ⅅ Lunatone

DALI Temp

Datasheet
Temperature Sensor

DALI sensor unit for temperature measurements
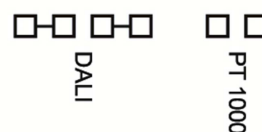
Art. Nr. 86459544

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

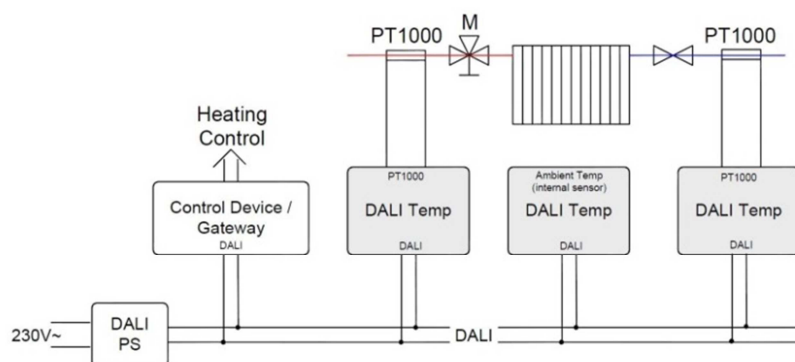- Double DALI terminals – the DALI signal line is connected through

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^2

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:

Temp[°C] = HiByte + 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

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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