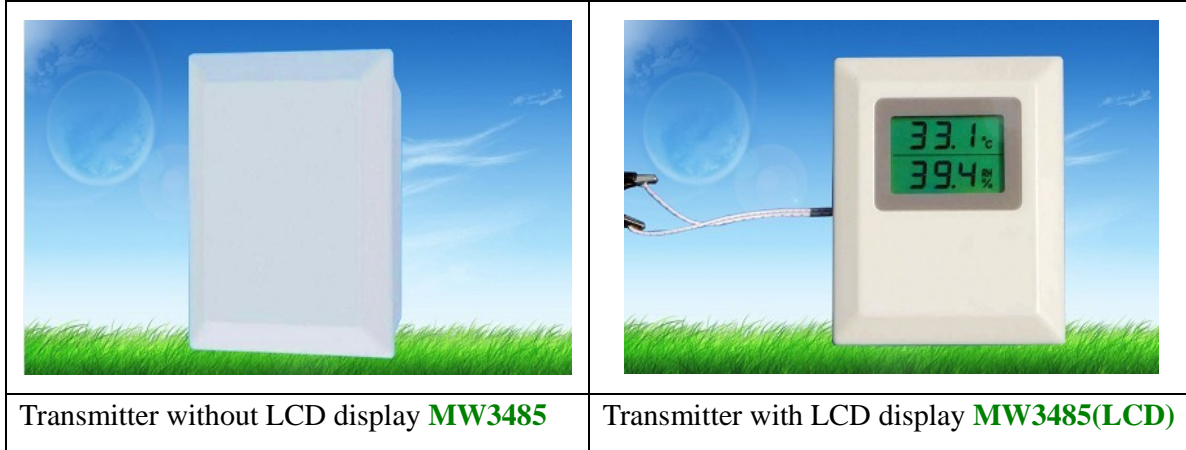


Relative Humidity & Temperature Transmitter



Capacitive humidity & temperature transmitter for Wall Mounting

1. Description:

MaxDetect capacitive humidity element based humidity & temperature transmitters are ideal solution for detecting relative humidity and temperature in applications such as HVAC in residential & commercial buildings. The capacitance element based transmitter is one of the most stable transmitters available and no recalibration required, **transmitters are temperature compensated and calibrated.**

MaxDetect transmitters are problem-free and accurate with long-term reliability by apply unique HydroProbe® digital technology, our transmitters are developed for high-precision measurement of relative humidity & temperature and transmitters are available for wall & duct & outdoor mounting.

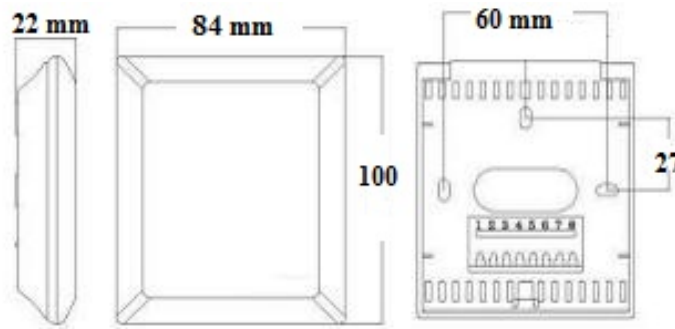
All MaxDetect transmitters can be equipped with industrial-class LCD display, LCD shows both humidity and temperature.

2. Technical Specification:

Power supply	12~36V DC
Humidity working range	0..100% RH
Humidity sensing element	Polymer humidity capacitor
Output for humidity	RS485 signal
Accuracy of humidity	+/-2% RH(10-95% RH, at 25Celsius); < +/-5% RH(-40..80Celsius)
Repeatability	+/-0.3% RH
Hysteresis	+/-0.3% RH
Sensitivity for humidity	0.1% RH
Drift rate per year	+/-0.5% RH

Temperature sensor	DS18B20
Accuracy of temperature	+/-0.3Celsius(at 25Celsius)
Output for temperature	RS485 signal
Temperature working range	Customer can select temperature range by dial-switches on PCB board: 0~50Celsius, -20~80Celsius, -40~60Celsius
Storage temperature range	-40..80Celsius
Case	ABS
Electrical connection	Screw connector(Max1.5mm ²)

3. Dimensions:(unit----mm)

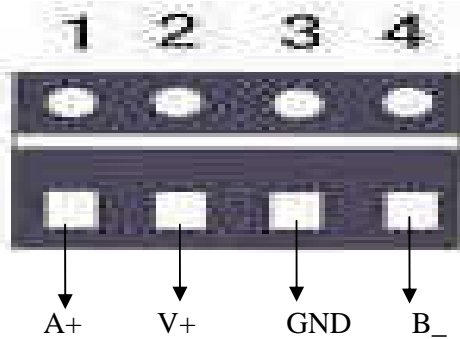


4. Wiring diagram

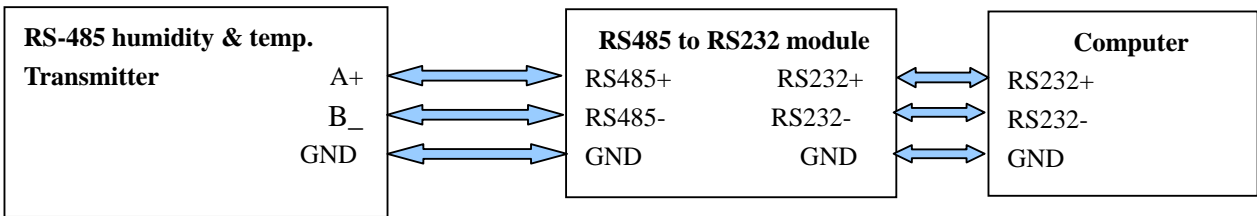


5. Electrical connection diagram

(1): Connection terminal



(2): Connection diagram between humidity transmitter and computer(example diagram)



6. Communication

(1). Set up Baud rate

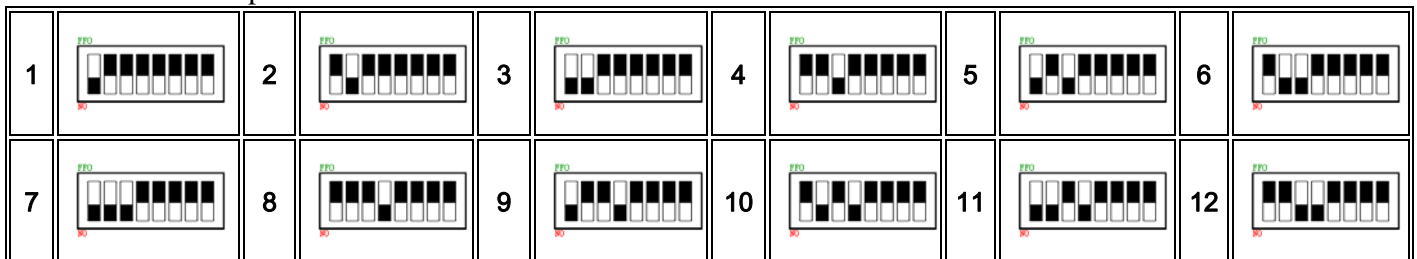
Set up Baud rate via dial switch located on humidity sensor's PCB board

1	2	bps
OFF/0	OFF/0	9600
ON/1	OFF/0	1200
OFF/0	ON/1	2400
ON/1	ON/1	19200

(2). Set up humidity sensor's address

Set up humidity sensor's address via dial switch located on humidity sensor's PCB board , from left side to right side, it's 8 7 6 5 4 3 2 1 on dial switch. Black color means to which direction the switch should be moved to

Below is example of address from 1 to 255.

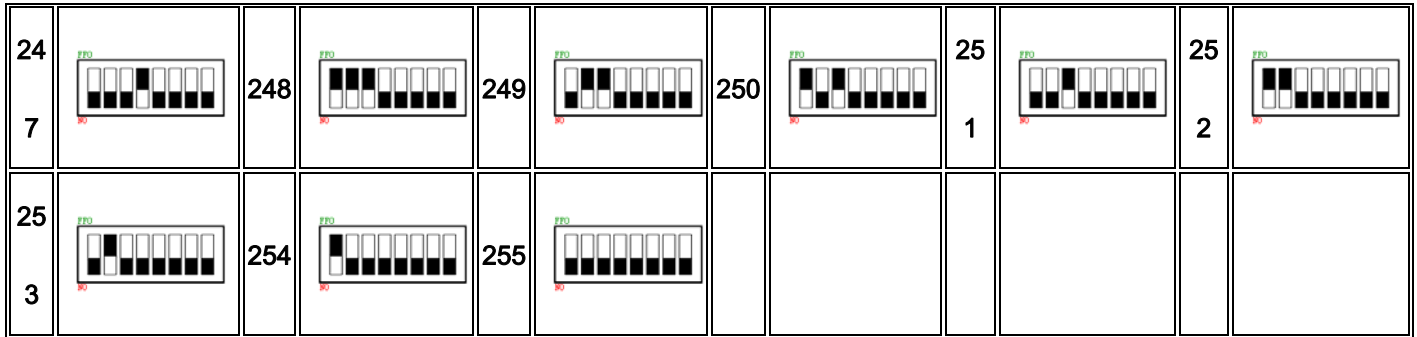


13		14		15		16		17		18	
19		20		21		22		23		24	
25		26		27		28		29		30	
31		32		33		34		35		36	
37		38		39		40		41		42	
43		44		45		46		47		48	
49		50		51		52		53		54	
55		56		57		58		59		60	
61		62		63		64		65		66	
67		68		69		70		71		72	
73		74		75		76		77		78	
79		80		81		82		83		84	

85		86		87		88		89		90	
91		92		93		94		95		96	
97		98		99		100		10		10	
10		104		105		106		10		10	
3								7		8	
10		110		111		112		11		11	
9								3		4	
11		116		117		118		11		12	
5								9		0	
12		122		123		124		12		12	
1								5		6	
12		128		129		130		13		13	
7								1		2	
13		134		135		136		13		13	
3								7		8	

13 9		140		141		142		14 3		14 4	
14 5		146		147		148		14 9		15 0	
15 1		152		153		154		15 5		15 6	
15 7		158		159		160		16 1		16 2	
16 3		164		165		166		16 7		16 8	
16 9		170		171		172		17 3		17 4	
17 5		176		177		178		17 9		18 0	
18 1		182		183		184		18 5		18 6	
18 7		188		189		190		19 1		19 2	

19 3		194		195		196		19 7		19 8	
19 9		200		201		202		20 3		20 4	
20 5		206		207		208		20 9		21 0	
21 1		212		213		214		21 5		21 6	
21 7		218		219		220		22 1		22 2	
22 3		224		225		226		22 7		22 8	
22 9		230		231		232		23 3		23 4	
23 5		236		237		238		23 9		24 0	
24 1		242		243		244		24 5		24 6	



(3). Data format from host

First byte	Second byte	Third byte	Fourth byte	Fifth byte	Sixth byte	Seventh	Eighth byte
Sensor's address	0X03	0X00	0X00	0X00	0X02	CRCL	CRCH

(4). Data format from humidity & temp.sensor

First byte	Second byte	Third byte	Fourth byte	Fifth byte	Sixth byte	Seventh byte	Eighth byte	Ninth byte
Sensor's address	0X03	0X04	Humidity integral part	Humidity decimal part	Temp. integral part	Temp. decimal part	CRCL	CRCH

(5). Calculation formula for value of relative humidity & temperature

Take how to calculate value of relative humidity for example.

First step: transform hexadecimal humidity data(Data A) received from sensor to decimal data(Data B).

Second step: Value of relative humidity=Data B divided by 10.

Cautions:

Proper location of the room humidity sensor is important to ensure accurate measurement of representative air samples. Place the sensor in an area of room that has good air circulation. Install the sensor on a flat interior surface, approximately 1.4m from the floor.

Avoid locating the sensor:

- * Near heat sources, such as radiant heat from the sun, heat from appliances, or from concealed pipe or chimneys
- * In areas subject to draft
- * Behind doors, draperies, or in corners
- * On walls having excessive vibration

* In corrosive environments such as swimming pools or hospital rooms