



-110 ... +60 °Ctd  
Ultra-wide range option



Outstanding long  
term stability



FixInst patented sensor  
materials and processes



Curve plotting  
Process data analysis



# F306x Series Dewpoint Monitor



# DEWPOINT METER

## Product Overview

The F302x series dewpoint meter can integrate a variety of the most advanced humidity sensors: polymer film capacitive sensors, ultra-fast response aluminum oxide sensors with innovative moisture sensitive materials and processes, and dual resonance QCM sensors with sensitivity at ultra-low dewpoint. These sensors provide F302x with the ability to accurately measure a wide range of dewpoints from  $-110$  to  $+60$  °Ctd

Revolutionary auto-calibration circuit design automatically compensates for circuit drift caused by temperature, contamination, and aging, providing long-term stability and high accuracy measurements

Innovative temperature compensation algorithm and multi-point temperature compensation calibration, greatly improving the sensor's temperature drift and ensuring high-precision dew point measurement over a wide temperature range

Upgraded with a 4.3" color touch screen, F306x provides clear real-time measurements and trend curves with smooth, intuitive operation

## Product Advantages



### Integrated Display

Display various dewpoint parameters simultaneously



### Ultra-wide Range

$-110 \dots +60$  °Ctd  
Optional measuring range



### Alarm Output

Relay alarm output and alarm information display

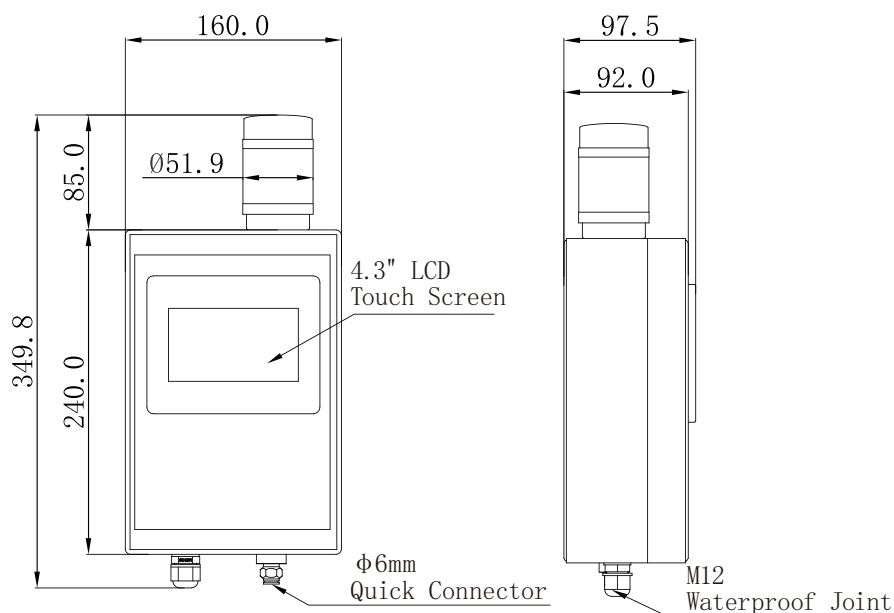


### Innovative Technology

First patented sensor materials and processes

- Compatible with various sensor technologies: polymer thin film, aluminum oxide, QCM crystal type sensors that can be used in different measurement ranges
- MEMS based pressure sensor for simultaneous monitoring of dewpoint and pressure
- 10+ points of dew point calibration and multi-point temperature compensation provide accurate measurements up to  $\pm 2$  °Ctd (Refer to "Technical Data" )
- Ultra-fast response time
- Outstanding long-term stability
- High resistance to electrical disturbance
- 4.3" Capacitive touch screen, provides real-time measurements and trend curves with simple operation
- Alarm light flashing and buzzer alarm
- Easy to install, plug-and-play, convenient for viewing data. Simply connect the gas via the 6 mm quick connector to begin measurement

## Product Dimensions



## Product Applications

Dewpoint 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

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

\* Sensor FIXINST-A FIXINST-Q have obtained relevant patents  
○ Model F139C-Puri, F305B

# Technical Data

| Measurement Range                                      |                           | Display                         |                                                              |
|--------------------------------------------------------|---------------------------|---------------------------------|--------------------------------------------------------------|
| Dewpoint                                               |                           | Display                         | 4.3" IPS touch LCD                                           |
| F306Ax                                                 | -60 ... +60 °Ctd          | Resolution                      | 800 × 480 px                                                 |
| F306Bx                                                 | -80 ... +20 °Ctd          | Power                           |                                                              |
| F306Cx                                                 | -110 ... +20 °Ctd         | Supply Voltage & Power          |                                                              |
| Temperature                                            | -40 ... +100 °C           | 18 ... 30 VDC Max 15 W @ 24 VDC |                                                              |
| Pressure                                               | 0 ... 1.7 MPa(a) (Option) | Output                          |                                                              |
| Accuracy                                               |                           | Alarm Output                    | Alarm light and buzzer alarm                                 |
| Dewpoint (Air or Nitrogen)                             |                           | Connector                       | 2 x PG Plug                                                  |
| +60 ... -60 °Ctd                                       | ±2 °Ctd                   | Operating Environment           |                                                              |
| -60 ... -100 °Ctd                                      | ±3 °Ctd                   | Operating Temperature           | 0 ... +50 °C                                                 |
| Temperature (Customizable)                             |                           | Storage Temperature             | -40 ... +80 °C                                               |
| 0 ... + 50 °C                                          | ± 0.3 °C (Standard)       | Relative Humidity               | 0 ... 95 %RH                                                 |
| -40 ... 0 °C & +50 ... +100 °C                         | ± 0.5 °C (Standard)       | Sample Gas Flow Rate            | > 1 L/min                                                    |
| Pressure                                               |                           | Pressure                        | 0 ... 1.7 MPa(a)                                             |
| Accuracy @23°C                                         | ±0.3% FS                  | Other                           |                                                              |
| Pressure Drift With Temperature                        | ±0.001 MPa/10 °C          | Process Connection              | 6 mm Stainless steel quick connector                         |
| Response Time                                          |                           | Sensor Filter                   | Stainless steel sinter filter<br>(Filtration class 30~45 um) |
| Dewpoint: 63% [90%], Reference: 20 °C, 1bar(a), 4L/min |                           | EMC                             | Compliant with IEC 61326-1                                   |
| -50 → +20 °Ctd                                         | 20 sec [40 sec]           |                                 |                                                              |
| +20 → -50 °Ctd                                         | 1 min [3 min]             |                                 |                                                              |
| Pressure                                               | < 1 sec                   |                                 |                                                              |

# Order Information

| Model   | Output     | Power | Description                                                                                                                                                     |
|---------|------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F306A   |            |       | Dewpoint monitor -60 ... +60 °Ctd, 4.3" Touch LCD screen, Wall-mounted                                                                                          |
| F306A-P |            |       | Dewpoint monitor -60 ... +60 °Ctd, 4.3" Touch LCD screen, Wall-mounted, Integrated pressure sensor, Simultaneous output of pressure dewpoint and atm. dewpoint  |
| F306B   |            |       | Dewpoint monitor -80 ... +20 °Ctd, 4.3" Touch LCD screen, Wall-mounted                                                                                          |
| F306B-P |            |       | Dewpoint monitor -80 ... +20 °Ctd, 4.3" Touch LCD screen, Wall-mounted, Integrated pressure sensor, Simultaneous output of pressure dewpoint and atm. dewpoint  |
| F306C   |            |       | Dewpoint monitor -110 ... +20 °Ctd, 4.3" Touch LCD screen, Wall-mounted                                                                                         |
| F306C-P |            |       | Dewpoint monitor -110 ... +20 °Ctd, 4.3" Touch LCD screen, Wall-mounted, Integrated pressure sensor, Simultaneous output of pressure dewpoint and atm. dewpoint |
|         | S0304 0002 |       | None (Default)                                                                                                                                                  |
|         | S0304 0003 |       | Modbus RTU (RS485) Output                                                                                                                                       |
|         | S0304 0004 |       | 4~20 mA output + Alarm relay output                                                                                                                             |
|         | S0304 0005 |       | Alarm light and buzzer alarm                                                                                                                                    |
|         | S0304 0006 |       | Alarm light and buzzer alarm + Modbus RTU (RS485) output                                                                                                        |
|         | S0304 0007 |       | Alarm light and buzzer alarm + 4~20 mA output + Alarm relay output                                                                                              |
|         | M2501 0001 |       | Power socket-CN, three-pin, 0.75 mm <sup>2</sup> , 1.5m                                                                                                         |
|         | M2501 0002 |       | Power socket -US, .75 mm <sup>2</sup> , 1.5m                                                                                                                    |
|         | M2501 0003 |       | Power socket -EU, 0.75 mm <sup>2</sup> , 1.5m                                                                                                                   |
|         | M2501 0004 |       | Power socket -UK, 0.75 mm <sup>2</sup> , 1.5m                                                                                                                   |
|         | M2501 0005 |       | Power socket -India, 0.75 mm <sup>2</sup> , 1.5m                                                                                                                |
|         | M2501 0007 |       | Power socket-AU, three-pin, 0.75 mm <sup>2</sup> , 1.5m                                                                                                         |

\* Portable protective case is available as an option. Please consult sales staff for details