
**GE555Y466**

## Description

The metering module **GE555Y466** is used to measure heat energy consumption (heating and/or cooling) in centralized systems with the centralized production of domestic hot water as well.

In the GE555 user modules, distribution network balancing is essential in order to guarantee the same conditions for all users and ensure the meters work close to the nominal project flow rates. The modules can also house units for measuring the consumption of domestic water.

The **GE555Y466** version has the following characteristics: cabinet 480x480x130÷165 mm, 3/4" connections with static balancing and differential pressure control valve.

## Versions and product codes

Product code	Type of balancing	Connections	Nr. of guides for domestic water unit outputs	Dimensions [mm]
GE555Y466	Static + differential pressure	3/4"	2	480x480x130÷165

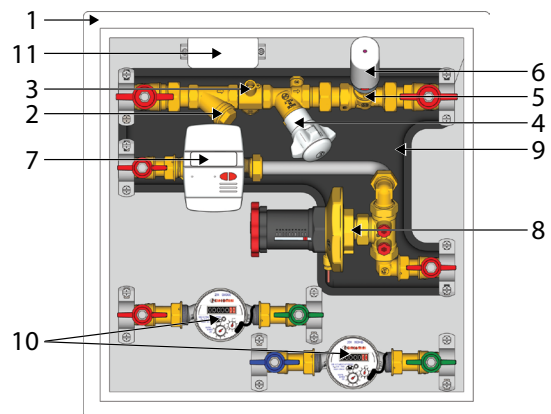
## Main features

- Static balancing valve and differential pressure control valve.
- Shut-off ball valves.
- Zone valve, motorizable.
- Predisposition for installation of energy meter and domestic water meters.
- Housing for delivery temperature probe, integrated in the shut-off valve.
- Insulation shell.
- Electric cabinet with electric terminal strips.
- Flush-mounting cabinet with adjustable frame depth and painted door (white RAL9010).

## Technical data

- Max. working temperature: 110 °C (90 °C with plastic spacer)
- Max. working pressure: 16 bar (10 bar with plastic spacer)

## Components


**Legend**

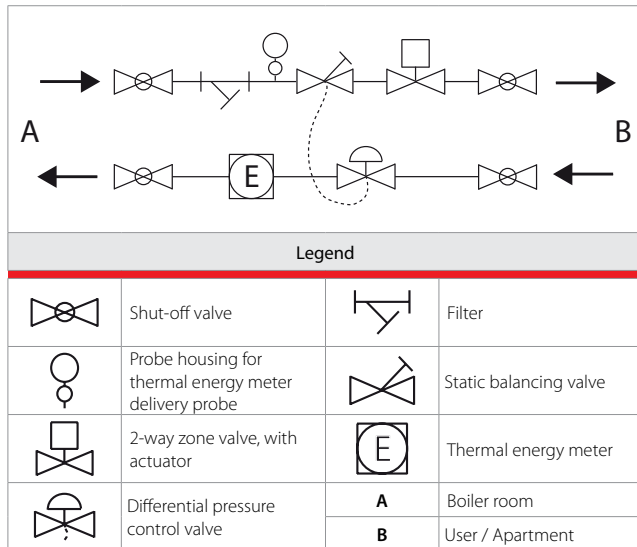
1	Metallic cabinet
2	Filter
3	Probe housing for thermal energy meter
4	Static balancing valve
5	2-way zone valve
6	Actuator for 2-way zone valve (optional)
7	Thermal energy meter (optional)
8	Differential pressure control valve
9	Insulation
10	Domestic hot/cold water unit outputs (optional)
11	Cabinet with electric terminal strips

## Optional

- Thermal energy meter, GE552 series
- Domestic hot/cold water unit outputs, GE550 series
- Actuator for zone valve, R473/R473M series
- Components for M-Bus data centralization GE552-4 series, or Wireless M-Bus GE552-W series.



## Operation



The delivery unit is composed by shut-off valves upstream and downstream the module, a filter, a static balancing valve and a 2-way zone valve controlled by an actuator receiving the opening / closing signal from the thermostats located inside the apartment.

The return unit is composed by shut-off valves upstream and downstream the module, a plastic spacer for the installation of thermal energy meter and a differential pressure control valve connected through a copper capillary pipe to the static balancing valve on the delivery unit.

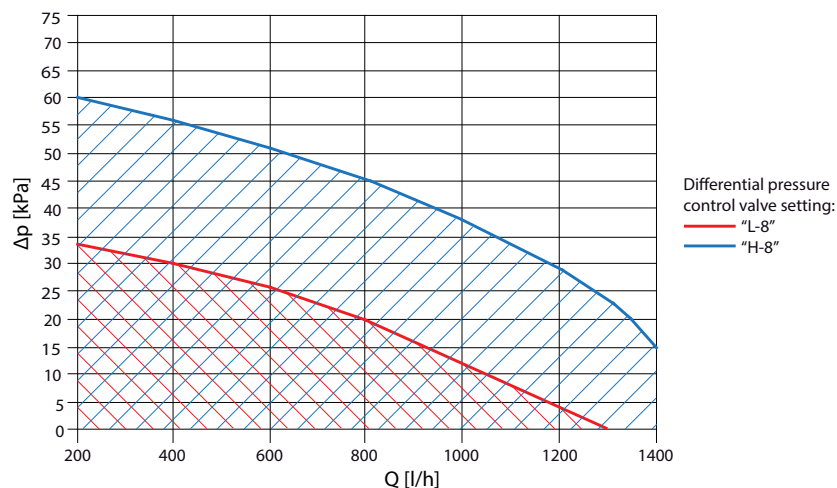
The fluid (for heating and/or cooling) coming from the centralized boiler room (A), enters the delivery unit: if the 2-way zone valve is open the fluid reaches the end user (B).

The correct flow and pressure balance within the system is guaranteed by the simultaneous operation of the static balancing valves and the differential pressure control valve.

The thermal energy meter (to be ordered separately) should be installed instead of the plastic spacer; the delivery temperature probe of the energy meter has to be installed into the proper housing on the delivery unit; the return temperature probe instead is already integrated into the meter body.

## Hydraulic features

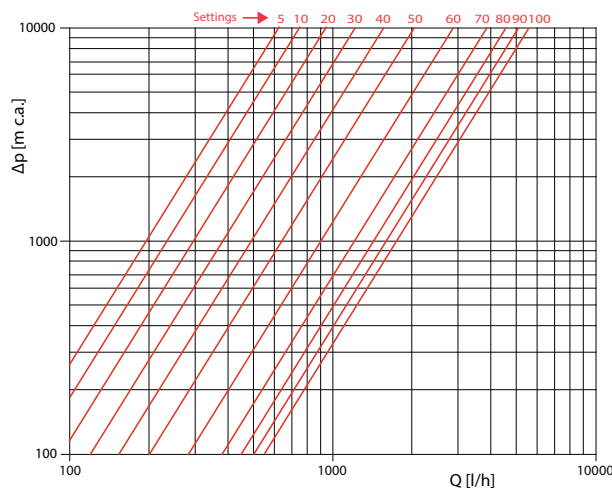
### Flow rate-hydraulic head range



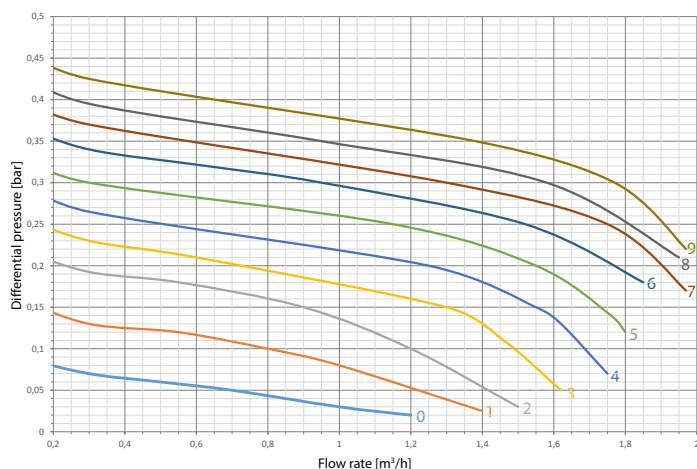
#### Note.

- Static balancing valve completely open
- Differential pressure control valve setted on "L-8" and "H-8"
- Graph valid for Primary circuit  $\Delta p$  between 70 kPa and 600 kPa

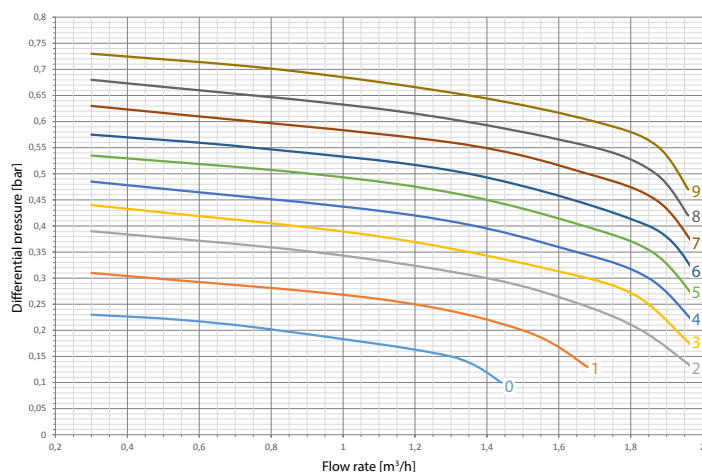
## Static balancing valve setting



Setting	Kv	Setting	Kv
100	5,50	50	2,00
95	5,20	45	1,81
90	5,00	40	1,58
85	4,80	35	1,39
80	4,57	30	1,24
75	4,35	25	1,10
70	3,95	20	0,96
65	3,50	15	0,85
60	2,88	10	0,75
55	2,37	5	0,62


**Differential pressure control valve setting**
**► setting "L" (Low)**


Indicator position	Qmin [m³/h]	Qmax [m³/h]
0	0,20	1,20
1	0,20	1,40
2	0,20	1,50
3	0,20	1,65
4	0,20	1,80
5	0,20	1,85
6	0,20	1,85
7	0,20	2,00
8	0,20	2,00
9	0,20	2,00

**► setting "H" (High)**


Indicator position	Qmin [m³/h]	Qmax [m³/h]
0	0,30	1,50
1	0,30	1,75
2	0,30	2,00
3	0,30	2,00
4	0,30	2,00
5	0,30	2,00
6	0,30	2,00
7	0,30	2,00
8	0,30	2,00
9	0,30	2,00

## METERING MODULES WITH DIFFERENTIAL PRESSURE CONTROL VALVE GE55Y466 (GE555-4 SERIES)

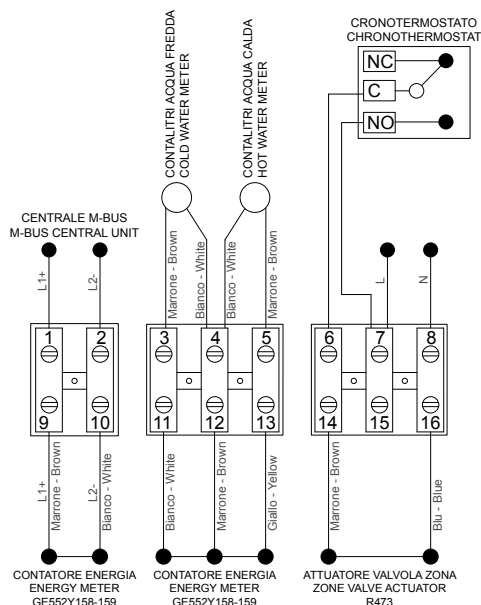

**GIACOMINI**  
WATER E-MOTION


### Electrical connections

At the top of the cabinet there is an IP55 electric cabinet. This contains the terminals for connecting the internal devices (R473/R473M actuator for the zone valve, thermal energy meter and water meters) and for data centralization via M-Bus.


**Warning.**

Ensure that the power supply is suspended while the connections are being carried out.



Terminal	Function
1	Cable transmitting M-Bus data to the data concentrator: connection of wire L1+. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
2	Cable transmitting M-Bus data to the data concentrator: connection of wire L2-. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
3	Connection for M-Bus centralization of water meters
4	Connection for M-Bus centralization of water meters
5	Connection for M-Bus centralization of water meters
6	Connection to the chronothermostat, to the common C terminal of the internal contact (cable section 0,5 mm²)
7	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm²) In parallel: connection to the chronothermostat, to the normally open NO terminal of the internal contact (cable section 0,5 mm²)
8	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm²)
9	Connection of L1+ brown wire of thermal energy meter
10	Connection of L2- white wire of thermal energy meter
11	Connection for M-Bus centralization of water meters
12	Connection for M-Bus centralization of water meters
13	Connection for M-Bus centralization of water meters
14	Connection R473 zone valve actuator, brown wire
15	-
16	Connection R473 zone valve actuator, blue wire


**Note.**

The showed electric scheme is about the connections of GE552Y158, GE552Y159 thermal energy meters. In the case of installation of other energy meters refer to the instructions of the meters themselves.

### Installation


**Warning.**

The heat interface unit can be used in indoor boiler rooms for operation with non-aggressive fluids (water, glycol-based water in compliance with VDI 2035/ONORM 5195).


**Warning.**

Respect the regulations regarding the use (installation, fixing, etc.), operation, recalibration and replacement of the meters. Refer also to the assembly instructions provided with the meter.

#### 1) Connecting the module to the pipes of the heating and/or cooling system.

To connect the module units to the system (heating and/or cooling) pipes, you can disconnect the shut-off valves as they are connected by means of detachable nuts. Once the free valve connections have been firmly fixed to the system pipes, reconnect the valves (interposing the gaskets) then tighten the nuts.

#### 2) Washing the system

The Standards (UNI EN 1432) indicate that the system must be washed before installing the energy meters. At the end of the washing, clean well the filter.

#### 3) Installing the thermal energy meter

When the system has been washed, you can replace the plastic spacer with the thermal energy meter (centre distance 110 mm).

The module is provided with a mounting kit to be able to separately install the hydraulic part and the display of the energy meters.


**Warning.**

For the thermal energy meter installation please refer to the instruction provided with the meter.

#### 4) Testing the system

After making the installations, test the pressurised system according to the requirements of regional/national standards.

### Dimensions

Product code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]
GE555Y466	516	516	130÷165	90	127	60	60

### Reference Standards

- UNI EN 1434
- EN 60751
- EN 61107

### Additional information

For more information, go to [www.giacomini.com](http://www.giacomini.com) or contact our technical assistance service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ [consulenza.prodotti@giacomini.com](mailto:consulenza.prodotti@giacomini.com)  
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