

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 (-58 to +50°F) 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 (6526 psig), 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

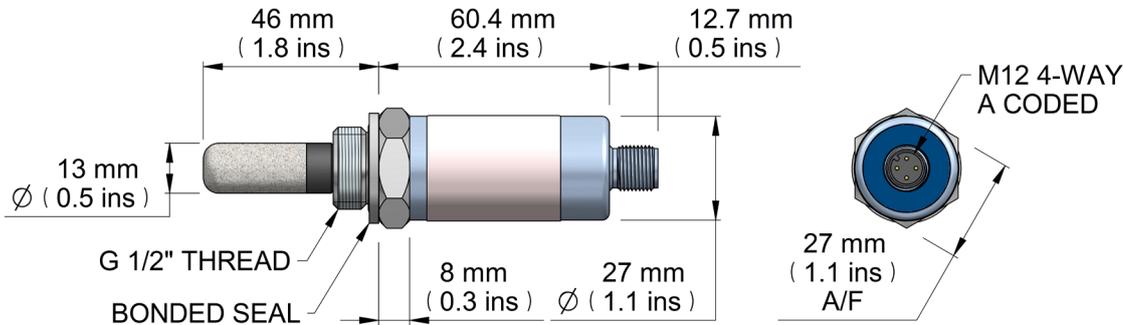
- Ideal for rail use
- M12 electrical connector
- Dew-point measurement range -60 to +60°Cdp (-76 to +140°Fdp)
- Fast response
- 316 stainless steel IP66 construction
- Traceable calibration certificate
- Accuracy $\pm 2^\circ\text{Cdp}$ ($\pm 3.6^\circ\text{F}$)
- G1/2" BSP process connection
- RFI/EMC 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 (-76 to +140°F) dew point
Accuracy (dp)	$\pm 2^\circ\text{C}$ ($\pm 3.6^\circ\text{F}$) dew point
Repeatability	$\pm 0.2^\circ\text{C}$ ($\pm 0.36^\circ\text{F}$) 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 (-76 to +140°F) 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 (-40 to +122°F) Gas: -40 to +70°C (-40 to +158°F)
Operating Temperature	Ambient: -40 to +50°C (-40 to +122°F) Gas: -40 to +60°C (-40 to +140°F)
Storage Temperature	-40 to +85°C (-40 to +185°F)
Operating Pressure	45 MPa (450 barg/6526 psig) maximum
Over Pressure Rating	x2 operating pressure 90 MPa (900 barg/13053 psig)
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 (4.69") (including HDPE filter) x $\varnothing 27\text{mm}$ ($\varnothing 1.06''$)
Filter	Standard: HDPE Guard <10 μm
Process Connection and Material	G1/2" BSP, 316 stainless steel
Weight	150g (5.29oz)
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_US_Datasheet_0121