

CF 51

Heat and cooling Meter Calculator



The CF 51 is a stand-alone calculator issued from the Itron CF Heat Meter Family and represents a technology step forward in the metering of thermal energy. Easy to handle, this calculator will turn your investment into benefits.

FEATURES AND BENEFITS

- » Modular Design
- » Plug and Play Communication options boards
- » Bonus calculator
- » Max. demand manager
- » 2 wires

CE type approval certificate:
DE-06-MI004-PTB006

Loop 1

Billing Data

- Energy
- Cooling energy*
- Volume
- LCD test
- External water meter 1/2*

*optional

Applications

Heating, Cooling and Combined, return and supply positioning.

Standards Compliance

- » MID 2014/32/EU Module B+D
- » Env. Class E1, M1 acc. 2014/32/EU
- » OIML R75

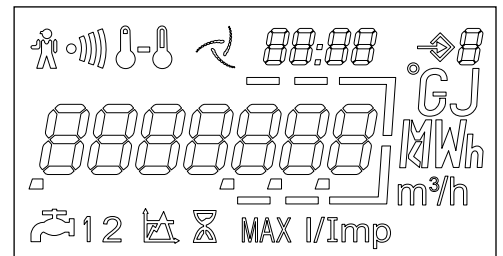
Benefits

- » Simple to use
- » Easy reading
- » Upgrade with option boards

Multifunctional Display

The multifunctional display facilitates easy reading, providing fast and clear access to the most important billing data. The display enables the diagnosis of failures alarms from a single glance.

The LCD has a long life time and through a push button you get easily access to each level of data.



Loop 2

Additional Information

- Flow rate
- Power
- Supply temperature
- Return temperature
- Temperature difference
- Operating time
- Power peak date + time*
- Flow peak date + time*
- Temperature peak date + time*
- Time in alarm
- Temperature alarm
- Flow alarm
- Overflow alarm
- Power supply alarm
- Current time + date*
- M-Bus primary address
- M-Bus secondary address
- M-Bus baud rate
- Pulse value water meter 1/2*

*optional

Loop 3

Fixed Date Reading

- Fixed date energy 1...24
- Fixed date cooling energy 1...24 *
- Fixed date volume 1...24
- Fixed date water meter 1/2 1...24*
- Software version

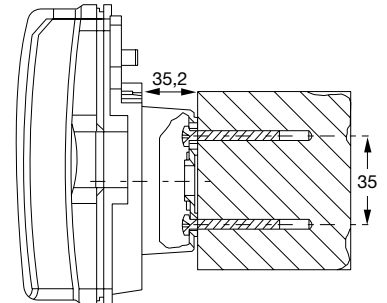
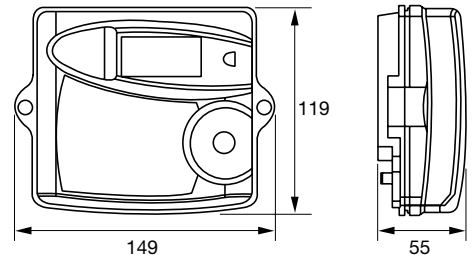
*optional

CF 51 Energy Calculator

Metrology exceeds	OIML, EN 1434
Temperature range	0 ... 180 °C
Temperature difference	3 ... 160 K
Temperature sensors	Pt100 or Pt500, 2 wires
Display	LCD - 7 digits
Back-up memory	EEPROM
Power supply (optional)	6 or 12 year Lithium battery - 230 V main power supply or power supply by M-Bus
Protection class	IP64
Environmental class	Env. Class E1, M1 acc. 2014/32/EU
Ambient temperature	5 ... 55 °C
Pulse value (programmable)	1 / 2.5 / 10 / 25 / 100 / 250 / 1000 L
Optical interface	EN 13757 / M-Bus protocol



DIMENSIONS



Wall mounting

Option Boards Characteristics

M-Bus

Standard reference	EN 1434-3
Baud rate	300 to 2400 baud
Data in standard mode	Energy, Volume, Flow, Temperatures (supply, return, difference), Time in error, Operation time, Date and time, Volume of water meters 1&2, Firmware version

Pulse Inputs for 2 water meters

Pulse value (independent per input)	1 / 2.5 / 10 / 25 / 100 / 250 / 1000L/imp
Pulse detection	Contact closed $R \leq 500 \Omega$ Contact opened $R \geq 100 \text{ k}\Omega$ Maximum frequency: 10Hz

Energy and Volume Pulse output

Pulse value	Repetition of display Energy from 1KWh to 1MWh Volume from 10 L to 1 m ³
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LON application

Transceiver	TP/FT-10
Transmission speed	78 Kb/s

Radio Applications

Compatibility	AnyQuest radio walk-by system EverBlu radio fixed network system
Frequency	433 MHz
Protocol	Radian open protocol

GPRS Modem with integrated M-Bus-Master (option)

GPRS specifications	Quad Band GSM 850/900/1800/1900MHz
GPRS datatransfer via	SMS, E-Mail, FTP client, http client
M-Bus Master (option)	EN 13757-2/-3, 300/2400 Baud, 8 unit loads

Modbus

Mode	2 wires, Differential Half-Duplex
Baudrate / Data	2400, 4800, 9600, 19200 bits/s
Format	8 data bit 1 stop bit no parity
Power supply	3,6 V-12V DC from CF heat meter

Power supply by M-Bus (Board 6)

Current consumption	2 unit loads = 3mA (M-Bus master / permanent load)
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OPTION BOARDS

The CF 51 is pre-equipped for communication. Different option boards can be plugged simply to the meter and start working automatically.

The following option boards are available:

- » Board 1: **M-Bus + E/V Repetition**
- » Board 2: **M-Bus + 2 Water Meters pulse input**
- » Board 3: **GPRS Modem + E/V Repetition + M-Bus Master**
- » Board 4: **LON + 2 Water Meters pulse input**
- » Board 5: **Radio + 2 Water Meters pulse input**
- » Board 6: **M-Bus + 2 Water Meters pulse input + power supply by M-Bus**
- » Board 7: **Modbus**



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