



Smart Thermostat



TP-101-W

TP-101-W series smart thermostat has luxurious look to fit any decor and is available in white or black. Colorful TFT touch screen and programmable schedule combined with smart functions can lower the energy cost by up to 20%. Built-in LoRa/WiFi communication for standalone or commercial centrally controlled operation. Suitable for commercial, residential, hotels, hospitals, schools and lite industrial applications.

Easy to use mobile APP smartphone quick HVAC control. Works seamlessly with other WatchNET IoT sensors and controls when subscribed to the WatchNET IoT Cloud platform.

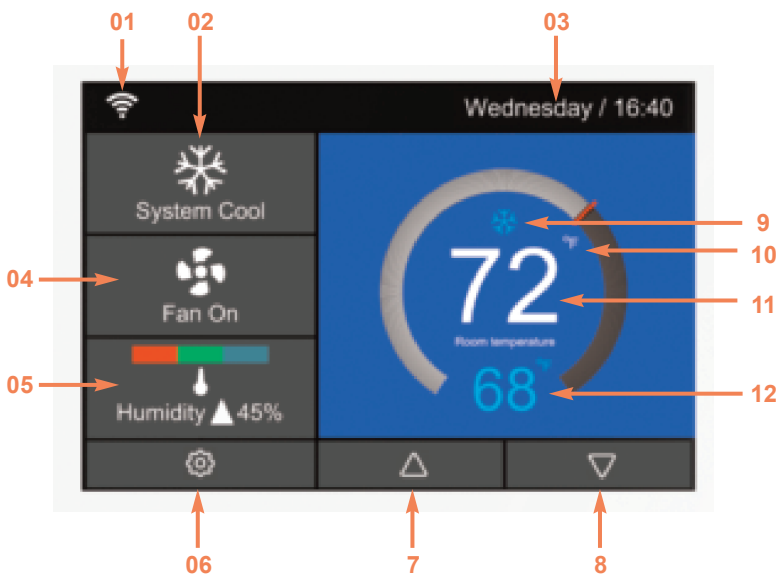
Features

- Hardwired, 24VAC power supply
- Up to 3 heating stages and 2 cooling stages, Gas / Electric / Heat Pump / Fossil Fuel / Conventional system
- 3.5" TFT touch color display, 480 x 320 resolution
- WiFi embedded, 2.4GHZ
- LoRaWAN, 915mHZ, "C" class (Region specific)
- LoRaWAN uplink default 10 mins, this time could be set by LoRaWAN downlink command
- Geo-fencing
- With humidity sensor (+/- 3%)
- With ambient light sensor
- Programmable mode, 5/2, 7 days, 24 hours
- Four or six events per day
- Frost protection/Filter reminder
- Manual or auto changeover
- Adjustable heating and cooling set point limits
- Automatically adjusts to daylight saving time
- C/F temperature display
- External sensor (10k 25°C @3950)
- Modbus RS485/TCP communication (Optional)
- Multi language
- Touch screen lockout
- Night light option

Technical Specifications

Control Device	Up to 3H/2C, Gas / Electric / Heat Pump / Fossil Fuel / Conventional system
Supply voltage	24VAC 50/60 hz
Relay rating	24VAC @1 Amp
Output relay	SPST - NO
Display	320 x 480 pixels color TFT - capacitive touch
Operating temperature	1°C - 85°C / 33.8°F - 185°F
WiFi	2.4GHZ, IEEE 802.11 b/g/n
Communications	Modbus RTU, Modbus TCP
Displayed temperature resolution	0.1°C / 33.8°F
Wire size, terminals	Current ≤ 5 a - 1.5 mm ² , solid core wire
Smart schedule type	7 days, weekday/weekend, 24 hours
Schedule	Up to seven different 4-event or 6-event program
Control Range	5°C/45°C - 41°F/113°F
Standby consumption	≤0.5 W
Dimensions (w/h/d)	96 x 86 x 32.5 (mm) / 3.78" x 3.38" x 1.28"
Weight	≤200gr / ≤0.441lb
Enclosure rating	IP 21
Product material	PC + ABS plastic

Home Screen Display



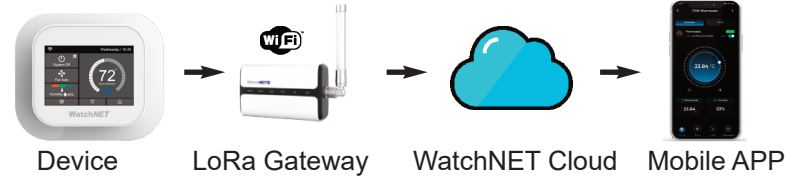
1. Wi-Fi indicator	7. Adjusting the setting temperature Up
2. System Mode: Heat, Cool, Auto, Off	8. Adjusting the setting temperature Down
3. Day Indicator & Clock	9. Heating/Cooling/Vent symbol
4. Fan mode: Auto, ON	10. °C or °F Display
5. Humidity	11. Room temperature display
6. Configuration settings	12. Setting temperature display

Configuration Settings

Language	English, Spain, Polish, Czech, German, French
Hold Temperature	Hold time Hold setpoint
Date & Time	01) Time Zone 02) Date & Time 03) Daylight Saving Time (DST)
Display Brightness	Ambient Light Dimming
Screen Saver	Standby Screen 01) Time: 3min, 10min, Just night 02) Type: Clock, Default, Off screen
Lock screen	4 number PIN Disable/Enable lock
Feature Settings	01) Temperature Format 02) Temperature Limit 03) History & Energy Tariff 04) Defrost: enable/disable 05) Schedule type: Weekday/Weekend 24 Days 24 Hours None 06) Internal sensor selection Indoor sensor selection 07) Humidity calibration 08) Open window function 09) Filter reminder
Installation Settings	01) Equipment type 02) With Auxiliary or not 03) With Fan or not 04) Electric heating or not 05) Deadband 06) Switch differential 07) Occupancy input
System information	Version number QR code LoRa ID

LoRaWAN

Remote control through cloud/Mobile APP



Byte ID	Data	Data
1	RoomTemp_Hi	Room temperature High byte
2	RoomTemp_Lo	Room temperature Low byte
3	SetTemp_Hi	Set temperature High byte
4	SetTemp_Lo	Set temperature Low byte
5	MaxSetTempLimit	Maximum set temperature
6	MinSetTempLimit	Minimum set temperature
7	Humidity	0-100
8	Status	0:OFF, 1:ON
9	SysRunningMode	MODE_HEATING: 0, MODE_COOLING: 1, MODE_AUTO: 4 MODE_OFF: 5
10	FanRunningMode	FAN_ON: 0, FAN_AUTO: 2

HVAC System Compatibility

Equipment	Supported
Gas/Oil/Electric heating (Up to two stages)	Yes
Standard electric cooling (Up to two stages)	Yes
Traditional AC (Up to two stages)	Yes
Heat pump with auxiliary heat (Up to three stages)	Yes
Dual fuel systems	Yes
Boilers	Yes
1 remote sensor (10K resistive temperature)	Yes
1 dry contact for Occupancy input	Yes

Outline Dimensions & Installation



Common Wire Kit - AP-4W24



The C-Wire Power Adapter makes WatchNET's Home smart thermostats compatible with most homes that don't have a common wire.

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Oct. 17, 2022

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