YUA
Fast · Accurate · Managing

-110 … +60 °Ctd
Ultra-wide Range Optional

FixInst patented sensor materials and processes

HD screen data display & curves analysis

Handheld, easy to operate




# F305x Series
# Handheld Dewpoint Meter

DEWPOINT METER

# Product Overview

The F305x handheld dew point meter is a handheld instrument that integrates dew point measurement, data analysis and recording. It is suitable for on-site inspection, working condition analysis and diagnosis, and can simultaneously measure temperature, pressure and humidity parameters

Integrating FIXINST-P polymer film capacitive sensor and FIXINST-A ultra-fast response $Al_2O_3$ sensor with updated moisture-sensitive materials and processes, enabling F305x to accurately measure a wide range of dew points from -110 ... +60 °Ctd

The dewpoint curve prediction algorithm quickly and accurately predicts the final stable dewpoint and time required, thus e作ciently complete on-site inspections. Curve drawing and data recording functions, real-time drawing dewpoint, temperature, pressure and other data measurement curves, record on-site working condition data, and easily analyze gas state change trends

The measuring chamber is equipped with a drying system that protects and dries the sensor when the instrument is not measuring, ensuring a quick response to the next measurement

# Product Advantages

## Display & Analysis

Display various dewpoint parameters simultaneously and also the graph

## Ultra-wide Range

-110 ... +60 °Ctd optional measuring range

## Innovative Technology

FixInst patented sensor materials and processes

## Handheld

Handheld, easy to operate and taken anywhere

- Compatible with various sensor technologies: polymer thin film, aluminum oxide sensors that can be used in different measurement ranges
- MEMS based pressure sensor for monitoring dewpoint and online pressure simultaneously (Abs. pressure 0 … 1.7 MPa.a)
- Accurate to ±2 °Ctd with up to 10+ dewpoint calibration and multi-point temperature compensation (Refer to “Technical Data” )
- Dewpoint steady-state prediction helps customers predict the trend in advance to save wating time
- Data logging and graphing
- Equipped with a dry measuring chamber to ensure ultra-fast respoonse and high accuracy
- Outstanding long-term stability
- 4.3″ IPS wide viewing anlge LCD with capacitive touch, data clearly displayed and user-friendly HMI
- Handheld so easy to use, start measurement by connecting the PTFE tube to the measuring chamber, no site restriction, no operational technical di作culties



# A Good Assistant for On-site Inspection

The replaceable desiccant that comes with the measuring chamber can protect and dry the sensor when the instrument is not measuring, ensuring quick response to the next measurement.

The measuring chamber can be directly connected to a PTFE tube to introduce gas for measurement. It is not restricted by space and on-site, measure and move, very suitable for on-site inspection.

## 01.

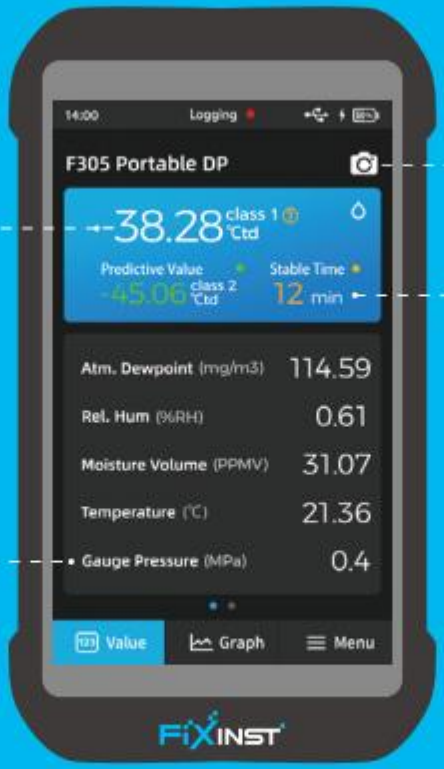
### Dewpoint Value

High-precision dewpoint measurement, with purity class according to ISO 8573

## 02.

### Screenshot

With this feature customer could retain the important data, to facilitate your later data and system analysis, etc




## 03.

### Customize Data Channel

This area indicates the value and allows you to customize the relevant channel according to the site situation

## 04.

### Dewpoint Steady-state Prediction

This indicates the predicted final stable dewpoint and the time required to reach stability, helping field engineers predict the system dewpont in advance and save detection / inspection time

# UI design

Equipped with a capacitive touch 4.3" IPS ultra-wide viewing angle LCD, providing clear data display on a large screen from all directions, with simple and intuitive human-machine interaction (HMI)



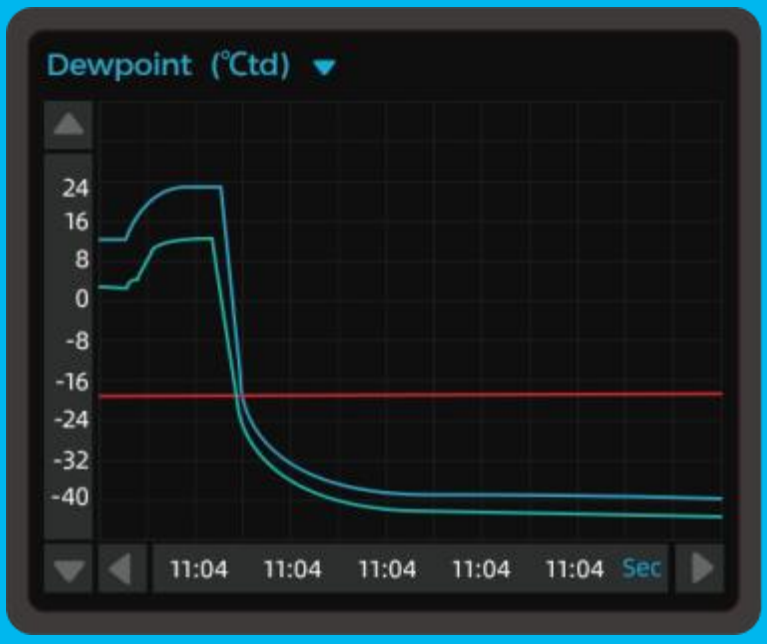

◎ Value




◎ Graph




◎ Setting




01.

Large-screen curve display for easy data comparison and analysis

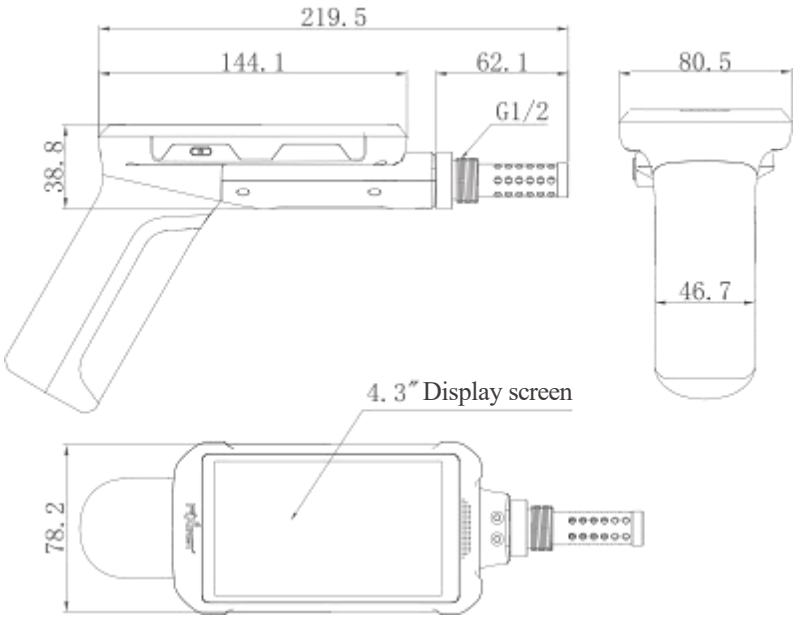
02.

Dynamic curve and trend / freely switch the data channel

03.

Flexible selection of time period and measuring range

# Product Dimensions




| Sensor Model | FixInst-P | FIXINST-A | FIXINST-Q |
|---|---|---|---|
| Sensor Type | Polymer Capacitive Sensors | Aluminum Oxide Sensors | QCM Sensor |
| Sensor View |  |  |  |
| Application in > -60 °Ctd: Refrigerant Dryer, Desiccant Dryer, Industrial Gas | ✓ | | |
| Application in -80 … -60 °Ctd: Desiccant Dryer, Nitrogen Generators, Industrial Gas | | ✓ | |
| Application in -120 … -80 °Ctd: High-purity industrial gas | | ○ | ✓ |
| Containing contaminated particles | ✓ | ✓ | |

* Sensor FIXINST-A FIXINST-Q have obtained relevant patents

○ Model F139C-Puri, F305B

# Product Applications

Dew point meters are widely used in dry purification, chemical, petrochemical, power engineering, and food & medicine etc.




Gas monitoring of drying equipment

* Refrigeration Dryer Desiccant dryer Membrane dryer




Vessel and pipeline gas monitoring



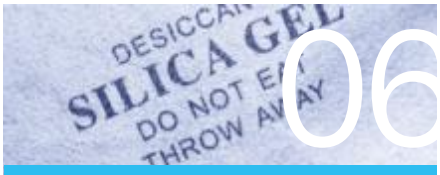

Medical and surgical gas monitoring




Moisture monitoring of industrial gases




Monitoring of dry and clean environments




Dryness test for food and drug additives

# Technical Data

## Measuring Range

| | |
|---|---|
| **Dewpoint** | |
| F305A | -60 … +60 °Ctd |
| F305B | -110 … +60 °Ctd |
| Temperature | -40 … +100 °C |
| Pressure | 0 … 1.7 MPa(a) |

## Power

| | |
|---|---|
| Battery charging | PD fast charger, 20 VDC 1 A |
| Charging interface | Type-C interface |
| Charging time | 2.5 h |
| Battery life | 16 h (at 20 °C operating temperature) |

## Accuracy

| | |
|---|---|
| **Dewpoint (Air or Nitrogen)** | |
| +20 … -60 °Ctd | ±2 °Ctd |
| -60 … -100 °Ctd | ±3 °Ctd |
| **Temperature (Customized)** | |
| 0 … +50 °C | ±0.3 °C (Standard) |
| -40 … 0 °C & +50 … +100 °C | ±0.5 °C (Standard) |
| **Pressure** | |
| Accuracy @23°C | ±0.3 %FS |
| Pressure Drift with Temperature | ±0.001 MPa/10 °C |

## Operating Environment

| | |
|---|---|
| Medium temperature | -30 … +70 °C |
| Operating temperature | 0 … +50 °C |
| Storage temperature | -10 … +60 °C |
| Relative humidity | 0 … 95 %RH |
| Sample gas flow rate | ≥ 2 L/min |
| Pressure | 0 … 1.7 MPa(a) |

## Output

| | |
|---|---|
| File export | Type-C interface |

## Response Time

| | |
|---|---|
| Dewpoint: 63% [90%], Reference: 20 °C, 1bar(a), 4L/min | |
| -50 → +20 °Ctd | 20 sec [40 sec] |
| +20 → -50 °Ctd | 1 min [3 min] |
| Pressure | < 1 sec |

## Other

| | |
|---|---|
| Display | 4.3″ IPS LCD with capacitive touch |
| Data log | 1.5 G storage, 200,000,000 values |
| Process connection | Dewpoint sensor: ISO G 1/2″ thread<br>Measuring chamber:<br>6 mm hose with fast connector |

# Order Information

| Model | Charger | Mobile USB Flash | Fast Connector | PTFE Tubes | Suitcase | Measuring Chamber | Connection Kit | Wireless Comm. | Discription |
|---|---|---|---|---|---|---|---|---|---|
| F305A | | | | | | | | | Handled dewpoint meter, -60 … +60 °Ctd, 4.3" Touch LCD screen, with Data logging function |
| F305B | | | | | | | | | Handled dewpoint meter, -110 … +60 °Ctd, 4.3" Touch LCD screen, with Data logging function |
| | E1701 0032 | | | | | | | | PD Fast Charger-CN, with 1m Type-C Cable |
| | E1701 0044 | | | | | | | | PD Fast Charger-US, with 1m Type-C Cable |
| | S1701 0026A | | | | | | | | PD Fast Charger-UK, with 1m Type-C Cable |
| | S1701 0026B | | | | | | | | PD Fast Charger-EU, with 1m Type-C Cable |
| | S1701 0026C | | | | | | | | PD Fast Charger-AU, with 1m Type-C Cable |
| | | E1701 0035 | | | | | | | OTG USB flash drive, Type-A & Type-C dual ports, 32G memory |
| | | | S0303 0002 | | | | | | Self-locking fast connector to Φ6 mm fast connector |
| | | | | M0104 0001 | | | | | PTFE tubes, Φ6mm (Std. 2m) |
| | | | | | M3501 0008 | | | | Suitcase, Suitable for F305x handled dewpoint meter, PP material |
| | | | | | | F0102A 0001 | | | Stainless steel measuring chamber with storage and drying function, G1/2″ sensor connection<br>Outlet: Flow control valve with silencer (Adjustable with screwdriver) |
| | | | | | | F0102A 0002 | | | Stainless steel measuring chamber with storage and drying function, G1/2″ sensor connection<br>Outlet: Stainless steel fast connector for 6 mm tube |
| | | | | | | F0102A 0003 | | | Stainless steel measuring chamber with storage and drying function, G1/2″ sensor connection<br>Outlet: Flow control valve with silencer (Default) |
| | | | | | | | V0013 0001 | | None (Default) |
| | | | | | | | F0103 0003 | | FixInst on-line dewpoint meter connection kit, for F305x calibrate online dewpoint meter |
| | | | | | | | | V0013 0001 | None (Default) |
| | | | | | | | | S1701 0010 | IOT-4G Module |