

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)

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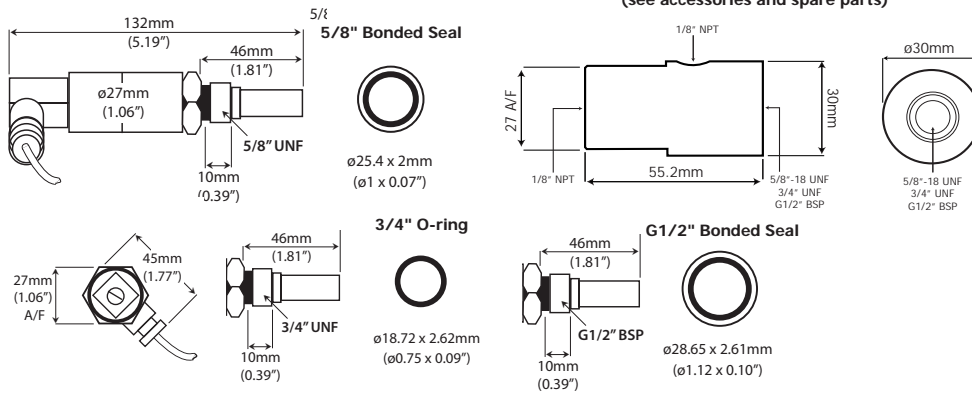
Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.
Issue No: Easidew IS_97168_V6.2_US_0815

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 Ga (-20°C to +70°C) IECEX: Ex ia IIC T4 Ga (-20°C to +70°C) TC TR: 0Ex ia IIC T4 Ga (-20°C to +70°C) FM: Class I, Division 1, Groups A B C D, T4 cCSAus: Class I, Division 1, Groups A B C D, T4	
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	Output
	Sensor fault	23 mA
	Under-range dew point	4 mA
	Over-range dew point	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

Easidew I.S.

Dimensions



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/psi, 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