YB104TM/YB5140TM / YB5140TM-Z Digital thermometer instructions

1.OVERVIEW

1.1 Strong anti-interference ability, stable performance, high accuracy and simple circuit. The shell is easy to install with standard embedded chassis.

1.2 With the thermal resistance, thermocouple sensor to complete the measurement of temperature, transformation, display, and with the adjustment, digital filtering

1.3 Input signal type: thermal resistance and thermocouple (Please indicate when ordering)

INCH Code:

Thermal resistance: 0：Pt100（-199.9~600.0℃） 1：Cu100（-50.0~150.0℃） 2：Cu50（-50.0~150.0℃）
3：BA1（-199.9~600.0℃） 4：BA2（-199.9~500.0℃） 5：G53（-50.0~150.0℃）

Thermocouple: 6：K（-200~1300℃） 8：R（0~1700℃） 9：J（-200~1200℃） 11：N（-200~1300℃）
12：E（-200~1000℃） 13：T（-200~400℃） 14：Wre325（0~2300℃）

2.TECHNOLOGY PERFORMANCE

2.1 Power supply please see the product label:
DC5V/12V/24V/8-24V±10% can selectable; working current less than 100mA
AC100-240V power consumption: <0.5W

2.2 Measurement accuracy: thermal resistance 0.3%FS thermocouple 0.5%FS

2.3 YB5140TM/YB5140TM-Z size: 79X43X25mm,Mounting hole size：76.5X39.2
Display word height: 0.56 inches high brightness red LED (other colors can be customized)

2.4 YB104TM size: 36X84X64mm,Mounting method: universal 35X7.5X1mm din rail
Display word height: 0.36 inches high brightness red/blue LED

2.5 Operating temperature: -10~50 Celsius degree (relative humidity below 80%)

3.PARAMETER TABLE(This parameter has been set up and tested, not easily changed)

NO.	Symbol	Name	function	Range	Explain
1	InCH	INCH	Signal input type	0-14	Factory settings, do not change
2	dP	Dp	Decimal places	0-1	3.2
3	cF	CF	Degrees Celsius and Fahrenheit choice	0-1	0 Centigrade , 1 Fahrenheit degree
4	Lc	LC	Zero correction value	-1999~9999	Display value = zero correction before the display value + LC
5	Fc	FC	Full degree correction value	0.500~1.500	Display value = full correction before the display value x FC
6	FLtr	FLTR	Digital filter time constant	1~20	The larger the number, the stronger the filtering effect
7	cSc	CSC	The correction value when measuring the cold end of thermocouple	-20~20	3.3
8	tY1	TY1	Alarm output type	0-2	0：Upperlimit , 1：lowerlimit , 2：Upper and lower bounds
9	AL1	AL1	Alarm value	-1999~9999	
10	HY1	HY1	Return difference	0~9999	

Note：The above 8-10 points for YB104TM & YB5140TM-Z only.

3.1 The adjustment can reduce the zero error and full error caused by sensors, transmitters, leads and so on.

3.2 Dp Decimal places: Thermal resistance class has optional 1-bit digital, when thermocouple K,E,T,J measurement range of less than 1000 degrees has optional 1 decimal.(measurement accuracy unchanged)

3.3 CSC galvanic cold patch correction. If the cold end compensation temperature error, can be corrected by the parameters: before the compensation temperature + CSC = compensation temperature

4.PARAMETER SETTING INSTRUCTIONS

4.1 Press and hold " MODE" key, then press "SET" key to enter parameter setting, the meter is showing the symbol of current parameter.

4.2 At this moment, press " SET" key repeatedly to switch the next parameter setting.

4.3 If you need to set the parameter, release all the keys, then press "MODE" key again to enter & set.

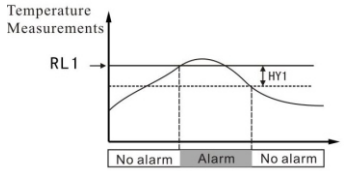
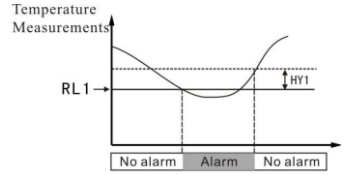
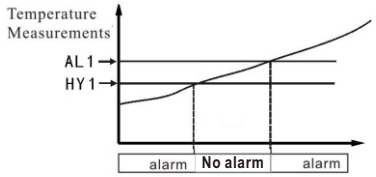
4.4 At this moment, press " MODE" key repeatedly to switch the flashing place in display, press "SET" key repeatedly to increase the value

4.5 After setting done, press and hold "MODE" key, then press "SET" to confirm.

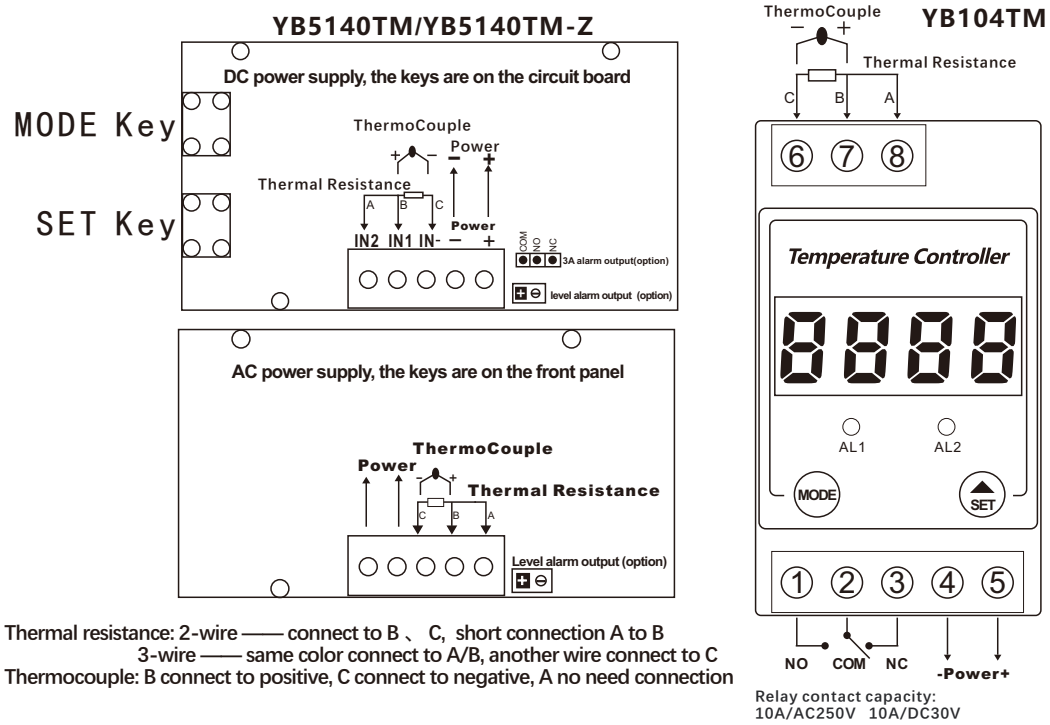
4.6 If no key pressing within 60 seconds, it will be automatically exit this mode.

5.ALARM ACTION DESCRIPTION(for YB104TM & YB5140TM-Z only.)

Alarm output mode (alarm signal: high level signal effective DC5V ± 10%)

TY1=0	Upper limit alarm: The measurement value is more than or equal to AL1, alarm output The measurement value is less than or equal to (AL1-HY1), turn off the alarm	 Figure 1
TY1=1	Lower limit alarm: The measurement value is less than or equal to AL1, alarm output The measurement value is more than or equal to (AL1+HY1), turn off the alarm	
TY1=2	Over limit alarm: The measurement value is more than or equal to AL1, alarm output The measurement value is less than or equal to HY1, alarm output Other sections, close the alarm	 Figure 3

6.WIRING DIAGRAM



Thermal resistance: 2-wire —— connect to B 、 C, short connection A to B
3-wire —— same color connect to A/B, another wire connect to C
Thermocouple: B connect to positive, C connect to negative, A no need connection

Relay contact capacity:
10A/AC250V 10A/DC30V