Распределители тепла Caltos E

Технические характеристики

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caltos E

Electronic heat cost allocator with radio module

LoRaWAN®- or wireless M-Bus-interface

The electronic heat cost allocator caltos E with integrated radio interface serves to record the share of heat produced by radiators. The electronic heat cost allocator caltos E with its many possible uses and its convenient recording and data transfer technology (LoRaWAN® or wireless M-Bus) fully satisfies the high level of requirements for the housing industry and the increasing demand for comfort by home owners and tenants.

The caltos E can be used within a particularly wide range of temperatures from 35 °C to 130 °C (average design temperatures for the heating medium) and is optimally suited for heating systems with all design temperatures (particularly low temperature systems). The caltos E can be used in single-pipe heating systems as well as the two-pipe systems that are standard today.

The caltos E works in accordance with the dual sensor measuring principle in which high-precision sensors constantly record the actual temperature difference between the radiator and room temperature. The recorded measurement data is reliably recorded and assessed for consumption measuring purposes. Also an automatic switch takes place from dual sensor measuring principle to single sensor measuring principle if there is a thermal effect (e.g. manipulation or heat accumulation).

Differentiation already occurs between heating operation and external heating in the heating-up phase by means of plausibility tests on the measured room air and radiator temperature in the equipment.

Consumption values transparent at all times

Home owners and tenants can see the consumption values on the equipment independently of whether the consumption values are read on the optical interface or remotely.

The easily legible 5-figure multifunctional display provides constant information on the current consumption value. If the display is activated using the optical interface on the front of theequipment then further important consumption and equipment information beyond the current value is visible in two display sequences.

After the display test the first display loop shows, in sequence, the meter reading on the specified billing date, the billing date and the scale and sensor versions.

18 past month-end values can be retrieved in sequence within the second display loop. The integrated wireless interface offers a particular advantage because cost-intensive journeys for interim readings are no longer required when tenants change. The values that are stored in the equipment allow exact consumption differentiation for the production of bills, even retroactively.

Wireless remote reading for maximum convenience

There are no more appointment commitments and no interruptions to your private life with the caltos E. Meter readers no longer need to enter your home when you use the electronic heat cost allocator caltos E, wireless water meters, heat meters and smoke detectors.

The caltos E with LoRaWAN® interface sends the monthly value, the mid-month value, fault reports, equipment manipulation and various equipment parameters.

The information that is sent is also coded on multiple levels, so that data security is guaranteed.

The caltos E with wM-Bus-interface sends every 180 seconds the current consumption value, historical consumption value and various equipment parameters.

A radio shutdown (transmission break) takes place at night from 23:00 - 5:00 and Sundays from 0:00 - 24:00.

The transmission is in C1 mode at a frequency of 868 MHz. The very short radio signals of the caltos E ensure secure data transmission. The information that is sent is also coded on multiple levels, so that data security is guaranteed.

Product characteristics

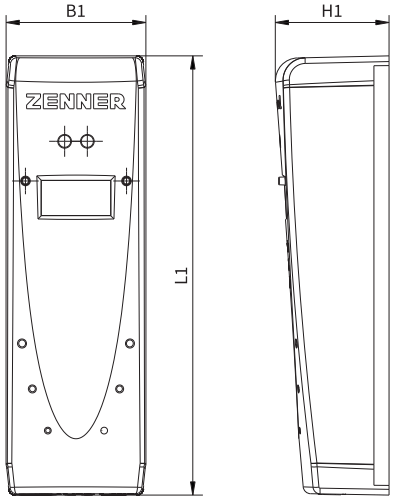
- **Use range from 35 °C to 130 °C (average design temperatures for the heating medium)**
- **Display of the current consumption data for the specified due date value and the last 18 month-end values in the equipment memory (each in a unit scale)**
- **Stored in the equipment memory: current consumption, 2 due date values and 18 mid-month and month-end values and 31 daily values**
- **The specified reading date can be chosen freely with corresponding parameterisation software**
- **Battery lifetime up to 12 years**
- **Infrared interface for data reading, display retrieval and equipment programming**
- **Consumption data reading using LoRaWAN® radio (standard: scenario for monthly values) or wireless M-Bus radio module**
- **Unit scale and alternative product scale programmable with corresponding parameterisation software**
- **Permanent internal self-monitoring**
- **Electronic registration of manipulation attempts**
- **High level of protection against thermal, electrical and magnetic failures**

caltos E with LoRaWAN®- or wM-Bus-interface

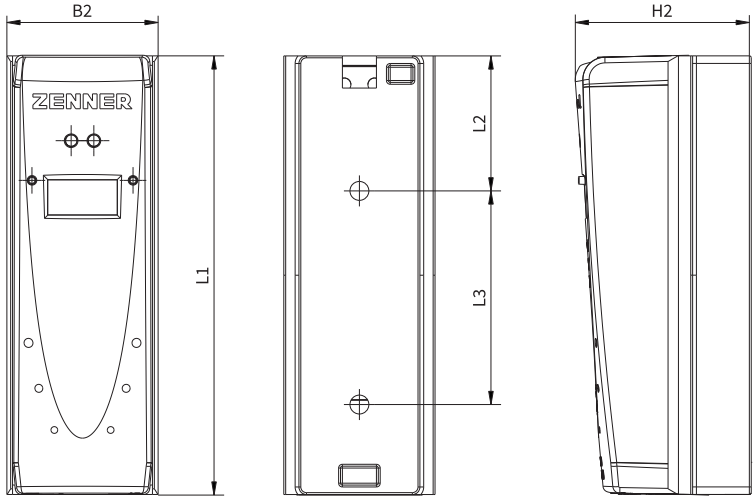
Technical data caltos E		
Measurement method		Dual sensor measurement operation with patented logic for external heat detection
Temperature range		35 °C to +130 °C
Display		LCD, 5-figure
Display function		Current value (is being resetted after the due date), reading of special displays possible
Version		Compact version and split version (remote sensor)
Transmission power		max. +14 dBm
Summer deactivation		optional (01.06. - 01.09.)
Scale factor		Unit scale (standard), product scale possible
Function test		internal self-calibration and function check
Certification		Electronic heat cost allocated certified in accordance with DIN EN 834: 2017-02 and the HKVO heat cost ordinance, approval no. A1.02.2017
Consumption value storage		current consumption, 2 due date values and 18 mid-month and month-end values, 31 daily values stored
Interfaces		all values readable using IR, wireless
Energy supply		3 V lithium battery
Operating frequency		868 MHz
Duration of transmission telegram		up to 1 s (depending on spreading factor)
Data transmission procedure		LoRaWAN® class A (bi-directional communication), wireless M-Bus
Battery lifetime		up to 12 years
Range in buildings	wM-Bus	approx. 50 m
Data rate	wM-Bus	~ 38,4 kBaud (effectively)
Sending interval	LoRaWAN®	standard: monthly; optional: daily
	wM-Bus	wM-Bus: all 180 s*
Encryption of radio protocols	LoRaWAN®	yes
	wM-Bus	AES 128 Bit encoded , encryption mode 5, optional Encryption mode 7
Test symbol	LoRaWAN®	CE, LoraWAN V1.0.2
	wM-Bus	CE
Content of radio telegram	LoRaWAN®	Month value, month center value ,error transmission, manipulation of equipment, various device data
	wM-Bus	Device serial number; Status information; Current value; Due date; Due date value; Monthly value previous month; Other 14 monthly values

Dimensions and weights:		
Length approx.	L1	116
	L2	35.7
	L3	56.5
Width approx.	B1	36
	B2	40
Height approx.	H1	30
	H2	47
Weight compact version approx.	kg	0.064
Weight split version approx.	kg	0.110

* After activation, the heat cost allocator transmits for a period of one hour with a quicker transmission interval of 20 s (commissioning scenario)



Dimensions compact version



Dimensions split version

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