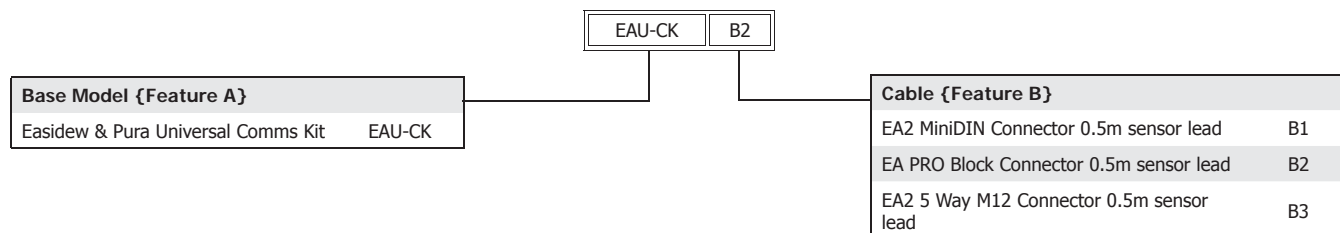
Services

Item	Product / Description
XP-Recal	Re-calibration of Easidew PRO XP *(standard/non-standard - supplied with traceable calibration certificate)*
XP-LQ-Recal	Re-calibration of Easidew PRO XP LQ *(standard/non-standard - supplied with traceable calibration certificate)*

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