

# TDS21 GLASS SCREEN THERMOSTAT



## I. Product Summary:

TDS21 series thermostats are luxurious programmable thermostat with large screen display. It is applied to temperature control of industrial, commercial and domestic room, and start of control heating appliance, especially used in the floor-heating systems.

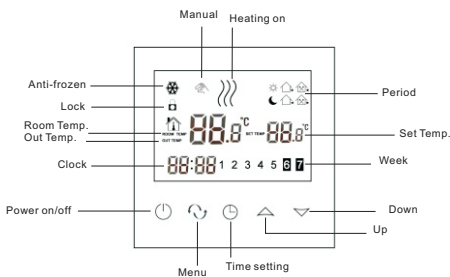
## II. Technical Parameter:

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	5-99°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.Large screen display and touch button.
- 2.Power-off memory function.
- 3.5+2 or 6+1 or 7days six periods program schedule.
- 5.Selectable 80mmx80mm European hidden box.
- 6.Precise comfort control keeps temperature within1°C of the level you set.

## IV. User Interface Explanation



## V. Model Definition

WP: For Water Heating System, 3A

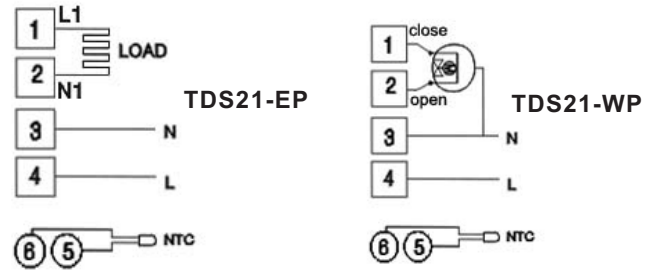
EP: For Electric Floor Heating System, 16A

For example: TDS21-EP TDS21-WP

## VI. Model Spec

Model	Current Loading	External Sensor	Week Programmable	Child Lock	Drop up
TDS21-EP	16A	✓	✓	✓	Optional
TDS21-WP	3A		✓	✓	Optional

## VII. Wiring Diagram



## VIII. 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.

Press to switch operation between manual mode and programmable mode.

	Period	Period Icon	Defaulted Time	Defaulted Temp.
Week	1		6:00	20°C
	2		8:00	15°C
	3		11:30	15°C
	4		12:30	15°C
	5		17:30	22°C
	6		22:00	15°C
Weekend	1		8:00	22°C
	2		23:00	15°C

### 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℃	42℃
DIF	Precision for floor temp.	1-9℃	2℃
SVH	High limit temp. for internal sensor	5-99℃	35℃
SVL	Low limit temp. for internal sensor	5-99℃	5℃
ADJ	Measure temp.	Check and calibrate the actual room temp.	0.5℃accuracy calibrate
FRE	Anti-frozen	00 : Close anti-frozen 01 : Open anti-frozen	00
PON	Power memory	00 : Power memory off 01 : Power memory on	00
DFI	Precision for room temp.	0.5-3℃	1℃
FAC	Factory setting	00 : Return to factory setting 08 : Just display	08

### Remark:

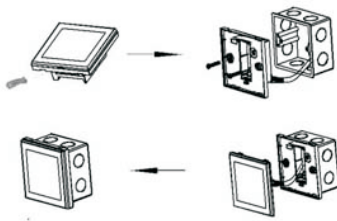
Deadzone for floor temp.: i.e. the setting deadzone for floor sensor is 2, OSV is 42℃, when actual temp. reach 44℃, the relay will stop working; when actual temp. is back to 40℃, the relay starts working again. It works when room temp. is lower than set temp.

### Sensor error:

Please select the right sensor mode. If select the different mode or there is error of sensor, Err will display on the LCD screen, the thermostat will stop heating till the problem is solved.

## IX. Installation Instruction

This product is suitable for standard 80\*80mm wall box and 60 mm european round box.



- 1.Connect the line of power and valve into the terminals. Fix the wall plate into the wall box by a screwdrive.
- 2.Connect the lines with the LCD board.
- 3.Connect the LCD board into the wall plate.

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

## X. 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:

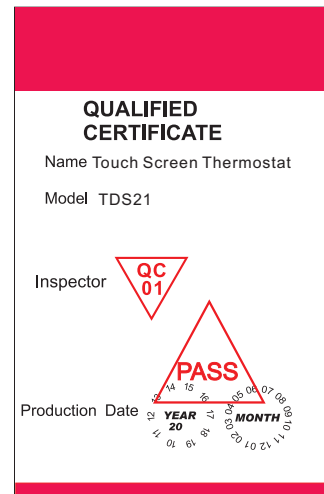
Model	TDS21-EP	TDS21-WP
Thermostat	✓	✓
User Manual	✓	✓
Screws	✓	✓
Dryer	✓	✓
External sensor	✓	

### 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.

