

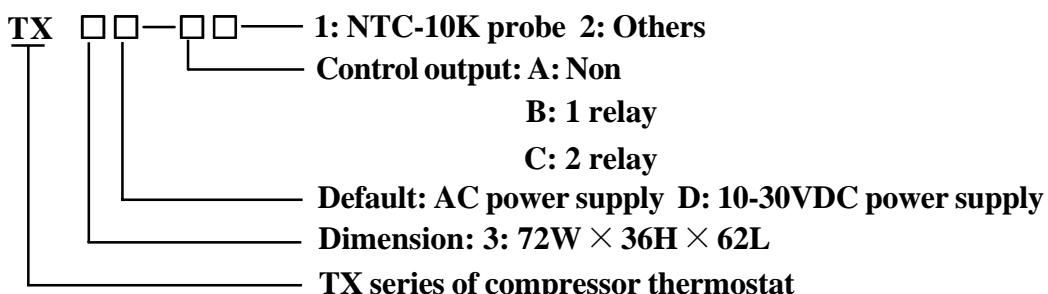
# TX Series of Compressor Thermostat



## FEATURES:

- ◎ Two loops of control output
- ◎ Sampling speed >1/Second
- ◎ Input mode: NTC-10K probes
- ◎ Measuring range: -40°C-99°C

## 1、 Ordering Code



## 2、 Applications

This economical TX series compressor thermostat is used with compressors, air-conditioning and heat/cooling machinery. It is used to protect compressors from frequently turning on/off; this type of operation will cause damage.

## 3、 Parameters

Control output	relay output (AC 250V/3A or DC 30V/3A)
Accuracy	± 1°C
Power supplied	AC:85~265V (50HZ~60HZ)
Environment	0~50°C 45~85%RH
Insulation Strength	AC 1500V 1min
Consumption	< 1.5VA
Insulation impedance	DC 500V ≥ 50M Ω

## 4、 Operations

The display window shows the measured value from the probe. Two indicators on the front panel OUT1/OUT2 light up when the outputs are used for control until cancelled.

### Temperature value setting:

Press the set button (less than 3sec) the thermostat will display the setting value. The indicating lamps OUT1/OUT2 will flash at the same time. To modify the value press the LEFT button to select and UP button to modify. The setting range is between 0 – 99°C. Press the SET button to confirm your setting value, the unit will confirm itself if no buttons are pressed for more than 50 seconds.

## Parameter Setting:

Press the set button for 4 seconds, the thermostat will display A00. Press the SET button again to select the parameter you want to modify.

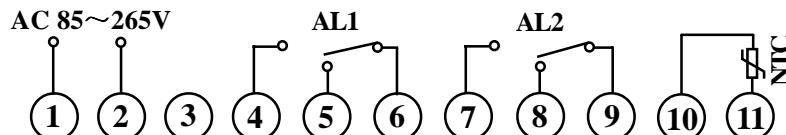
To modify the value press the LEFT button to select and UP button to modify.

Press the SET button for 4 seconds to confirm your setting value, the unit will confirm itself if no buttons are pressed for more than 50 seconds.

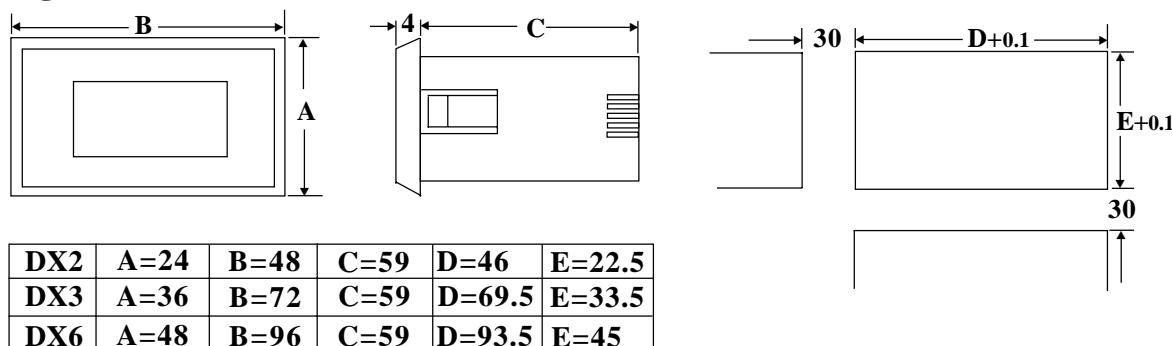
Press SET key to confirm when the modification finished.

Code	Meaning	Range	Unit	Factory setting
A□□	Calibration(measure offset)	-9~19	°C	0
b□□	Regulator hysteresis	1~19	°C	2
c□□	Disabling time at the output activation from the preceding deactivation	0~19	min	3
d□□	Defrost interval	0~99	h/min	8
E□□	Defrost length	1~99	min/sec	30
F□□	Delay to the defrost activation from the instrument start	0~99	min	15
G□	Display locked in defrost	0=NO 1=YES		1
U□	Unit selection for Parameters d and E	0=hours (min) 1=min (seconds)		0

## 5、Terminal connection



## 6、Figure and dimensions



## 7、Signals and alarms

LED displays “EO” and flashes, it means probe defective or wrong connected.

LED displays exceed max measuring value.

LED displays exceed min measuring value.

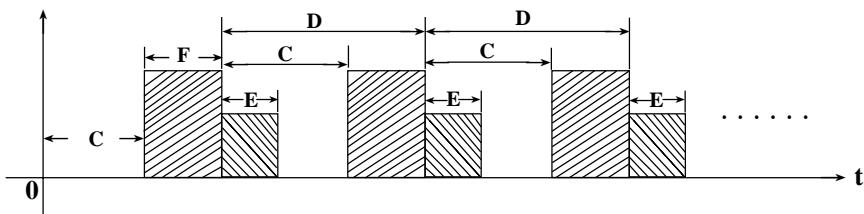
“OUT1” lamp on: The compressor is running.

“OUT2” lamp on: The instrument is defrosting.

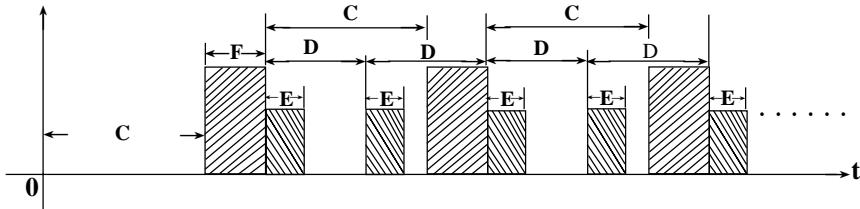
## 8、Control time procession

### 8.1、Measuring value>Setting point (Start defrosting G=1)

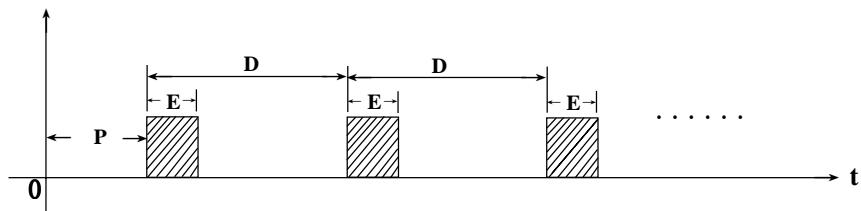
①  $D > C$



②  $D < C$



### 8.2、Measuring value<Setting point (Start defrosting G=1)

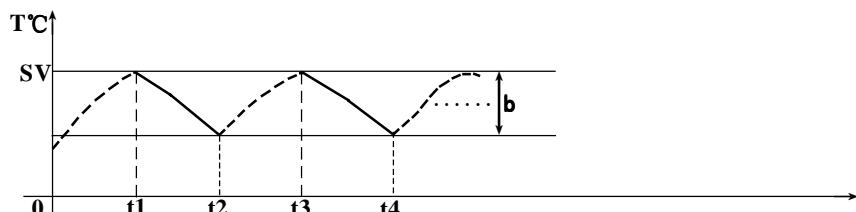


Note: In the above figures, stands for the length of instrument running;

stands for the length of defrosting.

In case  $F > D$ ,  $P = D$ ; In case  $F < D$ ,  $P = F$

### 8.3、In case without defrost control, the control mode is as follows:



Note: In the above figure SV is the “setting value”, b is the regulating hysteresis. The continuous line means the compressor is activated (AL1 output). The broken line means the compressor is off. If when the thermostat is turned on and the measured value is less than the setting value, the compressor will stay off. If it is greater but `t1` is less than `C` the unit will put the compressor into standby mode and the AL1 output will be activated until  $t_1=C$ .

The set temperature between ‘t1 and ‘t2’ is the regulating hysteresis.

If  $t_3-t_2$  is greater than ‘C’, the compressor will be activated, If it is less the compressor will stay off until  $t_3-t_2=C$ .



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