

DUCT TYPE

T&H Transmitter

4-20mA, 0-5VDC, 0-10VDC, RS485 OUTPUT

Model No.: MTH500S



General Specifications

GS 19A16D01-01EN

TEMPERATURE HUMIDITY
HIGH QUALITY
MTH500S

Overview

MTH500S is high quality Duct type temperature and humidity sensor, adopting Switzerland advanced sensor module and high performance single chip designed for temperature humidity measurement in HVAC, Central air conditioner; Greenhouse, integrated equipment, dryer Industry, building automation etc. **high humidity environment application.**

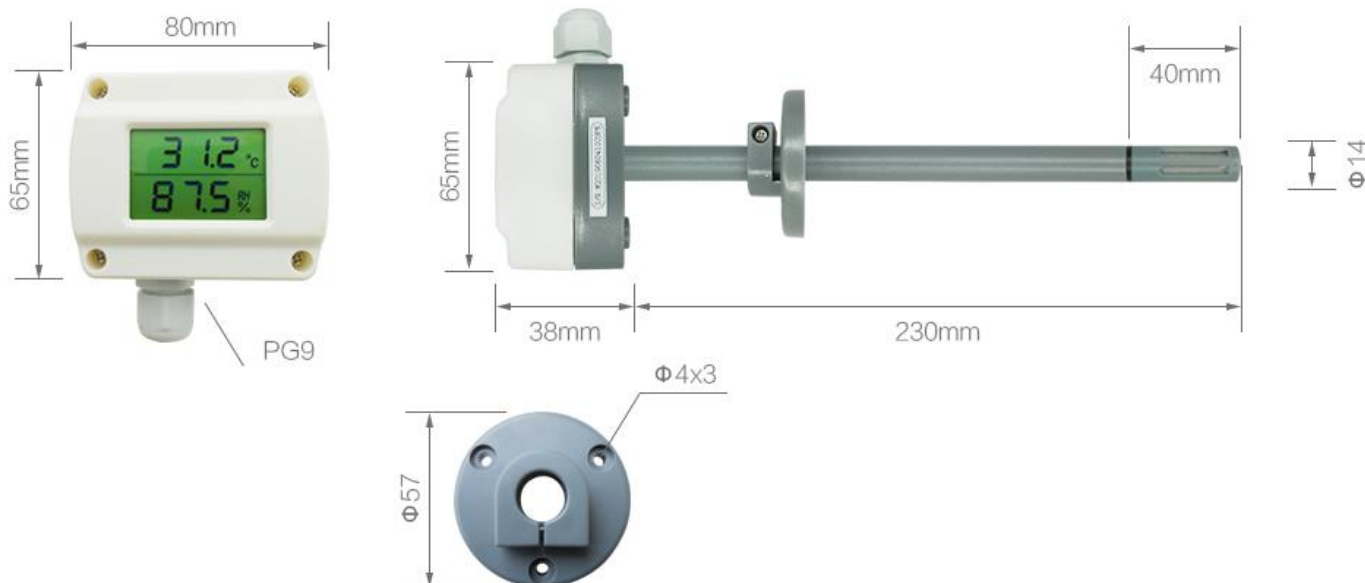
Feature

- High Accuracy, High Stability; Anti-Interference dealing on PCB
- High sealing technology and excellent three-proof coating protection
- Range: T: -20 to 80°C, 0-50°C, -40 to 60°C; H: 0-100%
- Temperature range can be set by inner DIN switch
- With offset function by built-in keys
- Output: 4-20mA, 0-5VDC, 0-10VDC, RS485 output
- Probe can be with dust-proof, water-proof type, optional
- Accuracy: T: $\pm 0.3^{\circ}\text{C}$, H: $\pm 3\%$; Resolution: T: 0.01, H: 0.1%RH
- Protection: Electrical housing: IP65; Probe: IP54
- Wide power supply: 12-36VDC; 15-36VDC (4-20mA only)

Size (mm)



**MTH500S Duct Type
Temperature Humidity Transmitter**
With Indicator ,Optional



Specification

Accuracy	T: $\pm 0.3^{\circ}\text{C}$ (Full range in average);	Power Supply	15-36VDC (4-20mA Output);
	RH: 3%RH (including non-linear, repeatability, hysteresis)		12-36VDC (0-5VDC, 0-10VDC; RS485 Output)
Long Stability	T: $<0.04^{\circ}\text{C}/\text{year}$;	Power consumption	60mA
	RH: $<0.05\%\text{RH}/\text{year}$	Housing Material	ABS
Range	T: -20 to 80°C ; 0 to 50°C , -40 to 60°C ;	Probe Type	Dust-proof (standard); water-proof
	RH: 0-99.9%	Installation	Duct Type
Resolution	T: 0.1°C , RH: $0.1\%\text{RH}$	Case Size	80mmx65mmx38mm (LXD);
Response time	T: 6t(63%): min=5s, max=30s;	Probe Size	230mmx 14mm (LXD)
	H (90% static air): 8second	Terminals Size	1X2.5 mm ² or 2X1.5 mm ²
Load resistor	$<500\text{ohm}$	Entry connector	M16X1.5mm
Output	4-20ma, 0-5VDC, 1-5VDC; RS485 output	Protection	Electrical Case: IP65; Probe: IP54
RS485 Protocol	Standard MODBUS-RTU protocol	Working Ambient	T: -40 to 80°C , H: 0-99.9%, no dew
Baud rate	9600; customized	Storage Temperature	10 - 50°C (0 - 125°C at peak)

Diagram

MTH500S: 4-20ma(standard), 0-5vdc,1-5vdc output Terminals

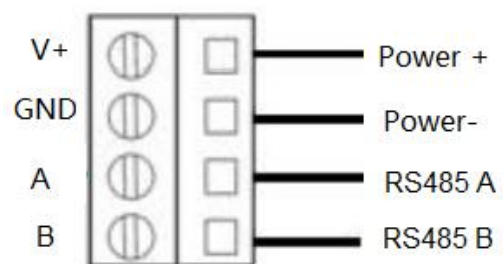
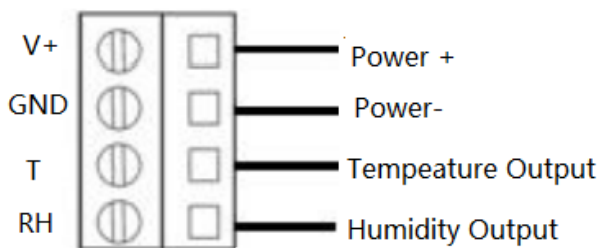
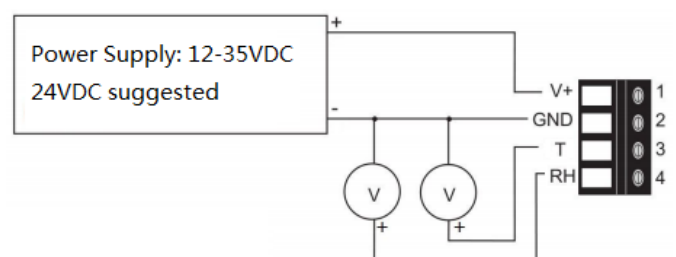
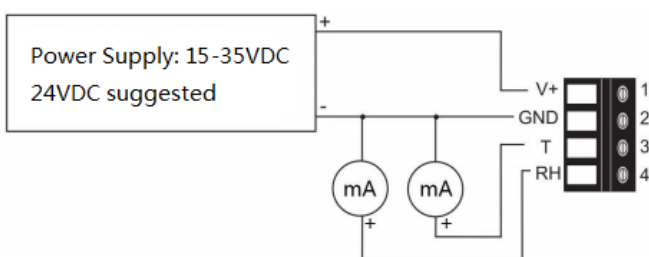
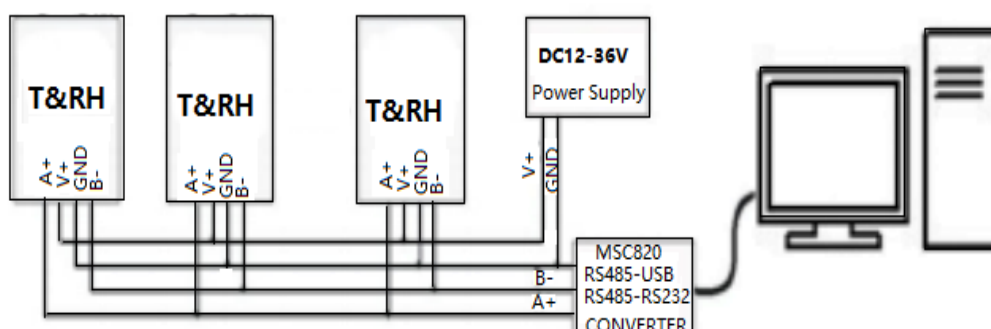


Diagram: 4-20mA,0-5VDC, 0-10VDC Terminals



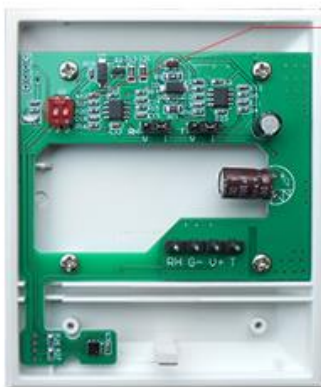
MTH500S: RS485 Communication, Standard MODBUS-RTU Protocol

Configurable with PLC, DCS, HMI, SCADA, OPC flexibly



Temperature Range Setting (4-20mA, 0-5VDC, 0-10VDC)

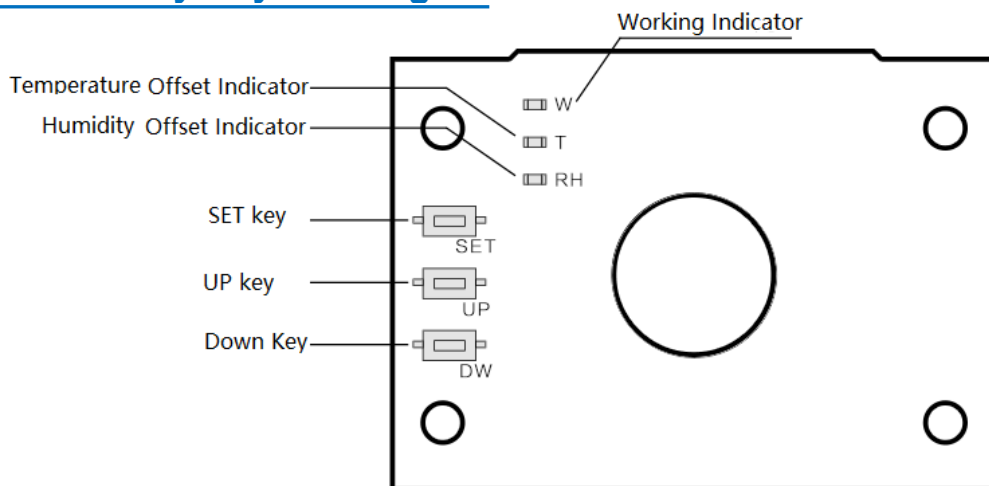
Temperature Range Setting



DIN Switch ρ	P1	P2	P3	P4 ρ
Range ρ	0 to 50°C ρ	-20 to 80°C ρ	-40 to 60°C ρ	Reserved ρ

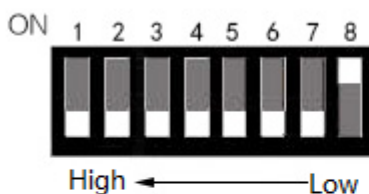
△ Temperature Range Setting

Offset Function by Keys Setting



RS485 Address Setting (RS485 Output: -20 to 80°C)

RS485 Communication Address Setting



DIN Switch on ON: 1

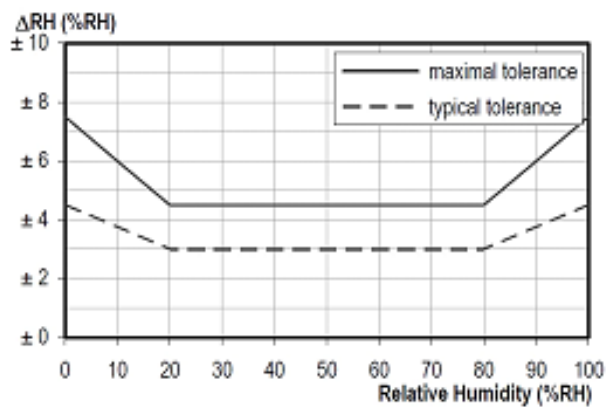
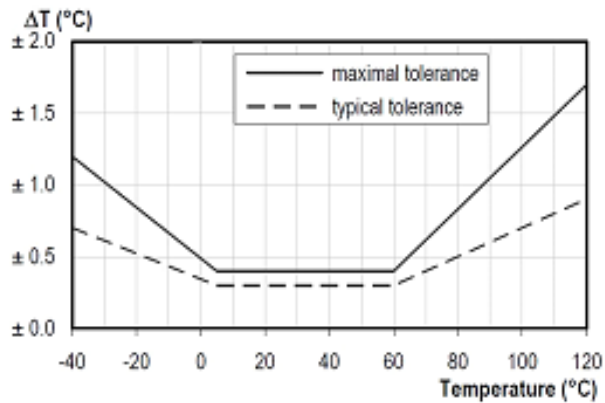
DIN Switch on OFF: 0

Address Setting as Follows

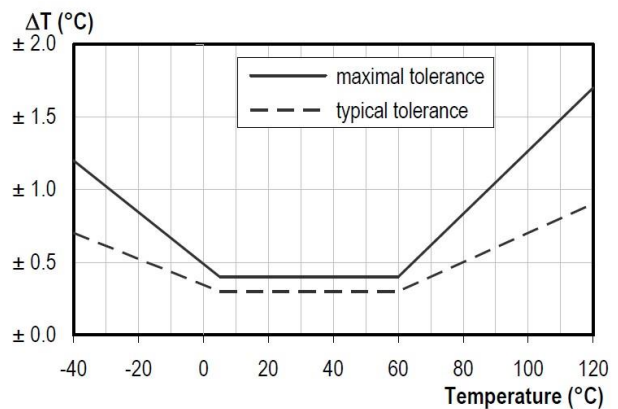
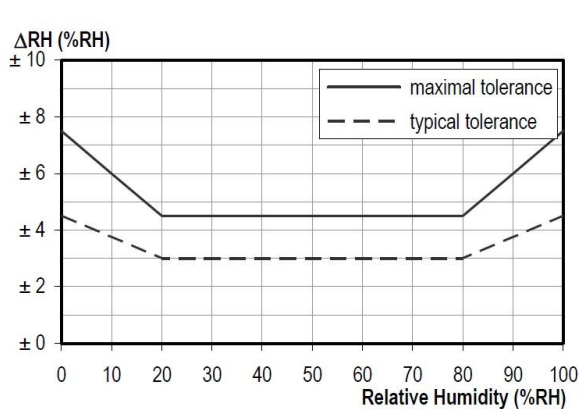
DIN Switch Address	Decimal System Address
00000001	1
00000010	2
00000011	3
00000100	4
.....
11111111	255

Accuracy

Analog Output: 4-20mA, 0-5VDC, 0-10VDC



RS485 Output



Order Code

MTH500S temperature and humidity sensor				
Order Code: MTH500S-NAN				Description
MTH500S	-X	X	X	MTH500S Duct Type temperature and humidity sensor
Indicator	-N			None
	-D			Yes, with indicator
Output Type		A		4-20mA
		A2		4-20mA (2 wire, special), when temperature measured, humidity should be measured
		V		0-5VDC
		V2		0-10VDC
		R		RS485 output
Probe Type		N		Standard type, dust-proof
		W		Water-proof (special)