Smart Radiator Thermostat

Featuring LoRaWAN®

WT102



WT102 is a LoRaWAN® radiator thermostat designed to help manage the heating control system. It uses thermal energy harvesting to power itself, eliminating the need for battery replacement or a wired power connection, thus reducing maintenance costs. With one preset date period and up to 16 customized heating plans, it enables the smart management of the heating system. WT102 is a smart and highly environmentally-sensitive product. Abnormal temperature difference and extremely low temperatures can quickly trigger it, prompting fast corrective action by adjusting the valve opening.

Compliant with Milesight LoRaWAN® gateway and Milesight Development Platform solution, WT102 is able to work with the WT401 wireless thermostat to achieve remote linkage control.

WT102 is widely used for smart heating control in buildings and homes.

◆ Features

- Built-in temperature sensor with support for external NTC sensor or WT401 wireless thermostat connection enables environmental detection and accurate control
- Intuitive, direction-adjustable LED display suitable for various installation environments
- Maintenance-free, self-powered by temperature difference with no battery replacement required
- Theft-deterring accessories for structural anti-theft protection
- Equipped with NFC for one-touch configuration
- Adjust the room temperature automatically and manually with time-controlled regulation
- Up to 16 heating plans within one preset Date Period

- Supports open-window detection and freeze protection
- Supports child-lock feature for tamper protection in public areas
- Stores historical records locally and support retransmission to prevent data loss
- Functions well with standard LoRaWAN® gateways and network servers
- Compatible with Milesight Development Platform
- Supports Firmware Update Over-the-Air (FUOTA)

◆ Specifications

Wireless Transmission	
Protocol	LoRaWAN®
Frequency	IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm (868MHz)/22 dBm (915 MHz)
Sensitivity	-137dBm
Mode	OTAA/ABP, Class A/Class B
Valve Control	
Actuator	Stepping Motor
Default Valve Fitting	M30 ×1.5 mm
Supported Metal Adapters	RA, RAV, RAVL, Giacomini, M28 (Comap, Herz, TA, Markaryd) (Customizable)
Advanced Feature	Automatic Temperature Control, Valve Opening Control, Heating Plans, Freeze Protection, Open-Window Detection, Effective Stroke
Temperature Sensor	
Sensor Type	NTC
Range	-20°C ~ 60°C
Accuracy	± 0.5°C (0°C ~ 50°C)
Resolution	0.1°C
Others	
Display	LED Display with White Light
Buttons	1 × Power/Reset Button, 2 × Temperature/Valve Opening Control Buttons
USB	1 × Type-C for Power Supply, Charging or External NTC Sensor Connection
Software	
Configuration	NFC via Mobile App or Downlink
Advanced Feature	Child Lock, External Sensor Mode, Data Storage (1,000 Entries), Data Retransmission, Data Retrievability, Multicast, FUOTA
Physical Characteristics	

Power Supply	1. Self-powered by temperature difference[1] 2. 5V by USB Type-C Port
Operating Temperature	-20°C ~ 60°C
Relative Humidity	0% - 95% (Non-condensing)
Ingress Protection	IP30
Dimension	50 × 60 × 101.9 mm
Material & Color	PC +Aluminum, White & Silver
Installation	Latching on the Valve
Approvals	
Regulatory	CE, FCC
Environmental	RoHS

1: When the water temperature exceeds 45°C, the device is powered via the thermoelectric effect.

◆ Dimensions (mm)

