HEAT METERS

Wall-mounted calculator

ICENTA

- MID Approved
- BMS output
- Pulsed output [Kw/hr], M-bus or 4-20mA versions
- Dn 15-300 applications
- Battery [6 year life] or 230v AC versions
- IP54 protection rating
- EMC Class C according to EN1434
- Measurement range 5-150°C
- Ambient temperature: 0 - 55°C
- Temperature resolution: 0.01°C
- Measuring frequency 20 - 120 seconds
- Selectable annual billing date
- No data loss when battery removed
- PT500 sensors
- Optional version with two pulsed inputs available

TECHNICAL DATA

Part No.	Power source	Pulse output values	
		Energy [Kw/h per pulse]	Volume [m³ per pulse]
ICT PIPO-1L	Battery 3v Li	1	0.1
ICT PIPO-10L	Battery 3v Li	10	0.1
ICT PIPO-100L	Battery 3v Li	100	1
ICT PIPO-1000L	Battery 3v Li	100	1
ICT PIPO230VAC-1L	230v AC 50Hz	1	0.1
ICT PIPO230VAC-10L	230v AC 50Hz	10	0.1
ICT PIPO230VAC-100L	230v AC 50Hz	100	0.1
ICT PIPO230VAC-1000L	230v AC 50Hz	100	1

Electrical characteristics	
Switching current	150mA~/-
Switching voltage	75mA/-
Switching power	5vA
Contact resistance [contact open]	10^{10} ohm
Contact capacity	$\leq$ 0.6 pF
Maximum current [contact closed]	1A
Max. voltage [open contact]	140v~/-
Pulse duration [contact closed]	100ms
Minimum time between pulses	400ms
Bounce time	0.5ms

ADDITIONAL FEATURES

- Continuous display of the accumulated heat energy on a large LCD display

- Application-oriented display menu; easy to scan using operating key

- Data storage six times a day in non-volatile memory

- Hourly self-check

- 12 monthly values readable on the display or via the optional interface

- Available lengths of temperature sensor pair:
  3m [2-wire type] and
  10m [4-wire type]

- Installation in temperature pockets of various lengths possible.

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THE MENU
The large high-contrast display continuously shows the accumulated heat energy. This enables an easy, sure and quick read-out of the most commonly needed figures.
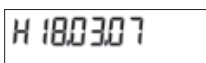
Main loop A1

Display	Description
`2567.783 MWh`	1] Total heat quantity [standard display]
`8888.8.8.8 kWh m³ / max ▼ GJh`	2] Segment test - all segments are triggered simultaneously
`223468.1 MWh` `E 31.12.06`	3] Heat quantity at last annual billing date, alternating with last billing date
`H 18.03.07`	4] Current date
`F 00d000`	5] Error message "F". "d" stands for days since error started
`648 1.8 m³`	6] Total volume since installation in m³
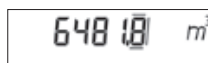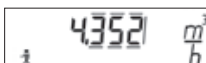
Technician loop A2
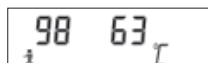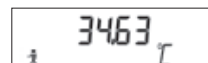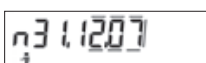
Display	Description
`4.352 m³/h`	1] Current flow in m³/h
`3.189 kW`	2] Current power in kW
`98 63 ℃`	3] Forward flow and return flow temperatures
`34.63 ℃`	4] Temperature difference
`n 31.12.07`	5] Date of next billing date
`d 658`	6] Days in operation since verification
`1.000` `L Pro 1`	7] Pulse value, alternating with its unit
`8400 100 M n`	8] Customer number or measurement location number
`bu5 1`	9] M-bus address
`8400 100`	10] Serial number
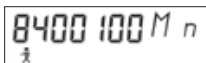
Statistic loop A3
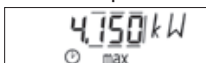
Display	Description
`138 10.18 MWh` `E 31.12.05`	1] Heat quantity at next-to-last billing date, alternating with next-to-last billing date
`24680.13 kW` `E 28.02.07`	2] Heat quantities of the last twelve months alternating with the corresponding billing date.
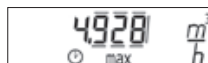
Tariff loop A4

Display	Description
`4.150 kW ⊙ max`	1] Maximum power for one hour
`4.928 m³/h ⊙ max`	2] Maximum flow for one hour
`4.150 kW ⊙ max` `E 31.12.06 ⊙`	3] Maximum power to previous billing date, alternating with previous billing date
`4.928 m³/h ⊙ max` `E 31.12.06 ⊙`	3] Maximum flow to previous billing date, alternating with previous billing date

All sizes are approximate and are given for guidance only.
Products and specifications may be subject to change from those shown without notice.

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STORAGE INSTRUCTIONS

Dry and frost protected

MOUNTING INSTRUCTIONS

Affix the wall mounting bracket [supplied with the calculator] to the wall and clip on the calculator.

Connect the wires as described below [for the pulsed BMS output].

Clip the calculator on the output module

Remove the terminal cover on the front of the calculator.

Connect two wires from water meter to left hand terminal [NOT polarity sensitive] to give pulsed input flow rate.
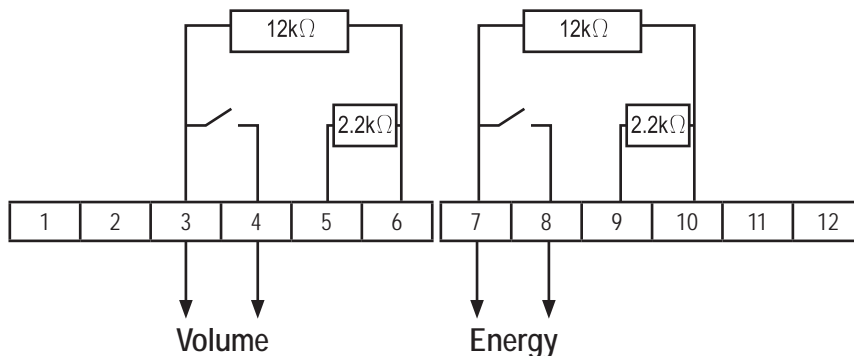
Re-fit terminal cover.

CONNECTION OF THE PULSE OUTPUT UNIT

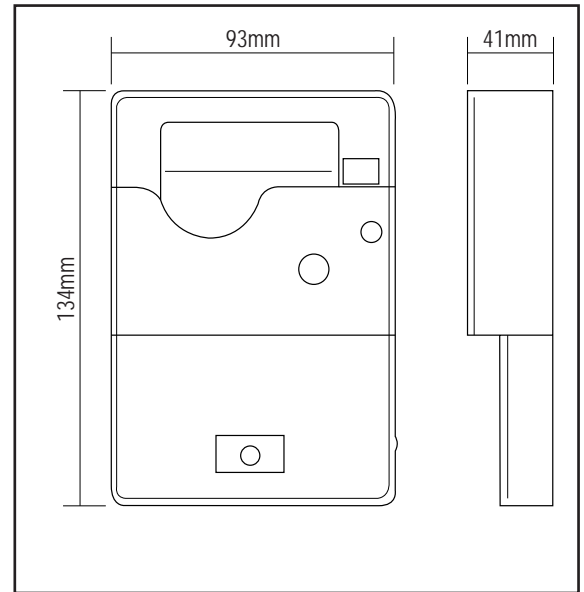To clamp on the **pulse output for energy**: the clamps **7** and **8** must be connected.

The short circuit wire between **4** and **5** must be removed.

To clamp on the **pulse output for volume**: the clamps **3** and **4** must be connected.

The short circuit wire between **8** and **9** must be removed.

Volume   Energy

DIMENSIONS

93mm   41mm

134mm

Wall mounting bracket

Output module

Calculator

Temperature sensors and pockets

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