Dew-point instrument

TMM-100

SPECIFICATIONS

Specifications are subject to change without prior notice.

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1. Outline

1.1 Outline of equipment

This equipment is the dew-point instrument which measures the dew-point temperature and dry-bulb temperature, and consists of the dew-point detection unit and the dew-point temperature measurement unit.

The dew-point temperature measurement unit can digitally display the dew-point temperature and dry-bulb temperature detected by the sensor and output the value as an analog voltage signal. Since the detection unit and the dew-point measurement unit can be installed separately, it is suitable for applications such as checking the condition of another room where the detection unit is installed.

1.2 Composition figure

1.3 External appearance

a) Detection unit

Wall attachment type: 240(W) × 320(H) × 180(D) Max

b) Dew-point temperature measurement unit

JIS 19 inch Cabinet rack installed type: 480(W) × 199(H) × 505(D) Max
2. Specifications

2.1 Detection unit

a) Dew-point temperature sensor
   • Product by YOKOGAWA
   • Wall attachment type for room
   • Measurement range 
     -45 ~ +60°C
   • Heater
     Gold-plating wire heater
   • Resistance temperature sensor
     Nickel wire
   • Dry and wet part application solution
     Lithium chloride (One bottle included)
   • Wind velocity
     Less than 0.25m/sec
   • Heater power supply
     25V AC

b) Dry-bulb temperature sensor
   • Product by OKAZAKI
   • Sheath with protection tube, Wall attachment type
   • Detection element
     Resistance temperature sensor
     JIS Pt100
   • Operating temperature range
     -50 ~ +80°C

2.2 Dew-point temperature measurement unit

a) General specifications
   • Power supply
     AC100V ±10% 50/60Hz Approx.150VA
   • Environmental conditions
     0 ~ +40°C 20~80%RH (No dew condensation)

b) Display Dew-point temperature / Dry-bulb temperature
   • Display the amount of physics (°C)
     Manual setting scaling method
   • 3 figure display
     Dew-point temperature 
     -45.0 ~ +60.0°C
     Dry-bulb temperature 
     -50.0 ~ +80.0°C
   • Display element
     Character height
     14mm RED LCD
   • Comprehensive accuracy (The accuracy of the sensor is not included)
     Dew-point temperature
     Accuracy rating
     ±0.4°C
     Temperature drift
     ±0.2°C/10°C
     Dry-bulb temperature
     Accuracy rating
     ±0.3°C
     Temperature drift
     ±0.2°C/10°C

c) Analog output Dew-point temperature / Dry-bulb temperature (Room temperature)
   • Number of outputs
     There are two outputs each for Dew-point temperature and Dry-bulb temperature, totaling 4 outputs
     Each output is an isolated output
     (Between each of input / output / power supply / enclosure)
     Insulation resistance
     100MΩ
     Electric strength
     1500V AC/1min
   • Output voltage
     Dew-point temperature
     -4.5 ~ +6.0V / -45.0 ~ +60.0°C
     Dry-bulb temperature
     -5.0 ~ +8.0V / -50.0 ~ +80.0°C
   • Permission load resistance
     More than 10kΩ
   • Comprehensive accuracy (The accuracy of the sensor is not included)
     Dew-point temperature
     Accuracy rating
     ±0.6% F.S.
     Temperature drift
     ±0.5%/10°C
     Dry-bulb temperature (Room temperature)
     Accuracy rating
     ±0.35% F.S.
     Temperature drift
     ±0.5%/10°C
d) Input and output connector
   - Power supply input: 3P inlet Connector
   - Sensor input: Product by JAE
     - Dew-point signal input: MS3102A 14S-6S Receptacle
     - Dew-point power supply output: MS3102A 14S-7S Receptacle
     - Dry-bulb signal input: MS3102A 14S-2S Receptacle
   - Analog output: Product by TAJIMI 2 outputs each (2 connectors)
     - Dew-point signal output: PRC03-21A10-4F Receptacle
     - Dry-bulb signal output: PRC03-21A10-3AF Receptacle

e) Power supply switch: Short circuit breaker With a test button (gray button)
   - Rated current: 20A
   - Short sensitivity current: 30mA

2.3 Test room and Measurement room cable
   - Electric wire: 1.25sq Vinyl cap tire electric wire 3 set
   - Cable length: Production according to installation environment.
JIS 19 inch cabinet rack mount type
Changed so that the sensor mounting part opens to the left and right.