

## DALI Temp



### Datasheet

#### Temperature Sensor

DALI sensor unit for temperature  
measurements

Art. Nr. 86459544

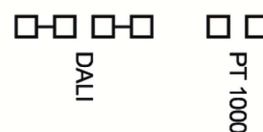
# DALI Temp Temperature Sensor

## Overview

- DALI sensor unit for temperature measurements
- Internal sensor and terminals for connecting an external PT1000 (other external sensors on request)
- The measurement values of internal and external sensor can be queried via DALI
- Suitable for measuring and monitoring temperature e.g. for heating and ventilation technology
- The module does not require an additional power supply, it is supplied by the DALI-line directly
- Double DALI terminals – the DALI signal line is connected through

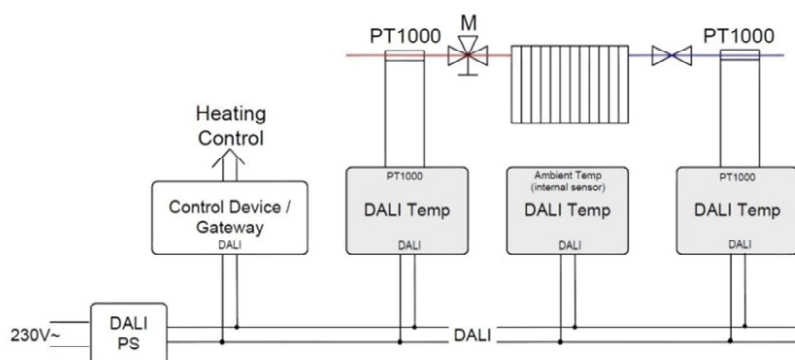
## Specification, Characteristics

| type                                            | DALI Temp               |
|-------------------------------------------------|-------------------------|
| article number                                  | 86459544                |
| power supply                                    | via DALI- Bus           |
| typ. current consumption                        | 2.6 mA                  |
| output                                          | DALI                    |
| number of used DALI addresses                   | 1                       |
| input (optional)                                | PT1000                  |
| temperature measurement range (internal sensor) | 0°C to +85°C            |
| accuracy (internal sensor)                      | 0.5°C                   |
| temperature measurement range (external PT1000) | -25°C to +125°C         |
| accuracy (external PT1000)                      | 0.4°C                   |
| operating ambient temperature                   | 0°C to +85°C            |
| protection class                                | IP20                    |
| connecting wire cross section                   | 0.5-1.5 mm <sup>2</sup> |



connection plan

**Application in heating technology e.g. for:**  
 measurement of flow temperatures  
 measurement of return temperatures  
 measurement of ambient temperatures



typical installation

## Querying and Evaluating Temperature Values

### ***Query Measurement Values***

The measurement values of the internal and the external sensor can be queried via scene values. Each measurement value is a 16bit value (2bytes), for low resolution (1°C) reading out the high byte only is sufficient.

Internal sensor:

HiByte: Scene 0 (Command: QUERY SCENE 0)

LoByte: Scene 1 (Command: QUERY SCENE 1)

External sensor:

HiByte: Scene 2 (Command: QUERY SCENE 2)

LoByte: Scene 3 (Command: QUERY SCENE 3)

### ***Evaluating the temperature***

Formula for combining the two bytes and generating a value in °C:

$$\text{Temp}[^{\circ}\text{C}] = \text{HiByte} + \text{LoByte}/256$$

range HiByte (signed): [-128 ... +127]

range LoByte (unsigned): [0...255]

For measurements with low resolution reading the HiByte only is sufficient. The value of the HiByte corresponds directly to the temperature value in °C. For higher resolutions the LoByte can be queried after having read out the HiByte.

Example:

-5,75°C: HiByte=-6, LoByte= 64;

+5,75°C: HiByte=5, LoByte=192;

## Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems

<http://lunatone.at/en/downloads/Lunatone-DALI-Cockpit.zip>

DALI-Manual [http://www.dali-ag.org/c/manual\\_gb.pdf](http://www.dali-ag.org/c/manual_gb.pdf)

DALI USB – PC interface for DALI system. The DALI-Cockpit can access DALI components using the DALI USB

<http://lunatone.at/en/downloads/Lunatone-Art24138923-DALI-USB-Datasheet-EN.pdf>

DALI PS – power supply for a DALI line

<http://lunatone.at/en/downloads/Lunatone-Art24033444-DALI-PS-Datasheet-EN.pdf>

## Contact

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