

## Microprocessor based transmitter for measurement of:

- Humidity
- Temperature
- Mixing Ratio
- Dewpoint

### Application

TVI-MFHHT is a transmitter used for all types of humidity and temperature measurement within the range -30...+80 °C and 0...100 % RH for measurement of:

- Humidity % RH
- Temperature °C / K / °F
- Dewpoint °C / K / °F
- Mixing ratio g/kg

TVI-MFHHT is available with the sensor attached to the transmitter or with remote cable for duct mounted sensors.

### Installation

MF-HTT is designed to be placed on a wall or recessed mounting through a wall or a cabin door. When recessed mounting, a mounting kit, MFM-Panel is used.

### Construction

TVI-MFHHT is equipped with an alphanumeric 2-line display with 32 signs. Setting and programming is made by four keypads on the front. Two parameters may be displayed simultaneously.

TVI-MFHHT has two analogue outputs to be used for RH, Temp, Dewpoint and Mixing ratio.

The output is possible to set 0/2...10VDC or 0/4...20 mA.

The output is scaleable for set ranges and for all parameters.

### Humidity sensor

The sensor is of capacitive type and laser trimmed to a measurement error of  $\leq \pm 2\%$  RH. The humidity sensor is delivered with a calibration protocol for 0% and 75.3% RH.

The sensor is interchangeable and after programming of the two points a measurement error of  $\leq \pm 2\%$  RH is reached.

The temperature measurement is made with a Pt1000 element with measurement error of  $\leq \pm 0.5$  °C.

The humidity sensor has a very good longtime stability, in process with  $\leq \pm 1\%$  RH for 5 years with an average of 50 % RH.



### Calibration of the humidity sensor

The unit is factory calibrated to a measurement error of  $\leq \pm 2\%$  RH according to the calibration protocol for the humidity sensor.

MF-HTT may be calibrated in the field in one or two points. A one-point calibration is possible during operation with a reference humidity instrument without interruption of the process.

### Supply

TVI-MFHHT is designed for power supply 24 VAC or 20...32 VDC.

For other supply voltages or for galvanic separation there are transformers (external) available as options.

### Alarm

TVI-MFHHT is as standard equipped with a visible alarm for selectable parameter with both min. and max.level. Normal is indicated with a green LED and alarm with a red LED.

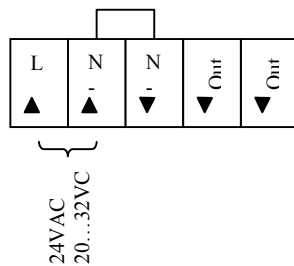
The red LED is lit at achieved level and after a programmed time delay the LED will change to flashing.

## Technical data

<b>Display:</b>	Alphanumeric, 2-line, 32 signs
<b>Supply voltage:</b>	24 _ 15% VAC 20...32 VDC
<b>Power consumption:</b>	Max 3 VA (24VAC)
<b>Measuring range</b>	
Temperature:	-30...80 °C
Humidity:	0...100 % non condensing
Dewpoint:	-30...80 °C
Mixing ratio:	0...600 g/kg
<b>Measurement error</b>	
Humidity:	<±2 % RH
Temperature:	<±0.5 °C
<b>Response time:</b> (low air flow)	30 seconds
<b>RH-stability:</b>	±1 % at 50% RH during 5 years
<b>Output:</b>	Two analogue outputs 0/2...10 VDC, 0/4...20 mA selectable and scaleable
<b>Ambient temp:</b>	0...50°C
<b>Alarm (visible):</b>	Two separate alarms high & low Red LED, alarm indication
<b>Degree of protection:</b>	IP 65, ABS plastic
<b>Sensor protection:</b>	Sintered metal filter
<b>EI-connection:</b>	Max 2 x 1.5 mm <sup>2</sup> per connection 2 pcs holes
<b>Cable entry:</b>	Pg 11 / Pr 18,6 (cable conn. not included)
<b>Dimensions:</b>	B x H x D = 120 x 122 x 62 mm
<b>Weight:</b>	0.5 kg

## Connection:

24VAC, 20...32 VDC  
(Standard)



## Maintenance

MF-HTT normally needs no service.  
The sintered filter must be cleaned at dirty applications.

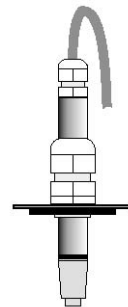
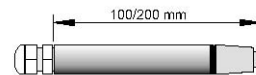
## Delivery

- MF-HTT
- Alternative-sensors
  - 1) Room sensor mounted
  - 2) Duct sensors mm, cable length 2 m
  - 3) -" 200 mm, -" 2 m
  - 4) -" 100 mm, -" 5 m
  - 5) -" 200 mm, -" 5 m
  - 6) -" 100 mm, -" 10 m
  - 7) -" 200 mm, -" 10 m

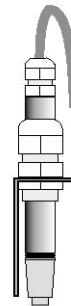
## Accessories

- Attachment for duct sensor
- Wall attachment for duct sensor
- Recessed mounting kit
- External transformer 24, 115, 230 VAC
- Mounting kit for DIN-rail
- Exchange sensor

Duct sensor  
Sensor length 100/200mm



Attachment for  
Duct sensor



Wall Attachment for  
Duct sensor