XMT-9007C temperature & humidity control meter
# Operation Instruction

I. General introduction

The XMT-9007C temperature & humidity meter is a new intelligent meter based on the computer technique. It adopts a 2-row digital tube system to make a synchronous display of both the humidity measured value and the temperature measured value. Every datum concerned used for control purpose can be keyed in from the top panel which is accompanied by an actual time display. The temperature measurement sensor selects PT100, the humidity measurement selects high molecular sensor. This meter has a free setting temperature value for heating time proportional control or ON/OFF control (the temperature upper limit), and for cool ON/OFF control (the temperature lower limit); in addition, this meter also has a ON/OFF control system by a free setting of the upper and lower limits of the humidity. The meter is a high accuracy and high integrity meter for measuring temperature and humidity.

II. Main Technical Specifications

1. Accuracy: Temperature measurement accuracy $\pm 0.5\%$ F.S ± 1.0 character
    Humidity measurement accuracy $\pm 3\%$ F.S ± 1.0 character
2. Dry temperature measurement range: -50.0～200.0℃
3. Time proportional range: 1%-10%
4. Effective humidity measurement range: 5%-95%RH
5. Contact output capacity: 220V 5A (resistive)
6. Data-ratention time at power breakage: More than 10 years
7. Working power: AC85～242V 50～60Hz Power consumption: less than 5W
8. Normal working ambience: Temperature: 0-50℃;
    Relative humidity: 35%-85% non-corrosive gas occasion
9. After the power is connected, if the upper window displays "HH"or "LL", or the lower window displays "100%", please check up whether the wire of the sensor is broken, or a case of short circuit or other problem, such as wrong connection, etc.

## III. The frontal arrangement of the instrument
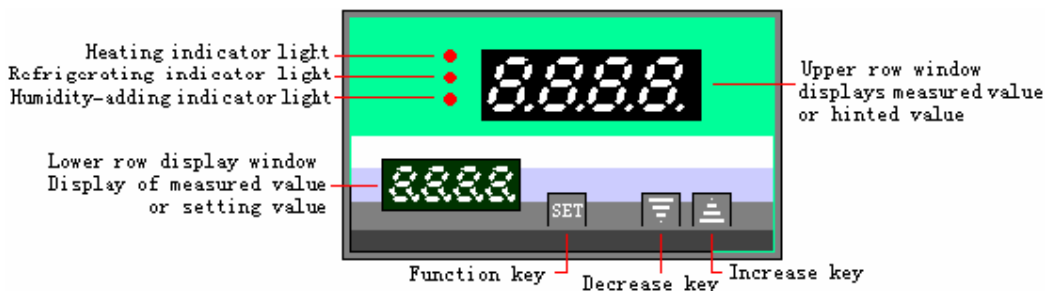
IV. The meter setting procedure:

1. Normal display status

During the normal use, the upper window displays the currently measured relative humidity value and the lower window displays the currently measured dry temperature value. The light of temperature-increase, refrigerating or humidity-increase is lightening respectively while it has output, and it is out while it has not output.

2. Setting parameters

Setting the different parameter: after the meter is powered, press the function key, then the upper row window displays "lock" and the lower row window displays the value. At the moment, just press both ▲ and ▼ keys and you will be able to do free value-setting within the fixed range on the meter. Pressing ▲ or ▼ for a long time can effect a quick successive decrease or increase. When the lower row window comes to the value required by you, please press the function key again, and the meter will enter into the next setting item. You may use the same method to set the upper limit for the dry temperature ℃⁻ the lower limit for the dry temperature ℃_, that for the humidity upper limit rH⁻ ,that for the humidity lower limit rH_, the revised value SC1 for the dry temperature Pt100, the revised value SC2 for the high molecular, heating drop in level Hy⁻ , refrigerating drop in level Hy_, time proportional range P, time proportional cycle. Please refer to the following set flow chart:
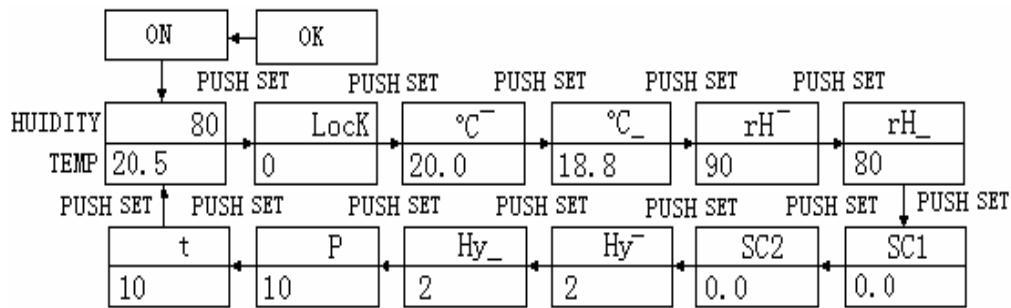
3.The meter control

(1) Two bit control: While P or t is zero, the meter has no time proportional control.

Heating:

Temperature value $>$ ℃_ + Hy⁻ , the heating light is out, the heating relay's high and com connect, low and com break.

Temperature value $<$ ℃_ - Hy⁻ , the heat light is lighten, the heating relay's high and com break, low and com connect.

℃_ - Hy⁻ $<$ temperature value $<$ ℃_ + Hy⁻ , ON/OFF control.

Refrigerating:

Temperature value $>$ ℃⁻ + Hy_, the Refrigerating light is lighten, the Refrigerating relay's high and com break, low and com connect.

Temperature value $<$ ℃⁻ - Hy_, the Refrigerating light is out, the Refrigerating relay's high and com connect, low and com break.

℃⁻ - Hy_ $<$ temperature value $<$ ℃⁻ + Hy_, ON/OFF control

Humidity-increase:

Humidity value $>$ rH⁻ , the humidity-increase light is out, the humidity-increase relay's high and com connect, low and com break.

Humidity value $<$ rH_ , the humidity-increase light is lighten, the humidity-increase relay's high and com break, low and com connect.

rH_ $<$ Humidity value $<$ rH- , ON/OFF control .

(2) Time proportional control: When P and t is not zero, the heating control output time proportional control according to the cycle time. The Refrigerating and humidity-increase is still use ON/OFF control.

V. The cipher lock item "lock"

When the "lock" item is "0", yon may alter all the parameters values. When the "lock" item is other than "0", altering the other parameters is not allowed.

VI. Connection scheme(consult)
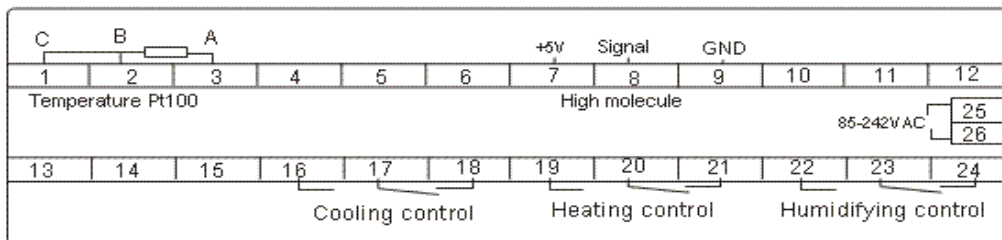
VII. Attentions

1. If all the figures display pulsate on the meter, check up whether the working voltage of the meter is normal, and correct it to the required specification.

2. If parameter cannot be altered, check up whether the "lock" is "0".

3. Setting the upper and lower limit of temperature and humidity: set upper limit first while raise; set lower limit first while drop; the upper limit must bigger 0.1 than the lower limit.

4. High molecule type humidity sensor should be mounted on some better occasion of the non-volatile oil, not the accumulation of dust, air mobility; to try to improve the measurement accuracy and to extend the maintenance cycle.

5. If the cooling output lights in the power-meter three minutes, refrigeration output terminals will delay 3 seconds output.