

MLR003



LoRaWAN Heating Solution

Self-powered radiator control
for low carbon, low energy, high comfort
buildings

economical
ecological
easy



micropelt
EH4 GmbH

Energy harvesting

Advantages

LoRaWAN offers long range communication capability, reducing network deployment and hardware cost



ecological

- reduce energy consumption
- reduce CO₂ emissions



economical

- reduce heating cost
- save maintenance charges
- low system and labor cost



easy

- easy installation
- no batteries, no cables
- maintenance-free



flexible

- suitable for all types of buildings
- great benefit with old and big buildings, housing complex



automatic control

- heat only when necessary
- individual and automatic room temperature control



wireless

- Long range LoRaWAN EU868MHz radio
- Gateway solution to cloud (TCP/IP, Mqtt) or Modbus/BACnet



encrypted

- high encryption standard through AES-CTR 128-bit process



certified

- Radio EN300220-2V3.1.1/-2V3.2.1/-1V3.1.1
- Radio EMC EN301489-1 V2.2.3/-3 V2.1.1
- EMC EN 55014-1/-2
- Human exposure EN62479
- Product safety EN60335

Micropelt long range valve actuator

MLR003

Self-sustaining, wireless radiator actuator with Micropelt thermogenerator and LoRa long range and low power sub-GHz radio

 LoRaWAN
CERTIFIED



Product features

- > Maintenance-free operation through conversion of temperature differences into electrical energy
- > Eliminates the need to change batteries
- > Robust design for use in public areas
- > Contactless user interface

Functions

- > Operates in valve position (%) or temperature setpoint (°C)
- > Ambient and flow sensor temperatures (°C)
- > Battery status, motor status
- > Radio communication and status
- > Reports power consumption and generation
- > USB rechargeable

Cloud Solution

In collaboration with
Engie Solutions

n Devices per building



Window contact
MWC001L



Presence sensor
MPS001L



Temperature
sensor MTS001L



Valve actuator
MLR003



LoRaWAN RF

Long range radio, reliable both
indoor and outdoor

1 Gateway per building



Gateway incl.

Network server / Join server / Key management /
MQTT Broker / Mqtt/https / Pre-commissioned



TCP/IP

Cloud

Cloud control / Dashboard /
Application / Services / Monitoring /
Device management / Decoding

Building Management

for building management systems

n Devices per building



Window contact
MWC001L



Presence sensor
MPS001L



Temperature
sensor MTS001L



Valve actuator
MLR003



LoRaWAN RF
Long range radio, reliable both
indoor and outdoor

1 Gateway per building



Gateway incl.
LoRaWAN / MQTT client / BACnet /
Desktop application

Modbus, BACnet

**Building management
solution**

Cloud control / Dashboard /
Application / Services / Monitoring /
Device management / Decoding

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