

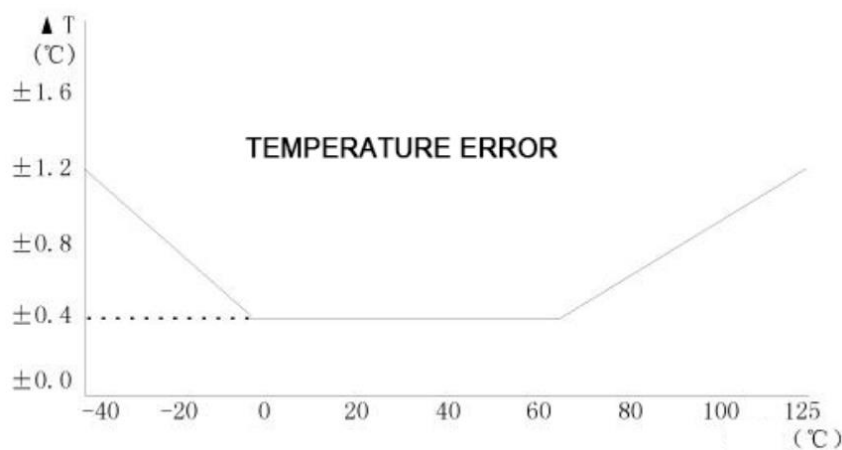
CWT-XYTH Temperature Humidity Transmitter Manual

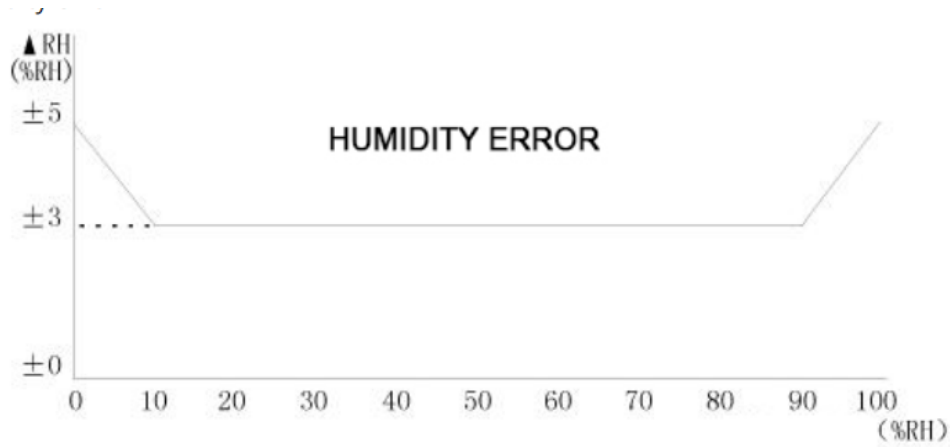
CWT-XYTH-S (RS485 type)



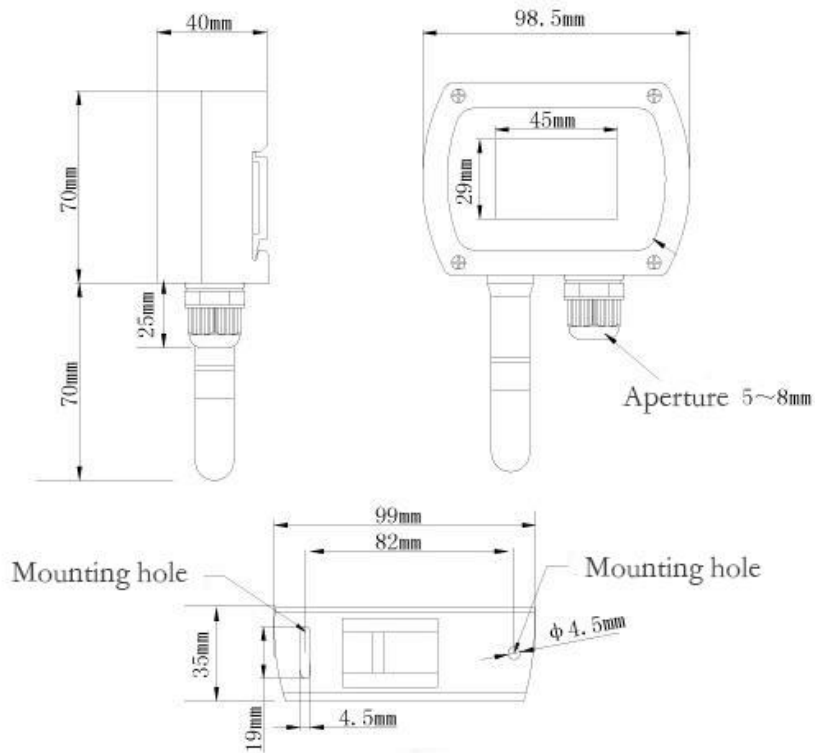
Basic parameters

Power supply	12-24VDC
Power consumption	≤0.2W
Temperature measuring range	-40~0~125°C
Humidity measuring range	0-100%RH (relative humidity)
Working conditions	ambient temperature -40~85°C, ambient humidity 5%~95%RH
Stable performance	1%RH FS/year, ±0.2°C/year
Seismic performance	5g (20...2000HZ)
Working environment	-40~85°C / 5~95%RH
Output	RS485 (Modbus RTU protocol)
Protection level	IP65
Measuring medium	gas (compatible with contact material)
Overall material	main body shell (contact) ABS engineering plastic

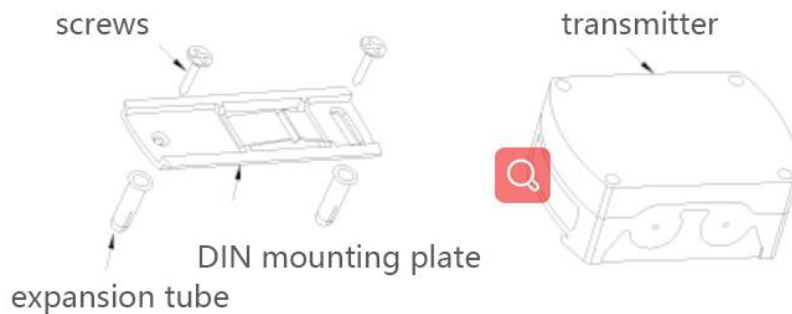




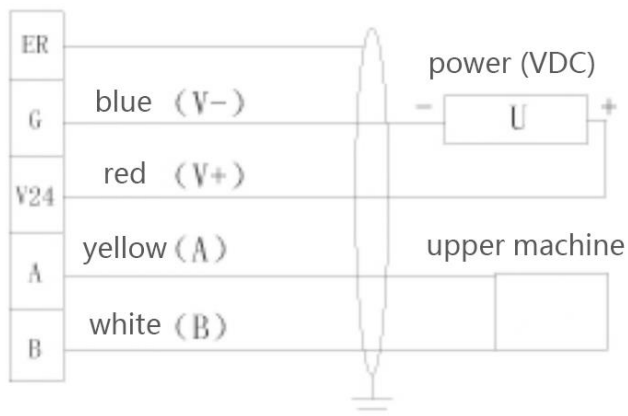
Size



Mounting method: Wall mounting or DIN



Open encloser to Wire



RS485 communication Default parameters: 9600,n,8,1

Default device address is 1

Modbus RTU protocol

Read status registers, read function code: 0x30					
Register address (Hex)	PLC Address (decimal)	meaning	Number of bytes	content	remark
0000	40001	temperature	2	0-1650 correspond to -40~125℃	Read
0001	40002	humidity	2	0-1000 correspond to 0-100%RH	Read
Parameters registers, read function code: 0x30, write function code: 0x60					
000F	40016	Slave ID	2	1-254	Read/Write

E.g. master read temperature humidity:

Address	Function Code	Start Address (Hi)	Start Address (Lo)	Number of Points (Hi)	Number of Points (Lo)	Error Check (Lo)	Error Check (Hi)
0x01	0x03	0x00	0x00	0x00	0x02	0xC4	0X0B

Sensor responds:

Address	Function Code	Number of byte	Humidity value	Temperature value	Error Check (Lo)	Error Check (Hi)
0x01	0x03	0x04	0x00 0xF8	0x01 0x77	0x3A	0x74

Temperature calculates:

00F8 (HEX)= 248 (DEC)

Output value 0~1650 corresponds to -40~125℃

Temperature=125-(-40)*248/1650-40=-15.2℃

Humidity calculates:

00177 (HEX)= 375 (DEC)

Output value 0~1000 corresponds to 0~100%RH

humidity=374*100/1000=37.5%RH

Set slave ID

E.g., set slave ID=9, Master sends

Address	Function Code	Start Address (Hi)	Start Address (Lo)	ID	Error Check (Lo)	Error Check (Hi)
0x01	0x06	0x00	0x0F	0x00 0x09	0x79	0xCF

Sensor responds:

Address	Function Code	Start Address (Hi)	Start Address (Lo)	ID	Error Check (Lo)	Error Check (Hi)
0x01	0x06	0x00	0x0F	0x00 0x09	0x79	0xCF

Enquiry slave ID

Master sends

Address	Function Code	Start Address (Hi)	Start Address (Lo)	Number of Points (Hi)	Number of Points (Lo)	Error Check (Lo)	Error Check (Hi)
0xFF	0x03	0x00	0x0F	0x00	0x01	0xA1	0xD7

Sensor responds:

Address	Function Code	Number of Points	address	Error Check (Lo)	Error Check (Hi)
0xFF	0x03	0x02	0x00 0x01	0x50	0x50