

SF72 Rail

Dew-Point Transmitter for Rail Applications



The SF72 dew-point transmitter is a compact sensor designed for use in industrial dryer applications at the key -50 to +10°Cdp measuring points: where response speed, reliability and long term stability of data within a control process is critical.

The transmitter is pressure rated to 450 bar, ensuring process gas safety, through the use of a 10-year, field-proven stainless steel body and glass-to-metal seal, applicable for environments with constant vibration.

Our polymer based sensor is calibrated on a high volume traceable calibration system, providing OEM quantities of units.

Highlights

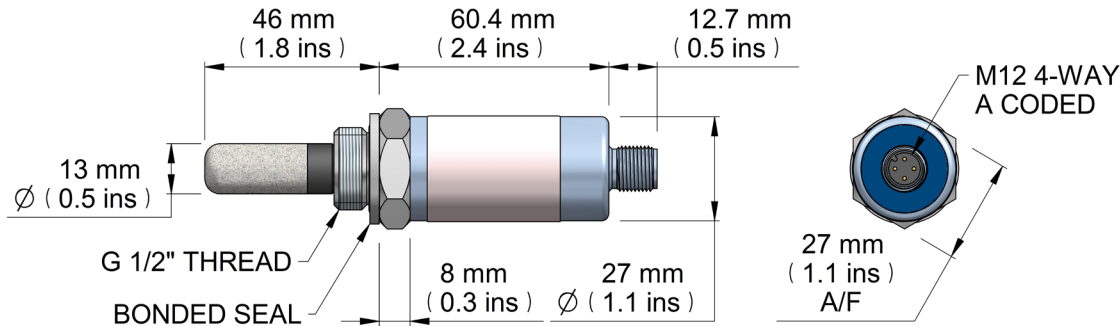
- Ideal for rail use
- M12 electrical connector
- Dew-point measurement range -60 to +60°Cdp
- Fast response
- 316 stainless steel IP66 construction
- Traceable calibration certificate
- Accuracy $\pm 2^\circ\text{Cdp}$
- G1/2" BSP process connection
- RFI/EMC certified to EN 50121-3-2:2006
- Shock/vibration certified to IEC 61373:1999-01

Technical Specifications

Performance		
Measurement Range (dp)	-60 to +60°C dew point	
Accuracy (dp)	$\pm 2^\circ\text{C}$ dew point	
Repeatability	$\pm 0.2^\circ\text{C}$ dew point	
Long-term Stability	Less than 1% per year at reference conditions	
Calibration	Traceable 8-point calibration certificate	
Electrical Specifications		
Output Signal	4–20 mA (2-wire connection, current source)	
Output	Dew point	
Analog Output Scaled Range	Standard: -60 to +60°C Non-standard available upon request	
Supply Voltage	12–28 V DC	
Load Resistance	Max 250 Ω @ 12 V (500 Ω @ 24 V)	
CE Marked	Certified	
Operating Specifications		
Start-up Temperature	Ambient: -40 to +50°C Gas: -40 to +70°C	
Operating Temperature	Ambient: -40 to +50°C Gas: -40 to +60°C	
Storage Temperature	-40 to +85°C	
Operating Pressure	45 MPa (450 barg) maximum	
Over Pressure Rating	x2 operating pressure 90 MPa (900 barg)	
Flow Rate	1 to 5 NI/min mounted in standard sampling block; 0 to 10 m/sec (0 to 32.8 fps) direct insertion	
Thermal Compensation	Characterized over operating range	
Mechanical Specifications		
Ingress Protection	IP66 in accordance with standard BS EN 60529:1992	
Housing Material	316 stainless steel	
Dimensions	L=119mm (including HDPE filter) x ϕ 27mm	
Filter	Standard: HDPE Guard <10 μm	
Process Connection and Material	G1/2" BSP, 316 stainless steel	
Weight	150g	
Electrical Connections	M12, 4 pin (A coded)	
Digital Diagnostic Communications	RS485, 2-wire Modbus RTU	
Diagnostic Conditions (factory programmed)	Condition	Output
	Sensor fault	23 mA
	Under-range dew point	4 mA
	Over-range dew point	20 mA
Rail Certifications		
Shock and Vibration	IEC 61373:1999-01 (EN 50155)	
RFI/EMC Emissions and Immunity	EN 50121-3-2:2006	

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Dimensions



Electrical Connections

4-20 mA 2-wire	
PIN 3	4-20 mA
PIN 4	Power supply +

Accessories and Spare Parts

Item	Product / Description
EA2-HDPE	Pack of 10 replacement HDPE guards for protection against fine particulate <10µm
SB-12	G 1/2" 316 stainless steel sample block (with 1/8" NPT inlet & outlet ports)
GEN-LABEL	Additional/replacement transmitter labels (2 Labels)
SF72-CK	Communication kit for SF72 transmitter
DP-MC	BS EN 10204 3.1 material certificate
BS-12-PK5	O-rings/bonded seals for process connection – pack of 5

Services

Item	Product / Description
READINGS	Recalibration of SF72 transmitter

Related Products



SF52
Dew-Point Transmitter



SF82
Industrial Dew-Point Transmitter



MDM50
Portable Hygrometer



MDM300
Advanced Portable Dew-Point Hygrometer

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Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Issue No: SF72-TX-SPO106_V3.1_UK_Datasheet_0320