

Easidew I.S.

Dew-Point Transmitter

(For Hazardous Area Applications)



The Easidew I.S. (intrinsically safe) transmitter is a dew-point transmitter designed and certified for use in hazardous area applications (flammable or explosive gases) in all regions with certification from: IECEx, CSA, FM and ATEX.

The Easidew I.S. is available with a 5/8" UNF process connection or alternatively with a G1/2" BSP or 3/4" UNF process connection. It is designed for ease of use, incorporating all of the features needed to make installation and operation into your air or gas management system as simple as possible.

Michell's Advanced Ceramic Moisture Sensor technology based transmitter is calibrated to international standards and is delivered with a traceable calibration certificate.

Highlights

- IECEx, CSA, FM, ATEX certified transmitter for use in hazardous areas
- 5/8" UNF, G1/2" BSP or 3/4" UNF process connection
- Dew-point or ppm_v moisture content
- 2-wire loop powered connection
- Rugged 316 stainless steel IP66 construction
- Measurement range -100 to +20°C (-148 to +68°F)
- Accuracy ±2°Cdp (±3.6°Fdp)
- Calibration Certificate (NPL, NIST)

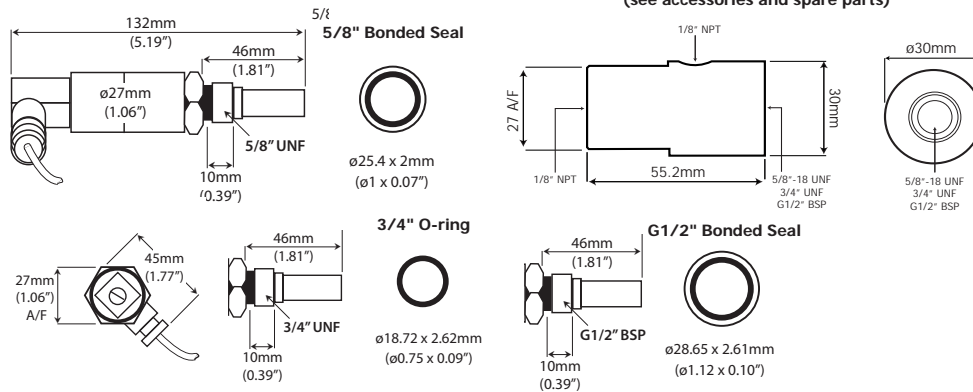
Michell Instruments Inc 319 Newburyport Turnpike, Suite 207, Rowley, MA 01969, Tel: 978 484 0005, Fax: 978 843 7669
Email: us.info@michell.com, Web: www.michell.com

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

| Performance | | |
|--|--|--|
| Measurement range | -100 to +20°C (-148 to +68°F) dew point -110 to +20°C (-166 to +68°F) dew point | |
| Accuracy | ±2°C (±3.6°F) dew point | |
| Response time | 5 mins to T95 (dry to wet) | |
| Repeatability | 0.5°C (0.9°F) dew point | |
| Calibration | Traceable 7-point calibration certificate | |
| Electrical Specifications | | |
| Output signal | 4-20 mA (2-wire connection, current source) User configurable over range | |
| Output | Dew point or moisture content for ppm _v | |
| Analog output scaled range | Dew point: -100 to +20°C (-148 to +68°F) Moisture content in gas: 0-3000 ppm _v Non-standard available upon request | |
| Supply voltage | 12 to 28 V DC | |
| Load resistance | Max 250 Ω @ 12 V (500 Ω @ 24 V) | |
| Current consumption | 20 mA max | |
| CE marked | Certified | |
| Operating Specifications | | |
| Operating temperature | -40 to +70°C (-40 to +158°F) | |
| Operating pressure | 45 MPa (450 barg / 6526 psig) maximum | |
| Overpressure rating | x2 operating pressure 90 MPa (900 barg / 13053 psig) | |
| Flow rate | 1 to 5 Nl/min (2.1 to 10.6 scfh) mounted in standard sampling block; 0 to 10m/sec (0 to 32 ft/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 in protection accordance with standard NEMA 250-2003 | |
| Hazardous area certificates | ATEX - II 1 G Ex ia IIC T4 (-20°C ≤ Ta ≤ +70°C (-4°F ≤ Ta ≤ +158°F)) FM - IS / I / I / ABCD / T4 Ta = +70°C CSA - IS Class I Div I Groups ABCD T4 IECEX - Ex ia IIC T4 (-20°C ≤ Ta ≤ +70°C (-4°F ≤ Ta ≤ +158°F)) | |
| Housing material | 316 stainless steel | |
| Dimensions | L=132mm x ø45mm (L=5.2" x ø1.8") (with connector) | |
| Filter (sensor protection) | Standard: HDPE Guard <10µm Optional: 316 stainless steel sintered guard <80µm | |
| Process connection and material | 5/8"- 18 UNF Alternatives: G1/2" BSP or 3/4"- 16 UNF 316 stainless steel | |
| Weight | 150g (5.3 oz) | |
| Interchangeability | Fully interchangeable transmitter | |
| Electrical connections | Hirschmann GDS series (DIN 4350-C) | |
| Diagnostic conditions (factory programmed) | Condition Sensor fault Under-range dew point Over-range dew point | Output 23 mA 4 mA 20 mA |
| Approved galvanic isolators | KFD2-CR-EX1.20200 KFD2-CR-EX1.30200 KFD0-CS-EX1.50P | KFD0-CS-EX2.50P KFD2-STC4-EX1.H MTL5041, MTL5040 |

Dimensions



Easidew I.S.

Electrical Connections

4-20 mA connections 2-wire

| | |
|-------|---------|
| Pin 1 | 4-20 mA |
| Pin 3 | POWER |

Ordering Codes

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}

Order example: EA2-IS-TX + B1 + C1 + D2

Easidew Hazardous Area, 2 wire, 4-20 mA output, G1/2" BSP process connection, -100 to +20°Cdp range, stainless steel sintered guard

| Base Model {Feature A} | EA2-IS-TX | B1 | C1 | D2 | Protection {Feature D} |
|--|-----------|----|---|---------|---|
| Base unit. Easidew Hazardous Area Transmitter 2-wire 4-20 mA | EA2-IS-TX | | | | Standard HDPE guard (with protection against fine particulate (<10µm)) D1 |
| | | | | | Stainless steel sintered guard D2 |
| Connection {Feature B} | | | | | |
| G1/2" BSP process connection | | B1 | | | |
| 3/4" UNF process connection | | B2 | | | |
| 5/8" UNF process connection | | B3 | | | |
| | | | Range {Feature C} | | |
| | | | -100 to +20°Cdp (-148 to +68°Fdp) output range | C1 | |
| | | | -110 to +20°Cdp (-166 to +68°Fdp) output range | C2 | |
| | | | Non-standard measurement range: v = zero value, w = full scale value, x = unit (C = °Cdp, F = °Fdp, P = ppm _v) y = Pressure for ppm _v conversion in bar/psig, Z = pressure unit (PG=psig, PA=psia, BG=barg, BA=bara) blank = 0 barg/0 psig | CX(...) | |

Accessories and Spare Parts

| | | Process Connection Size | | |
|---------------------|---|-------------------------|------------|-------------|
| | | G1/2" | 3/4" | 5/8" |
| Sensor Protectors | Pack of 10 replacement HDPE guards for protection against fine particulate <10µm | EA2-HDPE | EA2-HDPE | EA2-HDPE |
| | Stainless steel sintered guard replacement for protection against fine particulate <80µm | SSG | SSG | SSG |
| | Pack of 10 particulate filter cartridges for protection against fine particulate <25µm (for Sampler kits) | SSF-PF-10PK | | SSF-PF-10PK |
| Connection Adaptors | 3/4" UNF to 5/8" UNF adaptor | | | APT-PAN |
| | G 1/2" BSP to 5/8" UNF adaptor | | | APT-GEI |
| | 1/2" NPT to 5/8" UNF adaptor | | | APT-TSO |
| Sampling Blocks | G1/2" 316 stainless steel sample block (with 1/8" NPT inlet & outlet ports) | SB-12 | | |
| | G1/2" 316 stainless steel sample block with filter (with 1/8" BSP & 1/4" BSP ports) | A000351 | | |
| | 3/4" 316 stainless steel sample block with (1/8" NPT inlet & outlet ports) | | SB-34 | |
| | 5/8" 316 stainless steel sample block (with 1/8" NPT inlet & outlet ports) | | | CSB |
| | 5/8" Sampler kit – For atmospheric or pressure dp measurements (145 psig / 10 barg max) | | | EA2-SAM |
| | 5/8" HP (high pressure) Sampler kit – For atmospheric or pressure dp measurements (2900 psig / 200 barg max) | | | EA2-SAM-HP |
| Other Parts | KFD0-CS-EX1.50P galvanic isolator (for Easidew I.S. - Pepperl & Fuchs) | GI-PF-01 | GI-PF-01 | GI-PF-01 |
| | PTFE sample tube – 6mm outside diameter, thick-walled (for Sampler kit) (if more than the standard 0.5mm is required) | PTFE-xx | | PTFE-xx |
| | Cable – 0.8m with mini-DIN mating socket (for NON I.S. sensors) | EA2-CAB-08 | EA2-CAB-08 | EA2-CAB-08 |
| | Additional cable – total length (if more than the standard 0.8m is required) | EA2-CAB-xx | EA2-CAB-xx | EA2-CAB-xx |
| | Additional/replacement transmitter labels - 2 labels | GEN-LABEL | GEN-LABEL | GEN-LABEL |
| | O-rings/Bonded seals for process connection – 5 seals | BS-12-PK5 | OR-34-PK5 | BS-58-PK5 |
| | Sensor connector | EA2-SC | EA2-SC | EA2-SC |
| | Communications kit for Easidew I.S. | EA2-CK | EA2-CK | EA2-CK |

HAUSNET S.R.L.

Tel Argentina: (+54-11) 5219-2211

Tel Chile: (+56-2) 2897-3999

E-Mail: hausnet@hausnet.com.ar

Web: www.hausnet.com.ar

