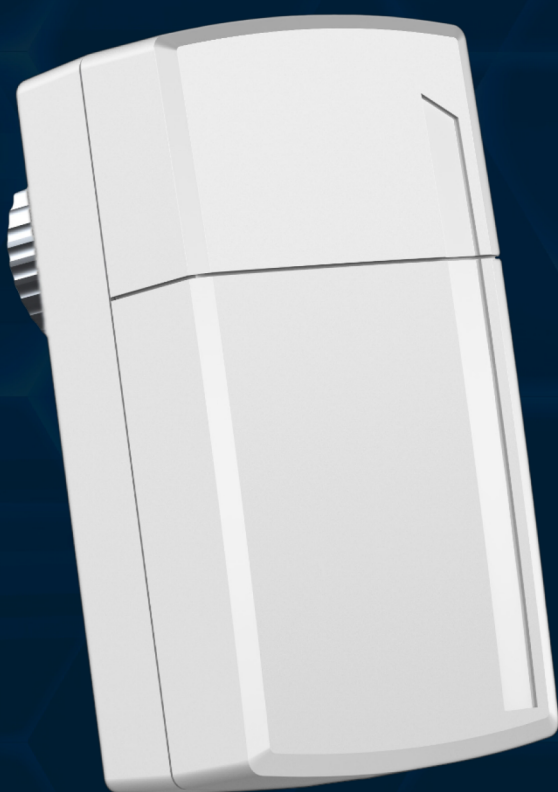# LoRaWAN®
Radiator thermostat

dnt-LW-eTRV

The LoRaWAN® radiator thermostat from dnt with a particularly long range radio connection is perfect for automated room climate control in public and spacious buildings such as educational facilities, industrial plants, public authorities, hotels or office complexes - Anywhere where the operation on the device is not desired.
Due to its minimalist design it is unobstrusive and the anti-theft accesory and lockable battery compartment protect the device against tempering and disassembly.

Closed housing without manual operation access and a lockable battery compartment prevents tampering with the device

Additional anti-theft accessory prevents the device from being removed from the valve

Low energy consumption due to low power design

Long range wireless connections due to LoRaWAN® wireless protocol - perfect 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
Supply voltage	2x 1.5V LR6 / Mignon / AA battery
Quiescent current	< 3.8 µA
Typical power consumption	55 µA*
Battery	< 5 years (battery lifetime varies depending on use)
*averaged for an average moto	current of 44 µA and an uplink interval of 10 minutes (SF7, 7 bytes)

MECHANICAL PROPERTIES

Dimensions (W x H x D)	50 x 98 x 48 mm
Weight	172 g
Installation	M30x1.5, RA, RAV and RAVL valves (adapters available for many other valves)
Protection class	IP20
Area of application	indoor
Operating temperature	0 to +50°C
Scope of delivery	dnt-LW-eTRV, operating instructions, valve adapter (RA, RAV, RAVL), 2x 1.5V AA batteries, square key for the battery compartment

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 10 temperature changes per day.
Manual positioning mode	Direct positioning of the valve via LoRaWAN® downlink 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
Frost protection function	Automatic heating 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.