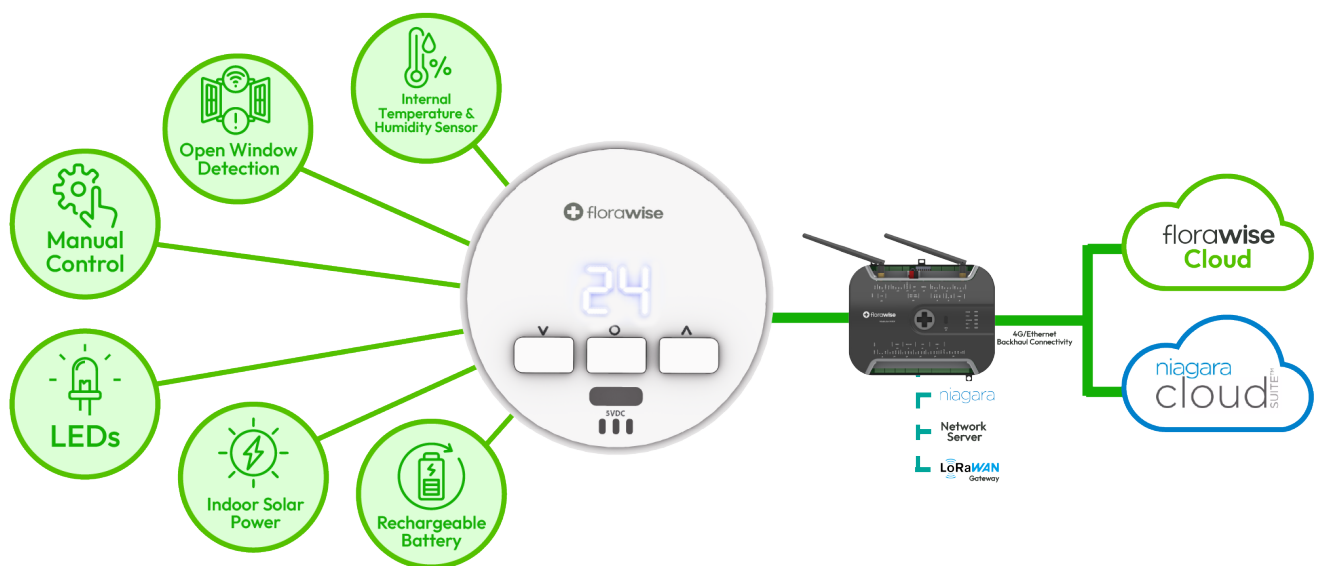# florawise

THERMOSTATIC VALVE
LoraWAN Heating
Solution That Charges Itself

DESCRIPTION

The Smart Radiator Valves allow you to manage your home's temperature when using collective heating, optimizing it for energy efficiency. By answering five simple questions, the system creates a heating schedule that heats only when necessary, adapting to each zone's specific needs. The system also includes features like Open Window Detection, which automatically turns off radiators when windows are open, and it integrates seamlessly with Niagara-based or Florawise Cloud monitoring systems. The Auto-Adapt feature ensures the heating is adjusted according to outdoor temperatures and the building's insulation, maintaining comfort and reducing energy waste.

In terms of connectivity, the Smart Radiator Valves can securely connect to the Modular MAX device via LoRaWAN, allowing for real-time data management and control. This wireless connection ensures efficient temperature adjustments in every zone while maintaining data security. The system integrates easily with algorithms uploaded to Niagara, enabling the heating system to adapt dynamically to changing weather conditions, further enhancing energy efficiency.

General Description:
- Internal Temperature & Humidity Sensor
- Open Window Detection
- Buttons for manual control
- LEDs for valve and device status indication
- Indoor Solar Power Harvesting
- Rechargeable Battery

Florawise Modular Thermostatic Valve Control solution is an intelligent application, perfect for users who are looking to remotely control, schedule, and manage their radiator heating systems. It offers bi-directional real-time communication, providing system status and confirmation that commands sent have been executed.

Bi-Directional Real-Time Communication:
- The solution ensures real-time communication, confirming that commands have been executed and providing up-to-date system status.

Support Simplified:
- Enables users to obtain detailed system status for malfunctions and errors, which can be provided to technicians and service providers to maximize the efficiency of service calls.

Florawise Thermostatic Valve Compatibility List	
Supported Brand	**Models**
Oventrop	UniLDV, UniLDVL, Uni LV Vaillant
Danfoss	FJVR, RAVL, RAV / RA-N, RA-A, RA-B, RA-C, T2000, T6000, T3000, RAS C2
FAR	Far 1941, EcoDHome 01333-3012-00
Other Supported Brands and Models	
- Caleffi - Gampper - Giacomini - Landis&gyr - OregOndal - Reich - Temset - Vaillant - EMMETI	

FEATURES AND FUNCTIONS

Rechargeable Battery	
Capacity	1600mAh
Technology / type	Li- Ion rechargeable Battery 14850
Wireless Transmission	
Protocol	LoRaWAN®
Frequency	EU868
Tx Power	16dBm(868MHz)
Sensitivity	-137dBm @300bps
Work Mode	OTAA/ABP Class A
Valve Control	
Actuator	Stepping Motor
Default Valve Fitting	M30 ×1.5 mm
Optional Adapters	RA, RAV, RAVL, Giacomini, M28 (Comap, Herz, TA)
Advanced Feature	Automatic Temperature Control, Heat plans, Child Lock, Freeze Protection, Open-window Detection
Temperature Measurement Resolution	12-bit (default), 16-bit
Processing time	10 ms/channel at 12-bit 140 ms/channel at 16-bit
Temperature & Humidity Sensor	
Sensor Type	Digital
Accuracy & Resolution (RH)	Accuracy $\Delta RH = \pm1.8$ %RH Resolution 0.01%
Accuracy (Temperature)	±0.2°C (–40°C to +125°C).
Resolution (Temperature)	±0.01°C
Others	
Display	LED Display with White Light
Button	3 × Control Buttons
Configuration	Internal Web Server Configuration via Web App (or LoRaWAN)
Physical Characteristics	
Batteries	2 x 3.7V Li-IO AA Rechargeable Batteries (1600 mAh in Total)
Power Supply with Charger Case	700uA Max Current with 40°C Temperature Difference between ambient & radiator pipe connector
Battery Life*:	With Charger Case for 3-10 Years (30 min Report Interval + Control Once during 5-month Heating Season,Presence Sensor- off)
Operating Temperature	-20°C ~ +60°C
Storage Temperature	-40°C ~ +70°C (Without Batteries)
Relative Humidity	0% - 95% (Non-condensing)
Ingress Protection	IP30
Dimension	Φ 52*90mm (Φ 2.05 * 3.54in)
Material & Color	Stainless+ABS, White
Installation	Latching on the Valve

*It may vary depending on the radar-based presence sensor on the device and the data transmission frequency.

ORDERING INFORMATION

FMT   **-TRV**

Product Code; LoraWAN Communication Thermostatic Valve Controller

Product Family, FMT = Florawise Modular Termostat