

CONTECA® EASY ULTRA direct heat meter MID Directive - Bus RS-485 transmission

7507 series



Function

CONTECA® EASY ULTRA is an **ultrasonic heat meter**, especially suited to measuring thermal energy consumption in residential buildings; thanks to a double memory register, it can also meter energy in both **heating** and **cooling** modes (option code 755810).

The device comprises an electronic calculator unit, an ultrasonic flow meter and two temperature probes. The CONTECA® EASY ULTRA meter is extremely simple to install and requires no special maintenance.

The flow is measured using the two-way ultrasound technique, based on the transit time method. As it has no moving parts, the device is therefore not very susceptible to build-up issues and offers an extremely low pressure drop.

The CONTECA® EASY ULTRA meter is equipped with an **8-digit LCD display** that can be switched on with a key. This display enables easy reading of both energy consumption values and technical data, for appliance operating status evaluation and data logging.

The CONTECA® EASY ULTRA meter is able to acquire up to 4 additional pulse inputs and two additional alarm-status digital inputs, and is equipped for centralised teletransmission (max. 250 users) in M-Bus protocol, on the RS-485 network. The device also supports MODBUS RTU protocol.



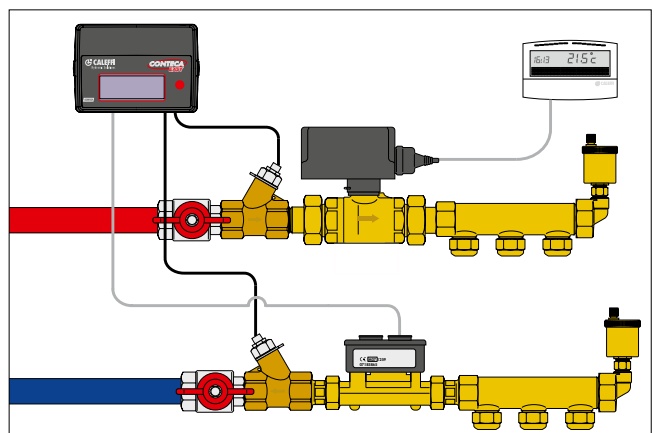
Product range

7507 series	Heat meter with threaded connection	size 1/2"-1 1/2"
7507 series	Heat meter with flanged connection	size DN 50-DN 200
Code 755010	TOUCH-screen controller	
Code 750450	EASY datalogger	
Code 750350	EASY TELE datalogger	
7558 series	Additional options	

Technical specifications

- Electric supply: 24 V (+10 % / -5 %) (ac) - 50 Hz - 1 W
- Data transmission: M-Bus protocol on BUS RS-485 (default)
MODBUS protocol on BUS RS-485 (on request)
- Tamper-proof protection
- Advanced control software
- Conformity: Directive 2014/32/EU EN 1434 (MI004)

Standard installation



Technical specifications

Temperature probes					
Flow probe length	m	1,9			
Return probe length	m	1,9			
Probe type	NTC				
Working temperature range limits	°C	10–90 (HEATING) - 2–25 (COOLING)			
Temperature difference limits	K	3–80 (HEATING) - 3–20 (COOLING)			
Measurement sensitivity	°C	≤0,05			
Flow meter					
Dimensions/Connection		1/2"–1 1/2"		DN 50–DN 100	DN 125–DN 200
Body		Brass			Steel P235GH
Type of hydraulic connection		Male thread ISO 228		Flanged EN 1092-1	
Nominal pressure	PN	bar	PN 16	PN 16	PN 25
Max. temperature of the medium	°C	90			
Mounting		preferably horizontal			
Pulse output		class OA-OC in accordance with EN1434-2			
Permanent flow rate	Q _p	l/h	see table 1 and 2		
Minimum flow rate	Q _i	l/h	see table 1 and 2		
Maximum flow rate	Q _s	l/h	see table 1 and 2		
Electric supply		lithium battery, life 12 years			
Microprocessor calculator unit					
Metrological specifications		in compliance with EN 1434-1 - MID 2014/32/EU			
Accuracy class		class 2			
Centralised transmission		according to M-Bus/ MODBUS RTU protocol on RS-485			
Ambient temperature range limits		°C	5–45		
Ambient classification		MID 2014/32/EU E1-M1			
Energy unit of measurement		kWh	8-digit display		
Electric supply		24 V (+10 % / -5 %) (ac) - 1 W - 50 Hz			
Protection class		in accordance with DIN 40050: IP 54			
Pulse inputs		class IB in accordance with EN 1434-2			

N.B. The flow meter must be installed between two rectilinear sections, measuring 10 times the pipe diameter upstream and 3 times the pipe diameter downstream.

The CONTECA® heat meter is supplied with accessories for installation, probes positioning and subsequent lead sealing.

TABLE 1 - Flow rate limit - Connections from 1/2" to 1 1/2":
2 x Y-pockets (the flow pocket is fitted with a strainer mesh)

Code	Connections	Q _i (l/h)	Q _p (m ³ /h)	Q _s (m ³ /h)	Q _p / Q _i
750704	1/2"	6	1,5	1,5	250
750705	3/4"	10	2,5	2,5	250
750706	1"	35	3,5	3,5	100
750707	1 1/4"	24	6	6	250
750708	1 1/2"	40/100*	10	10	100*/250

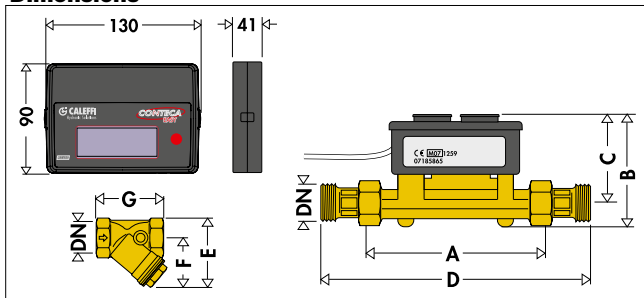
* vertical installation

TABLE 2 - Flow rate limit - Connections from DN 50 to DN 200:
2 x 1 1/2" weld sleeves with brass pocket to 1 lead sealing kit

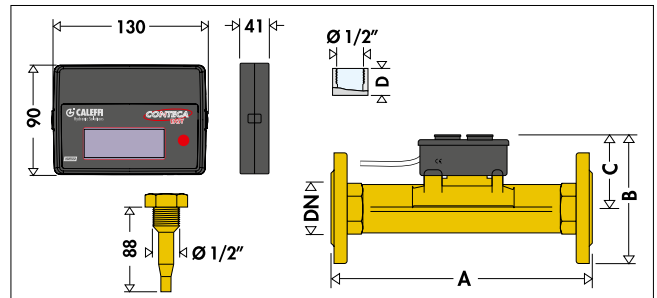
Code	Connections	Q _i (l/h)	Q _p (m ³ /h)	Q _s (m ³ /h)	Q _p / Q _i
750709	DN 50	60/150*	15	15	100*/250
750710	DN 65	250	25	25	100
750711	DN 80	400	40	40	100
750712	DN 100	600	60	60	100
750713	DN 125	1000	100	100	100
750714	DN 150	1500	150	150	100
750715	DN 200	2500	250	250	100

* vertical installation

Dimensions



Code	DN	A	B	C	D	E	F	G	PN
750704	1/2"	110	71	57	190	59	44	59	16
750705	3/4"	130	78	61	226	69	51	69	16
750706	1"	260	84	61	358	82	60	87	16
750707	1 1/4"	260	108	85	378	100	73	99	16
750708	1 1/2"	300	123	90	438	112	80	109	16



Code	DN	A	B	C	D	PN
750709	DN 50	270	165	82	36	25
750710	DN 65	300	185	75	36	25
750711	DN 80	300	200	80	36	25
750712	DN 100	360	235	85	25	25
750713	DN 125	350	500	375	25	16
750714	DN 150	500	535	390	25	16
750715	DN 200	500	585	420	25	16

Guidelines for first installation

It is good practice to install **shut-off valves upstream and downstream from the meter** in order to facilitate installation and maintenance, if required.

A **filtering device** must be provided upstream of the flow rate meter in order to protect the meter.

With a diameter of 1/2" to 1 1/2", this strainer is already inside the flow temperature pocket.

Installation procedure

- Install the hydraulic components (probe pocket and flow meter) in accordance with the guidelines provided in paragraph "Hydraulic installation diagrams" on this page;
- After installation, **wash the pipes and carry out a pressurised test**;
- **Check the saturation level of the strainers** and, if necessary, clean them;
- After completing installation of the hydraulic parts, install the CONTECA® EASY ULTRA electronic unit: follow the instructions for electrical connection on pages 5 and 6.
- Insert the temperature probes into the corresponding pockets in line with the flow direction: the flow probe (red label) must be installed on the flow pipe, while the return probe (blue label) should be on the return pipe.
- At the end of the installation process the main heat meter components (electronics unit, temperature probes and volume meter) should undergo lead sealing. **Lead sealing must be performed by qualified technicians in accordance with the instructions on pages 9 and 10** ("Lead sealing procedure").

Hydraulic installation diagrams

The flow meter must be fitted on the **return pipe**.

The hydraulic diagrams provided below show:

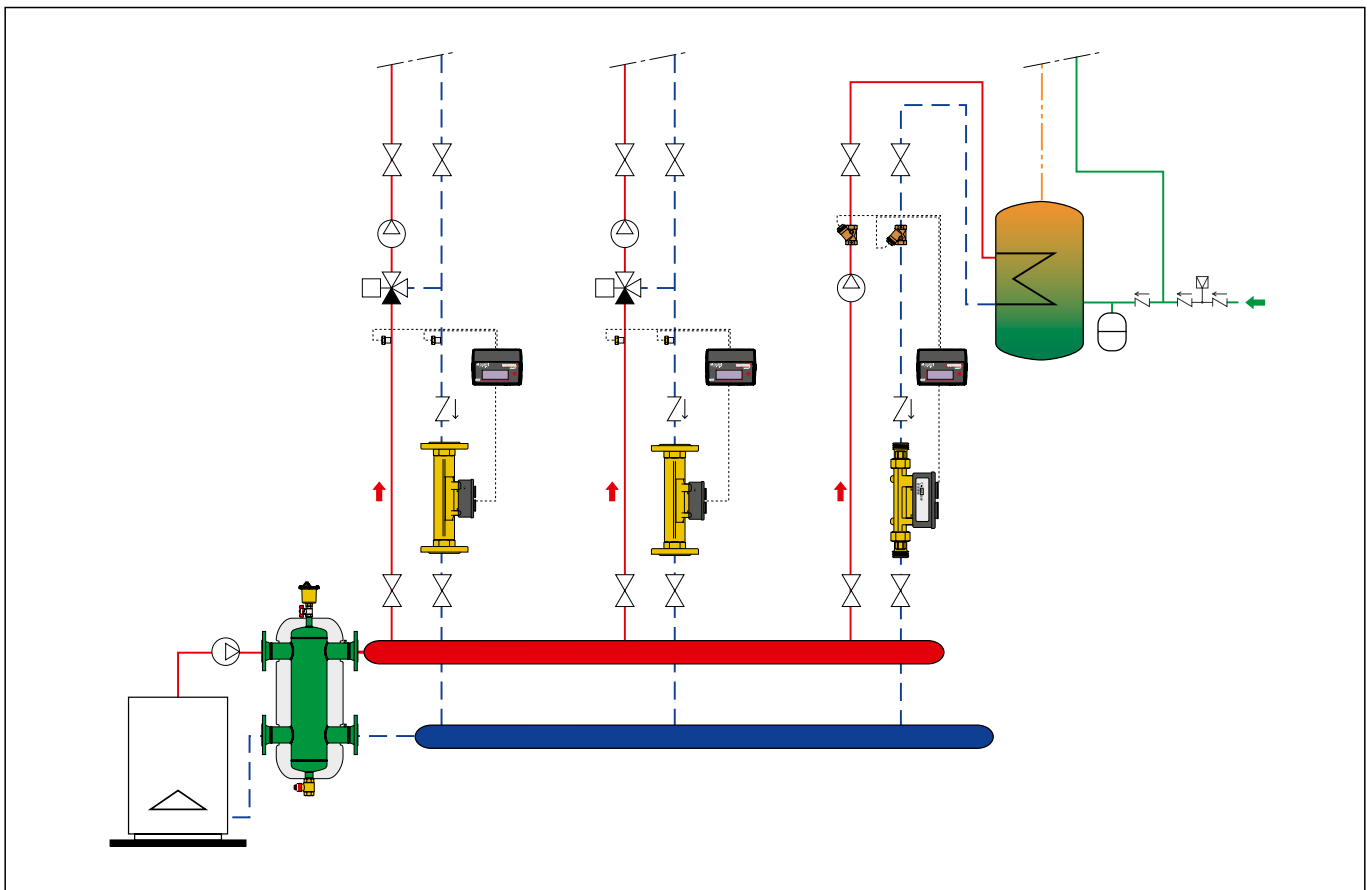
a) Flow meter positioning

The flow meter **should preferably be installed** in a horizontal position, with the axis of the turbine vertical, **observing** the flow direction as indicated by the arrow on the body. The position of the flow meter, where possible, should result in a zero flow rate when there is no service.

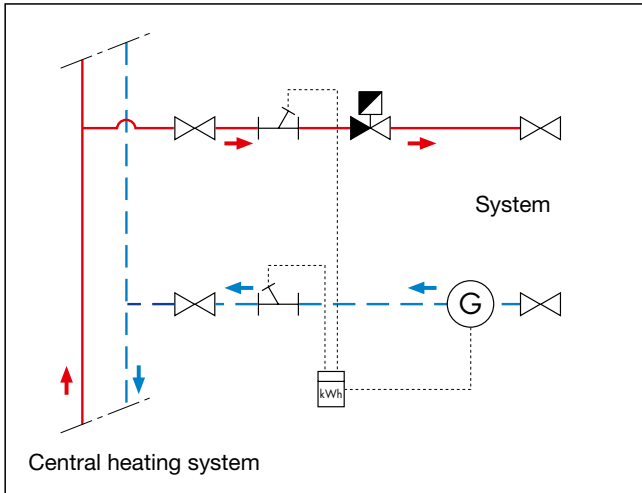
b) Probe positioning

The temperature probes (by means of the pocket or sleeve according to the DN) must be positioned on the corresponding flow/return pipes. The corresponding pipes are **the pipes carrying the same flow rate** when the flow has started.

1) Guideline diagram of the system with metering on the multiple circuit manifold.



2) User circuit diagram - 2-way zone valve regulation



Maintenance work

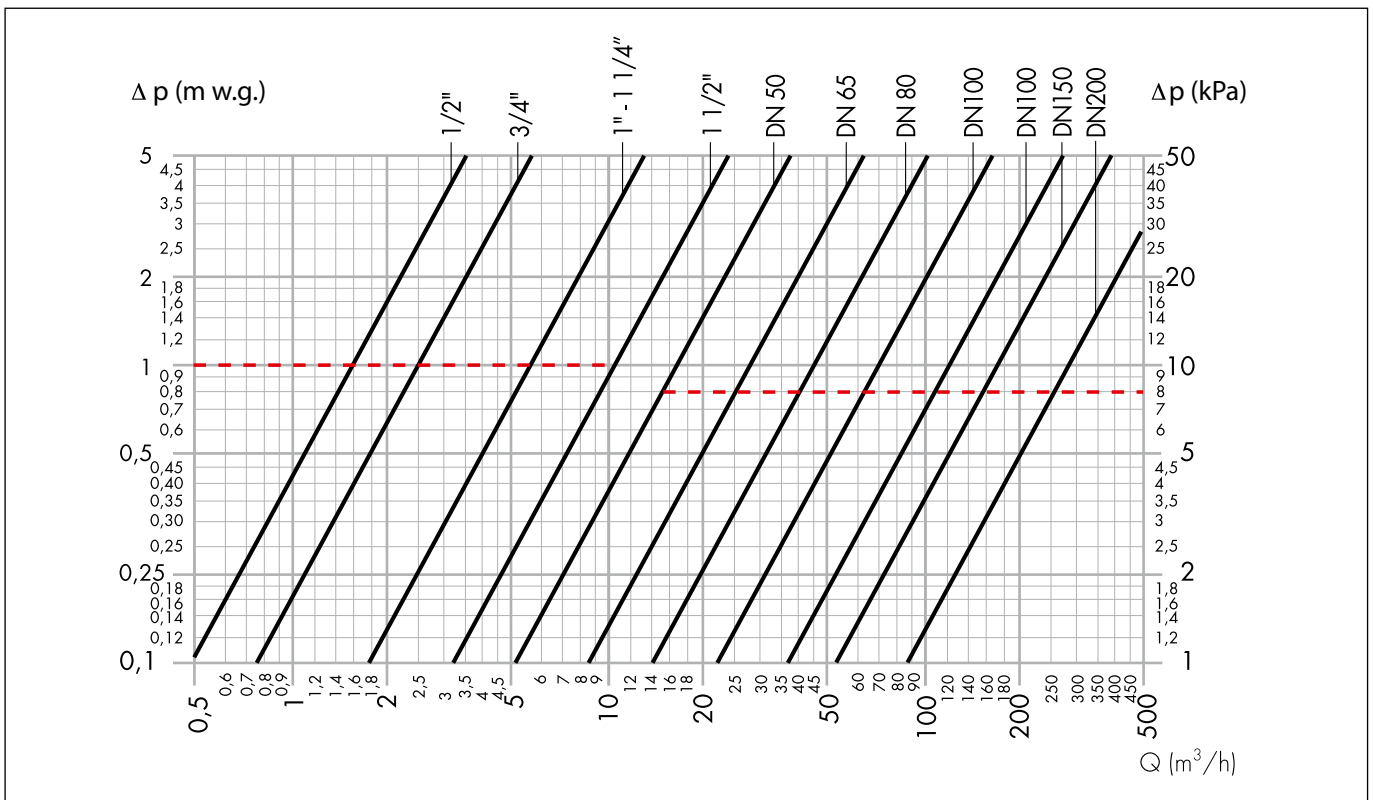
Strainer cleaning

It is periodically necessary to **clean the strainer on the flow pipe designed to protect the volume meter.**

By observing the instant flow rate and flow-return temperature difference values (significantly lower flow rate compared to the nominal value and significantly higher temperature difference), it is easy to find out whether the strainer is clogged and clean it.

Hydraulic characteristics

Flow meter + probe pockets (if threaded connection)



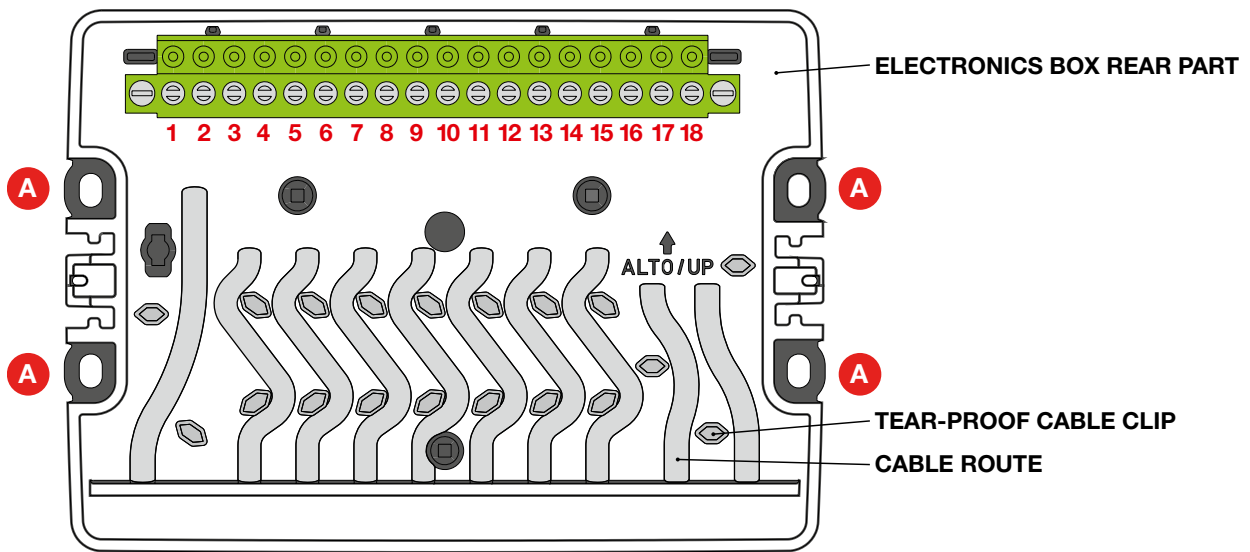
The broken red line indicates the pressure drop at the permanent flow rate Q_p ($\Delta p=3,5$ m w.g., for threaded connections only).

	1/2"	3/4"	1"	1 1/4"	1 1/2"
Kv	5,0	7,9	17,8	17,8	33,0

	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Kv	53	89	142	223	360	540	900

CONTECA® EASY ULTRA meter electrical connections

For box or direct wall mounting, use the screws provided and insert them into the corresponding holes **A**

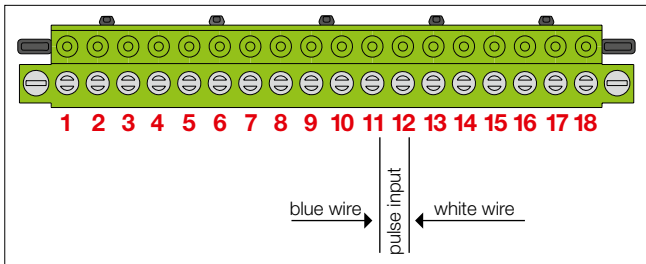


Pins	Description	Accessory
1 - 2	OUT 2 - Open collector pulse output for COOLING UNITS. GND=2 / duration 120 ms / Vmax 24 V (dc) - 50 mA	755882
2 - 3	OUT 1 - Open collector pulse output for HEATING units. GND=2 / duration 120 ms / Vmax 24 V (dc) - 50 mA	755881 - 755882
4	NOT used	
5 - 6	IN 4 - fourth pulse input (generic). GND=6	2 x 755825
6 - 7	IN 3 - third pulse input (generic). GND=6	755825
8 - 9	IN 2 - Pulse input for DCW. GND=9	
9 - 10	IN 1 - Pulse input for DHW. GND=9	
11 - 12	Heating/cooling flow meter pulse input (polarised, see page 6)	
13 - 14	Digital input (MUST be with voltage-free contact)	
15 - 16	Electric supply 24 V (ac) 50 Hz - 1W	
17 - 18	Transmission BUS RS-485 / RS-485 A=18 / RS-485 B=17	

• **Heating/cooling flow meter**

11 - **12** Flow meter pulse input.

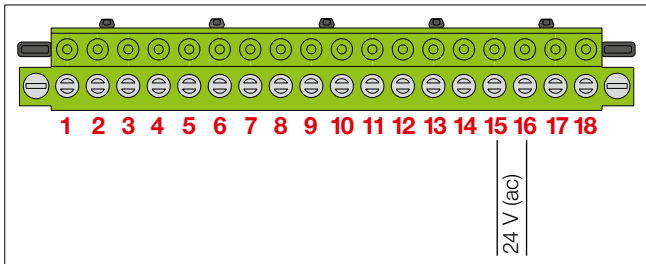
11 (blue wire) **12** (white wire)



• **Electric supply**

15 - **16** Centralised 24 V (ac) electric supply line

The **24 V (ac) electric supply line must only be used** for heat meters and must not be under the user's control.



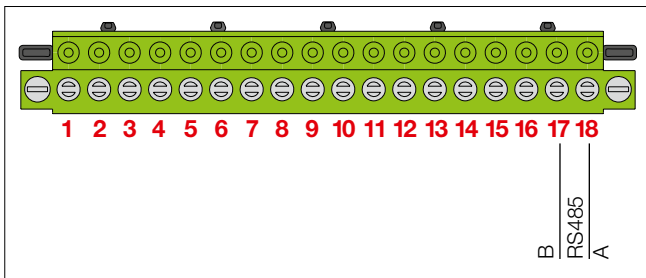
• **Data centralisation**

If centralised data transmission via BUS is used, the following connection plan must be implemented:

17 - **18** RS-485 polarised transmission Bus

17 Tx (RS-485-B) **18 Rx** (RS-485-A)

For the transmission bus, use 2 x 1 mm² cable, preferably of the twisted type. **Note: Transmission polarisation must be fully observed**



• **Energy pulse outputs - codes 755881/755882**

2 - **3** Remote heating units totaliser output (kWh) (OC type)

1 - **2** Remote cooling units totaliser output (kWh) (OC type)

These outputs can be connected to our product code 755890 (remote energy totaliser) or a general supervisor.

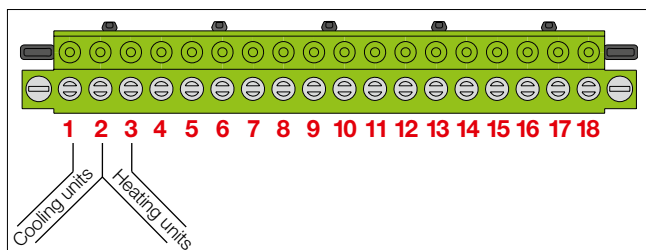
Output specifications:

1 IMP = 1 kWh - open collector contact

Pulse duration: 120 ms

24 V (dc) - 50 mA

Maximum frequency = 1 Hz



• **Additional pulse inputs 755825**

E.g.: Heating water - Electrical energy - Gas

NOTE: The additional inputs are only enabled with codes 755825. Connection must be with a voltage-free contact and the weight and unit of measurement for the pulse must be indicated at the time of ordering.

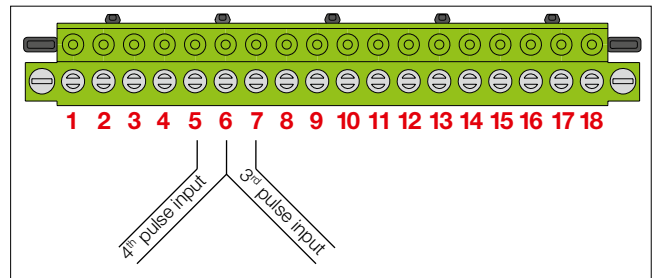
E.g.: 1 pulse = 10 litres of heating water
1 pulse = 0,1 kWh electrical energy
1 pulse = 1 Nm³ gas

6 - **7** 3rd pulse consumption

5 - **6** 4th pulse consumption

Minimum pulse duration: 120 ms

Maximum frequency = 1 Hz

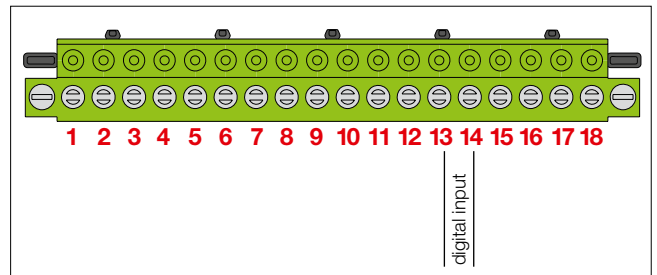


• **Digital input**

The digital input must be with a voltage-free contact (class IB)

13 - **14** Connection to the auxiliary microswitch for the zone valve.

Note - Each 7504 series appliance comes with a tamper-proof lead sealing kit for the temperature probes and the plastic electronics box.

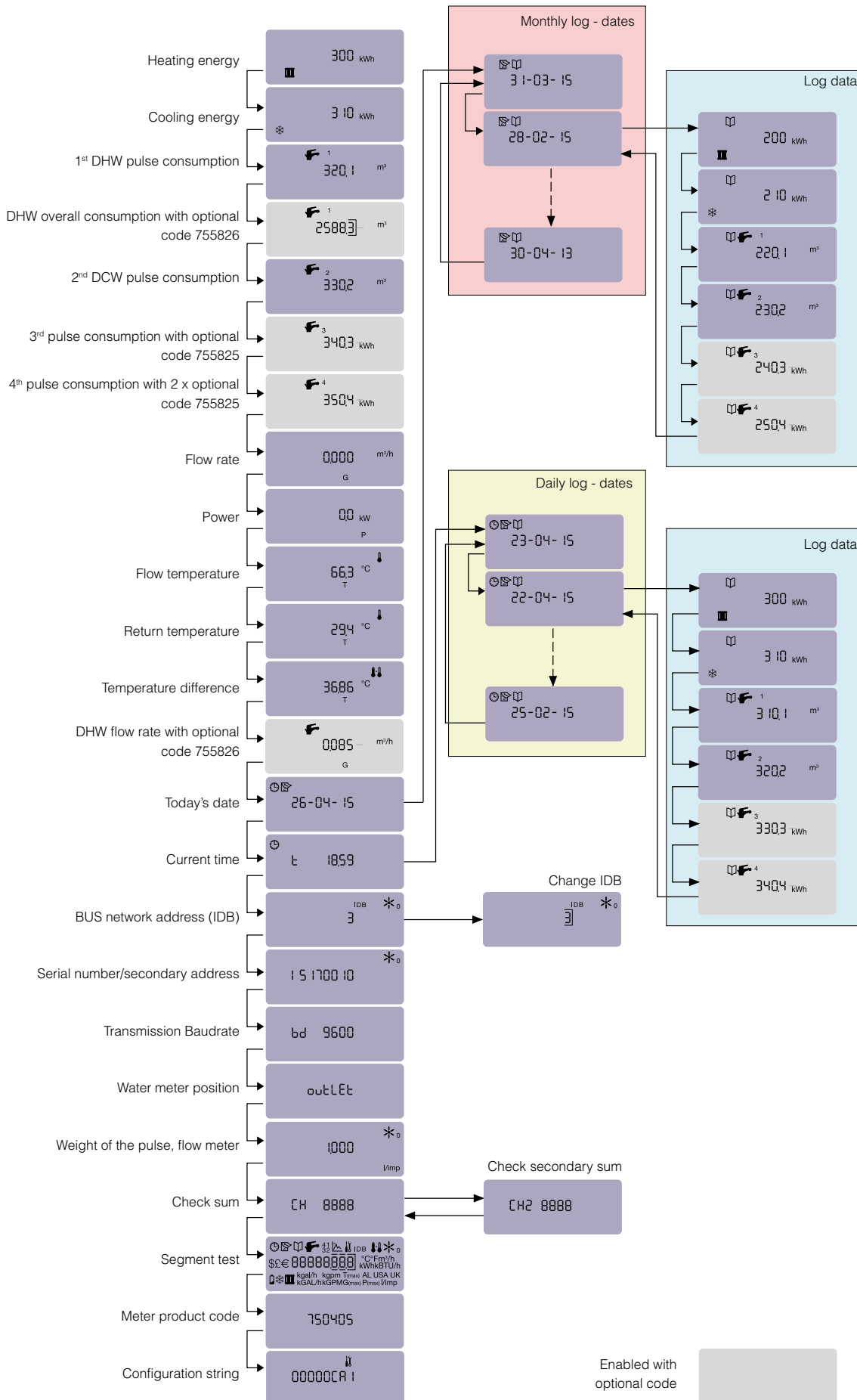


• **Operating information**

Accumulated energy is stored in a non-volatile memory device (EEPROM) each time the unit of measurement is completed (1 kWh); at the same time this increase results in updating of the display (see "User information cycle").

User information cycle

The heat meter is equipped with an LCD display. The display is activated by pressing the key on the front. By repeatedly pressing the key briefly, it is possible to scroll through the various information windows. Press and hold the key corresponding to some of the screens to access additional information.

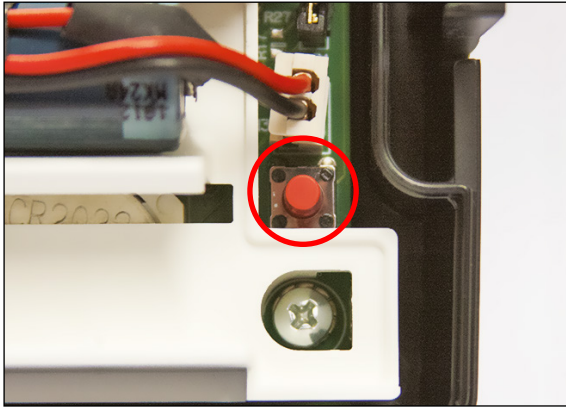


Test Instructions

The 7507 series meter is equipped with a fast output test device located inside the plastic container. In order to access this, remove the seal and take out the fixing screws.

On the right-hand side of the back of the card (fig. 1) there is a key offering access to the technical manual.

(fig. 1)



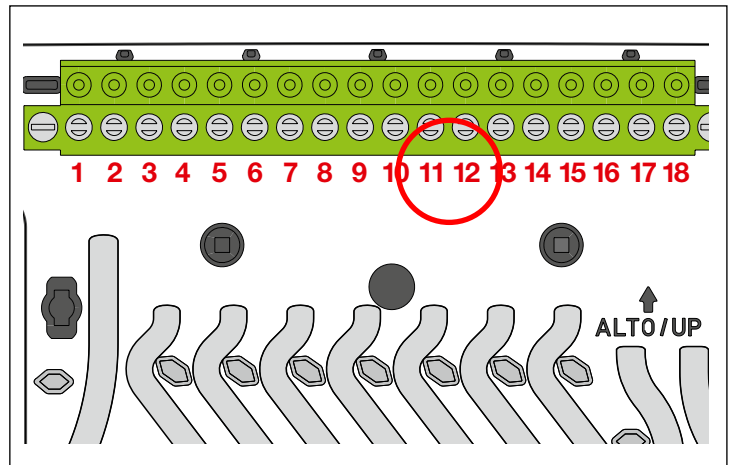
After pressing the key on the back of the card, pressing the key on the front allows you to scroll through the various screens.

(fig. 2)



An input pulse can be simulated by connecting pins 11 - 12 (fig. 3). The maximum input pulse frequency is 1 Hz.

(fig. 3)



The probes, which absolutely cannot be separated from the electronics circuit, may be inserted in a thermostatic bath, observing the temperature range of 10–90 °C and taking account of a ΔT between 3–80 K

The energy increases according to the following equation:

$$\Delta E = K \cdot \Delta T \cdot \Delta V \cdot 0,2777698 \cdot 10^{-3} \text{ [Wh]}$$

K = thermal coefficient [kJ/m³K]

ΔT = temperature change [K]

ΔV = volume change [l]

$$\Delta V = N \cdot P$$

where N = number of pulses

P = single pulse value per litre

Operating specifications

1) In order to protect against spurious measurements or undesired metering, the metering control software makes the processing of consumption subordinate to a specific flow temperature value (FT).

The **heating metering cycle is activated for FT > 22 °C** (factory setting).

The **cooling units cycle is activated for FT < 15 °C** (factory setting, with optional accessory code 755810).

On request, the setpoint values can be changed by technical personnel.

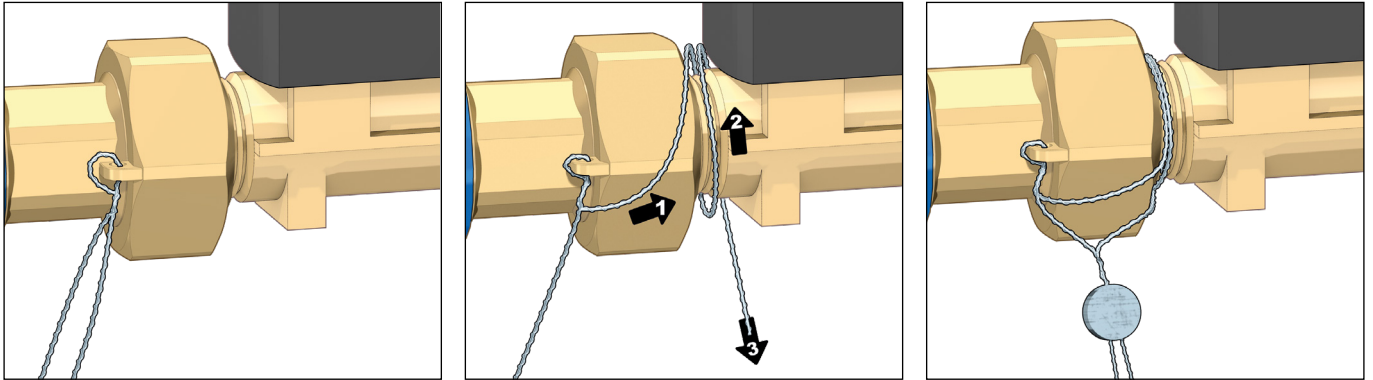
2) The software governing metering moreover has consumption processing subordinate to a **minimum temperature difference** in order to provide further protection against spurious measurements or minimum metering due to temperature tolerances. At the time of factory setting, a **dead band of 0,4 K** (factory setting) is therefore defined.

3) The software governing metering also requires **installation of the flow rate meter on the return pipe**.

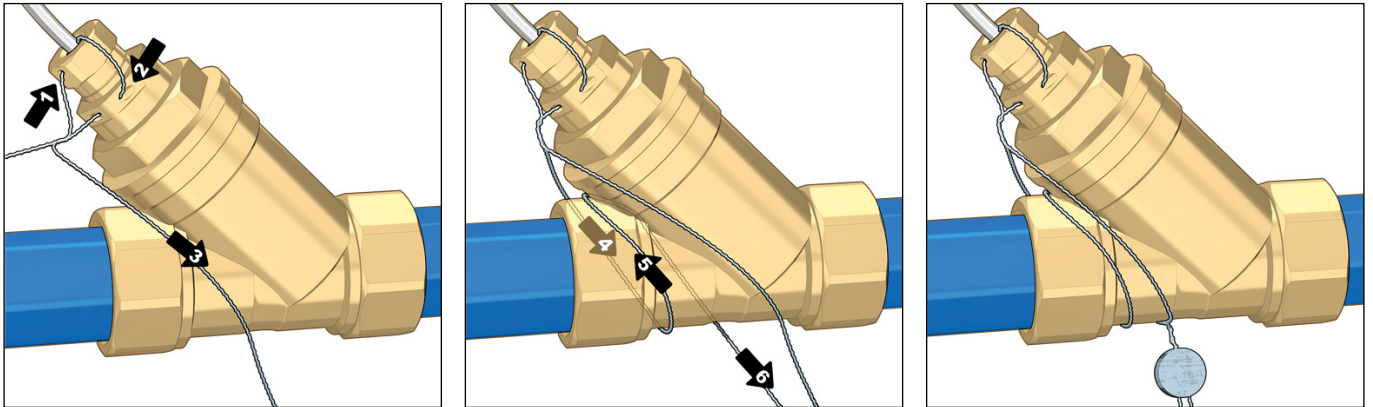
On request and further to the action of technical personnel, the configuration setpoint can be adapted in order to install the meter on the flow pipe.

Lead sealing procedure

Meter with threaded connections



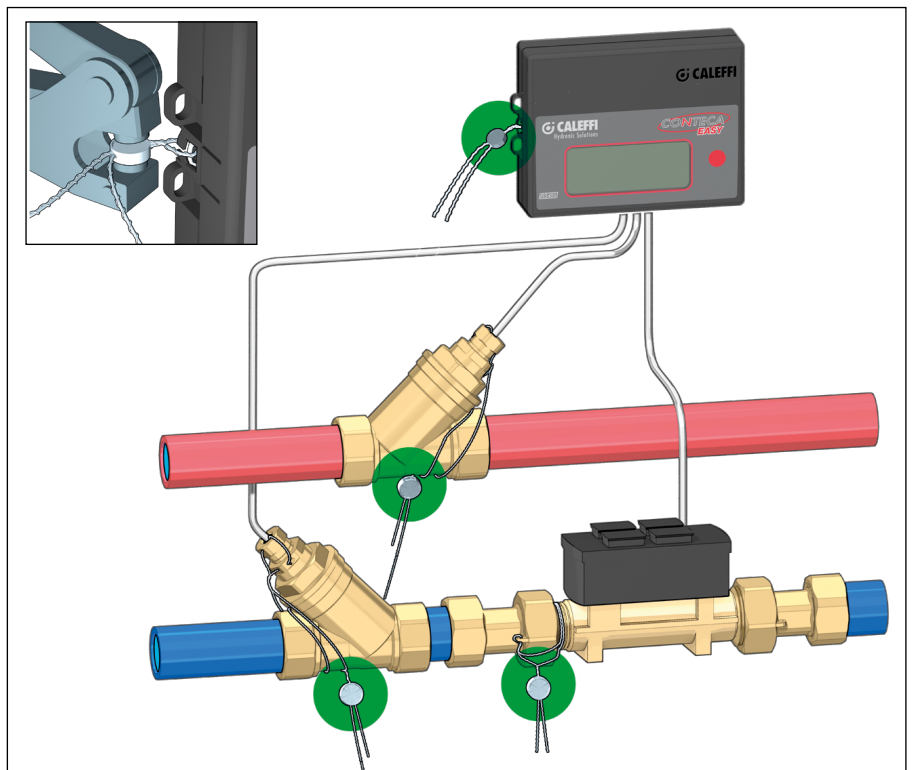
- A) Insert the steel thread into the dedicated hole on the volume meter caps and twist it.
- B) Wind the thread as illustrated in the figure so that, once lead sealing is complete, the cap cannot be unscrewed without breaking the seal or the thread.
- C) Twist the thread and insert the plumb bob.



- D) Pass the thread through the hole on the probe and the pocket and twist it;
- E) Wind the thread as illustrated in the figure so that, once lead sealing is complete, the cap cannot be unscrewed without breaking the seal or the thread;
- F) Twist the thread and insert the plumb bob;
- G) Repeat steps D, E, F for the other temperature probe.

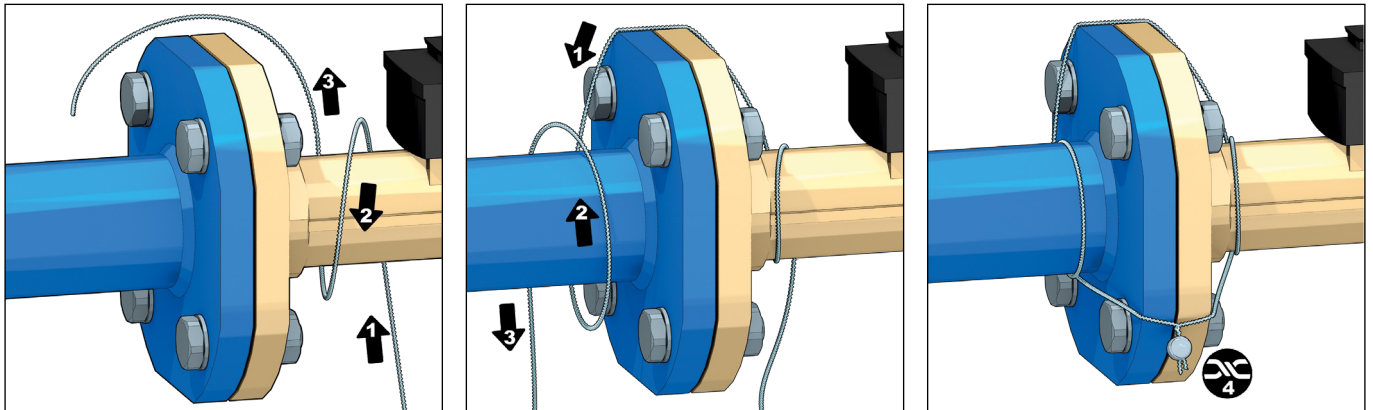


- H) Pass the thread through one of the dedicated holes on the sides of the heat meter calculation unit, twist it, then finally insert the plumb bob.
- I) Apply a cast to the plumb bobs, as shown in green in the figure on the right.

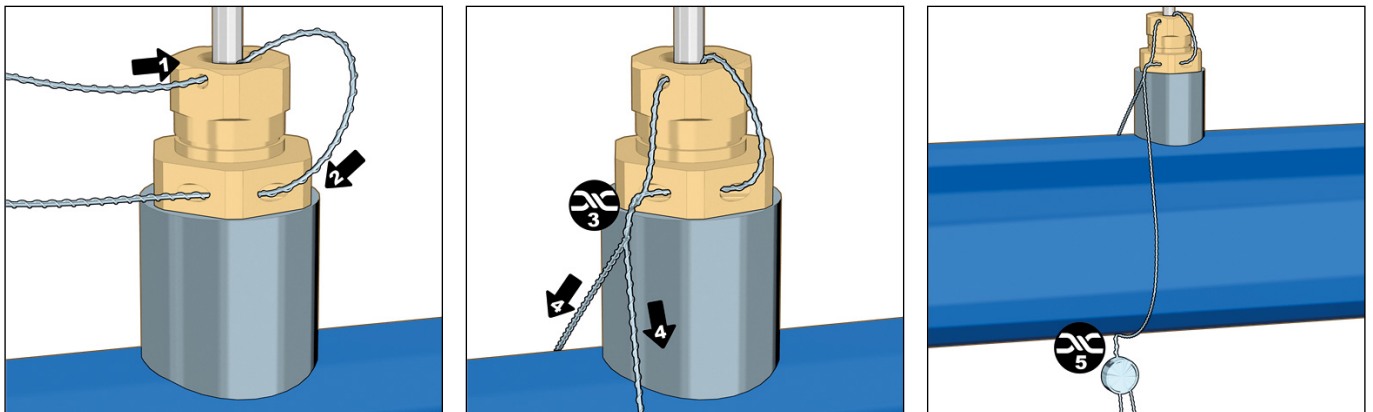


Lead sealing procedure

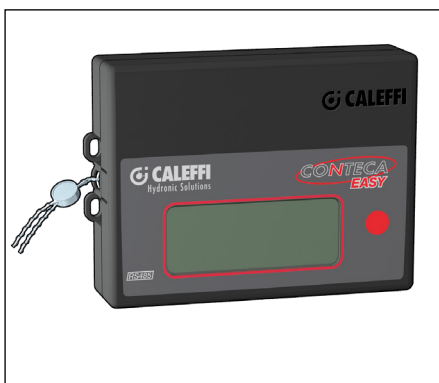
Meter with flanged connections



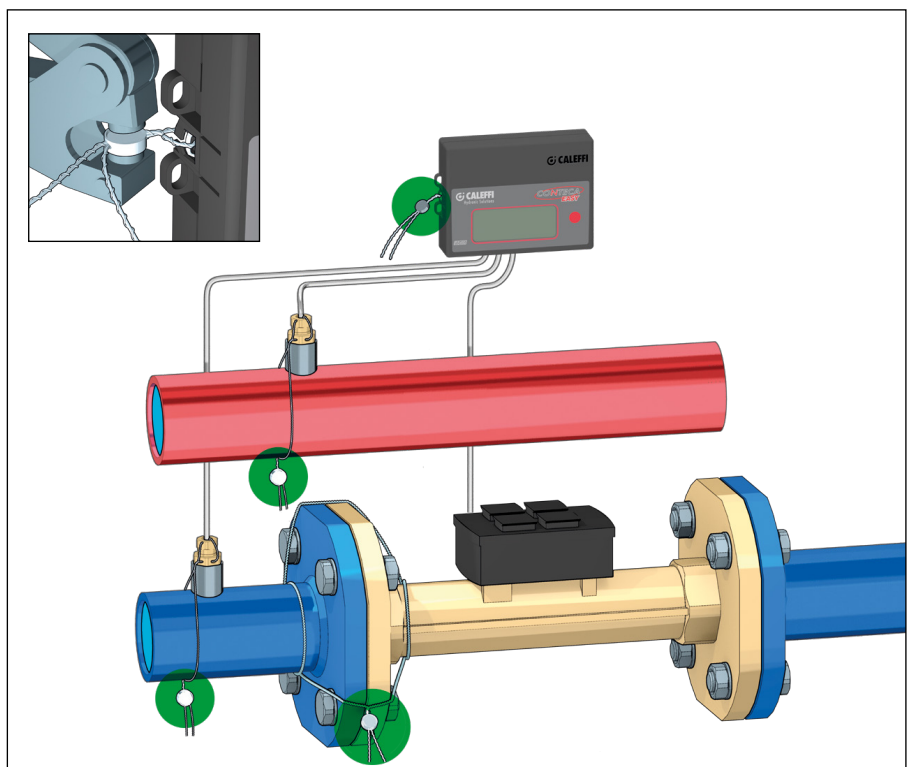
- A) Insert the steel thread into the hole as illustrated in the figure and wind it around the pipe;
- B) Wind the thread as illustrated in the figure so that, once lead sealing is complete, the flow meter cannot be removed without breaking the seal or the thread.
- C) Twist the thread and insert the plumb bob.



- D) Pass the thread through the hole on the probe and the pocket and twist it;
- E) Wind the thread as illustrated in the figure so that, once lead sealing is complete, the cap cannot be unscrewed without breaking the seal or the thread;
- F) Twist the thread and insert the plumb bob;
- G) Repeat steps D, E, F for the other temperature probe.

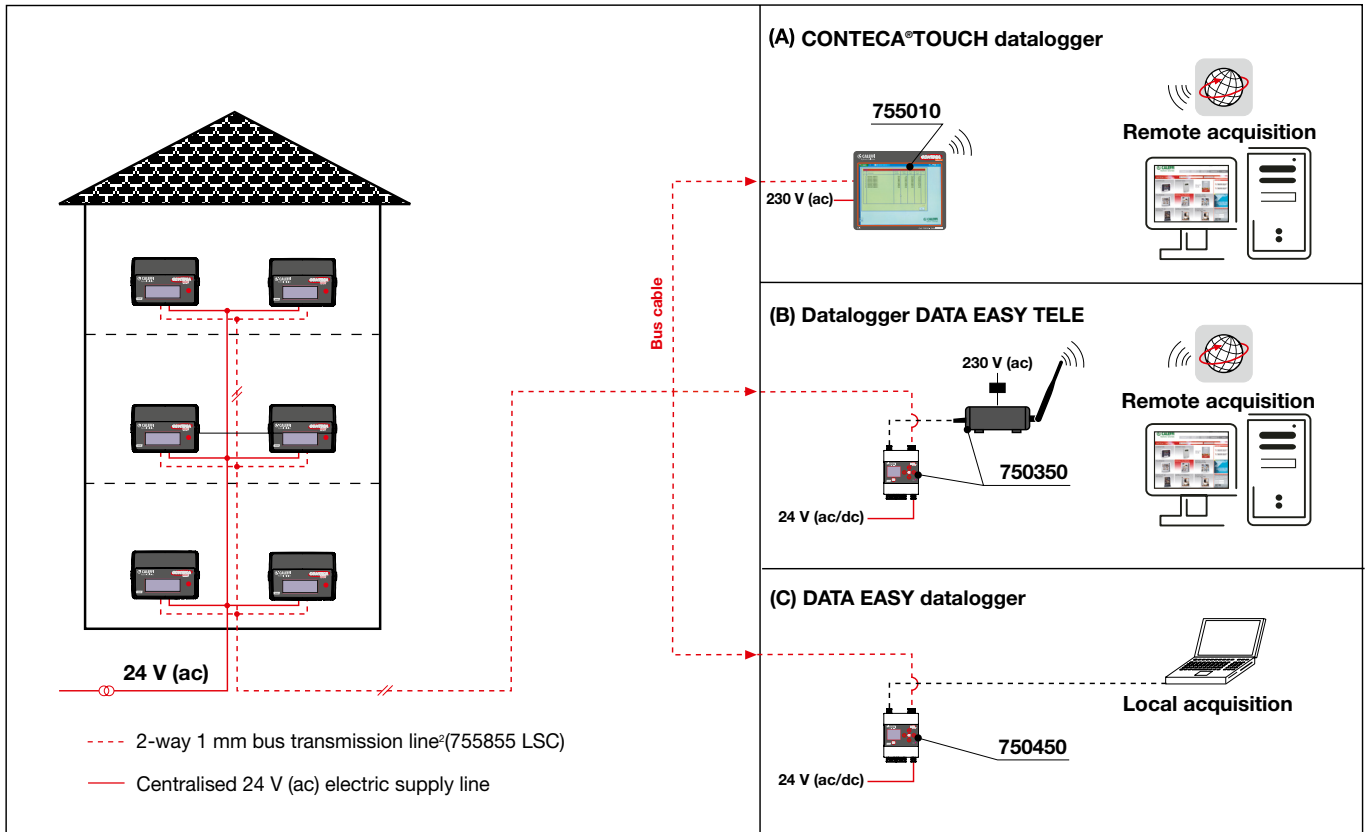


- H) Pass the thread through one of the dedicated holes on the sides of the heat meter calculation unit, twist it, then finally insert the plumb bob.
- I) Apply a cast to the plumb bobs, as shown in green in the figure on the right.



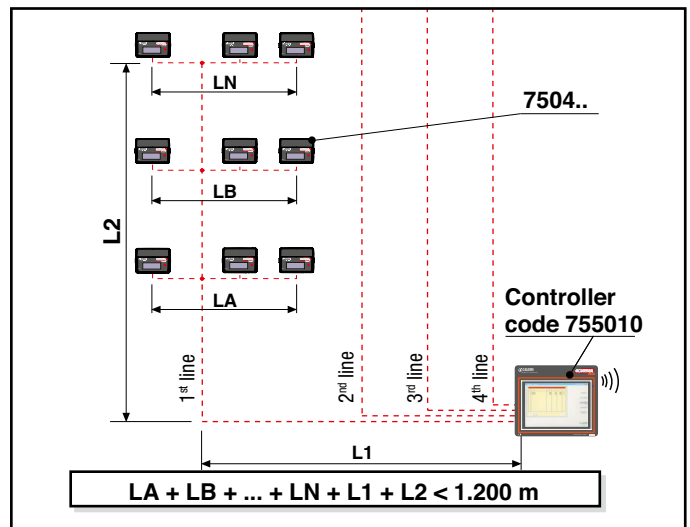
DATA CENTRALISATION

Architecture of centralisation



N.B.:

The transmission bus, code 755855 LSC, is two-way (cross-section $2 \times 1 \text{ mm}^2$). The controller allows **max. 250 users**. The **maximum length** of each individual section is **1200 m**. It is possible to lay **up to 4 separate sections** using the MULTIPLEXER, code 755005.



755058

M-Bus - RS-485 slave converter

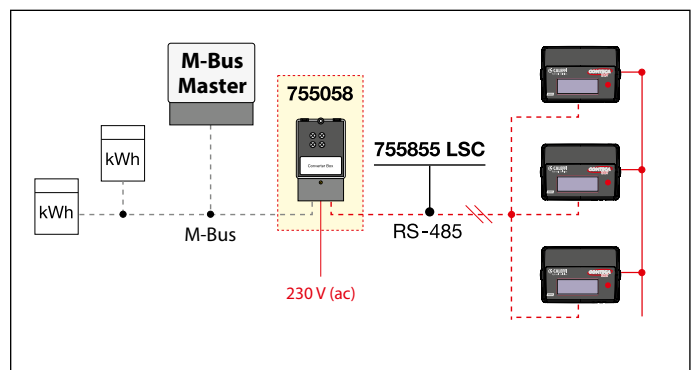
Used to adapt and galvanically separate two transmission standards (M-Bus and RS-485). It allows direct connection of CONTECA® EASY meters to an M-Bus transmission line, making them visible as slave devices.

Electric supply: 230V (ac) - 9VA
Operating temperature: -10 – 60 °C.

Code

755058 M-Bus/RS-485 slave converter

Application diagram for M-Bus slave converter - RS-485 code 755058
The software protocol used for supervisor/CONTECA® environment interfacing utilises the M-Bus standard (complies with EN 1434 part 3).



DATA CENTRALISATION

755010 CONTECA® TOUCH controller

The function of the controller is to acquire, via bus, all the totalised values of the individual users (heating/ cooling units / mass / zone valve opening hours), user operating status (ON/OFF), totalised values from the additional pulse meters (domestic cold/hot water) and operational diagnostics.

All the abovementioned totalised values are recorded on a daily basis in log files that are useful for consumption analysis and the division of expenses.

Maximum number of users: 250.



- Includes:
- 1 touch-screen CPU
 - 1 wall mounting rack

The controller has the following features:

- 1 touch-screen LCD monitor for reading consumption and user data
- 1 RS-485 port
- 2 USB ports
- 1 LAN port
- **GSM modem + M2M SIM managed by Caleffi S.p.A.**
- acquisition software
- instruction manual



Electric supply: 230 V (ac) $\pm 10\%$ - 50 Hz - 60 W.

Ambient conditions: 10–35 °C with no dust.

N.B.: User data MUST be submitted to Caleffi before commissioning can take place.

750350 DATA EASY TELE datalogger

The device is used to acquire and log the data originating from CONTECA® EASY meters via communication bus. The integrated web interface can be used to read consumption values and instant data, generate reports and, if applicable, consult the reading log. When associated with a UMTS router, it allows remote management of the CONTECA® EASY network.

The router for the **DATA EASY** datalogger has an Access point function for LAN management. If it has an M2M* data SIM (not supplied by us) and is connected to the **DATA EASY** system, it offers dynamic IP management via Dyn DNS. It allows the system to be used to its full potential, by using a browser to remotely manage the entire network of CONTECA® EASY heat meters.

Maximum number of users: 250.

* We recommend activating the M2M SIM with FLAT control with a minimum traffic threshold of 500 MB/month, with bandwidth suppression/limitation when the threshold is exceeded.

Datalogger specifications:

- Electric supply: 24 V (dc) $\pm 10\%$, 24 V (ac) - 3 W.
- 2 Ethernet outputs: ETH1 (PoE), ETH2.
- Working temperature range: 0–50 °C.
- Mounting: 35 mm DIN rail (EN 60715).
- Data log storage: 10 years.
- Reports: XLS or CSV format.
- Transmission method: FTP (Client), Webserver.

UMTS router:

- Electric supply: 100–240 V (ac) / 9 V (dc) - 7 W.
- LAN: Wireless AP, 4-port switch router with firewall.
- Dimensions: (H x W x D) 36 x 85 x 100 mm (mounting on horizontal plane).

- Certification: CE, EN 60950-1.

750450 DATA EASY datalogger

The device is used to acquire and log the data originating from CONTECA® EASY meters via communication bus. The integrated web interface can be used to read consumption values and instant data, generate reports and, if applicable, consult the reading log.

The main settings can be carried out locally via the web interface, by connecting a PC to one of the two Ethernet ports with switch functionality.

The SMART function allows the user to automatically recognise devices connected to the network. Data can be acquired and consumption reports created automatically, complete with the unit of measurement and a description, with other activities carried out by the user removed.

Maximum number of users: 250.

Datalogger specifications:

- Electric supply: 24 V (dc) $\pm 10\%$, 24 V (ac) - 3 W.
- 2 Ethernet outputs: ETH1 (PoE), ETH2.
- Working temperature range: 0–50 °C.
- Mounting: 35 mm DIN rail (EN 60715).
- Data log storage: 10 years.
- Reports: XLS or CSV format.



ELECTRICAL - ELECTRONIC OPTIONS

755826

Flow rate - DHW recirculation scan

In compliance with standard 9182 for DHW systems with recirculation on the risers, recirculation pipes may also need to be laid inside the user systems. DHW consumption meters are therefore vulnerable to incorrect circulation, which leads to errors in total consumption readings (actual user information). The scan option can be used to distinguish between actual and incorrect (or gross) flow rates, providing an exact DHW consumption value for the division of expenses. The option must be linked to the CONTECA® EASY heat meter supply; its on-site application and setup must be carried out by Caleffi technicians or staff from an authorised service centre.

The option requires setting of a recirculation flow rate (threshold), if drawing does not take place. Every time the detected flow rate is lower than the set threshold, only the GROSS register is increased, while - when the flow rate is above the threshold - both registers (GROSS and NET) are increased.

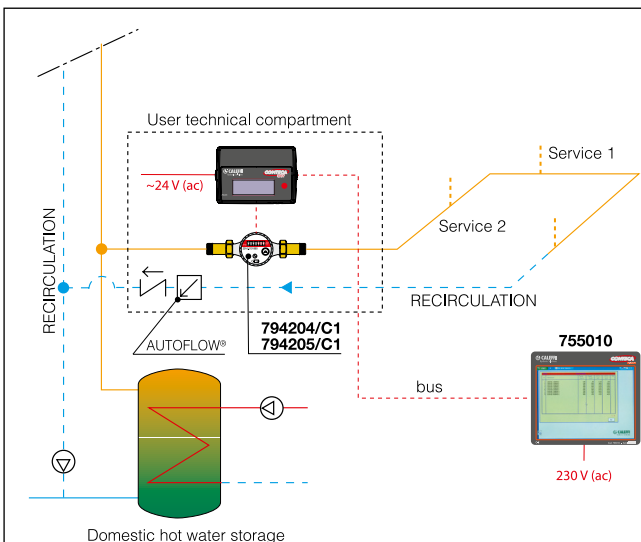
The following appear on the display:



To maintain a constant recirculation flow rate, a flow rate limiter with a setting value under 100 l/h must be fitted to the return branch of the apartment recirculation network. Furthermore, a specific flow meter must be used, with a pulse weight of 1 litre (see code 794204/C1 and code 794205/C1).

Option code 755826 is supplied with an AUTOFLOW® with a 1/2" connection and a nominal flow rate of 40 l/h, code 127141 M04

Application diagram, code 755826



755810 Cooling units metering

Upon activation of the software module, CONTECA® EASY is able to **meter the heating and cooling units, on the evaluation of the temperature difference reversal, in separate registers for both the current values and for the logged files.**

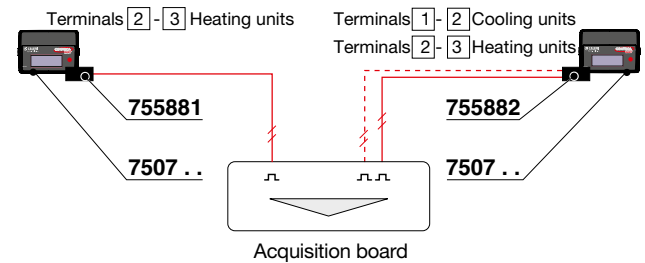
75588. Pulse output

The pulse output enables transferral of the heating and/or cooling energy values to a generic logger. **The pulse weighs 1 kWh.**

The pulse output with no potential is **open collector** with pulse time 120 ms - Vmax 24 V (dc) - 50 mA.

Code

755881	Single pulse output - HEATING UNITS
755882	Double pulse output - HEATING/COOLING UNITS



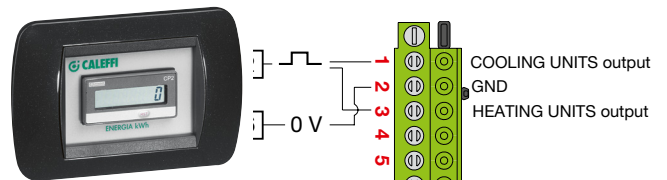
755890 Remote energy totaliser

Electronic 8-digit LCD totaliser equipped with cover plate for **three-slot recessed electric box.**

Lithium battery: life 8 years - max frequency 20 Hz

Suitable for pulse outputs code 75588.

Shielded cable length (2x1 mm²): max 75 m.



755825 Generic pulse input acquisition

The CONTECA® EASY module can acquire **up to two additional pulse inputs** (for one additional pulse a product code 755825 must be ordered; for two additional pulses 2 x product code 755825 are required), in addition to those already dedicated to DHW and DCW.

Sometimes, and normally when there is a controller code 755010, it is interesting to use the bus to transfer the user data in terms of consumption (gas meter / electricity meter).

The generic pulse must **have no potential (voltage-free contact, maximum frequency 1 Hz)**. Class IB. Residences and hotels are particularly suitable types of consumers.

DATA CENTRALISATION WITH PULSE MONITOR

720090

USB/Radio transmission device +
SW7200 software for reading and viewing consumption data.
Two-way wireless transmission
868.0–868.6 MHz, 10 mW.

Software developed for Microsoft® Windows operating system.



Code

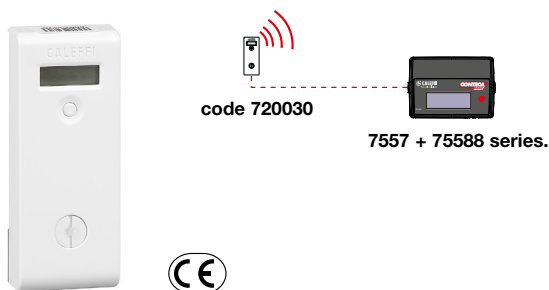
720090 USB/Radio device + SW7200 software

720030 PULSE MONITOR

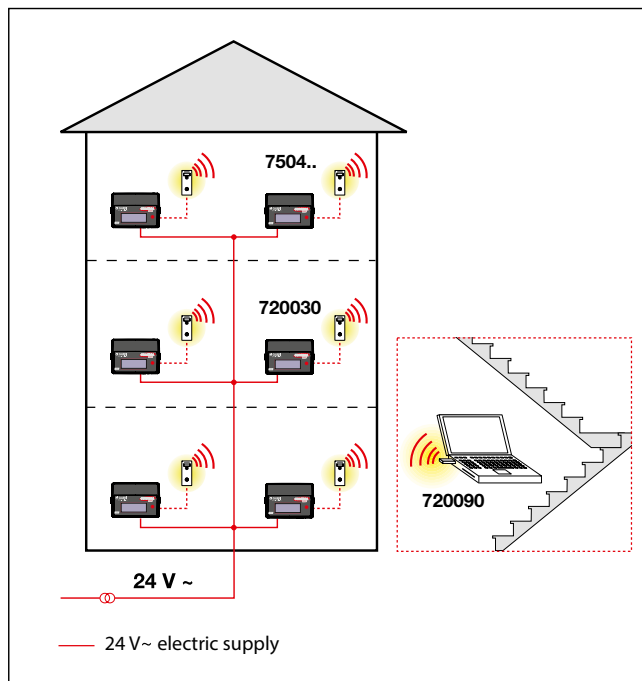
Pulse logger.
Electric supply: lithium battery.
6-digit display with user key.
Daily data saving.
Tamper-proof seal and sensor.

Enables acquisition of a pulse output from the heat meter.

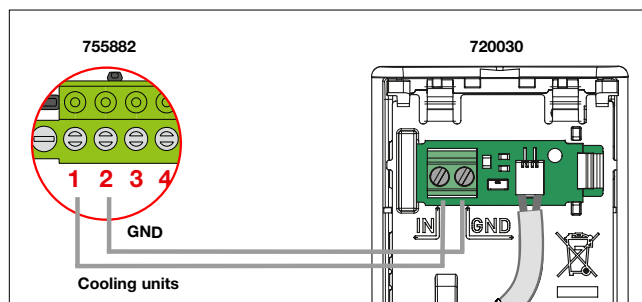
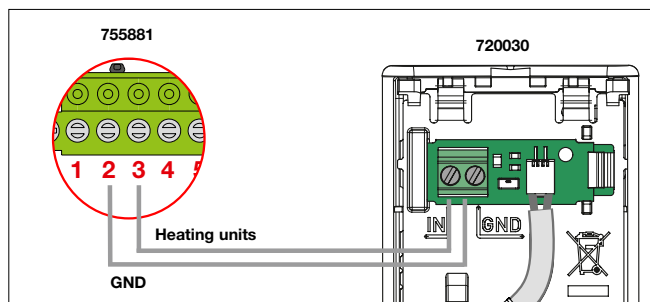
Two-way wireless transmission.
868.0–868.6 MHz, 10 mW.
Protection class: IP 31.



Building transmission diagram



Electrical connection between CONTECA® EASY and PULSE MONITOR code 720030



SPECIFICATION SUMMARY

7507 series

CONTECA® EASY ULTRA **direct heat meter, compliant with directive 2014/32/EU (MID)**, for use in heating and air-conditioning systems, with the following specifications: **ultrasonic** volume meter for hot water (maximum temperature 90 °C) with pulse output, NTC type temperature probe, data viewing on 8-digit display, working temperature range 10–90 °C, protection class IP 54, transmission via **TWO-WAY** Bus in accordance with M-Bus protocol over RS-485 or MODBUS RTU over RS-485, electric supply 24 V (ac) 50 Hz - 1 W. **Options:** up to 2 additional pulse inputs - up to 2 pulse outputs.

Code 755810

Metering of refrigeration units. Upon activation of the software module, CONTECA® EASY is able to meter heating and cooling units, on the evaluation of the temperature difference reversal, in separate registers for both the current values and for the logged files.

Code 755881 – 755882

The single pulse output code 755881 or the double pulse output code 755882, allow transferral of heating and cooling energy values to a generic logger. **The pulse weighs 1 kWh.** The pulse output with no potential is **open collector** with pulse time 120 ms - Vmax 24 V (dc) - 50 mA.

Code 755825

The optional pulse inputs (up to two) allow acquisition of generic meter consumption values (e.g. gas or electricity). The generic pulse input should be class IB, **with no potential**, maximum frequency 1 Hz.

Code 755826

Option for enabling DHW metering via checking of the flow rate scan for domestic water systems equipped with a recirculation system. The option distinguishes the actual DHW flow rates from inaccurate or gross recirculation values, with the aim of providing the exact domestic hot water consumption figure.

Code 755890

Electronic 8-digit LCD totaliser equipped with cover plate for **three-slot recessed electric box**. Lithium battery: life 8 years - max. frequency 20 Hz. Suitable for pulse outputs code 75588.. Maximum cable length (2x1 mm²) (not supplied): max. 75 m. Cable in dedicated raceway.

Code 755010

Compact touch-screen CONTECA® TOUCH controller, equipped with RS-232 - RS-485, USB and LAN port, with user supervisor function (max. 250) and daily logging of consumption data. Enabled for the management of alarm and remote activation SMS messages and for the automatic daily transmission of data to FTP server via email. Electric supply 230 V (ac). Working temperature range 10–35 °C with no dust.

Code 750350

Regulator for acquiring and logging data with the following specifications: communication over RS-485 physical level in M-Bus protocol. Electric supply: 24 V (dc) - 3 W or 24 V (ac) - 3 W. Local access via PC and remotely via integrated web page. Daily data storage: 10 years. Mounting on 35 mm DIN rail (EN 60715). 2 Ethernet ports. Reports in .XLS or .CSV format. Maximum number of users: 250. Ambient temperature range 0–50 °C. UMTS router with the following specifications: electric supply: 100/240 V (ac) / 9 V (dc) - 7 W, LAN: wireless AP, router switch with 4 ports with firewall. Dynamic IP management via Dyn DNS. Dimensions (H x W x D): 36 x 85 x 100 mm. Certification: CE, EN 60950 - 1.

Code 750450

Regulator for acquiring and logging data with the following specifications: communication over RS-485 physical level in M-Bus protocol. Electric supply: 24 V (dc) - 3 W or 24 V (ac) - 3 W. Integrated web interface. Daily data storage: 10 years. Mounting on 35 mm DIN rail (EN 60715). 2 Ethernet ports. Reports in .XLS or .CSV format. Maximum number of users: 250. Ambient temperature range 0–50 °C.

CERTIFICATION OF EVALUATION PROCEDURE FOR CONFORMITY TO DIRECTIVE 2014/32/EU (MID DIRECTIVE)



CONTECA® EASY ULTRA 7507 series

CONTECA® EASY ULTRA heat meters in the 7507 series conform to the requirements of directive 2014/32/EU, better known as MID (acronym for Measuring Instrument Directive).



Type test certification (according to form B - MID directive)

	
<small>Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra</small>	<small>Eidgenössisches Institut für Metrologie METAS</small>
EU Bauartprüfzertifikat Nr. CH-MI004-17022-00	
Auftraggeber:	CALEFFI S.p.A. S.R. 229, n. 25 28010 Fontaneto d'Agogna Italia
Anforderungen:	Messmittelverordnung vom 15. Februar 2006 (SR 941.210) und Verordnung des EJPD vom 19. März 2006 über Messmittel für thermische Energie (SR 941.231) Richtlinie 2014/32/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Messgeräten auf dem Markt (MID) mit messmittelspezifischem Anhang VI (MI-004)
Konformitätsnormen:	EN 1434-2007, EN 1434-2015
Geräteart:	Wärmerechner mit fest verbundenen Temperaturfüh- lern
Typenbezeichnung:	CONTECA EASY
Kenndaten:	Temperaturbereich: 10 °C ... 90 °C Temperaturdifferenzbereich: 3 K ... 80 K Umgebungstemperatur: Klasse A, 5 °C ... 45 °C Elektromagnetische Klasse: E1 Gehäuseklasse: IP54 Mechanische Klasse: M1
Zertifikat gültig bis:	6. Februar 2027
3003 Bern-Wabern, 7. Februar 2017	
Benannte Stelle:	Konformitätsbewertungsstelle METAS-Cert Nr. 1259
	 Julien Couvreur, Leiter METAS-Cert
<small>Dieses Dokument darf nur in vollständiger Form weitergegeben werden.</small>	<small>1/2</small>
<small>METAS Lindenberg 50, 3003 Bern-Wabern, Schweiz, Tel: +41 58 387 01 11, www.metas.ch</small>	

Production process certificate of conformity (according to form D - MID directive)

	
<small>Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra</small>	<small>Eidgenössisches Institut für Metrologie METAS</small>
Konformitätszertifikat Nr. 6030-00405	
Gegenstand	Modul D: Konformität mit der Bauart auf der Grundlage einer Qualitätssicherung bezogen auf den Produktionsprozess
Auftraggeber	CALEFFI S.p.A. S.R. 229, n. 28010 Fontaneto d'Agogna Italia
Anforderungen	Richtlinie 2014/32/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Messgeräten auf dem Markt (MID), Anhang II Modul D. Messmittelverordnung vom 15. Februar 2006 (SR 941.210)
Bestätigung	Dieses Konformitätszertifikat bestätigt, dass die Qualitätssicherung des Produktionsprozesses des Auftraggebers geprüft wurde und die oben aufgeführten Anforderungen erfüllt. Die Firma ist berechtigt, die Metrologie-CE-Kennzeichnung für die im Geltungsbereich dieses anerkannten Qualitätsmanagementsystems gefertigten Messgeräte mit der METAS-Cert-Kennnummer 1259 zu versehen.
Datum des Audits	3. April 2017
Zertifikat gültig bis	3. April 2020
Benannte Stelle	Konformitätsbewertungsstelle METAS-Cert Nr. 1259
3003 Bern-Wabern, 4. April 2017	
	 Julien Couvreur, Leiter METAS-Cert
<small>Dieses Dokument darf nur in vollständiger Form weitergegeben werden.</small>	<small>1/2</small>
<small>METAS Lindenberg 50, 3003 Bern-Wabern, Schweiz, Tel: +41 58 387 01 11, www.metas.ch</small>	

Declaration of conformity

The manufacturer, Caleffi S.p.A., declares that equipment in the CONTECA EASY series 7502-7504-7507 complies with Directive 2014/32/EU. The full text of the EU declaration of conformity is available at the following internet address: http://bit.ly/Conteeca_EASY

We reserve the right to make changes and improvements to the products and related data in this publication, at any time and without prior notice.



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