



THS90Q

Industrial Ultra-Low Dew Point Transmitter



| Features |

- **Ultra-Low Dew Point Measurement Range**

Measurement range from -120 ... -20 dp°C, suitable for compressed air, desiccant drying, PSA nitrogen generation, and ultra-dry processes.

- **Segmented Accuracy for Ultra-Low Dew Point**

Provides corresponding accuracy specifications across low dew point ranges from -120 ... -20 dp°C, helping users monitor dew point changes in ultra-dry processes.

- **Fast Response and Low-Moisture Detection**

The QCM sensing signal provides distinguishable changes under low dew point conditions. With $t_{90} < 30$ s at +25 °C, dew point changes can be identified at an early stage.

- **On-Site Readout and System Integration**

Supports display and output of dew point, ppmv, and ppmw values. Equipped with a 2-inch color LCD, 4 ... 20 mA, and RS-485 for convenient on-site reading and system integration.

- **Stable Measurement Design for Industrial Environments**

Enhanced signal processing and EMC protection help reduce the effects of electrical interference and changing environmental conditions on low dew point measurement, improving measurement stability in industrial applications.

| Applications |

CDA Compressed Dry Air Systems / PSA Nitrogen Generation and Air Separation Equipment / Desiccant Dryers / Plastic Drying Equipment / Semiconductor and Electronics Manufacturing Drying Systems / Industrial Drying Processes

| Specification |

Input

Input type	QCM
Operating range of dew point	-120 ... -20 dp°C
Max. scaling range	
Dew point switch to another	Dew point : -120 ... -20 dp°C
physical quantity range	Absolute humid.(Volume) : 0 ... 1000 ppm/v Absolute humid.(Weight) : 0 ... 634 ppm/w
Output signal	Standard 4 ... 20 mA+RS-485 / 0 ... 10 V+RS-485 on request
Signal connection	3-wire
Linear accuracy	-80 ... -20 dp°C : ± 2 dp°C -100 ... -80 dp°C : ± 3 dp°C -120 ... -100 dp°C : ± 5 dp°C
Load resistance	Current output : $\leq 500 \Omega$ Voltage output : $\geq 100 K\Omega$
Output calibration	Software
(ZERO & SPAN)adjustment range	
Response time t90(Temp. at+25°C)	<30 sec

Electrical

Power supply	DC 24 V $\pm$ 15%
Current consumption	DC 24 V / 50 mA
Electrical connection	M12 connector

Environment

Medium	Air
Operating Temp. for housing	0 ... +60°C
Operating Humid. for housing	0 ... 95%RH (Non-condensing)
Operating Temp. for probe	15 ... +50°C
Storage temperature	-25 ... +50°C

Installation

Installation	1/2"G
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Protection

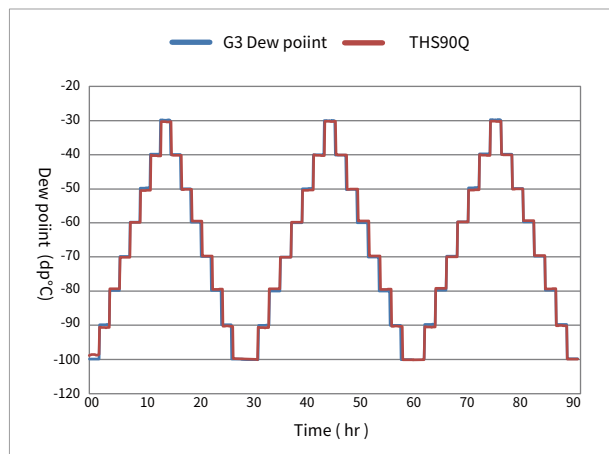
IP rating	IP54(Probe : IP20)
Electrical protection	■ Reverse polarity ■ Over-voltage ■ Short-circuit

Material

Housing	Aluminum alloy
Probe	S.S.(SUS304) ; SUS sintered filter(SUS316)
Weight	250 g

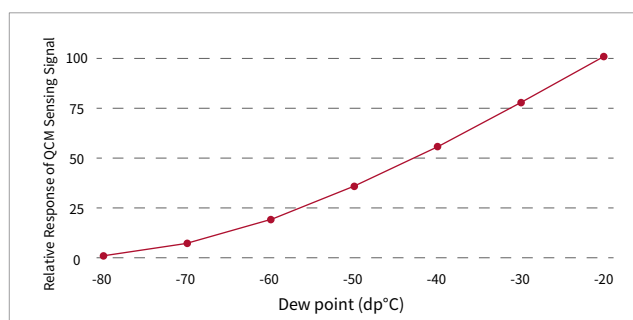
| 3-cycle Curve |

※ According to IEC 61298 and ISO 17025 standard to measuring 3-cycle curve.
As the charts result, accuracy of test sample match with accuracy chart of humidity generator + dew point mirror

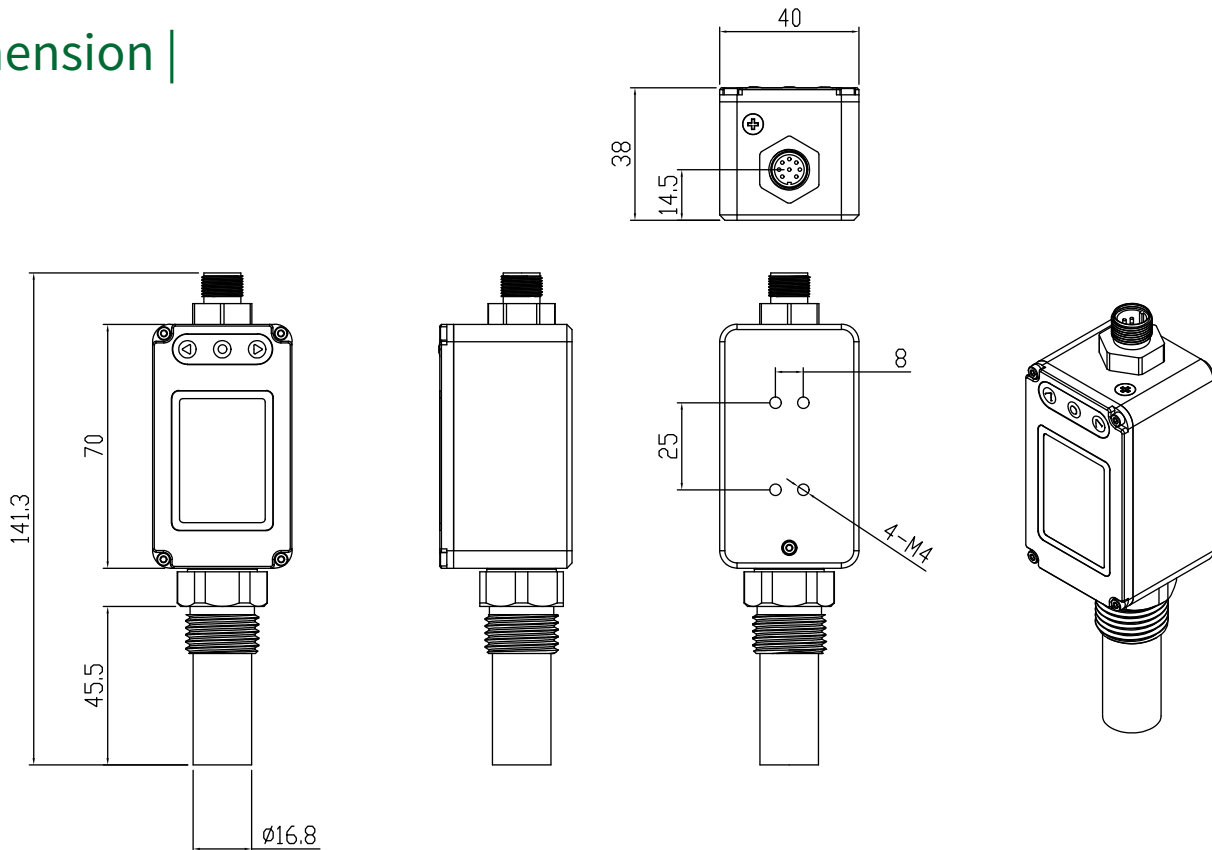


| Low Dew Point Signal Response |

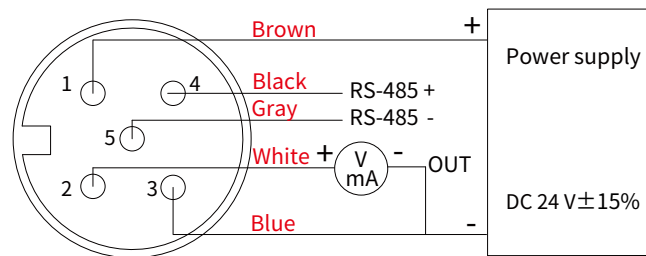
The QCM sensing signal demonstrates distinct and stable relative changes across the -80...-20 dp°C range, providing a reliable signal basis for low dew point measurement.



| Dimension |



| Diagram |



M12 connector

*Please make sure the product and the device which connect with RS-485 are on common ground, avoid damaged product.

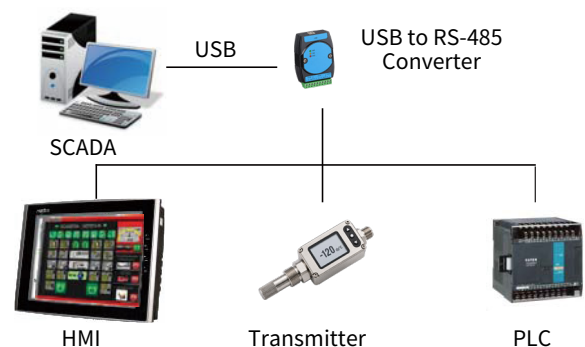
| Dew Point Automatic Inspection System |

| USB to Isolated RS-485 Application |



■ System Facility

- Humidity generator
- Dew point mirror
- Laboratory level facility to produce products, and automatic QC inspection sheet printing and factory report



■ Require Device

- PC / RS-485 to USB Converter / Power supply / UI software

| Ordering Guide |

THS90Q	—	Dew point measuring range B A : -100 ... -20°C B : -120 ... -20°C	Connector 2 2 : 1/2"G
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| Additional Option Test Report |

For more detailed information please contact us.

■ ILAC / TAF

YUDEN-TECH CO.,LTD. Calibration Laboratory - (ILAC / TAF) Test report.

(TAF accreditation : 3032, complying with ISO / IEC 17025) TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Dew point transmitter	$\geq -80 \text{ dp}^{\circ}\text{C} \dots \leq 60 \text{ dp}^{\circ}\text{C}$

■ ISO 9001

Project	Measurand level or range
Dew point	$\geq -95 \text{ dp}^{\circ}\text{C} \dots \leq 60 \text{ dp}^{\circ}\text{C}$