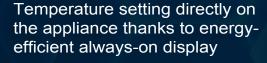# LoRaWAN®
Radiator thermostat

dnt-LW-eTRV-C

The dnt LoRaWAN Radiator Thermostat - Operable with particularly long radio range is ideal for automated room climate control in public and spacious buildings such as educational institutions, industrial plants, public authorities, hotels or office complexes. The high-quality always-on e-paper display makes it easy to set and read the temperature while keeping energy consumption low.

Temperature setting directly on the appliance thanks to energy-efficient always-on display

Low energy consumption due to low power design

Very long wireless range thanks to LoRaWAN wireless protocol - Ideal for large building complexes

Automatic temperature reduction when open windows or doors are detected

Wide range of configuration options via LoRaWAN downlink

TECHNICAL DATA

Abbreviation	dnt-LW-eTRV-C
Supply voltage	2x 1.5V LR6 / Mignon / AA battery
Quiescent current	2.81 µA
Typical power consumption	52 µA
Battery life *averaged for an average moto	4 years current of 44 µA and an uplink interval of 10 minutes (SF7, 7 bytes)

MECHANICAL PROPERTIES

Dimensions (W x H x D)	approx. 54 x 97 x 54 mm
Weight	179 g
Installation	M30x1.5, RA, RAV and RAVL valves (adapters available for many other valves)
Protection class	IP20
Area of application	Inside
Operating temperature	0 to +50°C
Scope of delivery	dnt-LW-eTRV-C, operating instructions, valve adapter (RA, RAV, RAVL), 2x 1.5V AA batteries

RADIOTECHNOLOGY

Communication	LoRaWAN EU868 (V1.0.3), internal antenna
Frequency band	L-band 865.0-868.0 MHz M-band 868.0-868.6 MHz O-band 869.4-869.65 MHz
Duty cycle	L-band < 1 % per h M-band < 1 % per h O-band < 10 % per h
Type. Radio transmitting power	+ 10 dBm
Recipient category	SRD category 2
LoRaWAN range	>6km (free field, SF9, gateway: Kerlink PDTIOT-ISS04)

FUNCTIONS

Configurable temperature profiles	3 different weekly temperature profiles can be saved on the device with up to up to 10 temperature changes per day.
Manual positioning mode	Direct positioning of the valve enables the use of your own external heating algorithms
Window open detection	Reduction of the room temperature to a defined temperature when an open window or door is detected
Dynamic adaptive adjustment	Automatic execution of a dynamically adaptive adjustment of the heating element
Frost protection function	Automatic heating process when the room temperature falls below 4°C
Vacation mode	Allows the temperature to be changed during a defined period of time
Battery voltage monitoring	The device monitors the battery voltage and informs the user when the battery voltage is low. In addition, a valve position configured by the user is approached before the device fails due to low batteries.
Cyclical status message	The radiator thermostat cyclically transmits a status message with the user's configured parameters at a configured time interval.