CALEFFI Hydronic Solutions

www.caleffi.com

Heat cost allocator MONITOR 2.0/MONITOR 2.0 E
Domestic water consumption data acquisition device MONITOR 2.0 PULSE

CE 0470

7200 series

OPERATING STEPS - INSTALLATION MANUAL

Function

MONITOR 2.0 and MONITOR 2.0 E are latest-generation electronic heat cost allocators to be fitted on each radiator to meter heat consumption in buildings with centralised systems featuring vertical heating distribution (riser type).
When combined with a thermostatic or chrono-thermostatic valve, both temperature regulation and metering of heat consumption are performed, obtaining improved comfort, quantification of the actual heat consumption and a fair allocation of costs.
The heat consumption data can be collected via radio and processed directly by the building administrator/manager.

MONITOR 2.0 PULSE is a pulse acquisition device that, combined with a domestic hot and/or cold water meter with pulse output, enables measuring domestic water consumption for cost accounting for each dwelling.
Consumption data can be collected via radio and processed directly by the building administrator/manager via the same software used for reading heat cost allocators MONITOR 2.0/2.0 E

CAUTION! CONSULT THIS MANUAL BEFORE USING THE PRODUCT

OPERATING STEPS

HEAT COST ALLOCATORS and PULSE ACQUIRERS - MONITOR 2.0 - 2.0 E - 2.0 PULSE

1. PRELIMINARY INSPECTION (to be carried out by the installer)

Identify:
- No. of heat emitters
- Type of valves/lockshield valves
- Type of heat cost allocator mounting kit
- Number of domestic water volume meters

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Forward the purchase order as shown in the example below

Example:
- 200 cast iron plate radiators
- 32 towel radiators
- 40 DHW volume meters
- 40 DCW volume meters

a) For the 200 cast iron plate radiators you need:

- 180		Convertible radiator valves for iron pipe with 1/2" angled connection
- 180		Lockshield valves for iron pipe with 1/2" angled connection
- 20		Convertible radiator valves for iron pipe with 3/8" straight connection
- 20		Lockshield valves for iron pipe with 3/8" straight connection
- 200	code 720060	Kit (Table 1 on pages 11-12)
- 200	code 720020	MONITOR 2.0 heat cost allocator
- 160	code 200000	Thermostatic control head for radiator valves
- 40	code 201000	Thermostatic control head for radiator valves with remote probe

b) For the 32 towel warmers you need:

- 32		Convertible radiator valves for copper pipe with 1/2" angled connection
- 32		Lockshield valves for copper pipe with 1/2" angled connection
- 35*	code 720050	Kit (Table 1 on pages 11-12)
- 32	code 720020	MONITOR 2.0 heat cost allocator
- 32	code 200000	Thermostatic control head for radiator valves

* Code 720050 comes in a minimum 5-piece pack and the order therefore needs to be a multiple of 5.

c) For hot and cold domestic water volume meters you need:

- 40	code 794204/C 1/2" DHW meters with pulse output
- 40	code 794204 1/2" DCW meters with pulse output
- 80	code 720030 domestic water consumption data acqusition device MONITOR 2.0 PULSE

2. INSTALLATION AND MAPPING (to be carried out by the installer)

Valve / lockshield valve / thermostatic control head mounting

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Heat cost allocator mounting according to positioning and clamping rules — page 4-5-6-7-8

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Condominium Data Sheet compilation — page 15

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Apartment Survey Sheet compilation — page 16

3. COMMISSIONING– PARAMETERISATION (to be carried out by the installer)

In situ heat cost allocator parameterisation — page 17

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Radio transmission functional test — page 17

4. HEAT COST ALLOCATOR CONSUMPTION READOUT PROCEDURES (to be carried out by the condominium person in charge)

- Availability of a laptop PC with Microsoft® Windows operating system
- Purchase of a USB/radio device + SW7200 software (code 720090) for reading, displaying consumption and creating reports

pag. 17-18-19

1. PRELIMINARY INSPECTION (to be carried out by the installer)

During the inspection it is essential to establish which mounting kit is suitable for the type of heating body on which the heat cost allocator is to be fitted.
See Table 1 on pages 11-12 to choose the suitable kit.

7200 Mounting kit

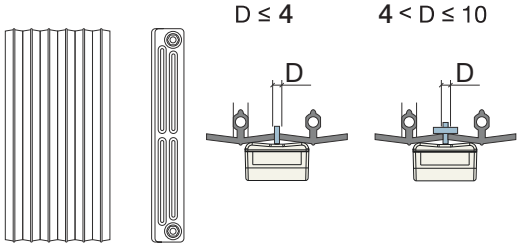
N.B. When ordering the mounting kit, check that the number of pieces is a multiple of the minimum pack.

Code	Description	No. of items in the pack
720050	plate (39 mm) + anchor (20 / 39 mm)	5
720051	plate (39 mm) + anchor (59 mm) + anchor (75 mm)	5
720052	plate (55 mm) + anchor (20 / 39 mm) + anchor (59 mm)	5
720053	plate (55 mm) + anchor (75 mm)	5
720054	plate (88 mm) + anchor (39 mm)	5
720055	plate (88 mm) + anchor (59 mm) + anchor (75 mm)	1
720056	plate (88 mm) + anchor (75 mm) + screws (M4 x 130 mm)	1
720060	plate (39 mm) + self-tapping screw	5
720061	plate (39 mm) + threaded plate	5
720062	plate (39 mm) + welded stud bolts	5
720063	plate (39 mm) + expanding corner pieces	1

IMPORTANT:
The tightening torque of the screws used in the mounting kit must be between 0.8 and 1 N·m.

Example:

- Heat emitter: CAST IRON PLATES
- Distance between the elements: LESS THAN 4 mm

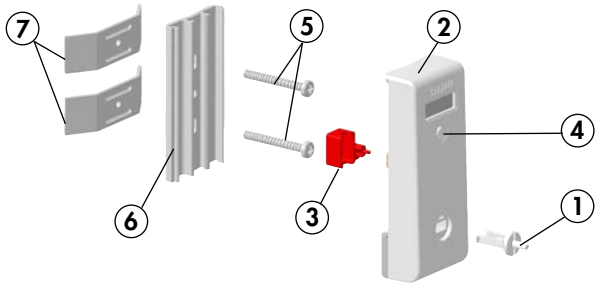
Cast iron plates		Distance between elements (D) less than or equal to 4 mm	**7200**60*
		Distance between elements (D) from 4 to 10 mm	**7200**61*

- Mounting kit: code 720060

2. INSTALLATION AND MAPPING (to be carried out by the installer)

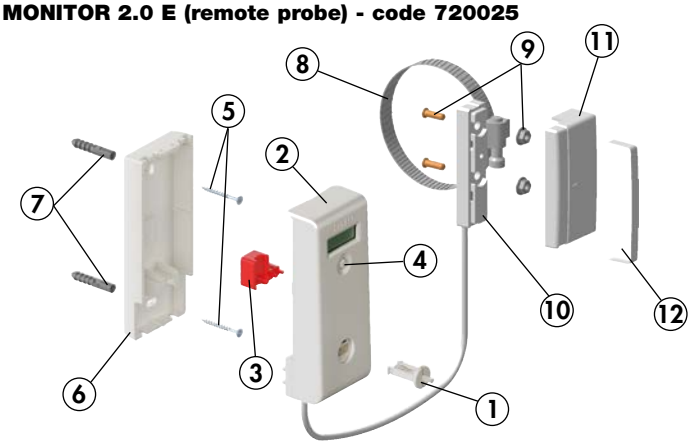
Characteristic components

MONITOR 2.0 - code 720020



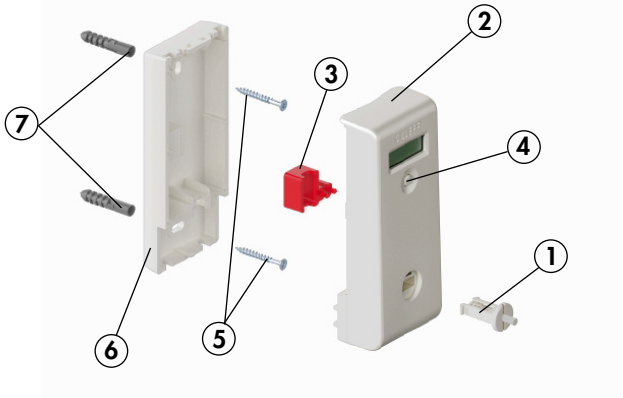
1 Tamper-proof seal
2 Heat cost allocator complete with PCB
3 Radiator probe protection (to be removed during installation)
4 Display selection button
5 Retaining screws (tightening torque 0.8-1 N·m)
6 Aluminium thermal coupling plate
7 Fastening brackets

MONITOR 2.0 E (remote probe) - code 720025



1 Anti-tampering seal
2 Heat cost allocator complete with PCB
3 Protection for the tamper-proof sensor (to be removed during installation)
4 Display selection button
5 Wall fastening screws (tightening torque 0.8-1 N·m)
6 Aluminium plate + spacers
7 Wall fastening anchors
8 Metal clamp for fastening the extended probe to the radiator/convector
9 Copper stud bolts + nuts for welded fastening
10 Remote probe
11 Remote probe cover
12 Tamper-proof label

MONITOR 2.0 PULSE - code 720030



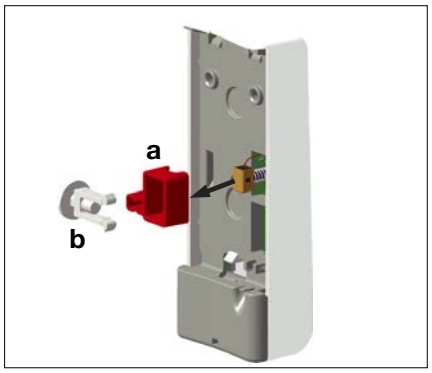
1 Tamper-proof seal
2 Acquisition device complete with PCB
3 Protection for tamper-proof element (to be removed during installation)
4 Display selection key
5 Wall mounting screws (tightening torque 0.8-1 N·m)
6 Plastic plate for wall mounting
7 Wall mounting wall anchors

2. INSTALLATION AND MAPPING (to be carried out by the installer)

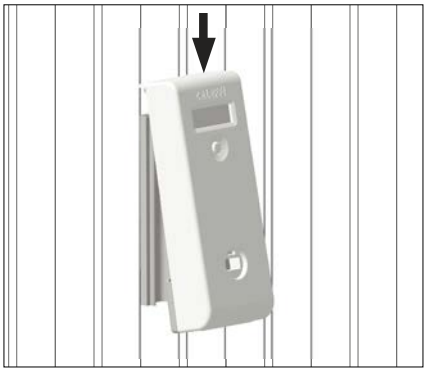
Installation of the heat cost allocator/pulse acquirer

MONITOR 2.0

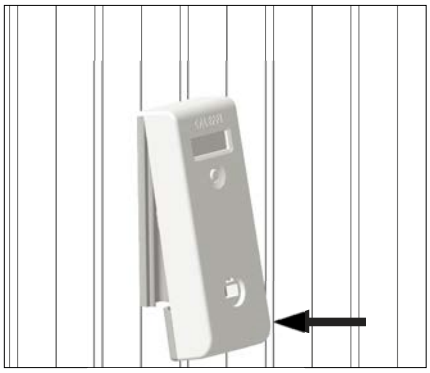
STEP 1
Before proceeding with installation, remove the probe protection (**a**) and the tamper-proof seal (**b**).



STEP 2
Install the heat cost allocator on the heat emitter hooking it onto the top part of the aluminium anchoring plate and pushing downward.

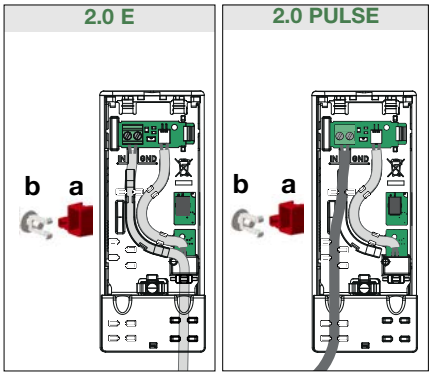


STEP 3
Press down on the bottom part of the heat cost allocator until it is securely in place.



MONITOR 2.0 E - 2.0 PULSE

STEP 1
Before proceeding with installation, remove the probe protection (**a**) and the tamper-proof seal (**b**).
- Depending on the device that has to be installed, fasten the wires according to the following pictures:



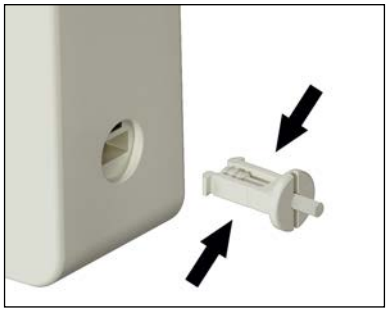
STEP 2
Install the heat cost allocator/pulse acquirer hooking it onto the top part of the anchoring support and pushing downward.

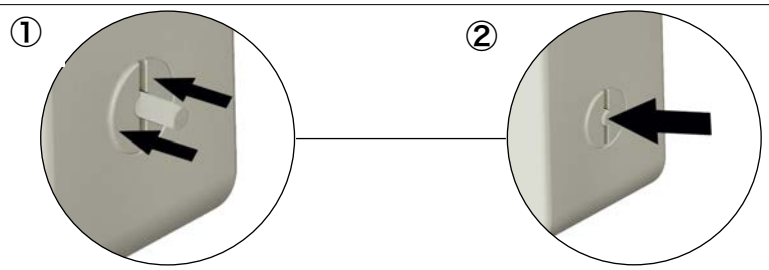
STEP 3
Press down on the bottom part of the heat cost allocator until it is securely in place.

MONITOR 2.0 - 2.0 E - 2.0 PULSE

Installing the tamper-proof seal

When installation is complete, fit the tamper-proof seal compressing the two tabs and continue as illustrated below:

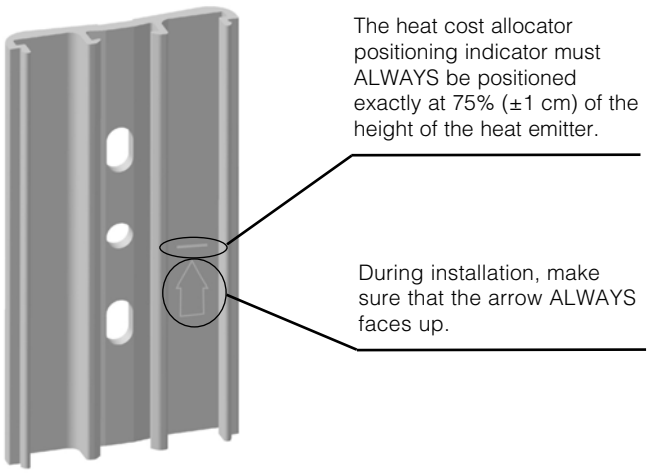




Push only the two side parts of the seal into the heat cost allocator until it fits into place.

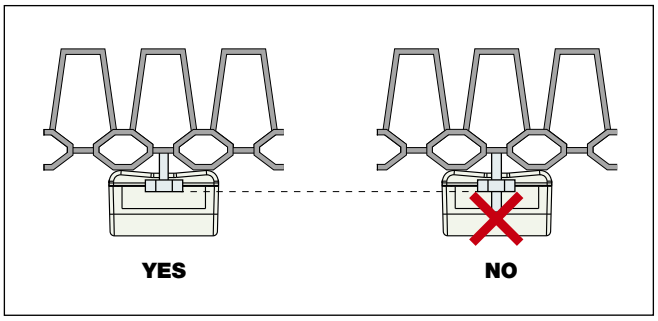
Finally, push in the central pin of the seal until it fits into place.

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0



Welded mounting kit

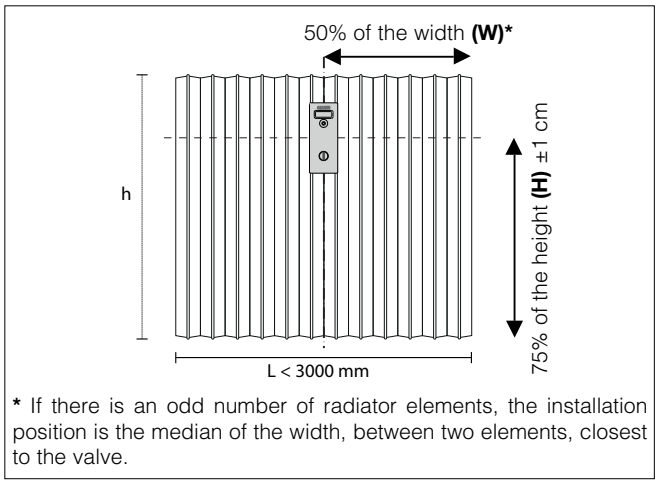
In case of the welded mounting kit:
- Strip the paint off the radiator at the points where the stud bolts are to be welded on.
- Weld the stud bolts in the gap between two ridges. If there is an odd number of ridges, choose the median position closest to the valve.
- Cut off the excess part using cutting nippers, as it may damage the device.



If you make a mistake, do not remove the stud bolts already welded on, as you risk damaging the radiator; cut them at the base as much as possible.

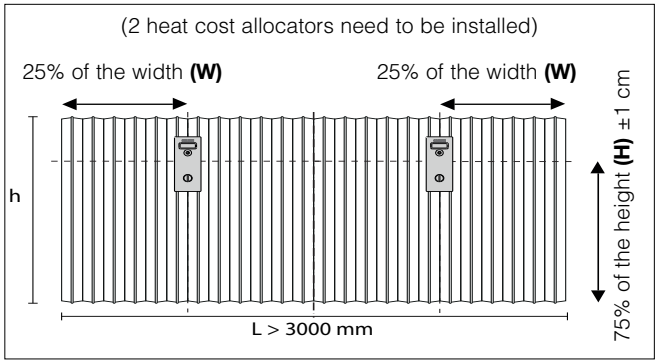
Heat cost allocator position on radiator

Width up to 3000 mm



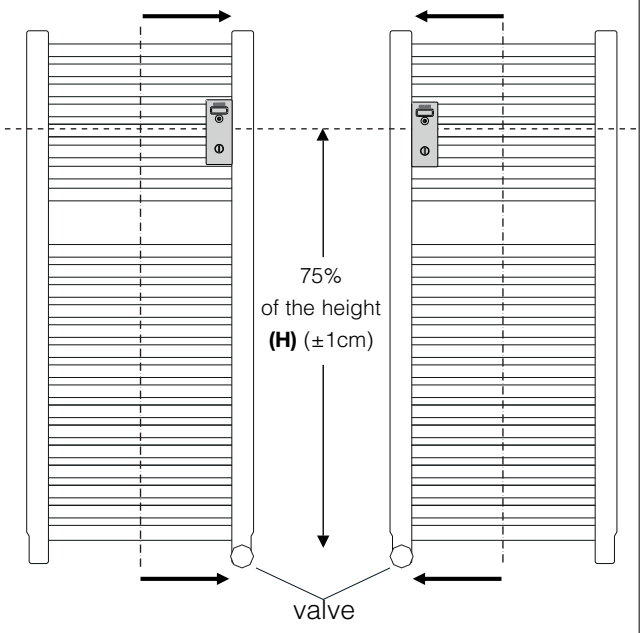
* If there is an odd number of radiator elements, the installation position is the median of the width, between two elements, closest to the valve.

Width over 3000 mm

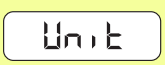


Heat cost allocator position on towel radiator

Position the heat cost allocator against the riser on which the thermostatic valve is fitted (flow).



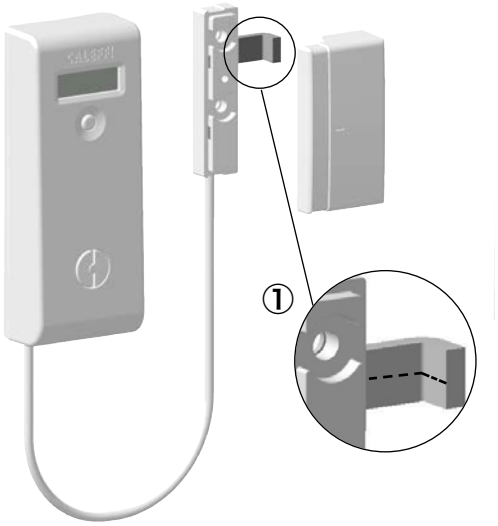
N.B. When installation is complete, **the heat cost allocator is automatically activated after about 90 second.**
The following appears on the display:



You can now proceed with parameterisation of the heat cost allocator (see page 17).

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0 E (with remote probe)

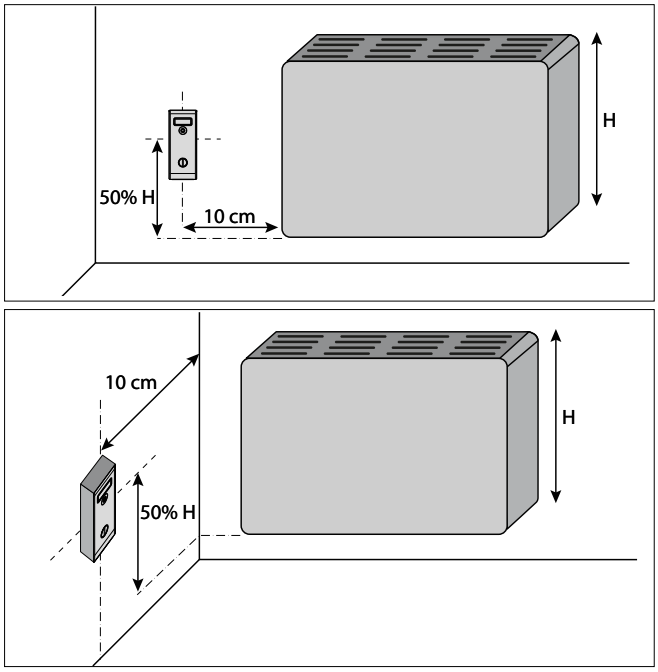
During installation, make sure that the centre-line of the part shown in **Figure 1** is positioned exactly at 75% (±1 cm) of the development of the coil or at 50% (±1 cm) of the height in the case of a single-block convector.



N.B. If using a remote probe with a radiator, the centre-line of the probe positioning indicator must be positioned (instead of the thermal coupling plate) according to the instructions given on page 6.

Heat cost allocator position with convector

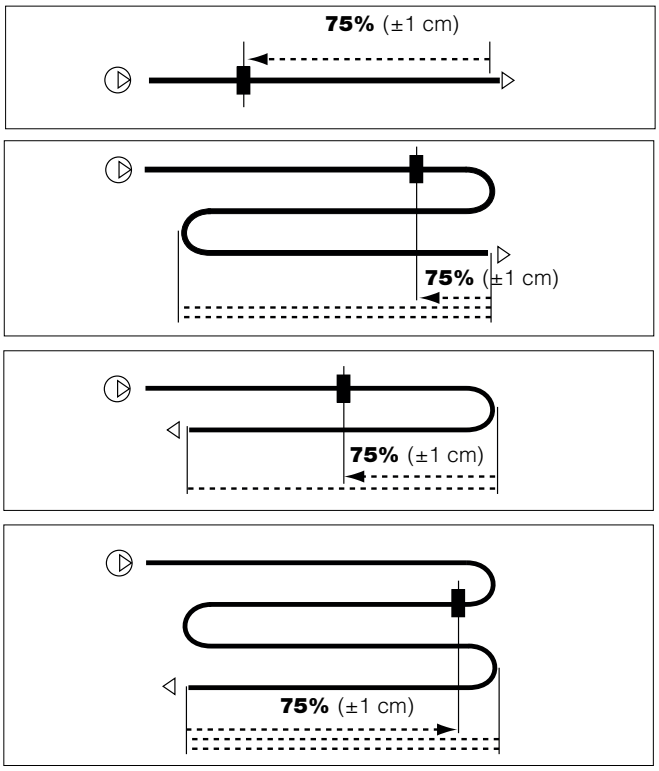
In order to ensure measurement according to the regulations, the heat cost allocator must be positioned at a distance not less than 10 cm from the heating body and at a height equal to half the height of the heating body.



Determination of the extended probe sensor position
Single-fin or coil convector

The sensor must be positioned at 75% (±1 cm) of the coil development (25% from the inlet, 75% from the outlet).

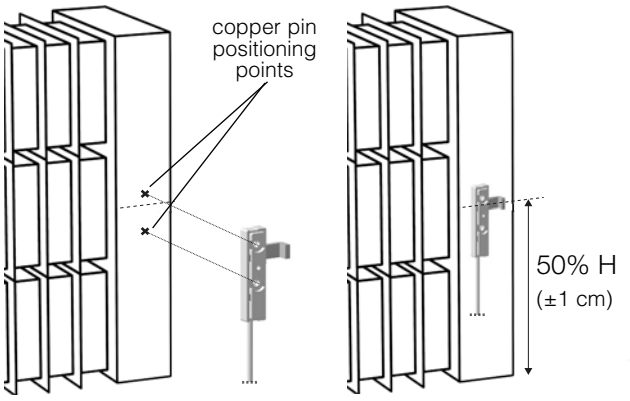
FASTENING WITH SCREWS OR CLAMPS



Determination of the remote probe sensor position
Single-block convector

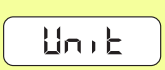
The remote sensor is to be fitted on the return chamber at 50% of the height.

WELD FASTENING



N.B. The remote probe must be installed in such a way that any attempt to disconnect the probe will leave a trace.
Therefore, use the tamper-proof label provided on the outer probe cover.

N.B. When installation is complete, **the heat cost allocator is automatically activated after about 90 seconds**.
The following appears on the display:



You can now proceed with parameterisation of the heat cost allocator (see page 17).

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0 PULSE (pulse acquirer)

Firstly use the special wall mounting hooks provided, install the rear plastic plate and, finally, use the fixing screws, as shown in the following picture:

Connect the pulse output wire from the volume meter to the device inputs with screw terminals (Figure A) as illustrated in the picture below:

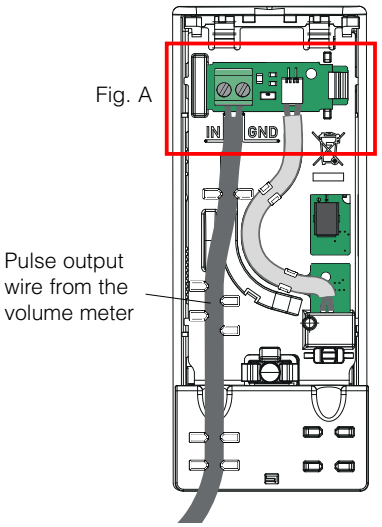
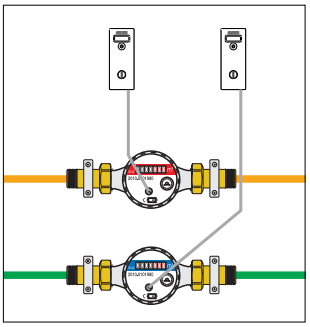
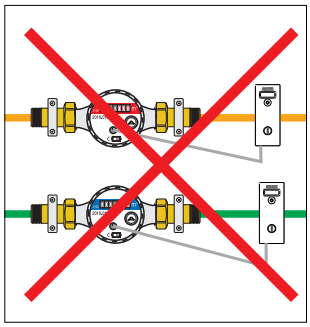


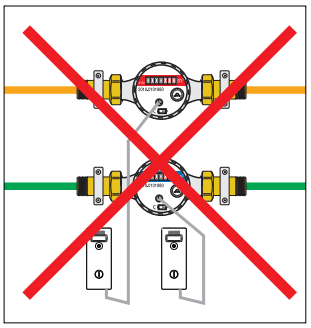
Fig. A

Positioning the consumption data acquisition device

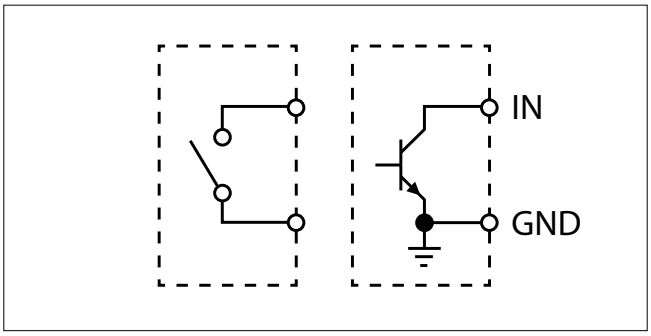
In order to guarantee correct operation of the consumption data acquisition device, it is necessary not to position the device in direct contact with pipes nor under them, in order to avoid malfunctions due to drops of condesation and humidity.



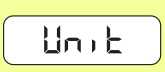




The generic pulse must be potential free
(volt free contact, maximum frequency 50 Hz.)



N.B. When installation is complete, **the heat cost allocator is automatically activated after about 90 seconds**.
The following appears on the display:



You can now proceed with parameterisation of the heat cost allocator (see page 17).

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0 - 2.0 E (remote probe)

Mapping
Mapping means filling the condominium and apartment survey sheets (see pages 15-16)

Example of data entry for a radiator using UNI 10200:

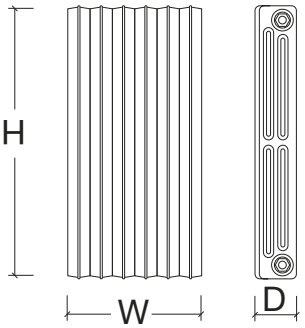
1 Room	2 Heat cost allocator serial number MONITOR 2.0 - 2.0 E	3 Radiator cover S = shelf (distance < 15 cm) C = full cover	4 Dimensions (*) **H** means the height of the radiator and **NOT** the distance between hub centres (*) H (mm)	W (mm)	D (mm)	5 No. of elements	6 Type EN 442 Brand	Series	Model	6 Type UNI 10200 See Table 2 Example: **A**	7 Installed capacity (W) ΔT 60°C	8 Tick if the heat cost allocator is with remote probe (MONITOR 2.0 E)
HALL	1 2 3 4 5 6 7 8	☒ S ☐ C	800	600	120	10				F		☐ 2.0 E
KITCHEN		☐ S ☐ C										☐ 2.0 E
LIVING ROOM		☐ S ☐ C										☐ 2.0 E
BATHROOM		☐ S ☐ C										☐ 2.0 E

1 Room
Enter the room where the heating body is installed.

2 Heat cost allocator serial number
Enter the serial number indicated on the label on the top part of the heat cost allocator.

4 Dimensions
Specify the dimensions of the heat emitter **expressed in mm**.

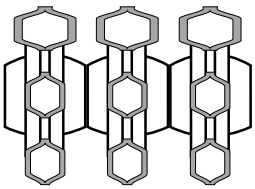
H = height
W = width
D = depth



3 Radiator cover
Indicate whether the radiator has a shelf cover ☒ S only if its distance from the radiator is less than 15 cm or a full cover ☒ C
(tick ONLY if the radiator has a shelf or a full cover).

5 No. of elements
Enter the number of elements the radiator is made of.

6 UNI 10200 type (see Table 2):
EXAMPLE: Heating body: cast iron plates, smooth columns

Cast iron plates		Smooth columns	**F**
		Finned columns	**G**

7 Convector. Installed capacity (W)
Where there are convectors, it is essential to indicate the installed capacity referring to ΔT 60°C.

8 MONITOR 2.0 E heat cost allocator with remote probe
Tick ONLY if the heat cost allocator is fitted with a remote probe (MONITOR 2.0 E).

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0 - 2.0 E (remote probe)

Example of data entry for a radiator using EN442:

1 Room	2 Heat cost allocator serial number MONITOR 2.0 - 2.0 E	3 Radiator cover S = shelf (distance < 15 cm) C = full cover	4 Dimensions (*) H means the height of the radiator and **NOT** the distance between hub centres			5 No. of elements	6 Type **EN 442**			Type **UNI 10200** See TAB. 2 Example: A	7 Installed capacity (W) **ΔT 60°C**	8 Tick if the heat cost allocator is with remote probe (MONITOR 2.0 E)
			(*) H (mm)	W (mm)	D (mm)		Brand	Series	Model			
HALL	1 2 3 4 5 6 7 8	☐ S ☐ C	1800	600	30	1	BRAND 1	SERIES 1	MODEL 1		854	☐ 2.0 E
KITCHEN		☐ S ☐ C										☐ 2.0 E
LIVING ROOM		☐ S ☐ C										☐ 2.0 E
BATHROOM		☐ S ☐ C										☐ 2.0 E

1 Room
Enter the room where the heat emitter is installed.

2 Heat cost allocator serial number
Enter the serial number indicated on the label on the top part of the heat cost allocator.

3 Radiator cover
Indicate whether the radiator has a shelf cover ☒ S only if its distance from the radiator is less than 15 cm or a full cover ☒ C
(tick ONLY if the radiator has a shelf or a full cover).

4 Dimensions
Specify the dimensions of the heat emitter **expressed in mm**.

5 No. of elements
Enter the number of elements the radiator is made of. In case of towel warmers specify "1".

6 Brand, series and model
Specify, if possible, brand, series and model of the towel warmer.

7 Installed capacity (W)
Specify, if possible, the installed thermal capacity referring to ΔT 60°C.

8 MONITOR 2.0 E heat cost allocator with remote probe
Tick ONLY if the heat cost allocator is fitted with a remote probe (MONITOR 2.0 E).

2. INSTALLATION AND MAPPING (to be carried out by the installer)
MONITOR 2.0 PULSE (pulse acquirer)

Example of data entry for a volume meter :

1 Stair	2 Floor	3 Room	4 Serial number of the acquirer MONITOR 2.0 PULSE	5 Domestic hot or cold water	6 Other type of meter	7 K (litres/pulse or kWh/pulse)	8 Diameter of the volume meter	9 Initial value to be set (m^3 or kWh)	10 Serial number of the volume meter
A	1	KITCHEN	1 2 3 4 5 6 7 8	☐ DHW ☒ DCW		10	3/4"	15,203	0123456789
				☐ DHW ☐ DCW					
				☐ DHW ☐ DCW					

1 2 3 Stair, floor and room
Specify the stair, floor and room where the MONITOR 2.0 PULSE is installed.

4 Serial number of the acquirer MONITOR 2.0 PULSE
Enter the serial number indicated on the label on the top part of the heat cost allocator.

5 DHW or DCW
Specify whether the device is connected to a hot or cold water volume meter

6 Other type of meter
In case the MONITOR 2.0 PULSE is not connected to a volume meter, specify the type (e.g.: heat meter).

7 K (litres/pulse or kWh/pulse)
Specify the K value (litres/pulse) that characterize the volume meter or the K value (kWh/pulse) in case of a heat meter.

8 Diameter of the volume meter
Specify the diameter of the volume meter or the diameter of heat meter

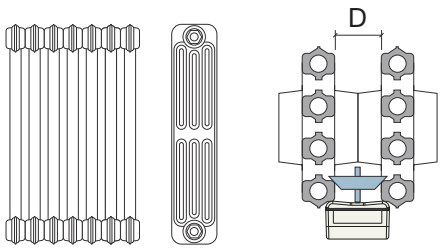
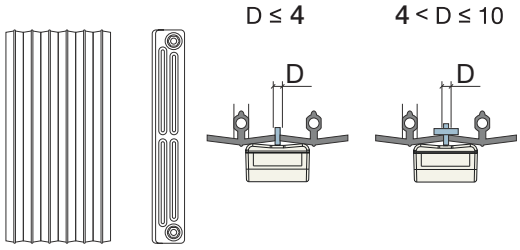
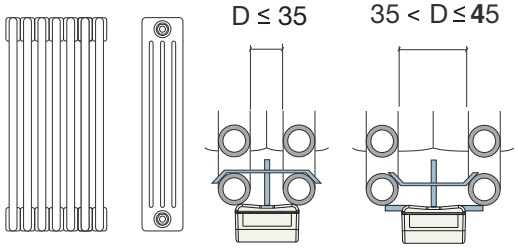
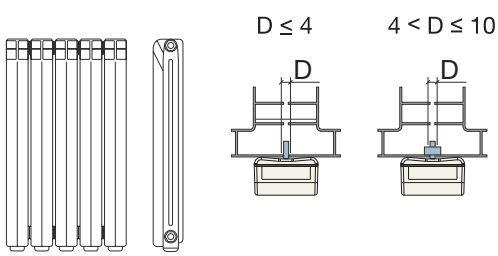
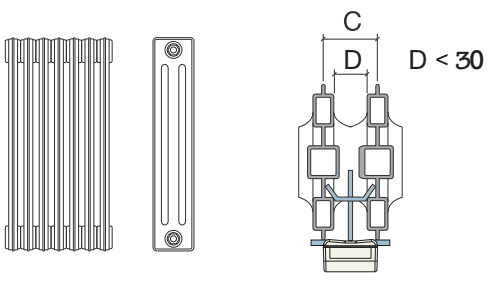
9 Initial value to be set
Specify the initial value to be set into the pulse acquirer, expressed in m^3 for a volume meter (in kWh for a heat meter) displayed on the meter at the moment of the installation of the MONITOR 2.0 PULSE acquirer.
ATTENTION : the initial value is MANDATORY for the parameterization!

10 Serial number of the volume meter
Specify the serial number of the volume meter or the one of the heat meter connected to the pulse acquirer.

2. INSTALLATION AND MAPPING (to be carried out by the installer)

TABLE 1 - Mounting kit MONITOR 2.0

Element radiators

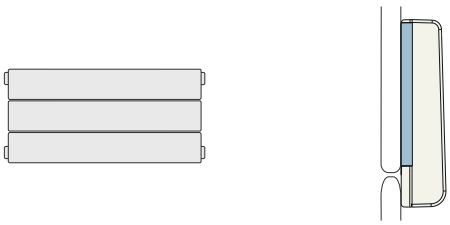
			MOUNTING KIT
Cast iron columns		Distance between elements (D) less than or equal to 30 mm	**720**50*
		Distance between elements (D) greater than 30 mm	**720**52*
Cast iron plates		Distance between elements (D) less than or equal to **4** mm	**720**60*
		Distance between elements (D) from **4** to 10 mm	**720**61*
Steel tubular		Distance between elements (D) less than or equal to 35 mm	**720**51*
		Distance between elements (D) from 36 to 45 mm	**720**53*
Aluminium columns		Distance between elements (D) less than or equal to 4 mm	**720**60*
		Distance between elements (D) from 4 to 10 mm	**720**61*
Ribbed steel		Distance between element centres (C) less than 50 mm and distance (D) less than 30 mm	**720**52*
		Distance between element centres (C) greater than or equal to 50 mm and distance (D) less than 30 mm	**720**54*

*** Minimum 5-piece pack**

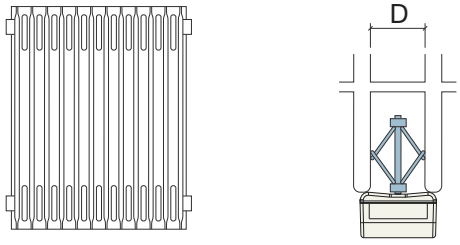
2. INSTALLATION AND MAPPING (to be carried out by the installer)

TABLE 1 - Mounting kit MONITOR 2.0

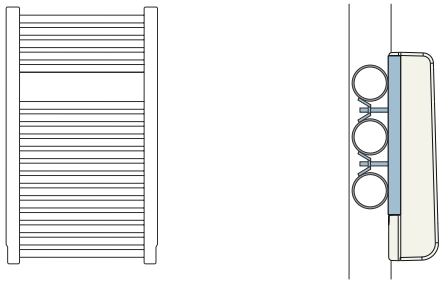
Panel radiators

			MOUNTING KIT
Ridged surface		Vertical profile	**720062***
Smooth surface		Smooth surface	
Flat tubes		Vertical	
		Horizontal	

Lamellar radiators

			MOUNTING KIT
Lamellar		Lamellar Distance between elements (D) from 24 to 28 mm	**720063**

Towel warmer

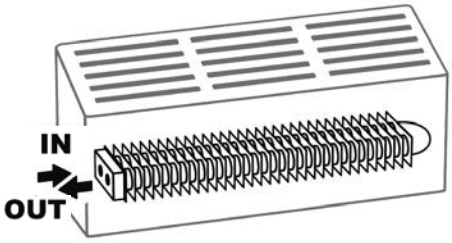
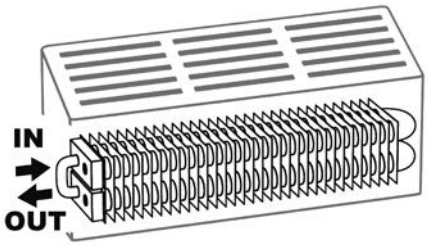
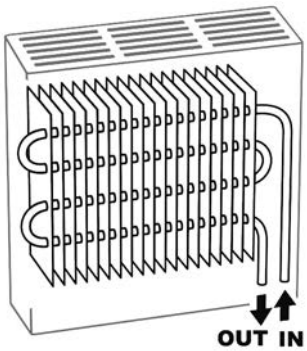
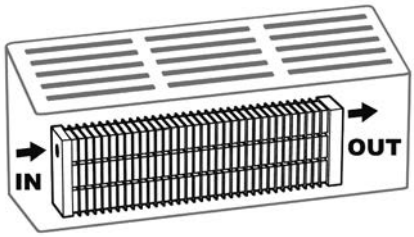
			MOUNTING KIT
Horizontal tubes		Towel radiator	**720050***

*** Minimum 5-piece pack**

2. INSTALLATION AND MAPPING (to be carried out by the installer)

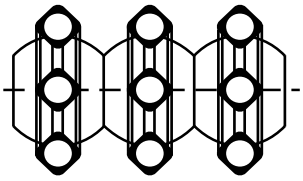
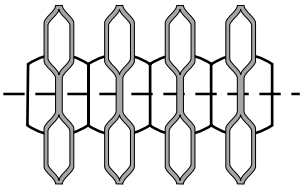
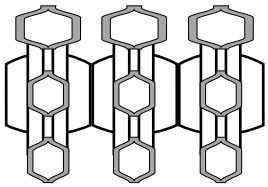
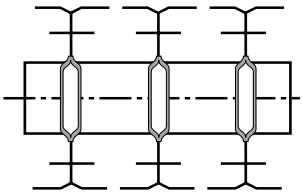
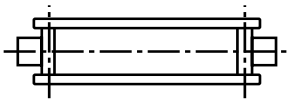
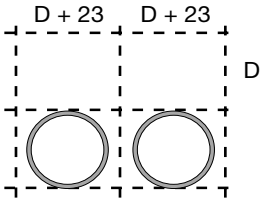
TABLE 1 - Mounting kit MONITOR 2.0 E

Thermal convectors
(mounting kit included in the heat cost allocator pack)

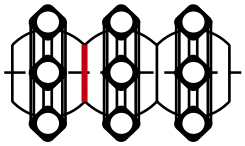
Single-fin convector		Single element without coil
Single-fin convector		Double or triple element without coil
Coil convector		Single, double or triple element with coil
Single-block convector		Weld-fastening single-block convector

2. INSTALLATION AND MAPPING (to be carried out by the installer)

TABLE 2 - UNI 10200

Material	Type	Description		UNI 10200 type
Cast iron or steel		Small columns Section < 30 x 30 mm	hub* 50 mm	A
			hub* 55 mm	B
		Large columns Section > 30 x 30 mm	hub* 55 mm	C
			hub* 60 mm	D
Cast iron or steel		Columns joined by diaphragm		E
Cast iron plates		Smooth columns		F
		Finned columns		G
Aluminium		Highly finned		H
		Averagely finned		I
		Lightly finned		L
Steel		Plate without fins		M
		With rear fins		N
		With fins between the plates		O
Bare tube**		Vertical or horizontal tubes		P

* Hub means the following dimension: —



** Bare tube means tubing visible in the rooms.

CONDOMINIUM DATA SHEET

CALEFFI Hydronic Solutions

Condominium name	**Tax code number**
Street	**Number**
Postal code	**City**	**Province**

No. of buildings*	No. of dwellings*	No. of radiators*	No. of towelwarmers/ radiators*	No. of convectors*	No. of MONITOR 2.0 heat cost allocators*	No. of MONITOR 2.0 E heat cost allocators*	No. domestic hot water volume meter	No. domestic cold water volume meter	No. of MONITOR 2.0 PULSE pulse acquisition device*

*** Indicate the grand total of ALL the APARTMENT SURVEY SHEETS of the condominium**

TECHNICIAN (who did the survey)		
	Denomination	
	Name and surname	
	Address	
	Phone/mobile no.	Fax
	E-mail	

BUILDING ADMINISTRATOR/ MANAGER		
	Denomination	
	Name and surname	
	Address	
	Phone/mobile no.	Fax
	E-mail	

STAMP AND SIGNATURE _____

Condominium Data Sheet

APARTMENT SURVEY SHEET **Mr/Ms** _____ **Phone/mobile no.** _____

CALEFFI Hydronic Solutions

Condominium name	Street	Number	City	Province

Staircase	Floor	Interior	Technician who did the survey	Technician's phone/mobile no.	Survey data

RADIATOR / CONVECTOR (1) / TOWEL RADIATORS (2)

(1) If convectors are present it is necessary to fill the "Installed capacity (W) ΔT 60°C" field.
(2) If you do not have the brand-name, series and model of the towel warmer or radiator, you need to send an e-mail to the address **7200.monitor@caleffi.com** attaching a **photo** and indicating the **tube and manifolds diameters** and to which condominium, dwelling and room they correspond.

Room	Heat cost allocator serial number MONITOR 2.0 - 2.0 E	Radiator cover S = shelf (distance < 15 cm) C = full cover	Dimensions (*) H means the height of the radiator and **NOT** the distance between hub centres			No. of elements	Type **EN 442**			Type **UNI 10200** See Table 2 Example: A	Installed capacity (W) **ΔT 60°C**	Tick if the heat cost allocator is with remote probe (MONITOR 2.0 E)
			(*) H (mm)	W (mm)	D (mm)		Brand	Series	Model			
HALL		☐ S ☐ C										☐ 2.0 E
KITCHEN		☐ S ☐ C										☐ 2.0 E
LIVING ROOM		☐ S ☐ C										☐ 2.0 E
BATHROOM		☐ S ☐ C										☐ 2.0 E
MASTER BEDROOM		☐ S ☐ C										☐ 2.0 E
CHILDREN'S BEDROOM		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E
		☐ S ☐ C										☐ 2.0 E

DOMESTIC HOT / COLD WATER VOLUME METER

Stair	Floor	Room	Serial number of the pulse acquirer MONITOR 2.0 PULSE	Domestic hot or cold water	Other type of meter	K (litres/pulse or kWh/pulse)	Diameter of the volume meter	Initial value to be set (m^3 or kWh)	Serial number of the volume meter
				☐ DHW ☐ DCW					
				☐ DHW ☐ DCW					
				☐ DHW ☐ DCW					
				☐ DHW ☐ DCW					

STAMP AND SIGNATURE _____

3. COMMISSIONING – PARAMETERISATION

Parameterisation (to be carried out by the installer) comprises the following services:

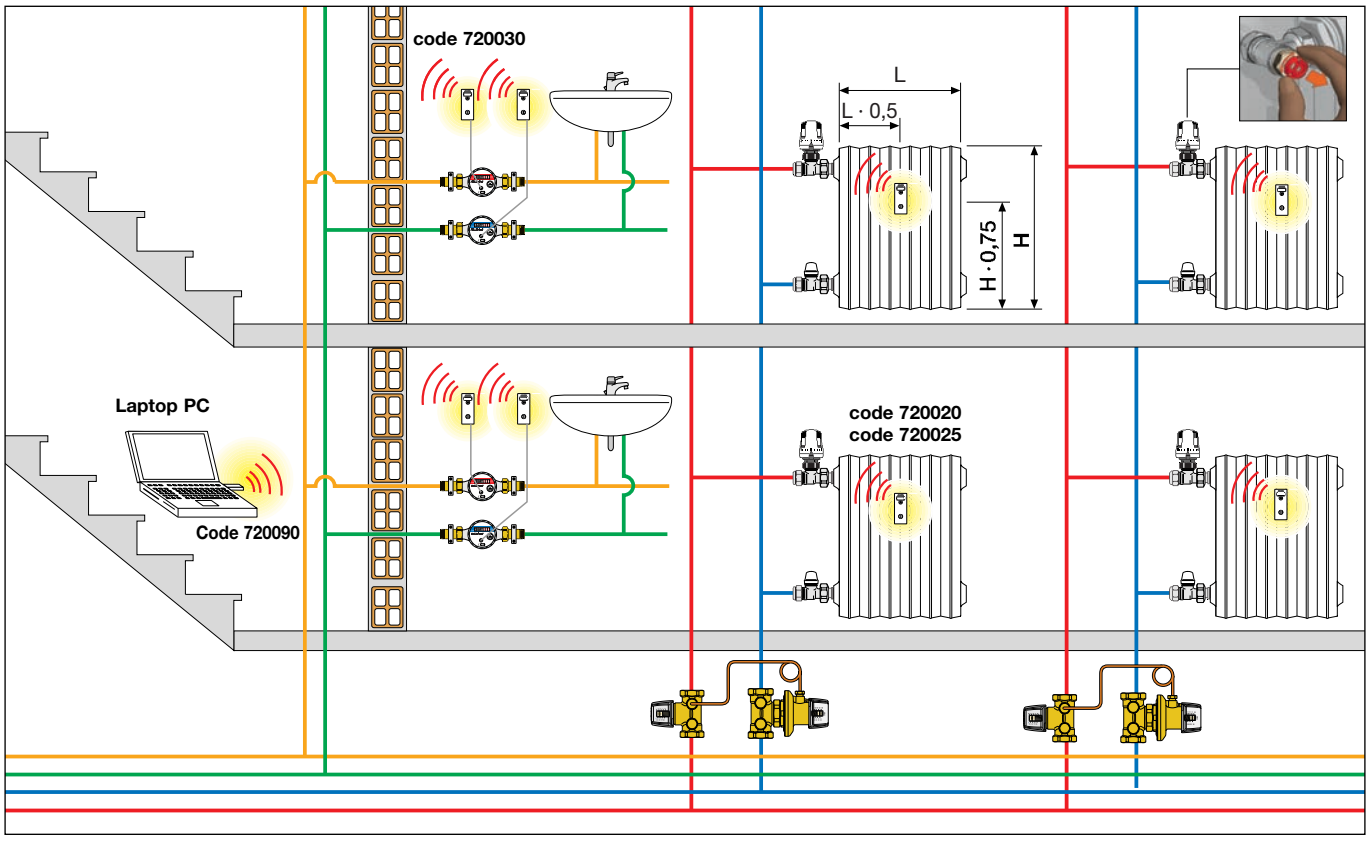
- In situ heat cost allocator parameterisation.
- Radio transmission functional test.

Parameterisation means programming the heat cost allocator with the power value (ΔT 60°C) according to the actual dimensions and characteristics of the heating body on which it is installed.
Parameterisation, in case of domestic hot/cold water pulse acquirers, means programming the characteristic coefficient K (litres/pulse) of the volume meter to which the device is connected. It is besides possible to match the count of the pulse acquirer with the one of the volume meter. This data is necessary for proper metering of the heat consumption by the heat cost allocators which are programmed by means of the USB/radio device (code 720090) and the software provided.
Normally, parameterisation is done in one go when installation has been completed and the mapping data of the specific building (see pages 15 - 16) has been entered in the SW7200 software.

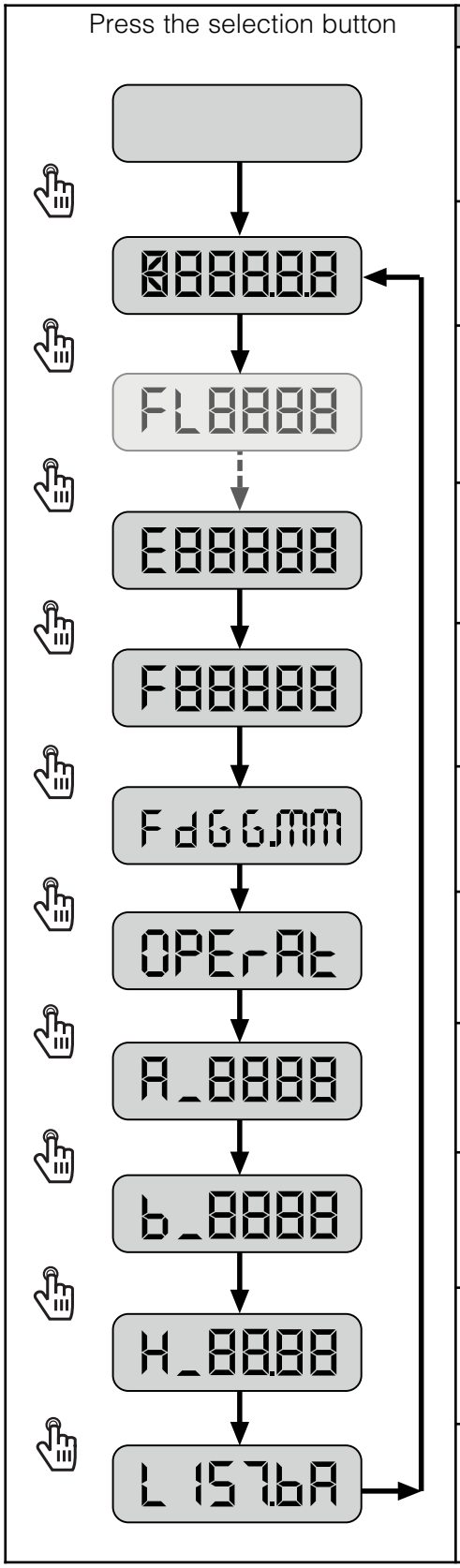
4. HEAT COST ALLOCATOR CONSUMPTION READOUT PROCEDURES
MONITOR 2.0 - 2.0 E - 2.0 PULSE

Consumption is read (by the condominium person in charge) using a laptop PC with Microsoft® Windows operating system, the USB/radio device (code 720090) and the SW7200 software provided, which allow reading, displaying consumption and creating reports.
A user guide for proper use of the software is provided

Consumption data readouts by means of the USB to radio device.



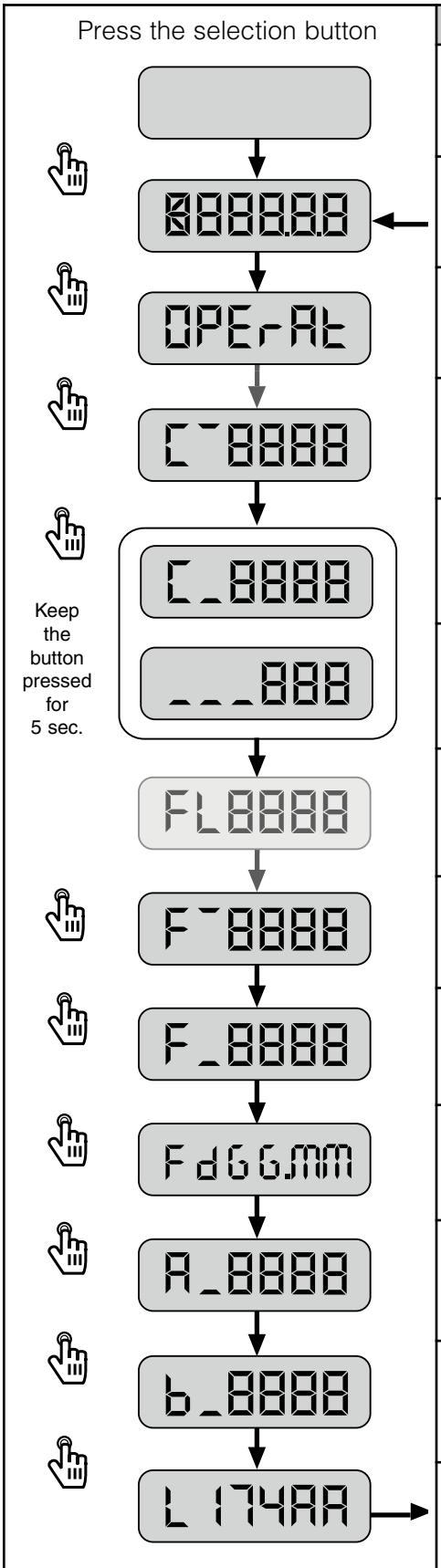
4. READING THE DISPLAY
MONITOR 2.0 - 2.0 E (remote probe)



Message	Meaning	Notes
-	OFF	The display is OFF. Low consumption mode is active.
8888.8.8	DISPLAY TEST	Used to visually check that all the display segments are functioning.
FL8888 Fr8888	ALERTS **(visible only in case of alerts)**	Shows a warning or fault code. Fr8888 or FL8888
E 12345	CURRENT HEATING SEASON CONSUMPTION	Current heating season consumption
F56789	PREVIOUS HEATING SEASON CONSUMPTION	Previous heating season consumption
Fd31.05	PREVIOUS YEAR CONSUMPTION LOGGING DATE	Day/month when the previous period consumption was stored
OPErAt	OPERATING STATUS	OPErAt :operating
A_1234	FIRST PART OF SERIAL NUMBER	First 4 digits of the heat cost allocator serial number
b_5678	SECOND PART OF SERIAL NUMBER	Last 4 digits of the heat cost allocator serial number
H_15.09	RESET	Reset date
L157.6A	FW VERSION INSTALLED	Shows the firmware version installed

OTHER MESSAGES DIFFERENT FROM THOSE LISTED ABOVE ARE STRICTLY FOR QUALIFIED TECHNICAL PERSONNEL

4. READING THE DISPLAY
MONITOR 2.0 PULSE (pulse acquirer)



Message	Meaning	Notes
-	OFF	The display is OFF. Low consumption mode is active.
8.8.8.8.8.8	DISPLAY TEST	Used to visually check that all the display segments are functioning.
OPErAt	OPERATING STATUS	OPErAt : operating
C 1234	CURRENT PERIOD CONSUMPTION	First 4 digits of the total consumption logged by the volume meter connected to the device
C_5678	CURRENT PERIOD CONSUMPTION	Last 4 digits of the total consumption logged by the volume meter connected to the device
___123	CURRENT PERIOD CONSUMPTION DECIMALS	Decimals of the total consumption logged by the volume meter connected to the device
FL8888 Fr8888	ALERTS **(visible only in case of alerts)**	Shows a warning or fault code. Fr8888 or FL8888
F 1223	PREVIOUS PERIOD CONSUMPTION	First 4 digits of the total consumption of the previous year
F_4297	PREVIOUS PERIOD CONSUMPTION	Last 4 digits of the total consumption of the previous year
Fd01.01	PREVIOUS YEAR CONSUMPTION LOGGING DATE	Day/month when the previous year consumption was stored
A_1234	FIRST PART OF SERIAL NUMBER	First 4 digits of the heat cost allocator serial number
b_5678	SECOND PART OF SERIAL NUMBER	Last 4 digits of the heat cost allocator serial number
L 174AA	FW VERSION INSTALLED	Shows the firmware version installed

OTHER MESSAGES DIFFERENT FROM THOSE LISTED ABOVE ARE STRICTLY FOR QUALIFIED TECHNICAL PERSONNEL

TROUBLESHOOTING

Problem	Likely cause	Suggested solution
Device disconnected from the radiator	Impact or other	Contact a certified installer to have it fastened
Missing seal	Tampering	Contact a certified installer to have it fitted
Position of the device changed since it was installed	Tampering, impact or other	Contact a certified installer to have it fastened
The display shows the alert code FL8888 or Fr8888	The internal self-test has detected a fault	Contact a certified installer and specify the code FL8888 or Fr8888
Null consumption is shown	No consumption has been logged.	This is not a fault. If the radiator is off, no energy emission is detected. In case the volume meter is replaced the count of the device must be reset.
Low consumption is shown	Beginning of a new season (heat cost allocator only)	This is not a fault. When the season start date is exceeded shown heat consumption is reset to zero
Nothing is shown on the display when the button is pressed	Internal problem	Contact a certified installer to have the device checked

Warnings for proper disposal of the product

The symbol shown on the side appears on the product MONITOR 2.0/2.0 E/2.0 PULSE to indicate that this product may not be disposed of as household waste.
This means that the European Directive on waste electrical and electronic equipment (WEEE) applies and that the product must therefore be sent to differentiated waste collection centres.

Moreover, the national laws on waste equipment collection systems need to be complied with.

Declaration of conformity

It is hereby declared that the product meets the applicable essential requirements of the R&TTE Directive 1999/5/EC. The CE 0470 marking on the product and in this document certifies conformity with the Directive. An unabridged copy of the Declaration of Conformity with the R&TTE Directive 1999/5/EEC is available on request at the address below.

CALEFFI S.P.A.
S.R. 229, n. 25
28010 Fontaneto d'Agogna (NO) - Italy
Tel. +39 0322 8491 / Fax +39 0322 863723
Model: 7200
Marking: CE 0470

We reserve the right to make improvements and modifications to the products described and the relative technical data at any time and without prior notice.