

Vicki LoRaWAN — LORCOM user guide

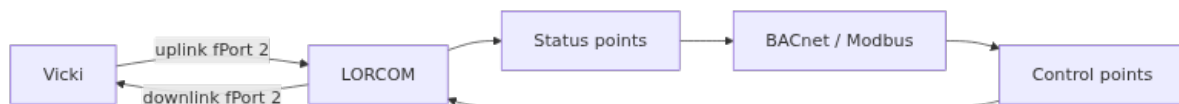
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MClimate **Vicki** is a LoRaWAN Class A radiator TRV (EU868). In LORCOM it is exposed as three profiles: **Vicki-ValvePosition**, **Vicki-TemperatureSetpoint**, and **Vicki-TemperatureSetpointExternal**.

OEM docs: mclimate.eu · docs.mclimate.eu

How LORCOM maps the device

All BACnet/Modbus points use **fPort 2** (keepalive uplink and application downlink).



diagram

Status points (rx)

Updated on keepalive uplinks. `operationalMode` appears when a mode response is present (e.g. after get/set mode via `0x18`); it is **not** in the 9-byte keepalive itself.

Common fields (all profiles)

Point	Meaning
<code>actualValvePosition</code>	Valve openness 0–100 %
<code>sensorTemperature</code>	Built-in ambient °C (0.1 resolution)
<code>relativeHumidity</code>	Relative humidity % (0.1 resolution)
<code>targetTemperature</code>	Target setpoint °C (integer from keepalive byte 1). Codec also decodes <code>targetTemperatureFloat</code> from <code>0x52</code> responses (0.1 °C); that field is not exposed on BACnet/Modbus.
<code>operationalMode</code>	Online mode code (see enum below)
<code>openWindow</code>	Open-window detection active (0 / 1 , informational)
<code>childLock</code>	Rotary encoder disabled / child lock (0 / 1 , informational)
<code>battery</code>	Battery voltage (V)
<code>status</code>	

Point	Meaning
	Aggregate device status: 0 =OK, 1 =WARNING, 2 =ERROR
statusFlags	Raw keepalive status bytes 7-8 as 16-bit integer (includes battery nibble in byte 7 high nibble)

operationalMode codes

Code	Enum name	Meaning
0	MANUAL	Valve % from server (setValvePosition)
1	AUTOMATIC	Internal PI algorithm, server setpoint
2	AUTOMATIC_EXTERNAL	Server setpoint + external room sensor

statusFlags bit mapping

Combined as (byte7 << 8) | byte8 from the 9-byte keepalive. High nibble of byte 7 also encodes battery voltage.

Byte 7 (low nibble — status flags):

Bit	Meaning when set
3	openWindow
2	highMotorConsumption
1	lowMotorConsumption
0	brokenSensor

Byte 8:

Bit	Meaning when set
7	childLock
6	calibrationFailed
5	attachedBackplate
4	perceiveAsOnline
3	antiFreezeProtection
1	batteryLow

status evaluation

Computed by the codec from keepalive status bits on each fPort 2 keepalive.

Level	Value	Conditions
Error	2	<code>brokenSensor</code> , <code>calibrationFailed</code> , or <code>perceiveAsOnline == 0</code>
Warning	1	<code>highMotorConsumption</code> , <code>lowMotorConsumption</code> , <code>antiFreezeProtection</code> , <code>batteryLow</code> , or <code>attachedBackplate == 0</code>
OK	0	Everything else

Informational (no status effect): `openWindow`, `childLock`.

Control points (tx)

Writes enqueue a LoRaWAN **downlink on fPort 2**. Prefer **unconfirmed** downlinks. Confirm on the next keepalive via `setpoint / valve % / status`.

Modes are **explicit** — write `setgetOperationalMode` to match the profile (or rely on profile default `d`). LORCOM does not auto-switch modes. Each write sets the mode and requests confirmation; `operationalMode` updates on the response uplink.

Note about use

BACnet/Modbus SEND control:

- Default **SEND** can be **4** (`single-on-write-any`): writing a TX point enqueues a downlink for that single value. Suitable for valve % (`setValvePosition`), target temperature (`setTargetTemperature`), or external temperature (`setExternalTemperatureFloat`) updates.
- Use **SEND 2** (`all-send-now`) to push **all** TX params in one batch.

Vicki-ValvePosition profile

Point	Default	Use
<code>setValvePosition</code>	0	Direct valve % (0–100). Manual mode only.
<code>setgetOperationalMode</code>	0 (<code>MANUAL</code>)	Online operational mode (set + get)
<code>setRadioInterval</code>	10	Keep-alive period (minutes)
<code>recalibrateMotor</code>	0	Trigger motor recalibration (boolean)

Point	Default	Use
setChildLock	0	Enable/disable rotary encoder child lock (boolean)

Vicki-TemperatureSetpoint profile

Point	Default	Use
setTargetTemperature	19	Room setpoint °C (integer; encoded via 0x0E)
setgetOperationalMode	1 (AUTOMATIC)	Online operational mode (set + get)
setRadioInterval	10	Keep-alive period (minutes)
recalibrateMotor	0	Trigger motor recalibration (boolean)
setChildLock	0	Enable/disable rotary encoder child lock (boolean)

Vicki-TemperatureSetpointExternal profile

Point	Default	Use
setTargetTemperature	19	Room setpoint °C (integer; encoded via 0x0E)
setExternalTemperatureFloat	0	External room °C from BMS (0.1 resolution; encoded via 0x3C)
setgetOperationalMode	2 (AUTOMATIC_EXTERNAL)	Online operational mode (set + get)
setRadioInterval	10	Keep-alive period (minutes)
recalibrateMotor	0	Trigger motor recalibration (boolean)
setChildLock	0	

Point	Default	Use
		Enable/disable rotary encoder child lock (boolean)

After device restart, mode 2 may revert to 1. When using external temperature, re-send `setgetOperationalMode=2` together with `setExternalTemperatureFloat` (per MClimate release notes).

Recommended control sequences

Goal	Profile	Sequence
Thermostat control	TemperatureSetpoint	<code>setgetOperationalMode=1</code> , then <code>setTargetTemperature</code>
Direct valve	ValvePosition	<code>setgetOperationalMode=0</code> , then <code>setValvePosition</code>
BMS room sensor	TemperatureSetpointExternal	<code>setgetOperationalMode=2</code> , then <code>setExternalTemperatureFloat</code> + <code>setTargetTemperature</code>

Not exposed in LORCOM

Raw motor counts (`motorRange` / `motorPosition`), `targetTemperatureFloat` / 0x52 float setpoint report, keepalive/watchdog/join config getters, open-window parameters, PI/algo tuning, valve range limits, primary heating/cooling mode (0x1E / 0x1F), FUOTA, and custom hex commands are not mapped to BACnet/Modbus.