

## ► Brunata FuturaTherm+

### Electronic heat cost allocator for detailed temperature registration

FuturaTherm+ is suitable for use where detailed knowledge of the temperature conditions is desired, e.g. basement and attic rooms in a block of flats. In addition, FuturaTherm+ can be used to register outside temperatures.

#### Characteristics

- Measures the current temperature with either internal sensor or remote sensor
- Measures every ten seconds
- Shows the temperature in °C with one decimal on the display
- Covers the range of measurement -25 °C to +100 °C at the standard setting (248,2 Kelvin to 373,2 Kelvin with a resolution of 0.1 K)
- Forms part of a radio-based system, is easy to install and involves no complicated cabling.

#### Registration method

FuturaTherm+ divides the time into ten minute periods. During each period, 60 temperature measurements are carried out (a measurement every ten seconds) and the following values are calculated on the basis of these measurements:

- Average temperature in the current ten minute period
- Maximum temperature in the current ten minute period
- Minimum temperature in the current ten minute period

The calculated temperatures are updated after each measuring. Every tenth minute, data are radio transmitted to a controller box. From here, data can be transferred to a PC, either directly or via a modem.



#### System components

1. Radio receiver, which is located up to 30 metres from the meters in the stairway, attic or basement, depending on the building conditions. The number of radio receivers required depends on the size of the building. Typically one radio receiver covers one stairway.
2. Controller box which collects and stores the signals from the radio receiver(s) with GPRS.
3. PC with internet browser.

The meter can be read remotely using a modem (fastnet, GPRS or GSM).

*Brunata is a 100 % Danish owned company. We have more than 90 years of experience within developing and producing heat cost allocators and heating accounts. Brunata a/s has implemented a quality system in accordance with EN ISO 9001. Please contact us for further information on our products.*

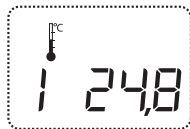
## Easy-to-read display

The meter is easy to read. The following information in °C with one decimal automatically alternates on the display:

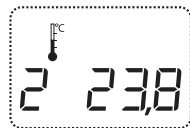
Meter number



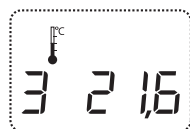
Display reading 1 shows the current temperature from the latest measurement



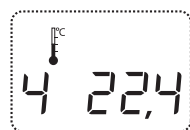
Display reading 2 shows the maximum temperature for the last completed ten minute period



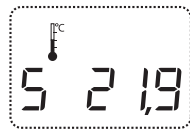
Display reading 3 shows the minimum temperature for the last completed ten minute period



Display reading 4 shows the average temperature for the last completed ten minute period



Display reading 5 shows the average temperature for the previous (last but one) completed ten minute period



## Radio telegram

Meters with radio transmitter transmit with a regular interval a number of selected data:

- Meter number
- Current temperature from the latest measurement
- Maximum temperature for the last completed ten minute period
- Minimum temperature for the last completed ten minute period
- Average temperature for the last completed ten minute period
- Average temperature for the previous (last but one) complete ten minute period
- Battery counter
- Current meter status
- Meter status flag

(all temperatures are in Kelvin with a resolution of 0.1 K)

## Replaceable batteries

The meter is supplied with a replaceable battery with an expected life of two years.

## Technical information

Minimum distance to radio transmitter:	1 m
Maximum distance:	30 metres, depending on the building conditions
Size and weight:	135 x 37 x 18 mm, approx. 61 g
Battery:	Replaceable lithium battery with an expected life of at least two years at telegram transmission intervals of 10 minutes.
Transmission frequency	Brunata FuturaTherm+ sends a telegram every 2nd – 4th hour. Brunata FuturaTherm+ ver2 sends a telegram every 2nd minute.
Protocol	Brunata FuturaTherm+ use BrunataNet protocol Brunata FuturaTherm+ ver2 use BrunataNet ver2 protocol