



**Description**

The GE552-1 volumetric meters are used in the boiler room, to measure the heating and conditioning energy. They are strongly recommended for energy balancing in condominiums that have a centralised heating system, zone distribution and individual metering of heat energy consumption via GE555 user modules or GE556 user satellites. The meters consist of:

- Calculation and visualisation unit
- Flow rate measuring section
- Two PT500 temperature probes and relative housings

**Versions and product codes**

Product code	Nominal flow rate [m <sup>3</sup> /h]	Maximum capacity [m <sup>3</sup> /h]	Connections		Assembly centre distance [mm]	Calculator included	Probes included	Housings included
GE552Y231	6	12,5	Threaded	G 1 1/4"	260	YES	YES	YES
GE552Y233	6	12,5		G 1 1/2"	260			
GE552Y235	10	20		G 2"	300			
GE552Y243	15	60	Flanged	DN50	200			
GE552Y245	25	60		DN65	200			
GE552Y247	40	90		DN80	225			
GE552Y249	60	180		DN100	250			
GE552Y251	100	250		DN125	250			
GE552Y253	150	300		DN150	300			
GE552Y255	250	500		DN200	350			

**GE552-1 THREADED CONNECTIONS**



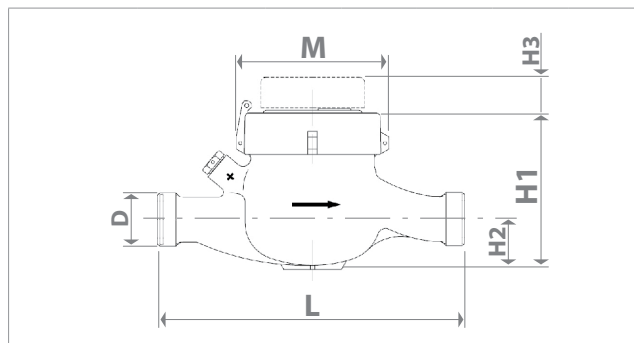
**Description**

Meter for measuring the flow rate. Horizontal or vertical installation. Its special construction guarantees excellent measurement accuracy and long-term reliability. The main characteristics are the reinforced bearings, high measurement stability and wide load range.

**Technical data**

Product code	GE552Y231	GE552Y233	GE552Y235
Connection	1 1/4"	1 1/2"	2"
Nominal flow rate [m³/h]	6	6	10
Maximum flow rate [m³/h]	12,5	12,5	20
Minimum flow rate H/V [l/h]	125 H / 250 V	125 H / 250 V	200 H / 400 V
Max. working temperature [°C]	90	90	90
Max. working pressure [bar]	16	16	16
Metrological class	R: 80 H	R: 80 H	R: 80 H
Pulse value [l/imp.]	10	10	10

**Dimensions**



Product code	Connection D	L [mm]	M [mm]	H1 [mm]	H2 [mm]	H3 [mm]
GE552Y231	1 1/4"	260	95	120	40	15
GE552Y233	1 1/2"	260	95	120	40	15
GE552Y235	2"	300	110	145	50	15

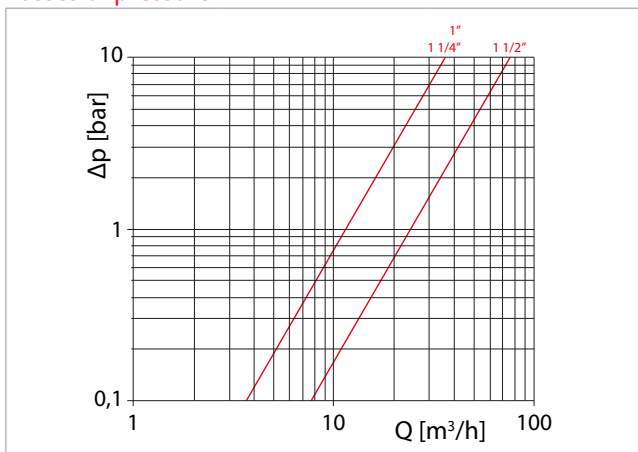
**Compliance with MID Directive**

If used for commercial applications, the energy meters are classified as measuring instruments subject to the rules of legal metrology. The GE552-1 volumetric meters for boiler room comply with the requisites of Directive 2004/22/EC on measuring instruments (MID - Measurement Instrument Directive), implemented in Italy by Legislative Decree 2 February 2007, no. 22 (Official Gazette no. 64 of 17 March 2007).



**NB:** The supplementary metrological marking is displayed on the front of each device, next to the EC mark; it consists of an "M" plus the last two digits of the year of marking, surrounded by a rectangle.

**Losses of pressure**



Product code	Connection	Kv
GE552Y231	1 1/4"	12
GE552Y233	1 1/2"	12
GE552Y235	2"	24

GE552-1 FLANGED CONNECTIONS



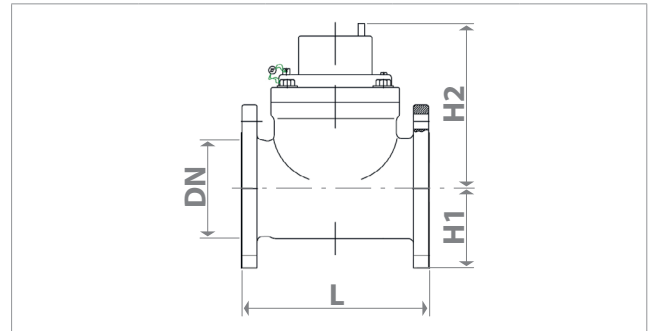
Description

Suitable for horizontal or vertical installation. Distinguished by its excellent maximum load capacity, minimum pressure losses, and compact size. The connection and construction dimensions comply with DIN ISO 4064.

Technical data

Product code	GE552Y243	GE552Y245	GE552Y247	GE552Y249	GE552Y251	GE552Y253	GE552Y255
Connection	DN50	DN65	DN80	DN100	DN125	DN150	DN200
Nominal flow rate [m³/h]	15	25	40	60	100	150	250
Maximum flow rate [m³/h]	60	60	90	180	250	300	500
Minimum flow rate [m³/h]	0,6	1,0	3,2	2	3	8	10
Max. working temperature [°C]	120	120	120	120	120	120	120
Max. working pressure [bar]	16	16	16	16	16	16	16
Measurement accuracy in accordance with EN 1434	class 3	class 3	class 3	class 3	class 3	class 3	class 3
Pulse value [l/imp.]	100	100	100	100	1000	1000	1000

Dimensions



Product code	Connection DN	L [mm]	H1 [mm]	H2 [mm]
GE552Y243	DN50	200	141	75
GE552Y245	DN65	200	141	82,5
GE552Y247	DN80	225	141	94
GE552Y249	DN100	250	200	110
GE552Y251	DN125	250	200	125
GE552Y253	DN150	300	244	135
GE552Y255	DN200	350	244	163

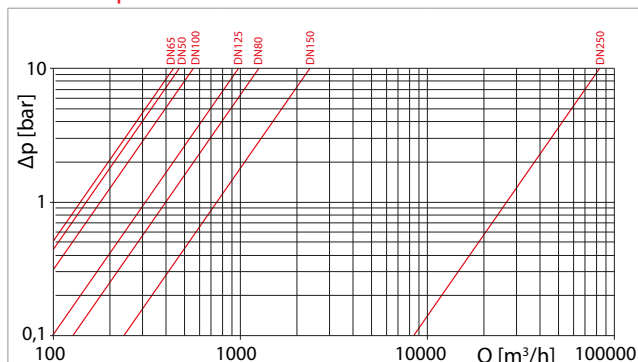
Compliance with MID Directive

If used for commercial applications, the energy meters are classified as measuring instruments subject to the rules of legal metrology. The GE552-1 volumetric meters for boiler room comply with the requisites of Directive 2004/22/EC on measuring instruments (MID - Measurement Instrument Directive), implemented in Italy by Legislative Decree 2 February 2007, no. 22 (Official Gazette no. 64 of 17 March 2007). The DE-08-MI004-PTB012 certificate of conformity was issued by the PTB Institute of Metrology (Physikalisch-Technische Bundesanstalt).



**NB:** the supplementary metrological marking is displayed on the front of each device, next to the EC mark; it consists of an "M" plus the last two digits of the year of marking, surrounded by a rectangle.

Losses of pressure



Product code	Connection	Kv
GE552Y243	DN50	150
GE552Y245	DN65	145
GE552Y247	DN80	400
GE552Y249	DN100	180
GE552Y251	DN125	316
GE552Y253	DN150	750
GE552Y255	DN200	1760

## ELECTRONIC CALCULATOR



### Description

The calculation and visualisation unit of the GE552-1 meters performs a dynamic measurement cycle, so even minimum energy consumption levels can be measured accurately. The calculation part that is important for the configuration process is built into the display; it can be separated from the part containing the terminal board (so the latter can remain installed even during tool calibration or maintenance work). The calculation unit can be opened without using any tools. The user interface consists of a button for navigating the menus and a multi-purpose LCD display (3 read loops) indicating: energy, volume, flow rate, delivery and return temperature, temperature difference, power, operating hours, error codes. The display shows the current meter status by default. The additional symbols allow you to see the operating conditions quickly and easily. The calculation and visualisation unit has a built-in M-Bus communication interface. The measured data can therefore be transferred to a central M-Bus unit (GE552-4 series) and made available for the heat cost allocation calculation.

### Main features

- LCD 8-figure display with special symbols
- Two inputs for connecting flow rate meters with impulse output
- Double register for use in heating and conditioning mode
- Adaptor for assembly on wall or DIN rail

### Technical data





- Temperature range: 1÷150 °C
- Temperature difference: 3÷120 K
- Ambient temperature: 5÷55 °C
- Measurement cycle: 40 s, 30 s (default), 10 s
- Power supply: lithium battery (lifespan > 6 years)
- International protection of casing: IP65
- M-Bus interface in accordance with EN 1434-3
- Transmission speed on M-Bus - 2400 baud (default). Can be set at 300/9600 baud
- Environmental class A
- Dynamic measurement cycle (usually 30 s)

### Display

The calculation and visualisation unit is equipped with a multi-purpose display which is easy to read thanks to a simple menu and symbols that are immediately comprehensible. The display shows the current consumption status by default. The thermal energy measurement unit can be set as MWh, kWh, GJ or MJ. One single button for selecting 3 read loops containing all the most important device and consumption data. Consumption values for the previous 18 months can also be displayed on the dial.

The table symbols indicate the device operating status in an unmistakable manner. They appear in the main menu only. The "Attention" symbol (triangle) may appear temporarily due to certain system conditions; it does not always indicate a device fault.

Faults are indicated by numerical codes whose meanings are shown in the following table. If more than one fault is present, the code will be the sum of the various corresponding error codes (e.g. error 1005 = error 1000 + error 5).

Symbol	Status	Action
	Current flow rate	-
	Attention!	Attention! Check the system/device
	Data transmission	-
	Emergency	Replace the device

### M-Bus communication

The M-Bus system allows the exchange of information and the remote reading of measurement devices. When requested, the latter send the measured data to a central unit that makes the data available locally or remotely (via modem), depending on the needs of the individual system. The system ensures excellent data transmission thanks to an extremely high interference immunity level, and the full attainment of the special requisites imposed by battery-operated measurement devices. M-Bus fully complies with European Standard EN 1434 relating to heat meters (Part 3: "Data exchange and interfaces").

Product code	Fault	Solution
1	Short-circuit on the return probe	Check the probe and replace it if necessary
2	Interruption on return probe	Check the probe and replace it if necessary
3	Short-circuit on the delivery probe	Check the probe and replace it if necessary
4	Interruption on delivery probe	Check the probe and replace it if necessary
5	Hardware fault	Replace the device
6	Flat battery or wrong type of probe	Check the device/probe
7	Temperature outside measuring range	Adjust the heating system
100	Emergency operation	Replace the device
1000	Battery life exceeded	Replace the device
2000	Calibration period exceeded (*)	Replace the device
> 8000	Internal hardware fault	Replace the device

(\*) For countries where device calibration is envisaged.

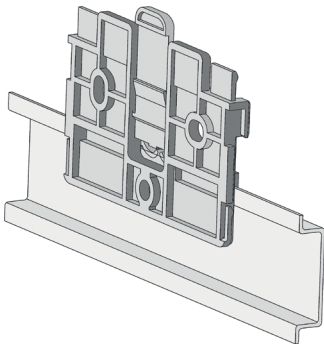
**Installation**

The device must be installed in accordance with the laws in force in the relevant country, and with the specific regulations for thermal meter installation (in particular, Standard EN 1434). As the GE552-1 volumetric meters are fitted with an interface for data transmission on the M-Bus network, the regulations concerning the installation of electronic devices must also be respected.

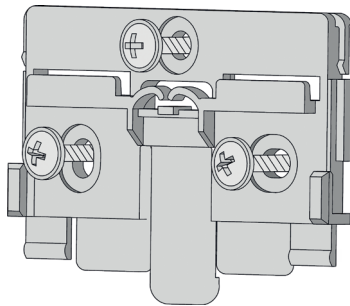


**Warning.**  
The installation must be carried out by specialised, qualified personnel only. Read these instructions fully before proceeding with the installation.

The calculation and visualisation unit is equipped with an adaptor that can be used for installation on a profiled DIN rail on one side, or for wall assembly on the other side. At least 2 screws are needed for wall assembly.



Installation with adaptor on DIN rail



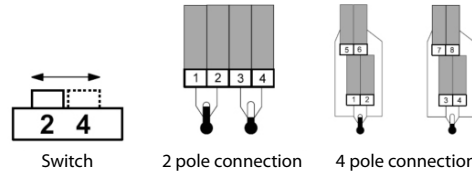
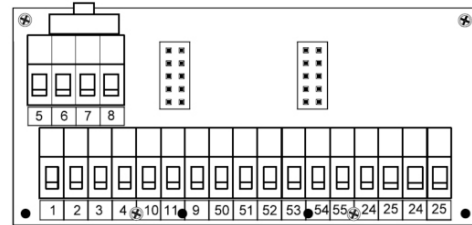
Installation with adaptor on wall

When installing the device, make sure the display can be correctly read and that the navigation button is accessible.

The calculation and visualisation unit, temperature probes, M-Bus cable and the cables connected to the impulse inputs must not be fitted/laid near electromagnetic fields such as pumps, electric motors or transformers. Keep them at least 1 metre away from this type of equipment.

**Electric connections**

The calculation and visualisation unit has 7 inputs for cables with a diameter of 4,2 - 10 mm, and an internal terminal board for the electrical connections. It is essential to follow the indications given in the figure below when connecting the unit to the two temperature probes, the flow rate measurement section, the M-Bus signal network, and the two flow rate meters with impulse output. Keep the unused inputs closed. Pay attention to the connection sequence: first connect the probe cable, then the impulse cable.



Terminal board for electrical connections



**Warning.**  
The meter must be installed by qualified personnel. Comply with the regulations regarding the use (installation, mounting, etc.), operation, recalibration and replacement of the meter. Refer also to the assembly instructions supplied with the meter (electric part and volumetric part).

**Temperature probes (2-wire connection)**

- Delivery probe: connection to terminals 1 and 2
- Return probe: connection to terminals 3 and 4

It is not necessary to respect the polarity

**Flow rate measuring section**

- Connection to terminals 10 and 11
- The maximum length of the connection is 10 m (using a shielded cable with a suitable section)

**M-Bus signal network**

- Connection to terminals 24 and 25 (L1+ and L2- respectively)



**Warning.**  
The M-Bus cable must not be laid near the 230V AC power supply cable; there must be a minimum distance of 20 cm between the two.

**Flow rate meters with impulse output**

- Flow rate meter 1: connection to terminals 52 (contact) and 53 (GND)
- Flow rate meter 2: connection to terminals 54 (contact) and 55 (GND)

The two flow rate meters must be configured with 1 impulse = 10 litres



**Warning.**  
Check the flow rate meter instructions to understand whether or not you must respect the polarity when making the electrical connection.

Display menu

Level 1

Level 2

The levels can be changed at any point of the menu.

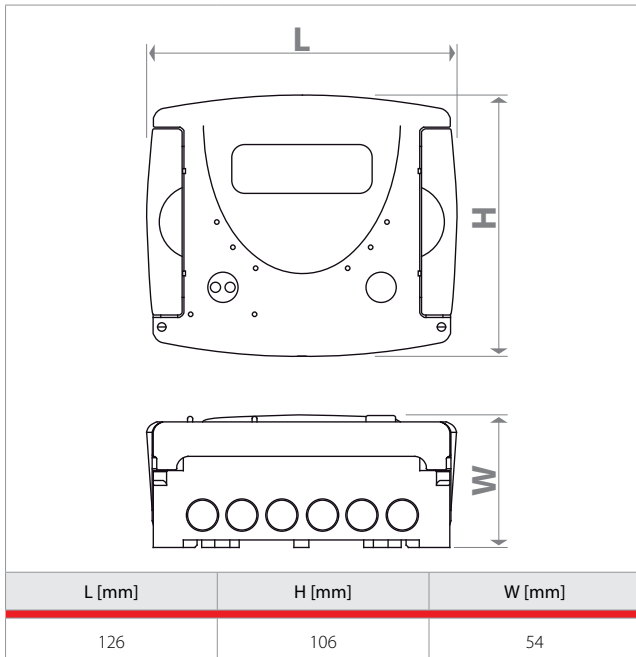
Month consumption

Level 3

Legend

- Briefly press button (S) to scroll from the top downwards. Once you reach the last point, you will return automatically to the first (loop system).
- Press button (L) and hold it until the door symbol appears on the top right of the display (about 2 seconds), then release the button. Only then will the menu be updated or pass on to the sub-menu.
- Keep button (H) pressed until the level changes or until you move on to the sub-menu.

Dimensions



**TEMPERATURE PROBES**



**Description**

An important component for measuring the heat in the meters accurately is the temperature probe.

The probes have PT500 platinum sensors with 2-wire technology, and can be installed directly in the pipe or via a housing.

**Technical data**

**For meters from 1 1/4" to DN125**

- Type of probe: PT500
- Probe Ø: 6 mm
- Probe length: 105 mm
- Cable length: 3 m
- The probes are produced, tested and labelled in accordance with the MID Directive

**For meters from DN150 to DN250**

- Type of probe: PT500
- Probe Ø: 6 mm
- Probe length: 140 mm
- Cable length: 3 m
- The probes are produced, tested and labelled in accordance with the MID Directive

**HOUSINGS FOR PROBES**



**Description**

Stainless steel housings are available for the temperature probes. Their diameter is 6 mm. They provide the best possible combination of stability and minimum thermal resistance.

**Technical data**

**For meters from 1 1/4" to DN125**

- Material: stainless steel
- Housing Ø: 6 mm
- Housing length: 85 mm
- Connection: 1/2" M

**For meters from DN150 to DN250**

- Material: stainless steel
- Housing Ø: 6 mm
- Housing length: 120 mm
- Connection: 1/2" M

## Product specifications

### GE552-1 THREADED CONNECTION

#### GE552Y231

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Threaded connections 1 1/4". Nominal flow rate 6 m<sup>3</sup>/h. Maximum flow rate 12 m<sup>3</sup>/h. Minimum flow rate 125 l/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 260 mm. Max. working temperature 90 °C. Max. working pressure 16 bar. Impulse value 10 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y233

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Threaded connections 1 1/2". Nominal flow rate 6 m<sup>3</sup>/h. Maximum flow rate 12 m<sup>3</sup>/h. Minimum flow rate 125 l/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 260 mm. Max. working temperature 90 °C. Max. working pressure 16 bar. Impulse value 10 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y235

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Threaded connections 2". Nominal flow rate 10 m<sup>3</sup>/h. Maximum flow rate 20 m<sup>3</sup>/h. Minimum flow rate 200 l/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 300 mm. Max. working temperature 90 °C. Max. working pressure 16 bar. Impulse value 10 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

### GE552-1 FLANGED CONNECTION

#### GE552Y243

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN50. Nominal flow rate 15 m<sup>3</sup>/h. Maximum flow rate 60 m<sup>3</sup>/h. Minimum flow rate 0,6 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 200 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 100 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y245

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN65. Nominal flow rate 25 m<sup>3</sup>/h. Maximum flow rate 60 m<sup>3</sup>/h. Minimum flow rate 1 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 200 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 100 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y247

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN80. Nominal flow rate 40 m<sup>3</sup>/h. Maximum flow rate 90 m<sup>3</sup>/h. Minimum flow rate 3,2 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 225 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 100 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y249

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN100. Nominal flow rate 60 m<sup>3</sup>/h. Maximum flow rate 180 m<sup>3</sup>/h. Minimum flow rate 2 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 250 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 100 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y251

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN125. Nominal flow rate 100 m<sup>3</sup>/h. Maximum flow rate 250 m<sup>3</sup>/h. Minimum flow rate 3 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 250 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 1000 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y253

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN150. Nominal flow rate 150 m<sup>3</sup>/h. Maximum flow rate 300 m<sup>3</sup>/h. Minimum flow rate 8 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 300 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 1000 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

#### GE552Y255

Volumetric heat energy meter, for use in a boiler room. Double register for measuring consumption in heating and conditioning mode. Flanged connections DN200. Nominal flow rate 250 m<sup>3</sup>/h. Maximum flow rate 500 m<sup>3</sup>/h. Minimum flow rate 10 m<sup>3</sup>/h. Consisting of an electronic calculation and visualisation unit, a flow rate measuring section, and two PT500 temperature probes complete with housings. M-Bus communication interface in accordance with EN 1434-3. Battery-powered. Centre distance for assembly 350 mm. Max. working temperature 120 °C. Max. working pressure 16 bar. Measurement accuracy in accordance with EN 1434: class 3. Impulse value 1000 l/imp. EC mark. Certified in accordance with the MID Directive (2004/22/EC).

## Additional information

For additional information please check the website [www.giacomini.com](http://www.giacomini.com) or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ [consulenza.prodotti@giacomini.com](mailto:consulenza.prodotti@giacomini.com)  
This pamphlet is merely for information purposes. Giacomini S.p.A. retains the right to make modifications for technical or commercial reasons, without prior notice, to the items described in this pamphlet. The information described in this technical pamphlet does not exempt the user from following carefully the existing regulations and norms on good workmanship.  
Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy





**Description**

The GE552-2 meters are thermal energy meters with double register and ultrasound, for use in a boiler room. They enable the measurement of energy used for heating and air-conditioning. They are recommended for energy balancing in condominiums that have a centralised heating system, zone distribution and individual metering of heat energy consumption via the GE555 user modules or the GE556 user satellites.

**Versions and product codes**

Product code	Nominal flow rate [m³/h]	Maximum capacity [m³/h]	Connection		Centre to centre assembly distance [mm]	Version
GE552Y131	3,5	7,0	threaded	G 1 1/4"	260	<b>A</b>
GE552Y133	6	12,0		G 1 1/4"	260	
GE552Y135	10	20,0		G 2"	300	
GE552Y139	6	12,0	flanged	DN25	260	
GE552Y141	10	20,0		DN40	300	
GE552Y143	15	30,0		DN50	270	
GE552Y145	25	50,0	flanged	DN65	300	<b>B</b>
GE552Y147	40	80,0		DN80	300	
GE552Y149	60	120,0		DN100	360	


**GE552-1 VERSION A**

Product code	Nominal flow rate [m³/h]	Maximum capacity [m³/h]	Connection		Centre to centre assembly distance [mm]	Version A
GE552Y131	3,5	7,0	threaded	G 1 1/4"	260	
GE552Y133	6	12,0		G 1 1/4"	260	
GE552Y135	10	20,0		G 2"	300	
GE552Y139	6	12,0	flanged	DN25	260	
GE552Y141	10	20,0		DN40	300	
GE552Y143	15	30,0		DN50	270	

**Main characteristics**

- Class 2 in accordance with EN 1434, PTB Class C.
- Max. temperature 130 °C, PN16.
- Temperature probes included:
  - for DN25, DN32, DN40: pair of PT100 probes with housing, of the THF50 2-wire type (pocket short, L=50 mm, silicone cable length 1,75 m).
  - for DN50: pair of PT100 probes, of the PC121-2-30 2-wire type (pocket, L=105 mm, cable length 3 m).
- Kit of housings included.
- M-Bus card + 2 water meter inputs included.
- Cable length (hydraulic, with electronic integrator): 1,5 m.
- Power supply: lithium battery, effective life 12 years.
- Size unit: Energy MW/h / Flow rate m³/h.
- Electronic integrator protection: IP64.
- Meter position: on the return line.
- Horizontal or vertical installation in the return pipes of heating, cooling and combined systems.

**Calculator characteristics (electronic part)**

- Temperature range 0-180 °C
- Temperature difference 3-160 K
- Temperature probes: PT100 (2 wires)
- Backup memory: EEPROM
- Display: LCD - 7 figures
- Optic interface: EN 60870-5 / M-Bus protocol
- Power supply: lithium battery, 12-year lifespan.

**Advantages**

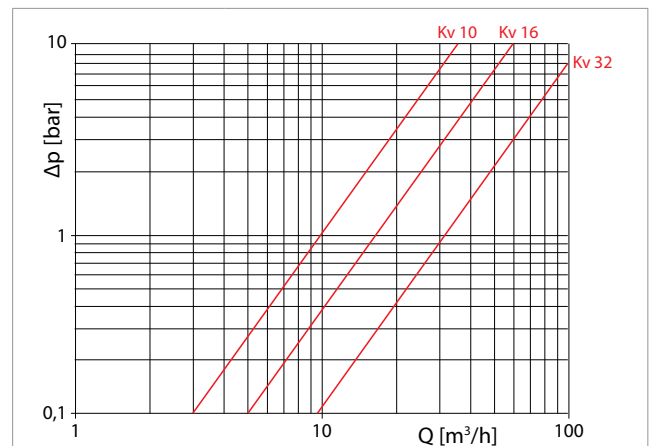
- Precise measuring of high and low flow rates.
- Suitable for communication - Easy to read.

**Advanced functions**

The meter offers a series of advanced functions such as the registration of data for complex network analyses, the registration of consumption peaks and so on to provide effective diagnosis tools for network management. All the available data are presented on an ergonomic, multi-purpose display.

**Technical data**

Product code	GE552Y131	GE552Y133	GE552Y135	GE552Y139	GE552Y141	GE552Y143
Ambient temperature [°C]	5÷55					
Storage temperature [°C]	-20÷60					
Maximum flow rate [m³/h]	7,0	12,0	20,0	12,0	20,0	30,0
Nominal flow rate [m³/h]	3,5	6	10	6	10	15
Minimum flow rate [l/h]	35	60	100	60	100	150
Water temperature (heat./cool.) [°C]	5÷130					

**Losses of Pressure**


Product code	Nominal flow rate [m³/h]	Kv
GE552Y131	3,5	10
GE552Y133	6	16
GE552Y135	10	32
GE552Y139	6	16
GE552Y141	10	32
GE552Y143	15	32

**Supplementary card:**
**M-Bus + 2 inputs for external water meters**
**M-Bus**

- Reference Standard: EN 1434-3
- Baud rate: from 300 to 2400 baud
- Data in standard mode: Energy - Volume - Flow rate - Temperatures (delivery, return, difference) - Time spent in error - Operating time - Date and time - Water meter water volumes - Firmware version

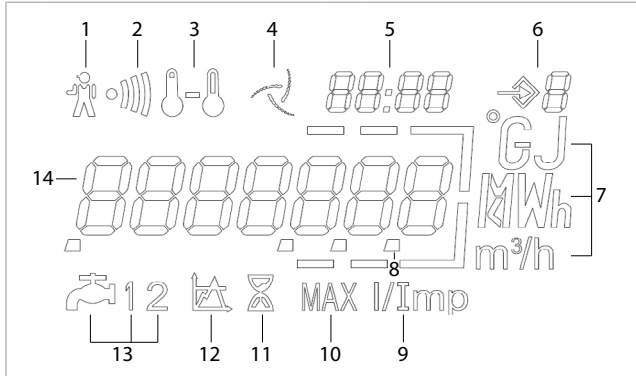
**Impulse inputs for water meters**

- Impulse value (regardless of the input): 1 / 2,5 / 10 / 25 / 100 / 250 / 1000 litres/impulse
- Impulse measurement: Closed contact  $R_s \leq 500 \Omega$   
Open contact  $R_s \leq 100 \text{ k}\Omega$   
Maximum frequency: 10 Hz

**Multi-purpose display**

The multi-purpose display facilitates reading, making it easier to access the cost data and allowing you to diagnose the fault alarms straight away.

The long-life LCD display has a button for accessing the various operating levels (level).



Legend			
1	Alarm icon	8	Decimal
2	Dirt warning	9	Impulse input value
3	Temperatures	10	Peaks
4	Flow rate indicator	11	Lapsed time indicator
5	Date and time figures	12	Thresholds
6	Loop indicator	13	External water meters
7	Size unit	14	Main figures

**Display navigation levels**

**Level 1 - Cost data**

- Energy
- Cooling energy (optional)
- Volume
- LCD test
- External meter for water 1/2 (optional)

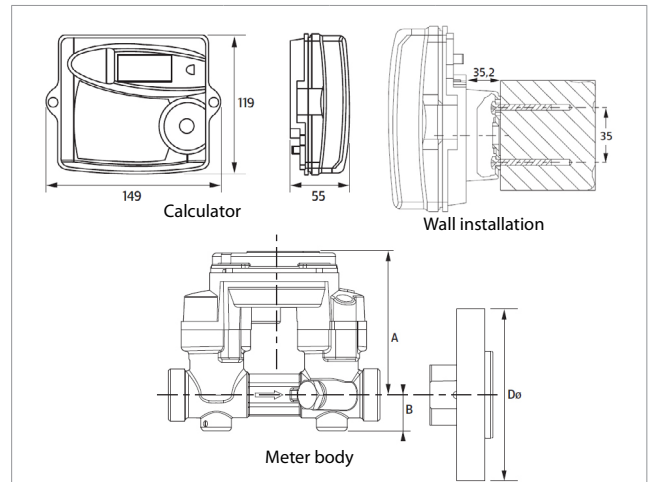
**Level 2- Additional information**

- Flow rate
- Power
- Delivery temperature
- Return temperature
- Temperature difference
- Operating time
- Date + time at maximum power (optional)
- Date + time at maximum flow rate (optional)
- Date + time at maximum temperature (optional)
- Time alarm
- Temperature alarm
- Flow rate alarm
- Overflow alarm
- Energy supply alarm
- Current date and time (optional)
- Primary M-Bus address
- Secondary M-Bus address
- M-Bus Baud rate
- Impulse value on water meter 1/2 (optional)

**Level 3- Fixed date reading**

- Energy at fixed date 1...13
- Cooling energy at fixed date 1...13
- Volume at fixed date 1...13
- Water meter at fixed date 1/2 1...13 (optional)
- Software version

**Dimensions**



Product code	DN	A [mm]	B [mm]	flange Ø
GE552Y131	25	77	23	-
GE552Y133	25	77	23	-
GE552Y135	40	85	35	-
GE552Y139	25	77	23	110
GE552Y141	40	85	35	140
GE552Y143	50	85	-	160

**Compliance and Normative references**


- MID 2004/22/EC Module B+D
- Class 2.0, complying with EN 1434
- Environmental class C, complying with EN 1434
- OIML R75
- PTB Class C
- Test SP ≤ -2%
- PED conformity

**Compliance with MID Directive**

If used for commercial applications, the energy meters are classified as measuring instruments subject to the rules of legal metrology. The GE552-1 boiler room meters comply with the requisites of Directive 2004/22/EC on measuring instruments (MID Directive - Measurement Instrument Directive), implemented in Italy by Legislative Decree 2 February 2007, no. 22 (Official Gazette no. 64 of 17 March 2007). The certificate of conformity was issued by the PTB Institute of Metrology (Physikalisch-Technische Bundesanstalt).

**Note.**  
The supplementary metrological marking is displayed on the front of each device, next to the EC mark; it consists of an "M" plus the last two digits of the year of marking, surrounded by a rectangle.

**GE552-1 VERSION B**

Product code	Nominal flow rate [m³/h]	Maximum capacity [m³/h]	Connection	Centre to centre assembly distance [mm]	Version B
GE552Y145	25	50,0	flanged	DN65	
GE552Y147	40	80,0		DN80	
GE552Y149	60	120,0		DN100	

**Main characteristics**

**Volumetric measurer with ultrasound:**

- Complying with R45 Class 4, EN 1434 Class 2, PTB Class C.
- Type-approved in accordance with MID directive (2004/22/EC).
- PN25.
- Power supply: battery, via the calculation unit.
- Protection class: IP68.
- Meter position: on the return line.
- Impulse weight: 25 litres/impulse.
- Horizontal or vertical installation in the return pipes of heating, cooling and combined systems.

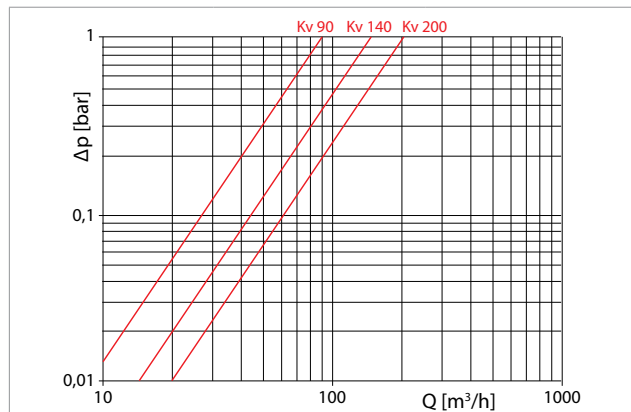
**Calculator characteristics (electronic part)**

- Temperature range 0÷180 °C
- Temperature difference 3÷160 K
- Ambient temperature range 5÷55 °C
- Temperature probes: PT100 (2 wires)
- Kit of housings included.
- Backup memory: EEPROM
- Display: LCD - 7 figures
- Power supply: lithium battery, effective life 12 years.
- Size unit: MW/h, m³/h.
- Meter position: on the return line.
- Impulse value (programmable): 1 / 2,5 / 10 / 25 / 100 / 250 / 1000 l
- Optic interface: EN 60870-5 / M-Bus protocol
- M-Bus card + 2 water meter inputs included.
- Length of the cable: 5 m

**Electricity supply**

- Nominal voltage: 3,0...5,5 V DC
- Average current consumption: < 100 mAh per year
- Peak current consumption I<sub>max</sub>: < 10 mA
- The volumetric measurer with ultrasound is powered directly from the calculator, via its battery.

**Losses of Pressure**



Product code	Nominal flow rate [m³/h]	Kv
GE552Y145	25	90
GE552Y147	40	140
GE552Y149	60	200

**Technical data**

Product code	GE552Y145	GE552Y147	GE552Y149
Ambient temperature [°C]	5÷55		
Storage temperature [°C]	-20÷60		
Maximum flow rate [m³/h]	50	80	120
Nominal flow rate [m³/h]	25	40	60
Minimum flow rate [l/h]	250	400	600
Water temperature (heat./cool.) [°C]	5÷120		

**Characteristics of the impulse output**

- Version: collector open (drain)
- Polarity: not reversible
- Impulse length: 100 ms ±10%
- Maximum input voltage: 30V DC
- Maximum input current: 20 mA
- Maximum output frequency: 150 Hz

**Supplementary card:**

**M-Bus + 2 inputs for external water meters**

**M-Bus**

- Reference Standard: EN 1434-3
- Baud rate: from 300 to 2400 baud
- Data in standard mode: Energy - Volume - Flow rate - Temperatures (delivery, return, difference) - Time spent in error - Operating time - Date and time - Water meter water volumes - Firmware version

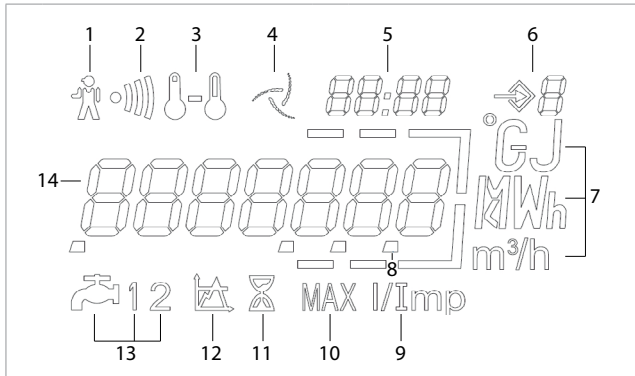
**Impulse inputs for water meters**

- Impulse value (regardless of the input): 1 / 2,5 / 10 / 25 / 100 / 250 / 1000 litres/impulse
- Impulse measurement: Closed contact R<sub>s</sub>≤500 Ω  
Open contact R<sub>s</sub>≤100 kΩ  
Maximum frequency: 10 Hz

**Multi-purpose display**

The multi-purpose display facilitates reading, making it easier to access the cost data and allowing you to diagnose the fault alarms straight away.

The long-life LCD display has a button for accessing the various operating levels (level).



**Legend**

1	Alarm icon	8	Decimal
2	Dirt warning	9	Impulse input value
3	Temperatures	10	Peaks
4	Flow rate indicator	11	Lapsed time indicator
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7	Size unit	14	Main figures

**Display navigation levels**

**Level 1 - Cost data**

- Energy
- Cooling energy (optional)
- Volume
- LCD test
- External meter for water 1/2 (optional)

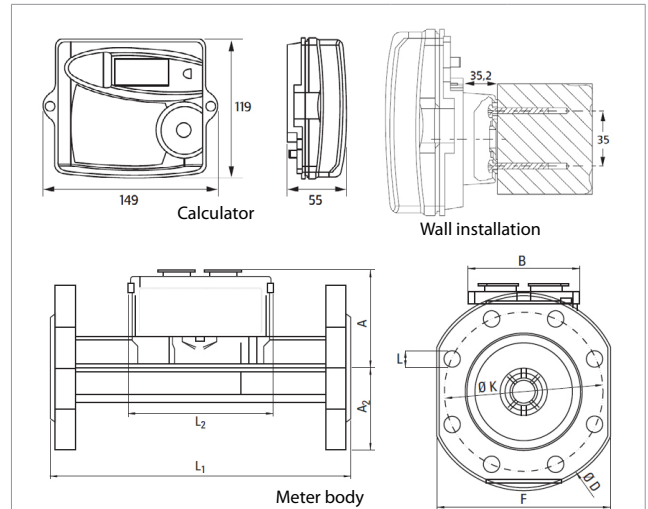
**Level 2- Additional information**

- Flow rate
- Power
- Delivery temperature
- Return temperature
- Temperature difference
- Operating time
- Date + time at maximum power (optional)
- Date + time at maximum flow rate (optional)
- Date + time at maximum temperature (optional)
- Time alarm
- Temperature alarm
- Flow rate alarm
- Overflow alarm
- Energy supply alarm
- Current date and time (optional)
- Primary M-Bus address
- Secondary M-Bus address
- M-Bus Baud rate
- Impulse value on water meter 1/2 (optional)

**Level 3- Fixed date reading**

- Energy at fixed date 1...13
- Cooling energy at fixed date 1...13
- Volume at fixed date 1...13
- Water meter at fixed date 1/2 1...13 (optional)
- Software version

**Dimensions**



Product code	GE552Y145	GE552Y147	GE552Y149
Body length L1 [mm]	300	300	360
Electronic length L2 [mm]	90	90	90
Electronic width B [mm]	65,5	65,5	65,5
nominal Ø	65	80	100
Height A [mm]	79	86,5	95,5
Height A2 [mm]	85	92,5	108
flange Ø [mm]	184	200	235
Centre distance of holes K [mm]	145	160	190
Hole Ø L [mm]	18	18	22
Number of holes	8	8	8
Flange dimension F [mm]	170	185	216

**Compliance and Normative references**

- MID 2005/22/EC
- Class 2.0, complying with EN 1434
- Environmental class C, complying with EN 1434
- PTB approved

**Compliance with MID Directive**

If used for commercial applications, the energy meters are classified as measuring instruments subject to the rules of legal metrology. The GE552-2 boiler room meters comply with the requisites of Directive 2004/22/EC on measuring instruments (MID Directive - Measurement Instrument Directive), implemented in Italy by Legislative Decree 2 February 2007, no. 22 (Official Gazette no. 64 of 17 March 2007). The certificate of conformity was issued by the PTB Institute of Metrology (Physikalisch-Technische Bundesanstalt).



**Note.**

The supplementary metrological marking is displayed on the front of each device, next to the EC mark; it consists of an "M" plus the last two digits of the year of marking, surrounded by a rectangle.

## Product specifications

### GE552-1 ENERGY METERS FOR USE IN A BOILER ROOM GE552Y131

Thermal energy meter with ultrasound, for use in a boiler room. Threaded connections 1 1/4". Nominal flow rate 3,5 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 260 mm. Max. temperature 130 °C. PN16.

#### GE552Y133

Thermal energy meter with ultrasound, for use in a boiler room. Threaded connections 1 1/4". Nominal flow rate 6,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 260 mm. Max. temperature 130 °C. PN16.

#### GE552Y135

Thermal energy meter with ultrasound, for use in a boiler room. Threaded connections 2". Nominal flow rate 10,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 300 mm. Max. temperature 130 °C. PN16.

#### GE552Y139

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN25. Nominal flow rate 6,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 260 mm. Max. temperature 130 °C. PN16.

#### GE552Y141

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN40. Nominal flow rate 10,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 300 mm. Max. temperature 130 °C. PN16.

#### GE552Y143

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN50. Nominal flow rate 15,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 270 mm. Max. temperature 130 °C. PN16.

#### GE552Y145

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN65. Nominal flow rate 25,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 300 mm. Max. temperature 120 °C. PN25.

#### GE552Y147

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN80. Nominal flow rate 40,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 300 mm. Max. temperature 120 °C. PN25.

#### GE552Y149

Thermal energy meter with ultrasound, for use in a boiler room. Flanged connections DN100. Nominal flow rate 60,0 m<sup>3</sup>/h. Consisting of an electronic calculation and display unit, a flow rate measuring section, and two PT100 temperature probes complete with housings. Two inputs for connecting the water meters with the impulse output. M-Bus communication interface. Assembly in "split" mode. Complying with Directive 2004/22/EC (MID). Battery-powered (effective life 12 years). Electronic calculator protection: IP64. Centre distance for assembly 300 mm. Max. temperature 120 °C. PN25.

## Additional information

For additional information please check the website [www.giacomini.com](http://www.giacomini.com) or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ [consulenza.prodotti@giacomini.com](mailto:consulenza.prodotti@giacomini.com)  
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