Electronic heat cost allocator with integrated data transmitter

E-ITN 30.6 - wireless M-BUS

Description

E-ITN 30.6 is a modern electronic device intended for ratio-based allocation of heat cost in buildings with central heating system . **The allocator can be used for yearly and monthly billing.**
The heat cost allocator E-ITN 30.6 uses the 2 sensor measuring principle. One sensor measures the temperature of the radiator and the second sensor measures the temperature of the room. Using this principle, allocator ensures exact measurement of consumption value only when the radiator really emits heat.

Data reading

Due to integrated radio transmitter, presence of flat-occupant is not required when data are read. No strangers also enter the flat. Data reading can be made by billing company employee using mobile receiving unit. When everyday online access to the data is required, the data can be also read by central reading system permanently installed in the building .
The radio transmitted data can provide you with the following information: serial number of the allocator, date of the billing period beginning, date of reading, date of breaking of the electronic seal, consumption value for the current year billing period, consumption value for the previous year billing period, consumption value for the current month billing period, consumption value for the previous month billing period, average temperature for the previous month billing period.

User control

Every user can control current value during actual billing period and archive value for past billing period on LC display. LCD is for better accessibility placed on the top side of the fashionably designed allocator.

Protection against cheating

The heat cost allocator E-ITN 30.6 is equipped with electronic seal. This seal is able to recognize unauthorized manipulation and record its exact date. Data about unauthorized manipulation is transmitted in radio signal. When thermally influenced, allocator is switched to single-sensor mode. Allocator is switched back to standard two-sensor mode when thermal influence is finished. Consumption values and radiator temperatures for past 12 months can be read from the allocator memory via infra-red interface.

Ciphering

The heat cost allocator E-ITN 30.6 has the option of ciphering using AES - 128 (the block size of the ciphered data is 128 bits, the size of the key is je 128 bits). The key consists of two parts— the first is defined by the manufacturer specifically for each partner, the second can be specified by the partner in the setting protocol.

Technical data

Communication protocol	W-MBUS according to EN 13757-4
Measuring method	Two sensor principle
Conditions for measuring	sensor temperature of the radiator ≥ 23 °C temperature difference between the mean heating medium temperature and the reference air temperature <= 5K (according to standard EN 834:2013), different conditions for registration in the summer period
Resulting rating factor	Individual scale
Calendar functions	Consumption values for current, previous and penultimate year billing period; monthly consumption values; minimum, average and maximum temperatures on the radiator sensor; number of days when and increase of consumption value was registered
Data displaying	5-digits LC display + 2 special characters
Data reading	Visual, radio and infra-red interface
Protection against cheating	If the thermal influence is detected, allocator is switched to single-sensor mode Mechanical seal with marking of the operating company Electronic seal records manipulation date when uninstalled
Data back up	daily backup of measured values including actual time
Function control	Automatic, can be activated and controlled by user
Dimensions	100 x 37 x 33 mm
Power supply	Lithium battery 3,0 V
Battery life	10 + 1 year
Material	ABS + PC / Al - F22
IP	IP 42
Conformity	EN 834
Operating frequency	868,95 Mhz
Transmitting power	< 5 mW
Transmission length	~ 5 ms
Transmission range	up to 250 m (without entering the building, with additional panel antenna) Note.: all metal parts of construction (armouring, lifts, switch rooms, etc.) can negatively affect the range of radio signal.
Data ciphering	optional AES-128, (the block size of the ciphered data is 128 bits, the size of the key is je 128 bits)

Application

E-TIN 30.6 is intended to be installed in one-tube horizontal/vertical and two-tube heating systems with the lowest mean design heating medium temperature ≥ 35 °C and highest mean design heating medium temperature ≤ 105 °C.

Contact

APATOR METRA s.r.o.
Havlíčkova 919/24
787 64 Šumperk
Czech Republic

Tel.: +420 583 718 261
Fax.: +420 583 718 150
E-mail: prodej@metra-su.cz
WWW: http://www.metra-su.cz

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