

Relative Humidity & Temperature Transmitter



Transmitter without LCD display



Transmitter with LCD display

MQ series *Capacitive humidity & temperature transmitter for Wall or Outdoor 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	0~5V DC or 0~10V DC or 4~20mA
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	0~5V DC or 0~10V DC or 4~20mA
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. Ordering guide:

MQ3005, output 0~5V DC for humidity & temperature both, without LCD display

MQ3105, output 0~5V DC for humidity & temperature both, with LCD display

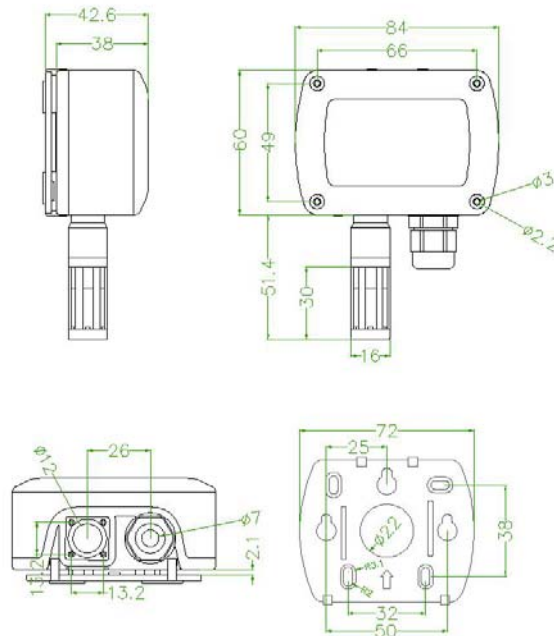
MQ3010, output 0~10V DC for humidity & temperature both, without LCD display

MQ3110, output 0~10V DC for humidity & temperature both, with LCD display

MQ3020, output 4~20mA for humidity & temperature both, without LCD display

MQ3120, output 4~20mA for humidity & temperature both, with LCD display

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

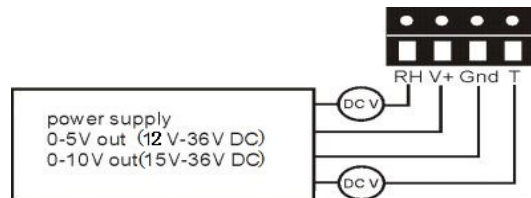


5. Electrical connection diagram

1). Diagram for voltage output

*Four-core shielded cable as outgoing line, the four cores are red wire, yellow wire, white wire, black wire.

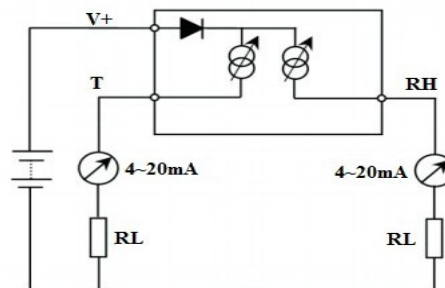
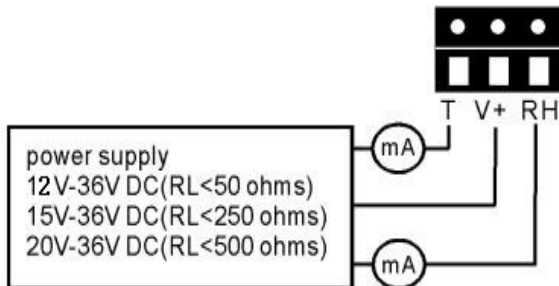
Wires	Function
1	Red wire----power supply
2	Yellow wire----RH signal
3	White wire----Temp. signal
4	Black wire----GND



2). Diagram for current output

*Three-core shielded cable as outgoing line, the three cores are red wire, yellow wire, white wire.

Wires	Function
1	Red wire----power supply
2	Yellow wire----RH signal
3	White wire----Temp. signal



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