

Programmable Humidity- & Temperature transmitter and controller

MF-HTT

Version 3.x

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APPLICATION

MF-HTT is a transmitter and controller 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**
- ✓ **PI-Controller**

MF-HTT 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

MF-HTT is equipped with an alphanumeric 2-row display with 2x16 characters. Setting and programming is done with a keypad on the front. Two parameters may be displayed simultaneously.

MF-HTT has two analogue outputs to be used for actual value or control output of RH, Temp, Dewpoint and Mixing ratio.

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

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

HUMIDITY SENSOR

The sensor is of capacitive type and lasertrimmed to a measurement error of $< \pm 2\%$ 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 $< \pm 2\%$ RH is reached.

The temperature measurement is made with a Pt-1000 element with measurement error of $< \pm 0,3\text{ °C}$.

The humidity sensor has a very good longtime stability, in process with $< \pm 1\%$ 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 $< \pm 2\%$ 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

MF-HTT 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

MF-HTT 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.

PI-CONTROLLER

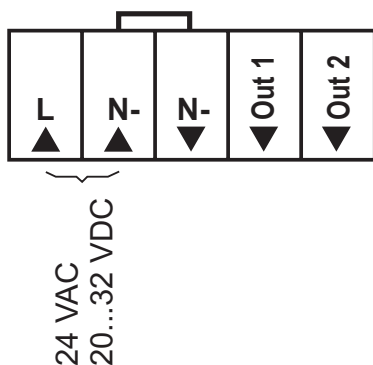
MF-HTT with programme version 3.0 or later is equipped with a PI-control function for one selected measuring parameter.

TECHNICAL DATA:

Display:	Alphanumeric LCD, 2-row, 2x16 characters
Supplyvoltage:	24 ± 15% VAC 20...32 VDC
Power-consumption	Max 3 VA (24VAC)
Measuring range	
- Temperature:	-30...80 °C
- Humidity:	0...100 % non condensing
- Dewpoint:	-30...80 °C
- Mixing ratio:	0...25 g/kg
Measurement error	
- Humidity:	<±2 % RH
- Temperature:	<±0,3 °C
Response time: (low air flow)	30 seconds
RH-stability:	±1 % at 50% RH during 5 years
Output:	Two analogue outputs for actual value/control output: 0/2...10 VDC, 0/4...20 mA selectable and scaleable
Ambient temp:	0...50°C
Alarm (visible):	Two separate alarms high & low Red LED, alarm indica- tion
Degree of protection:	IP 65, ABS plastic
Sensor protection:	Sintered plastic filter
EI-connection:	Max 2x1.5 mm ² per connection
Cable entry:	2 pcs holes M16x1,5 (cable conn. not inclu- ded)
Dimensions:	W x H x D = 120 x 122 x 62 mm
Weight:	0,5 kg

CONNECTION:

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



MAINTENANCE

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

DELIVERY OPTIONS SENSOR MF-HTT:

Art no	Probe	Cable	Note
60-5462-1	100 mm	0 m	"ROOM SENSOR"
60-5462-20	100 mm	2 m	
60-5462-21	200 mm	2 m	
60-5462-30	100 mm	5 m	
60-5462-31	200 mm	5 m	
60-5462-40	100 mm	10 m	
60-5462-41	200 mm	10 m	



Ex. Sensor probe with cable

ACCESSORIES

- Duct mounting kit
- Wall mounting kit
- Recessed mounting kit
- External transformer
24, 115, 230 VAC
- Mounting kit for DIN-rail
- Exchange sensor module

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