

# ROUND TOUCH SCREEN THERMOSTAT



## I. Product Summary:

TGR87 series Heating Thermostat is touch screen thermostat with Round shape.

It is applied to temperature control of industrial, commercial and domestic room, and start of control heating appliances, especially floor heating systems. It can be controlled by phone.

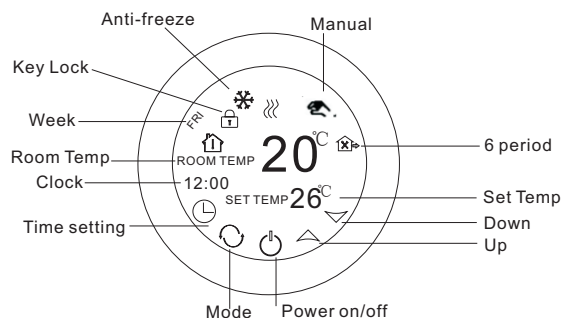
## II. Technical Parameter:

Power Supply	200 ~ 240V 50 ~ 60Hz
Current Load	≤3A (water heating) ≤16A(electric heating)
Power Consumption	<0.3W
External Material	PC+ABS (flame retardant)
Sensing Element	NTC
Set Temp. Range	5-60°C
Floor Set Temp. Range	5-99°C
Accuracy	±1°C
Dimension	86x86x13.3mm
Ambient Temp.	0-45°C, 5-95%RH(Non-condensing)
Storage Temp.	-5~55°C
Timing Error	<1%

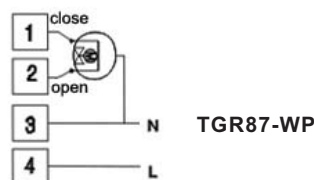
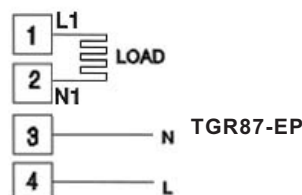
## III. Main Functions and Characteristics

1. Round curved screen.
2. WIFI for Andriod & Apple iOS.
3. Large screen display and touch button.
4. Power-off memory function.
5. Real-time data save function.
6. 5+2 or 6+1 or 7 days six periods program schedule.
7. Anti-freezing function.
8. 3 sensor modes can be setting.
9. With child lock function.
10. Selectable 80mmx80mm European hidden box.

## IV. User Interface Explanation (Thermostat Port)




## VII. Wiring Diagram




## VIII. Thermostat Operation Instruction


### 1. Setting Power on/off


Press  to turn on/off the power.

### 2. Setting Temperature

Press  to set the temperature.



### 3. Setting the Clock


Press  to set minute, hour and week.


Press  for adjusting.

### 4. Setting the Manual Mode.

Manual mode means non-programmable mode.


Press  then  will display in the screen, it is in manual mode.

Press  to set the temperature.


Press  to set minute, hour and week.


### 5. Setting the Child Lock

Long press  to enter into child lock mode,  will display.

Long press  again, the child lock will be disappeared.

### 6. Setting the Programmable Mode.

Press and hold  into programmable mode. LOOP and 12345 will display.


Press  to select the control way: 5+2 or 6+1 or 7 days programmable.


12345 display in the position of week means 5+2;


123456 display in the position of week means 6+1;


1234567 display in the position of week means 7 days programmable.



Press  to select the periods.

Press  to change the temperature;

Press  to do time adjustment.

Press  to change the time;

Press  again to select the weekend's temp.

If you want to make temporary adjustment in any period, press  then  will flash. When finish the setting, all will confirm automatically.

## VI. Model Spec

Model	Current Loading	External Sensor	Week Program	Controlled Objects
TGR87-EP	16A	✓	✓	For electric heating appliances
TGR87-WP	3A		✓	For water heating appliances

Press to switch operation between manual mode and programmable mode.

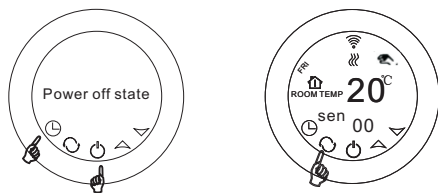
Period	Period Icon	Defaulted Time	Defaulted Temp.
Week	1		6:00
	2		8:00
	3		11:30
	4		12:30
	5		17:30
	6		22:00
Weekend	1		8:00
	2		23:00

#### Remark:

(1) The defaulted temperature of period3 and period4 is the same as period2. Please change it according to the request.  
 (2) When setting temperature is 00, this period is power off.  
 (3) How to check floor temp?  
 During power on, press and hold then press the button of power to check floor temp.. OUT TEMP will display.  
 Press again to display room temp..

#### 7. Advanced Setting

In the state of power-off, long press and hold then press into advanced setting mode. Then press to set relative item.



Display Code	Function	Setting And Options	Factory Default
SEN	Sensor mode	0:Internal sensor 1:Floor sensor 2:Both internal sensor and floor sensor	0
OSV	Set temp. range for floor sensor	5-99°C	42°C
DIF	Precision for floor temp.	1-9°C	2°C
SVH	High limit temp. for internal sensor	5-99°C	35°C
SVL	Low limit temp. for internal sensor	5-99°C	5°C
ADJ	Measure temp.	Check and calibrate the actual room temp.	0.5°C accuracy calibrate
FRE	Frost-protection	00 : Off 01 : On	00
PON	Power memory	00 : Off 01 : On	00
DFI	Precision for room temp.	0.5-3°C	1°C
FAC	Factory setting	08 : Just display 00 : Factory reset	08

#### Remark:

**DIF:** Precision for floor temp.

i.e. the setting deadzone for floor sensor is 2.  
 OSV is 42°C, when actual temp. reach 44°C, the relay will stop working;  
 when actual temp. is back to 40°C, the relay starts working again. It works when room temp. is lower than set temp.

**DFI:** Precision for room temp.

The factory default is 1°C, if you think 1°C is too big, you could change to 0.5°C

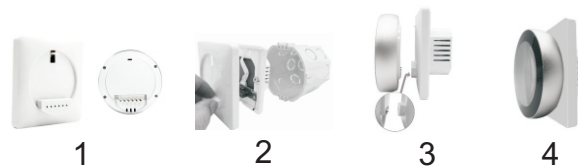
#### Sensor error:

Please select the right sensor mode.

If Err display on the screen, change SEN=00, Or connect the floor sensor.

## XI. Installation Instruction

This thermostat is suitable for standard 80\*80mm wall box Or 60\*60 mm Europe standard round box.



1. Turn off the main power. Take away the front display screen part, then use screwdriver to open the installation panel.
2. Refer the wiring diagram(VII) to connect the lines with terminals.  
Fix the installation panel with installation box with screws, and insert into wall
3. Insert the display screen part into the installation panel.
4. Installation finished.

**NOTICE:** The installation wire should be 1.5-2.5mm<sup>2</sup>.

## XII. ATT:

Thank you for buying this product!

Please read this manual for complete instructions on installing and operating your thermostat. If you require further assistance, please feel free to contact us.

#### In the box you will find:

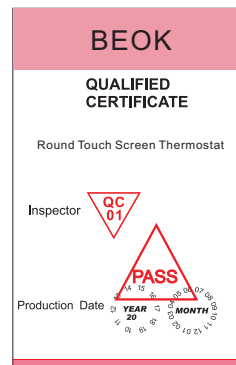
Model	TGR87-EP	TGR87-WP
Thermostat	✓	✓
User Manual	✓	✓
Screws	✓	✓
External sensor	✓	

#### Our Service:

We offer the warranty of 24 months from the sales day.

During the warranty, if it is belong to the quality issue, we will fix or replace them for you by free after test them.

If it is not quality problem or beyond the warranty time, we will charge for the after-sales service.



#### Warning:



The symbol means the unit is being installed, it may cause electrical shock hazard during maintaining, so please make sure it is operated by the professional technical worker.

