EquaScan eHCA^{RF} V2

Electronic heat cost allocator with radio communication

The electronic heat cost allocator of the EquaScan system was specifically developed by Itron, to meet the diverse requirements of independent metering service companies.
The devices are designed for simple and quick installation and cover almost all applications due to their range of functions. In the wireless version, the heat cost allocators are optimised for the remote control data collection. The EquaScan system from Itron includes all the components for the secure and convenient radio transmission of consumption values.
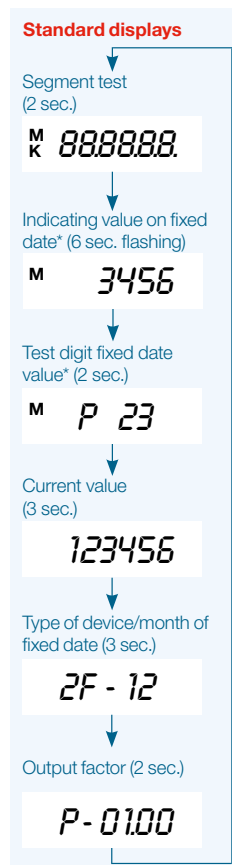
OMS COMPATIBILITY

The bi-directionality of the EquaScan radio system provides a very extensive data protocol and can thus process more data than usual. Thanks to the standardised wM-Bus protocol, Itron EquaScan radio components can be integrated into existing open metering systems (OMS) and smart meter applications.

PERFORMANCE FEATURES

» 2-sensor unit with high accuracy
» Mounting plate compatible with most welding stud positions
» Patented, quick and easy interface (inductive)
» Radio version with bidirectional radio communication (for WalkBy, FNet)
» 18 monthly data sets (middle and end of month)
» Remote sensor can be retrofitted on site

Rolling display

Standard displays

Segment test
(2 sec.)

Indicating value on fixed date* (6 sec. flashing)

Test digit fixed date value* (2 sec.)

Current value
(3 sec.)

Type of device/month of fixed date (3 sec.)

Output factor (2 sec.)

Efficient

With the introduction of the new generation of the EquaScan radio system Gen2, a further increase in the already exceptionally long range of the V2 radio components has been achieved. This means a further significant increase in the efficiency of the stationary EquaScan radio system, as fewer routers may be required than in comparable installations.

Buildings of bricks

Range 50 m and up to 6 floors!

The consumption data are easy to read on the 6-digit display. All relevant information is shown on the rolling display.

» Display test
» Fixed date value "M"
» Current consumption value
» Device type / month of fixed date

In the case of product-scaled units, the display values are marked by additional symbols.
Further comprehensive data for service and analysis are available via the inductive or radio interface.

SYSTEMS

COMMUNICATION INTERFACE

The communication interfaces (inductive or via radio) enable quick and and secure recording of heat cost allocator data. All relevant parameters of the EquaScan eHCA can be programmed via the inductive head, e.g. product scale and rating factors, the fixed date billing or the annual reset of indicating value. In the radio version, individual parameters can also be programmed via MasterRF.

In combination with the EquaScan software, access to a multitude of service and status functions at maximum speed is possible:

» Password protection

» 2 yearly fixed dates

» 18 end of month indexes

» 18 mid of month indexes

» 18 monthly radiator temperature averages

» Remaining battery life time

» Error and manipulation reports

Technical data

Characteristics	
CE conformity	2004/108//EC, 1999/5/EC, 2011/65/EU, 2012/19/EU
Qualification approval in accordance with	EN 834 (HkVo) Approval no. C 3.01 / 2012
Protection class	IP43
Types of device	standard and radio
Versions of device	compact and remote sensor version
Power supply	3V lithium long life battery
Battery life time (normal)	10+1 year
Display	Liquid crystal display (LCD)
Resolution	6 digits (00 00 00 … 99 99 99)
Measuring principle	2 sensors
Scale	standard or product sale
Radiator thermal output	4-16.000 Watt
Range for heating systems	t_{min} 35 °C - t_{max} 105 °C (110 °C remote sensor)
Operating range	-15 °C … +120 °C
Storage temperature	-25 °C … +60 °C
Maximum temperature exposure of metallic back/rear plate of device	75 °C

Radio performance	
Protocol	bidirectional EN 13757-3/-4 wireless M-Bus or unidirectional OMS V4
Operating mode	C2- or C1 mode
Frequency band	Tx 868,95 MHz Rx 869,525 MHz
Transceiver	Transmitter: 10 dBm Receiver: -100 dBm
Transmitting cycle	after fixed date value 56 days every minute
Transmission period	6…10ms

Dimensions
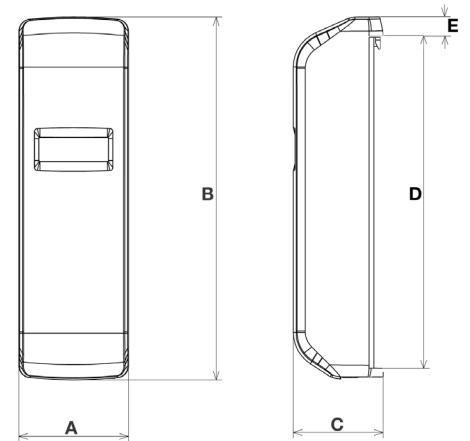
Dimensions	mm
A	37
B	122
C	30
D	111
E	7

The electronic heat cost allocator can be switched to the desired radio operating mode* at any time using the inductive head.
The electronic heat cost allocator supports the following radio operating modes:

- EquaScan V2 (use of single key encryption and bidirectional radio operation);

- EquaScan Retrofit (use of global customer key and bidirectional radio operation);

- OMS (use of single key encryption and unidirectional radio operation).

*By default, the radio modules are supplied in the EquaScan V2 radio operating mode. In this mode, a full backwards compatibility to EquaScan system components already in use (V1) is given. The units operate in C2 mode, which also includes the comprehensive C1 radio protocol, providing all relevant data required in OMS specifications.