

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 TB730 transmitter family offers reliable performance for a wide variety of ordinary industrial humidity measurements.

The FTI Humidity and Temperature Transmitter Series TB730 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	0~100 °C
	-40~+120 °C ; -40~+150 °C
	-40~+180 °C
humidity	0~100%
dew point	-20~+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	$\pm 0.15^{\circ}\text{C} \pm 0.002^{\circ}\text{C} \times t_{\text{actual}}$
humidity	$\pm 1.5\%\text{RH} \dots \pm 2.0\%\text{RH}$
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)

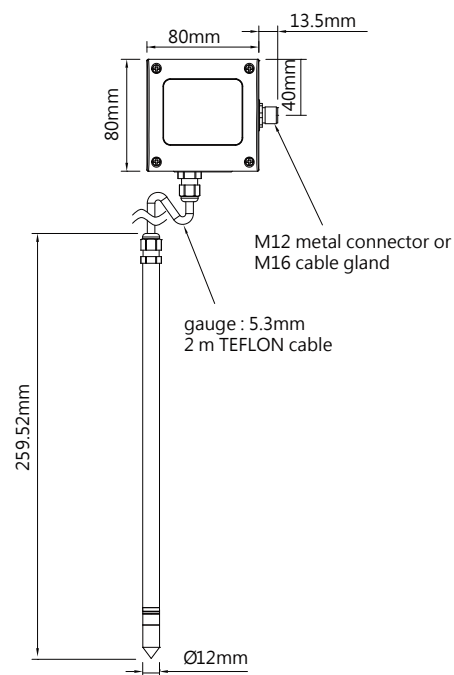
Environment

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

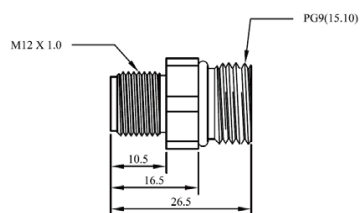
Power supply	8~35VDC / 12~30VAC
Current consumption	DC 24V : 60mA / DC 12V : 120mA AC 24V : 140mA / AC 12V : 230mA
Electrical connection	M12 metal connector with 2 m cable or terminal (cable gland)
Protect degree	housing : IP65 ; probe : IP 20
Electric protection	◎Polarity protection ◎over-voltage ◎short-circuit
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

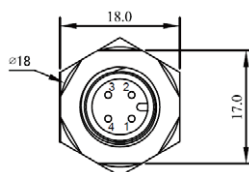


Electric Connector

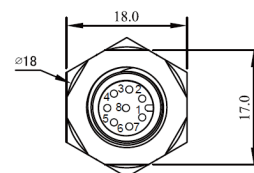
unit : mm



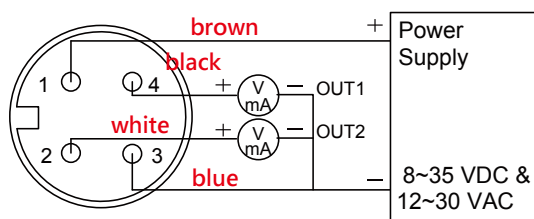
【 M type (M12-4PIN metal
connector) 】



【 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*