

APPLICATIONS

- * Industrial Process Monitoring / Air Conditioning / Environmental Ventilation Control
- * Buildings, factories, hospitals, clean rooms, laboratories , weather stations Environmental monitoring
- * Storage rooms, environmental chambers, greenhouses, mushroom farms
- * Semiconductor, electronics, paper, printing, textiles, steel and iron Industry, food, chemical, pharmaceutical biotechnology industry



SPECIAL FEATURES

- Industrial sensor comes with high accuracy and long-term stability
- Capable of temperature compensation and linear adjustment
- Multifunction physical quantities — temperature & humidity/dew point/frost point/wet-bulb temp./vapor pressure/mixture ratio/absolute humidity/specific enthalpy
- Standard 2 analogue output or Modbus RS-485
- Option analogue output+ RS-485
- Probe : PC or S.S. ; Remote type : PVC or TEFLON cable
- Power supply : 8-35VDC and 12-35VAC
- RS-485 and Modbus RTU
- Free programmable software - physical quantities/output/data logger/charts/calibration
- Option : USB to RS-485 Converter

The TB720 transmitter family offers reliable performance for a wide variety of ordinary industrial humidity measurements.

The FTI Humidity and Temperature Transmitter Series TB720 is designed for demanding industrial applications where stable measurements and extensive customization are essential. With multiple options to choose from, the instrument can be tailored to meet the specific needs of each individual application.

Proven Sensor Performance

The TB700 series incorporates FTI 20 years of experience in industrial humidity measurement. The updated fourth-generation sensor provides accurate

and stable measurement even in environments with high humidity or chemical contaminants.

Chemical Purge Minimizes Effects of Contaminants

In environments with high concentrations of chemicals and cleaning agents, the chemical purge option helps to maintain measurement accuracy between calibration intervals.

The chemical purge involves heating the sensor to remove harmful chemicals. The function can be initiated manually or programmed to occur at set intervals.

Specification

Input

input type Capacitive Humidity Sensor & PT 100Ω class A

Working Range Suggestion

temperature 0~50°C ; -40~+80°C(TB700/TB720/TB721)
 -40~+120°C (TB733) ; -40~+150°C (TB735)
 -40~+80°C(TB720/TB730)
 humidity 0~100%
 dew point -40~+60°C

Frost Point(F) 、Wet-bulb Temperature(W) 、Vapor Pressure(E) 、Mixture Ratio(R) 、
 Absolute Humidity(V) 、Specific Enthalpy(S) : please refer to physical quantity measuring range list

Output

output standard RS-485 or 2 analogue output
 0-20mA/4~20mA/0~1V/0-5V/0-10V
 signal Connection 3-wire
 modbus RS-485 (programmable)
 and 2 analogue output
 display type LCD Module with back light, double line character
 display range upon request, one decimal place
 height of character 5.56mm

Linear Accuracy (at 25°C)

temperature $\pm 0.3^{\circ}\text{C} \pm 0.002^{\circ}\text{C} \times t_{\text{actual}}$
 humidity $\pm 2\%\text{RH}(10\%\sim 90\%)$
 temperature influence of body (at+25°C) 0.05%RH/°C
 load Resistance current output : max. 500Ω / voltage output : min. 10KΩ
 output calibration (ZERO & SPAN) software
 response time t90 (temp. at +25°C) < 20S (membrane filter / S.S. metal grid filter
 with mesh) ; < 30S(sintered filter)

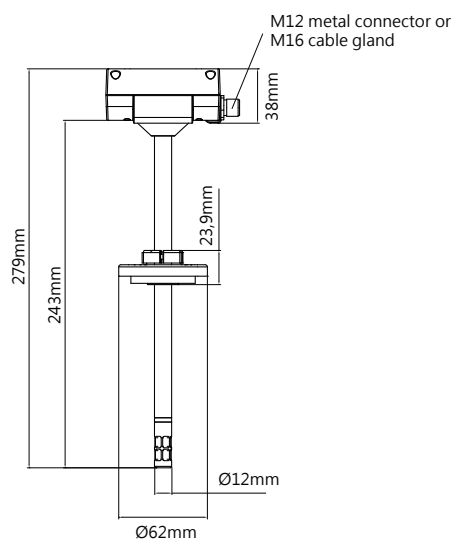
Environment

Media measured air
 Working temp. for housing -20~+60°C
 Working humidity for housing 0~95%(non-cond.)
 Working temp. for housing with display 0~60°C
 Working temp. for probe PC probe : max. 120°C ; S.S. probe : max. 180°C
 Cable (remote type) PVC cable : max. 80°C ; TEFLON cable : max. 180°C
 Storage temperature -25~+60°C
 proof pressure for S.S. probe 10bar
 filter PC membrane filter (standard : PC probe)
 sintered filter (standard : S.S. probe)
 CE certification EN 61326-1 : 2006 、 EN 61326-2-2 : 2006
 Emissions
 EN 55011 : 2009/A1 : 2010
 Immunity
 IEC 61000-4-2 : 2008
 IEC 61000-4-3 : 2006 / A1 : 2007 / A2 : 2010
 IEC 61000-4-8 : 2009

Electrical

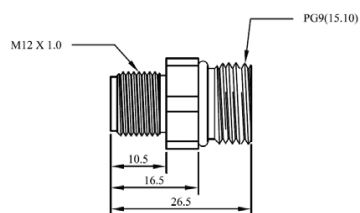
Power supply 8~35VDC / 12~30VAC
 Current consumption DC 24V : 60mA / DC 12V : 120mA
 AC 24V : 140mA / AC 12V : 230mA
 Electrical connection M12 metal connector with 2 m cable
 or terminal (cable gland)
 Protect degree housing : IP65 ; probe : IP 20
 Electric protection ◎Polarity protection ◎over-voltage ◎short-circuit
 Installation PC probe : Plastic flange (standard)
 Housing PC fire-proof class (PC-110) (UL94V-2)
 Probe PC fire-proof class (PC-110) / S.S. (SUS304)

Dimension Drawing

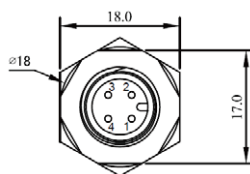


Electric Connector

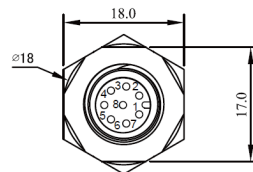
unit : mm



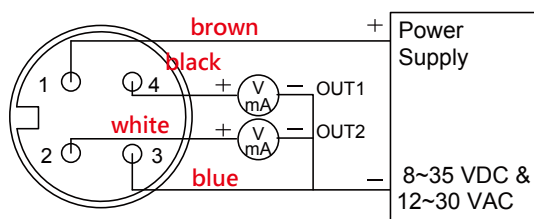
【 M type (M12-4PIN metal connector) 】



【 M type (M12-8PIN metal connector) 】



Analogue Diagram



M12 connector

M type (4P)

Mounting Options



*Mounting with Wall
Mounting Kit* S213*



*Mounting with DIN Rail
Installation Kit S220*



*Pole Installation with Installation
Kit for Pole or Pipeline A315/
A320*



*Mounting Rain Shield with
Installation Kit F450*