

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 $+10^{\circ}\text{Cdp}$ 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 $+60^{\circ}\text{Cdp}$
- 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

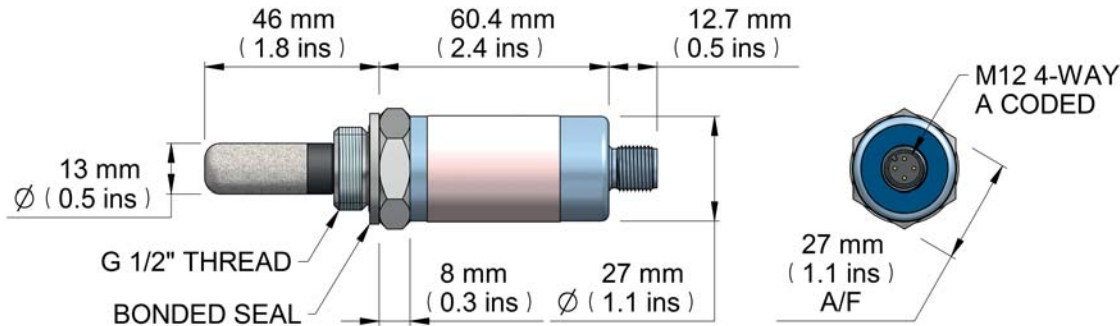
Technical Specifications

Performance									
Measurement range (dp)	-60 to $+60^{\circ}\text{C}$ 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 $+60^{\circ}\text{C}$ 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 $+50^{\circ}\text{C}$ Gas: -40 to $+70^{\circ}\text{C}$								
Operating temperature	Ambient: -40 to $+50^{\circ}\text{C}$ Gas: -40 to $+60^{\circ}\text{C}$								
Storage temperature	-40 to $+85^{\circ}\text{C}$								
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 $< 10\mu\text{m}$								
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)	<table border="1"> <thead> <tr> <th>Condition</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Sensor fault</td> <td>23 mA</td> </tr> <tr> <td>Under-range dew point</td> <td>4 mA</td> </tr> <tr> <td>Over-range dew point</td> <td>20 mA</td> </tr> </tbody> </table>	Condition	Output	Sensor fault	23 mA	Under-range dew point	4 mA	Over-range dew point	20 mA
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								
RFI/EMC emissions and immunity	EN 50121-3-2:2006								

SF72 Rail

Dew-Point Transmitter for Rail Applications

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



PCMini52
12mm RH and Temperature
Mini Probe



MDM50
Portable Hygrometer



MDM300
Advanced Portable
Dew-Point Hygrometer

Michell Instruments 48 Lancaster Way Business Park, Ely, Cambridgeshire, CB6 3NW

Tel: +44 (0) 1353 658000, Fax: +44 (0) 1353 658199, Email: uk.info@michell.com, Web: www.michell.com/uk

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_UK_Datasheet_0915