Energy display

Description

Device with 1.6" display, for the display of the energy consumption data (obtained from the energy meters), and for the control of the actuators of the Energy Management system.

The information displayed is the following:
- instantaneous consumption value and cumulative daily/monthly/yearly consumption;
- status of the actuator of the load control system (enabled, disabled, and forced), and value of the power controlled (only for device item F522);
- identification of the line monitored;
- type of energy measured (electricity, heating, cooling, water).
- generic information (device errors, self-learning being completed, etc...);
- management of a threshold that can be set from the device menu, with the exclusion of modes M1=8 and M2=6 (see the next page for the details).

the Energy Display shows the information on several "pages", which can be viewed using the "controlled line selection" pushbutton (ref. detail 7 of the drawing at the side).

The information displayed in these pages depend on the configuration of the device, as indicated in the following pages.

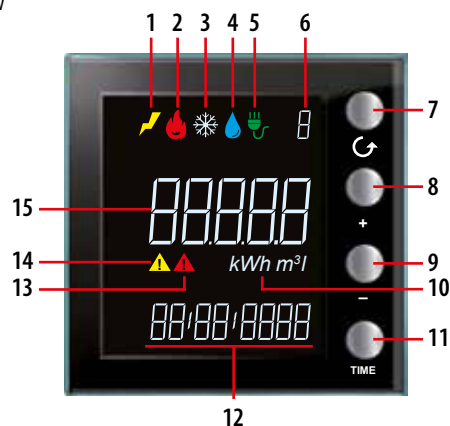⚠ The Energy Display is not compatible with the pulse counter interface item 3522

Technical data

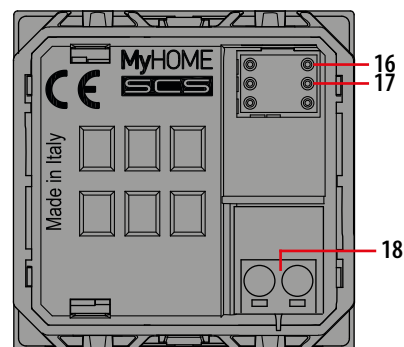|	
Power supply from SCS BUS:	27 Vdc
Operating power supply with SCS BUS:	18 - 27 Vdc
Absorption:	max. backlighting: 33 mA
	stand-by backlighting: 21 mA
	backlighting OFF: 18 mA
Operating temperature:	5 - 35° C

Dimensional data

Size: 2 flush mounted modules.

Front view

Rear view

Legend

1. Power control icon
2. Heating control icon
3. Cooling control icon
4. Water control icon
5. Socket control icon
6. Line number indicator
7. Displayed line selection pushbutton on the display
8. 9. 11. Generic navigation keys, to be used depending on the selected function (see user manual).
10. Indicator of the units of measure of the consumptions (l / m^3 / W)
12. Current time (4 digits) or date (8 digits)
13. Disabled load icon
14. Forced load icon
15. Consumption indicator
16. Socket M1 for setting the operating mode
17. Socket M2 for setting the operating mode
18. BUS connection clamp

Configuration

Energy display

The device can be configured in two ways:
- Physical configuration: some preset display modes are suggested, activated by connecting the configurators to the appropriate M1 and M2 sockets.
Configuration performed using MyHOME_Suite software downloadable from the website www.homesystems-legrandgroup.com
For the list of modes and the corresponding meanings refer to the indications of this data sheet, and to the "Function description" section of the MyHOME_Suite software.

Below are the possible device configuration modes to enable the monitoring / display of energy consumptions.
These modes have been conceived taking into account the most common types of hydraulic / electric heating, cooling, and sanitary hot water systems. The complexity of such systems requires that professionals have specific hydraulic and thermo-technical knowledge, which is not discussed in this document, and must be dealt with in the appropriate way.

Here is the list of the pre-configuration modes for the configuration of position M1, while in the following pages (page 21) is the table for the pre-configuration of position M2.
For both modes, also shown are the system diagrams and the types of consumptions that can be displayed (electric consumption measurement, impulse from heat meter, impulse from volume meter), in relation to each specific configuration.

Configuration mode M1

List of preconfigured modes

M1 = **1** Display of electric consumptions, heating system consumptions (by heat meter) and hot sanitary water system consumptions (by volume meter)   04

M1 = **2** Display of electric consumptions, heating system consumptions (by heat meter) and hot sanitary water system consumptions (by volume meter) - estimate per energy   06

M1 = **3** Display of electric consumptions, heating system consumptions (by heat meter) and hot sanitary water consumptions (by heat meter)   08

M1 = **4** Display of electric consumptions, electric consumptions for heating system and hot sanitary water   10

M1 = **5** Display of electric consumptions, heating system consumptions (by GAS volume meter) and hot sanitary water   12

M1 = **6** Display of electric consumptions and split between heating system and sanitary hot water (UNIQUE ELECTRIC)   14

M1 = **7** Display of electric consumptions, consumptions with split between heating system and hot sanitary water (from one SINGLE GAS volume meter)   16

M1 = **8** Consumption display with Energy Data Logger device   18

Configuration

The following table can be of support in the selection of the mode for correct pre-configuration based on the origin of the measurement (electric consumption measurement, impulse from heat meter, impulse from volume meter) for the HEATING and HOT WATER types.

TYPE OF CONSUMPTION	DISPLAY ICON	MEASUREMENT ORIGIN	UNIT OF MEASURE	CONFIGURATION MODE M1 =
Total ELECTRIC		Toroid	W (electric)	M1 = 1 - 8
SOCKETS		Toroids	W (electric)	M1 = 1 - 8
HEATING		Pulse by heat meter	W (thermal)	M1 = 1 M1 = 2 M1 = 3
		Toroid	W (electric)	M1 = 4
		Impulse from gas volume meter multiplied by a conversion coefficient	W (estimate)	M1 = 5
		Percentage of a SINGLE ELECTRIC consumption heating & hot sanitary water)	W (estimate)	M1 = 6
		Percentage of a SINGLE GAS consumption (heating & hot sanitary water)		M1 = 7
WARM WATER		Pulse by volume meter	l (volume in litres)	M1 = 1
		Pulse by heat meter	W (thermal)	M1 = 3
		Toroid	W (electric)	M1 = 4 M1 = 5
		Impulse from the volume meter multiplied by a conversion coefficient	W (estimate)	M1 = 2
		Percentage of a SINGLE ELECTRIC consumption heating & hot sanitary water)	W (estimate)	M1 = 6
		Percentage of a SINGLE GAS consumption (heating & hot sanitary water)		M1 = 7
COOLING		Toroid	W (electric)	M1 = 1 - 8
OTHER ELECTRIC CONSUMPTIONS		Measurement calculated as the difference between the ELECTRIC total and the other electric measurements	W (electric)	M1 = 1 - 8

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS, HEATING SYSTEM CONSUMPTIONS (BY HEAT METER) AND HOT SANITARY WATER SYSTEM CONSUMPTIONS (BY VOLUME METER)

Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 1 M2 = 0

Description

- Measurement of the electric consumptions (total consumption, socket consumption, cooling consumption)
- Heating consumption with pulse measurement by heat meter
- Hot sanitary water consumption with pulse measurement by volume meter
- Water consumption with pulse measurement by volume meter

Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Pulse counter	Wh (NOTE 2)	004	
Page 4	Hot sanitary water		Pulse counter	l (NOTE 1)	005	
Page 5	Cooling		Toroid	Wh	006	
Page 6	Other electric consumptions			Wh		001 less 002 less 003 less 006
Page 7	Water		Pulse counter	l (NOTE 1)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
   - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres ⟶, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt ⟶, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Lighting

Various services (gate, swimming pool pump)

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-5	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

Non electric consumptions

Heating
Pulse by heat meter

3522N 004

A1	= 0
A2	= 0
A3	= 4
MUL	= -
DIV	= -

Hot sanitary water
Pulse by volume meter

3522N 005

A1	= 0
A2	= 0
A3	= 5
MUL	= -
DIV	= -

Water
Pulse by volume meter

3522N 008

A1	= 0
A2	= 0
A3	= 8
MUL	= -
DIV	= -

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS, HEATING SYSTEM CONSUMPTIONS (BY HEAT METER) AND HOT SANITARY WATER SYSTEM CONSUMPTIONS (BY VOLUME METER) - ESTIMATE PER ENERGY
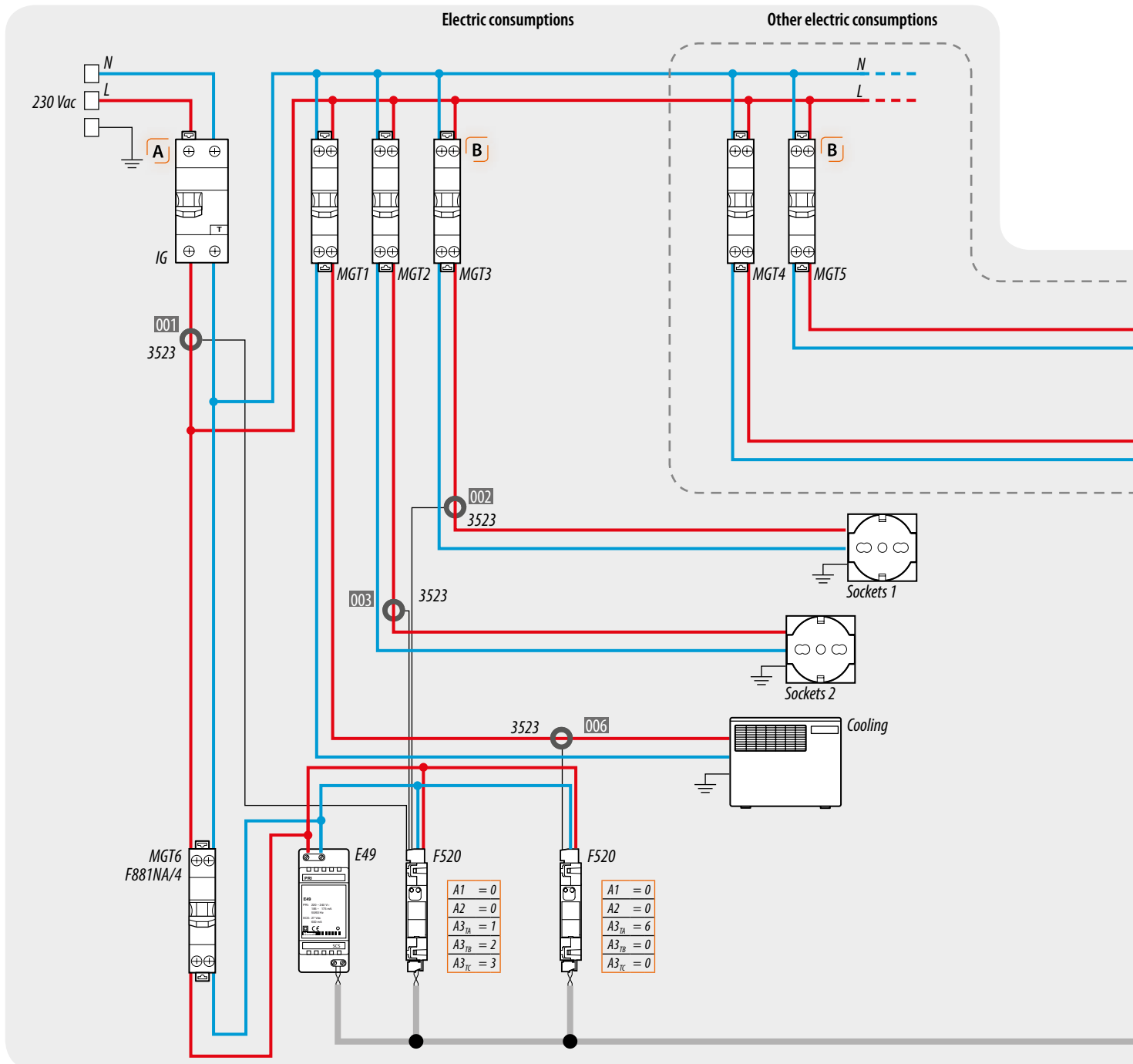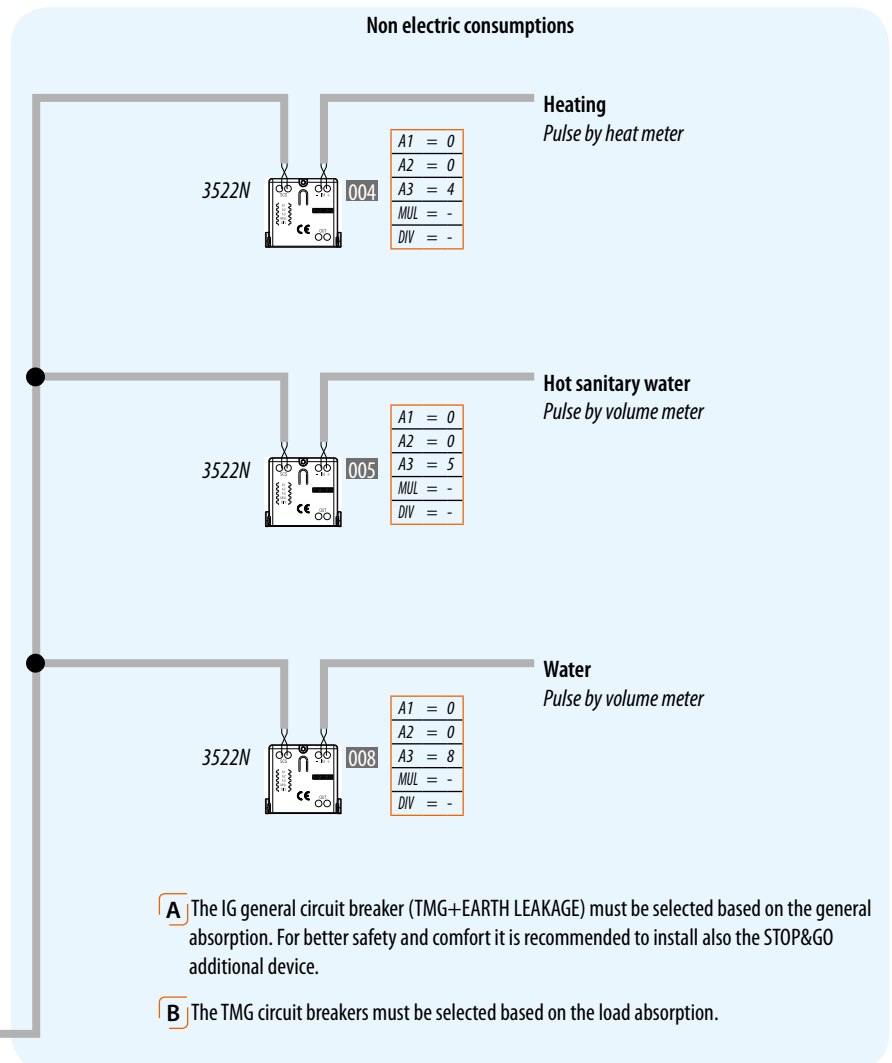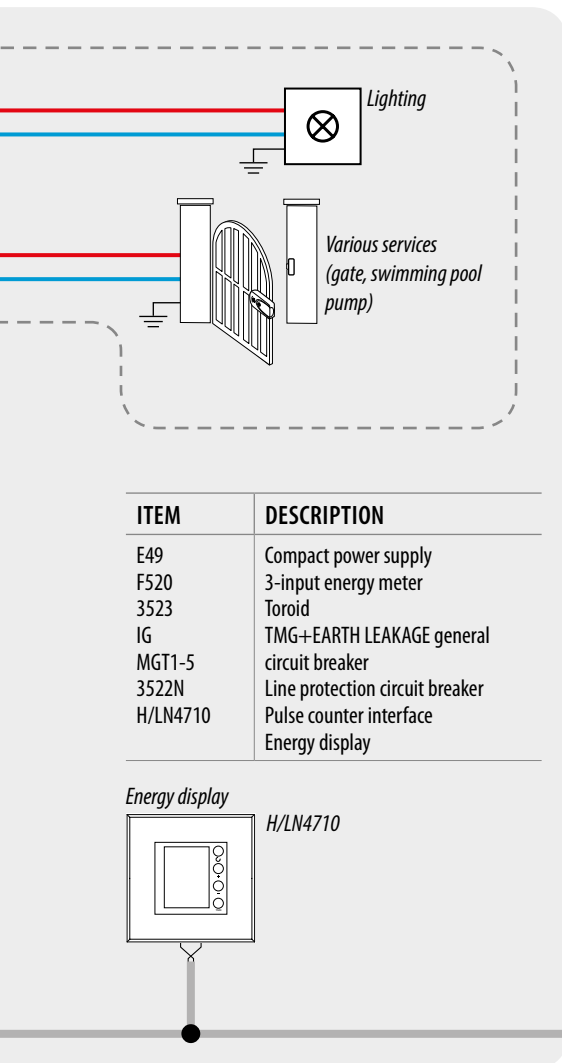
Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = **2** M2 = **0**

Description

- Measurement of the electric consumptions (total consumption, sockets, cooling)
- Heating consumption with pulse measurement by heat meter
- Hot sanitary water consumption with pulse measurement by volume meter
- Water consumption with pulse measurement by volume meter

NOTE: For hot water (page 5), it is possible to set a conversion coefficient (range from 0.01 to 100 - default 1) using the menu, to transform the volume of water measured into energy.

Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Pulse counter	Wh (**NOTE 2**)	004	
Page 4	Hot sanitary water (in volume)		Pulse counter	l (**NOTE 1**)	005	
Page 5	Hot sanitary water (in energy)			Wh		Measured value multiplied for a factor settable in the menu
Page 6	Cooling		Toroid	Wh	006	
Page 7	Other electric consumptions			Wh		001 less 002 less 003 less 006
Page 8	Water		Pulse counter	l (**NOTE 1**)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
- If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt →, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Non electric consumptions

Lighting

Various services (gate, swimming pool pump)

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-5	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

Heating
Pulse by heat meter

3522N 004
A1	=	0
A2	=	0
A3	=	4
MUL	=	-
DIV	=	-

Hot sanitary water
Pulse by volume meter

3522N 005
A1	=	0
A2	=	0
A3	=	5
MUL	=	-
DIV	=	-

Water
Pulse by volume meter

3522N 008
A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

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ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS, HEATING SYSTEM CONSUMPTIONS (BY HEAT METER) AND HOT SANITARY WATER CONSUMPTIONS (BY HEAT METER)

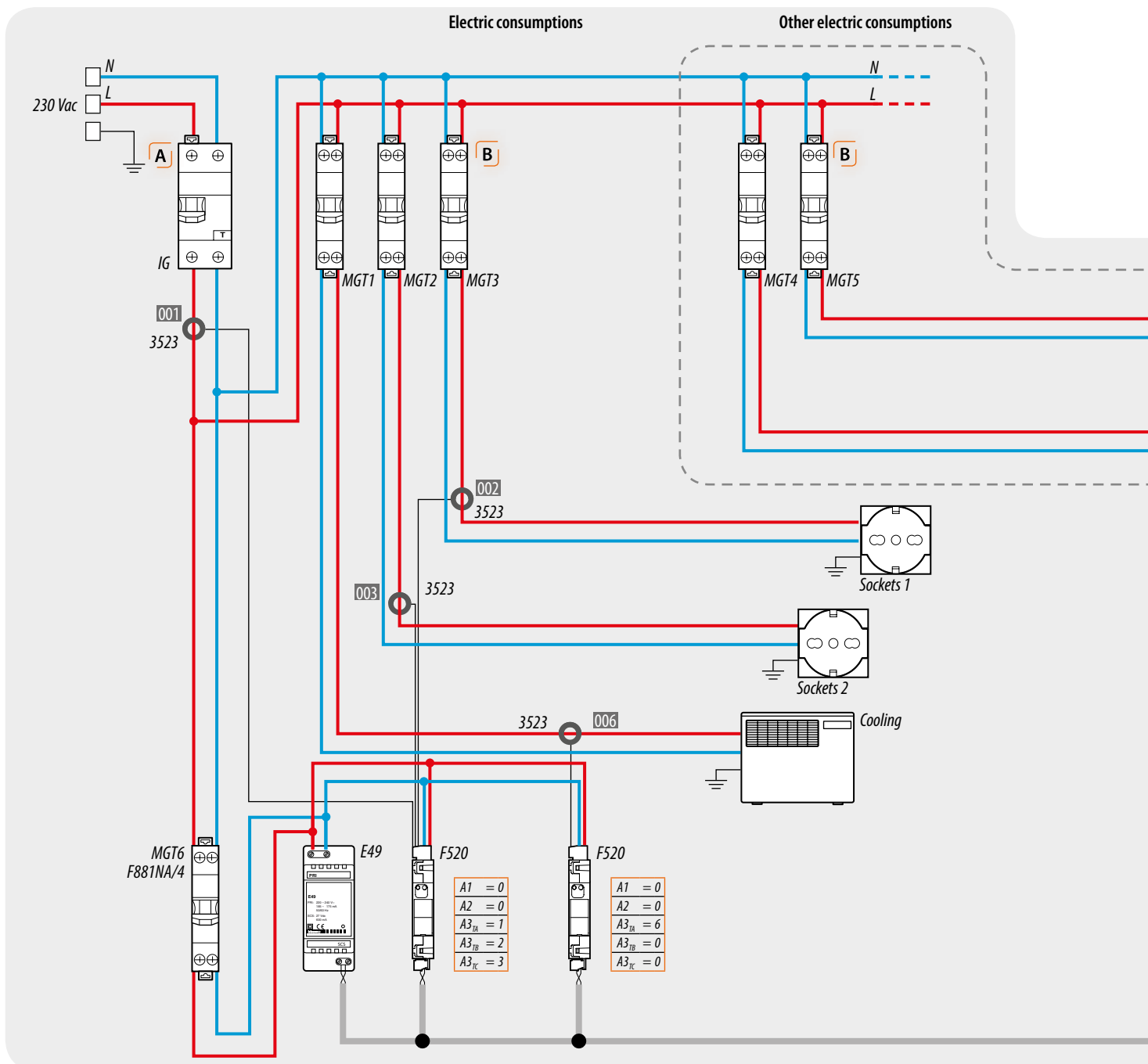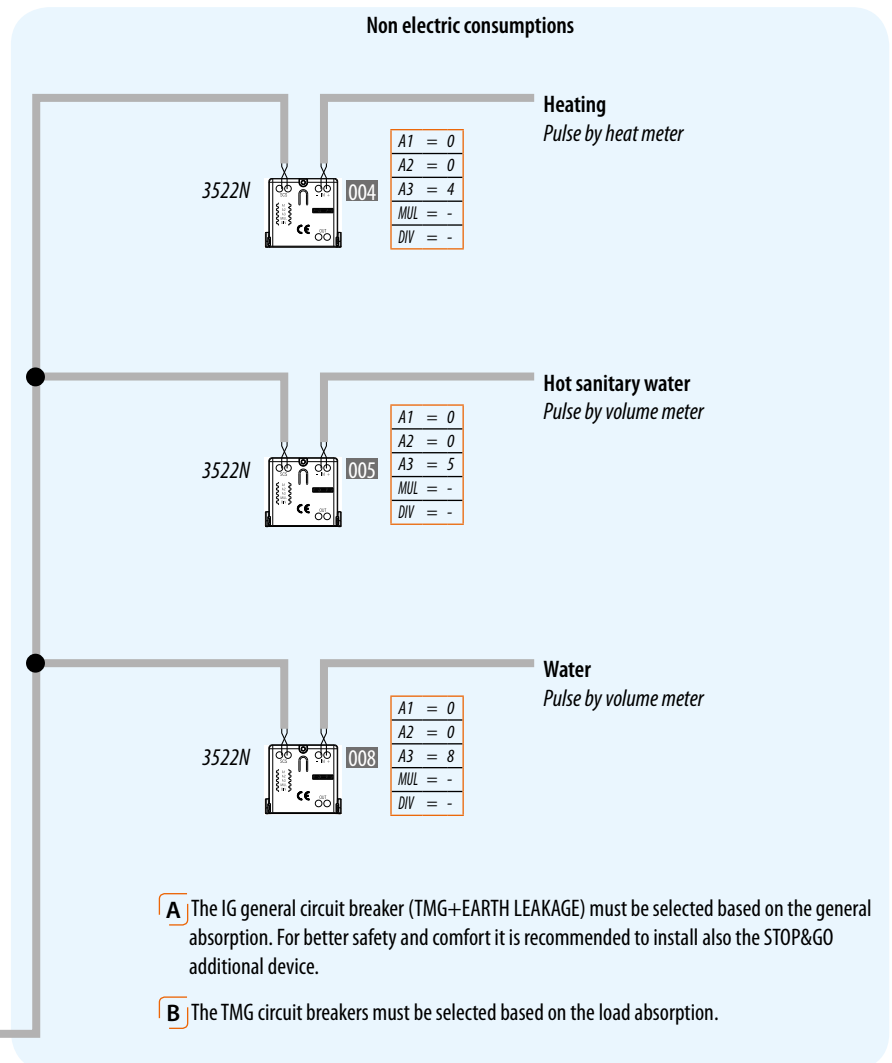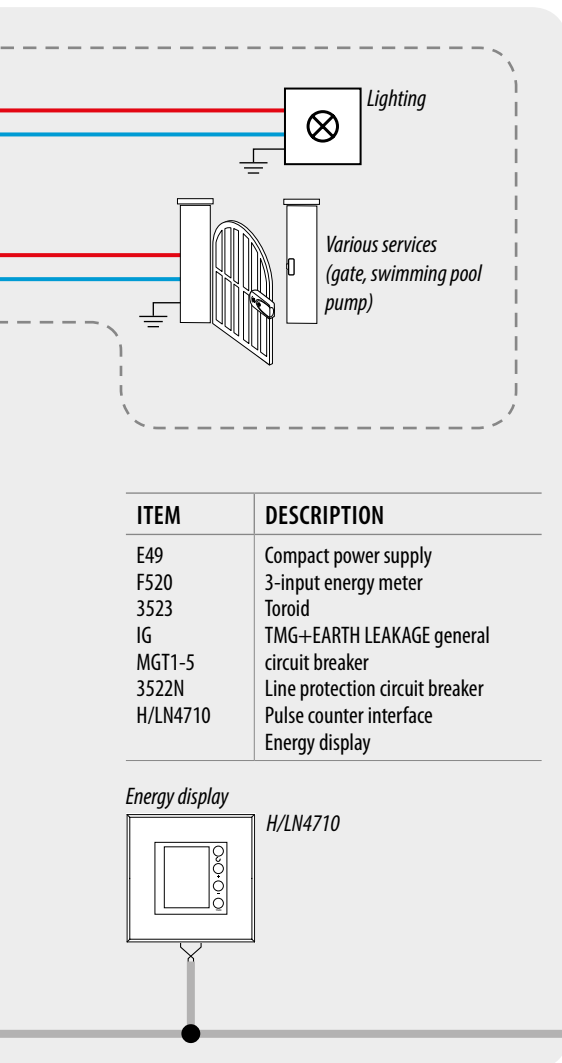| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite** software"	M1 = **3** M2 = **0**

Description

- Measurement of the electric consumptions (total consumption, sockets, cooling)
- Heating consumption with pulse measurement by heat meter
- Hot sanitary water consumption with pulse measurement by heat and volume meter
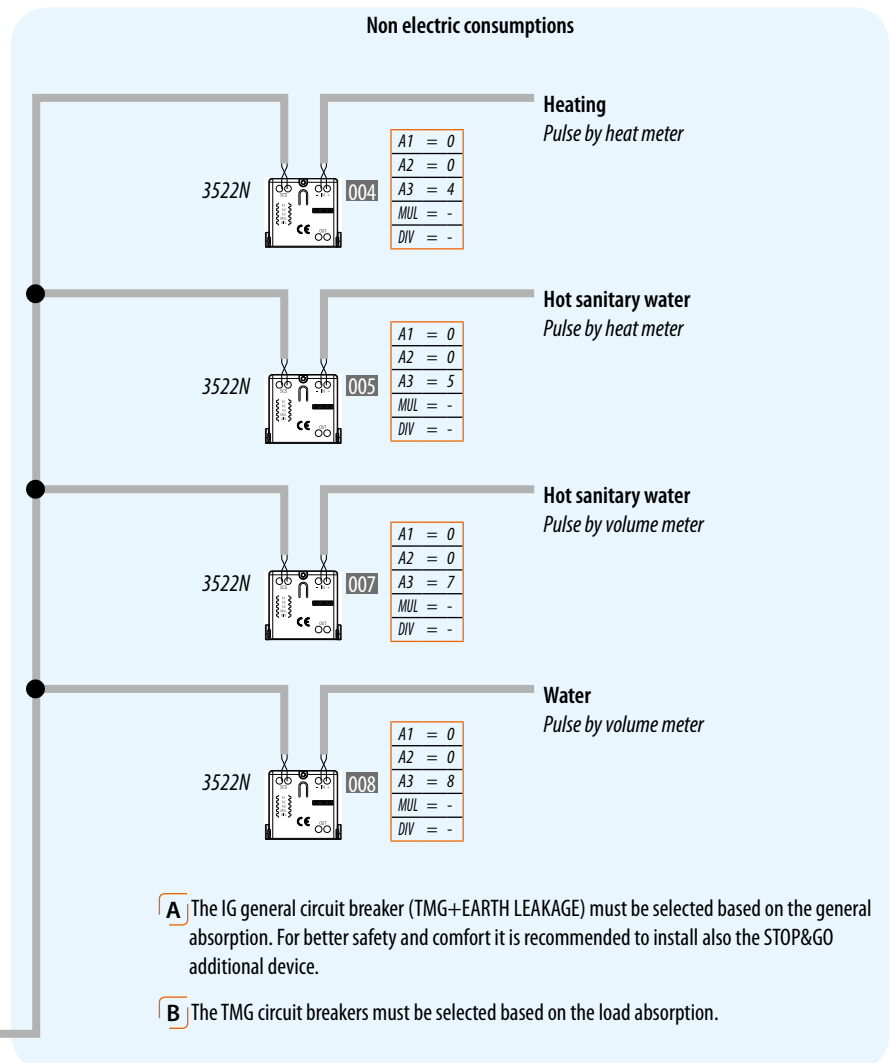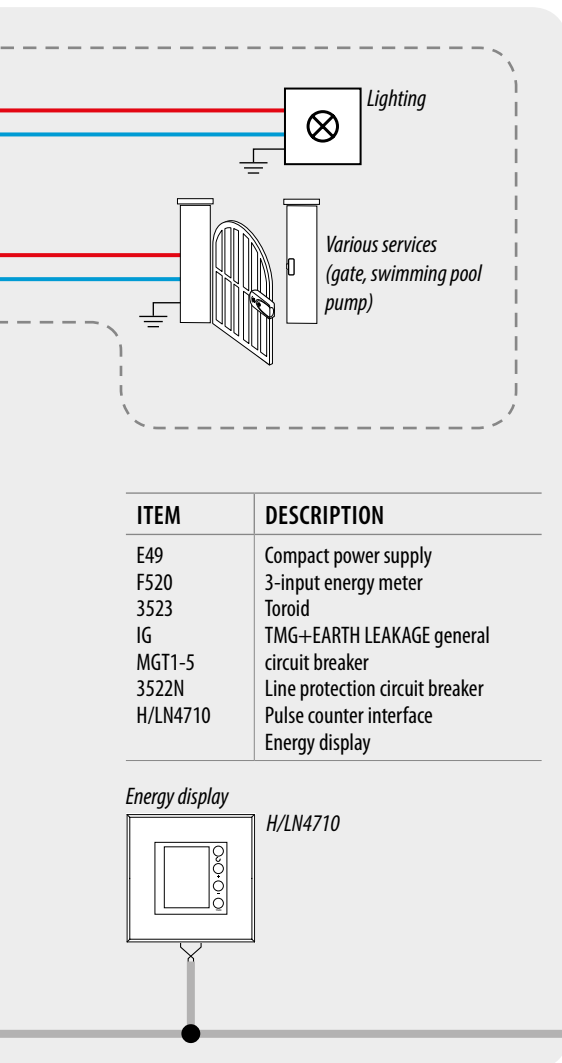- Water consumption with pulse measurement by volume meter

Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Pulse counter	Wh (**NOTE 2**)	004	
Page 4	Hot sanitary water		Pulse counter	Wh (**NOTE 2**)	005	
Page 5	Cooling		Toroid	Wh	006	
Page 6	Other (Electric)			Wh		001 less 002 less 003 less 006
Page 7	Hot sanitary water		Pulse counter	I (**NOTE 1**)	007	
Page 8	Water		Pulse counter	I (**NOTE 1**)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres ⟶, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt ⟶, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Non electric consumptions

Lighting

Various services (gate, swimming pool pump)

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-5	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

Heating
Pulse by heat meter

3522N — 004
A1	=	0
A2	=	0
A3	=	4
MUL	=	-
DIV	=	-

Hot sanitary water
Pulse by heat meter

3522N — 005
A1	=	0
A2	=	0
A3	=	5
MUL	=	-
DIV	=	-

Hot sanitary water
Pulse by volume meter

3522N — 007
A1	=	0
A2	=	0
A3	=	7
MUL	=	-
DIV	=	-

Water
Pulse by volume meter

3522N — 008
A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

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ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS, ELECTRIC CONSUMPTIONS FOR HEATING SYSTEM AND HOT SANITARY WATER
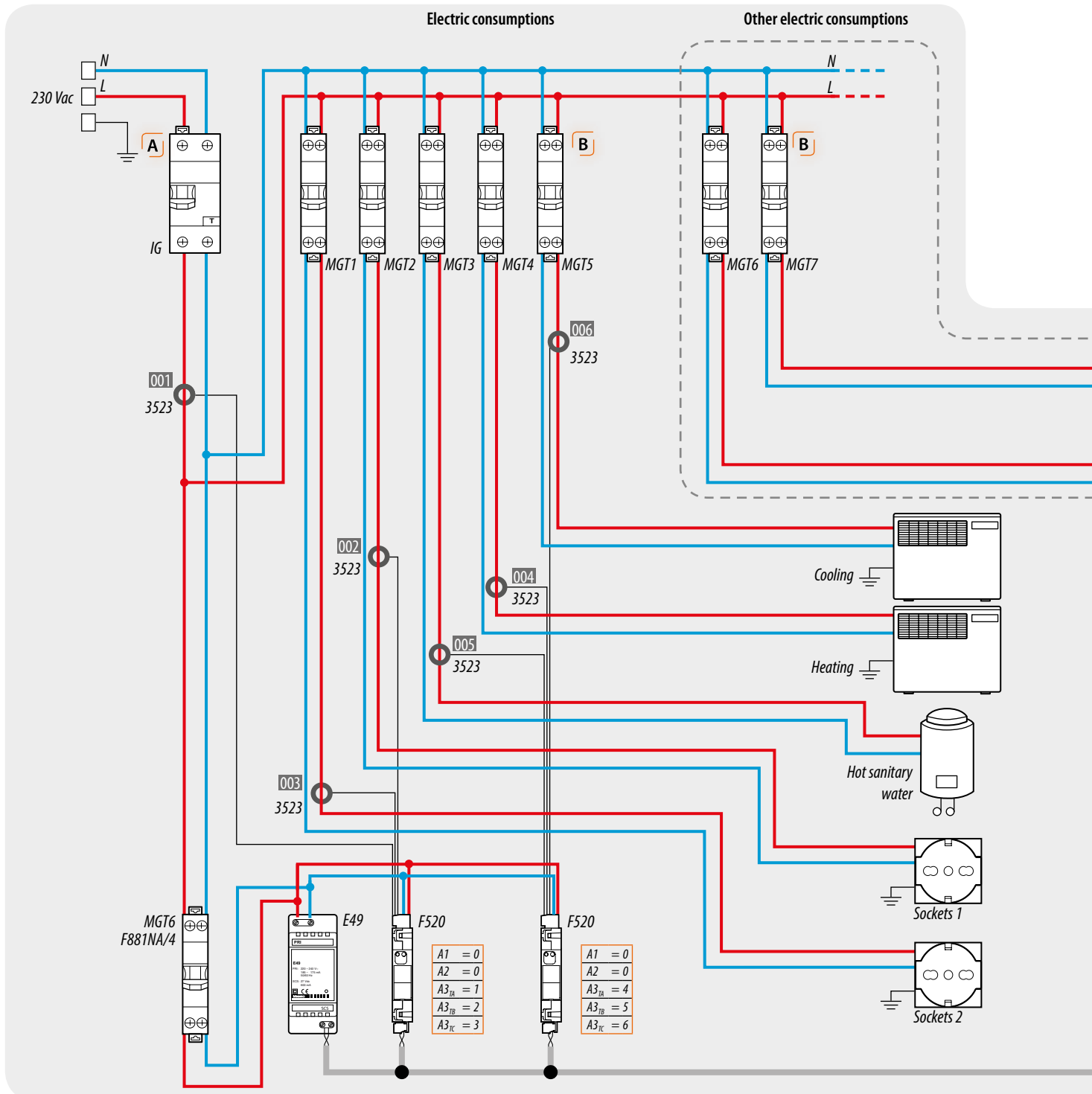
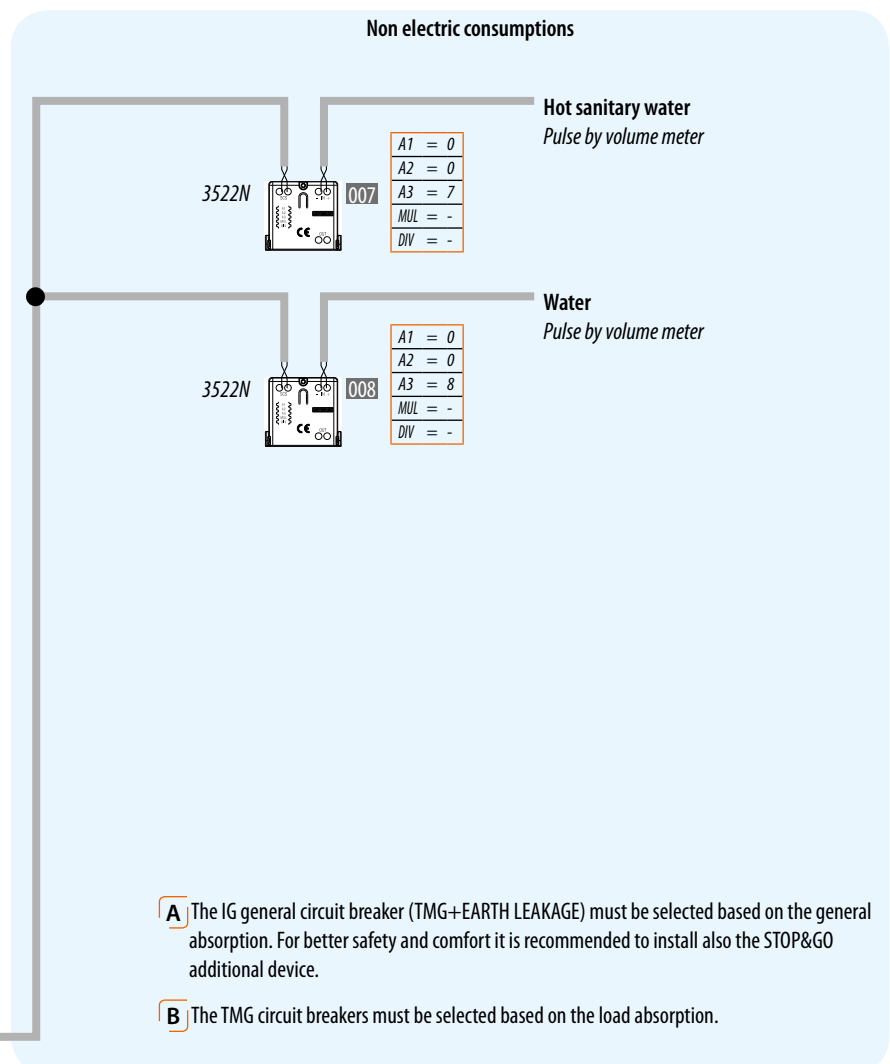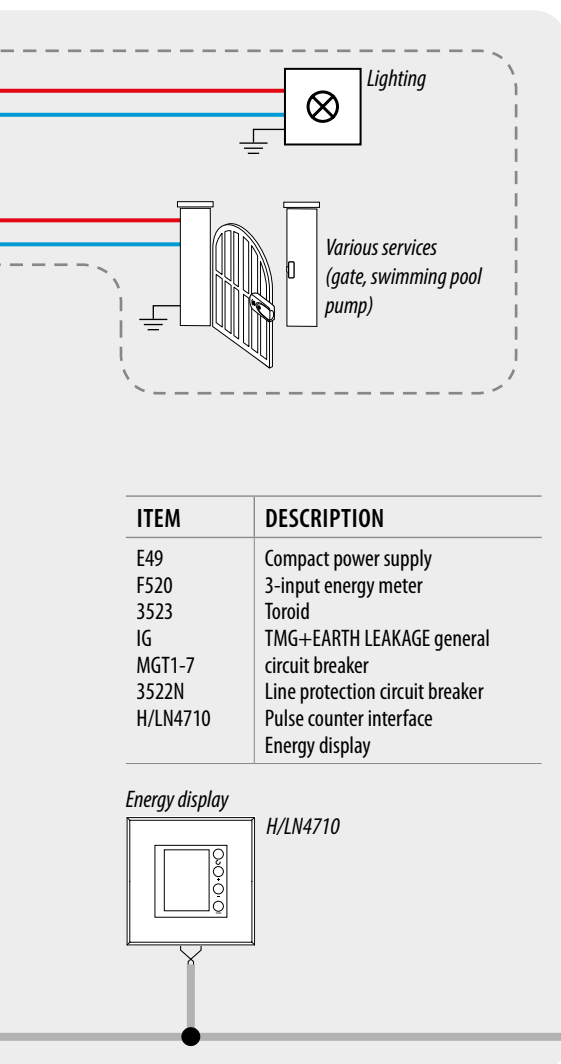| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 4 M2 = 0

Description

- Measurement of the electric consumptions (total consumption, sockets, hot sanitary water, heating, cooling)
- Hot sanitary water consumption with pulse measurement by volume meter
- Water consumption with pulse measurement by volume meter

Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Toroid	Wh	004	
Page 4	Hot sanitary water		Toroid	Wh	005	
Page 5	Cooling		Toroid	Wh	006	
Page 6	Other (Electric)			Wh		001 less 002 less 003 less 004 less 005 less 006
Page 7	Hot sanitary water		Pulse counter	l (NOTE 1)	007	
Page 8	Water		Pulse counter	l (NOTE 1)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

Lighting

Various services (gate, swimming pool pump)

Non electric consumptions

Hot sanitary water
Pulse by volume meter

3522N   007

A1	=	0
A2	=	0
A3	=	7
MUL	=	-
DIV	=	-

Water
Pulse by volume meter

3522N   008

A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general
MGT1-7	circuit breaker
3522N	Line protection circuit breaker
H/LN4710	Pulse counter interface
	Energy display

Energy display

H/LN4710

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS, HEATING SYSTEM CONSUMPTIONS (BY GAS VOLUME METER) AND HOT SANITARY WATER CONSUMPTIONS

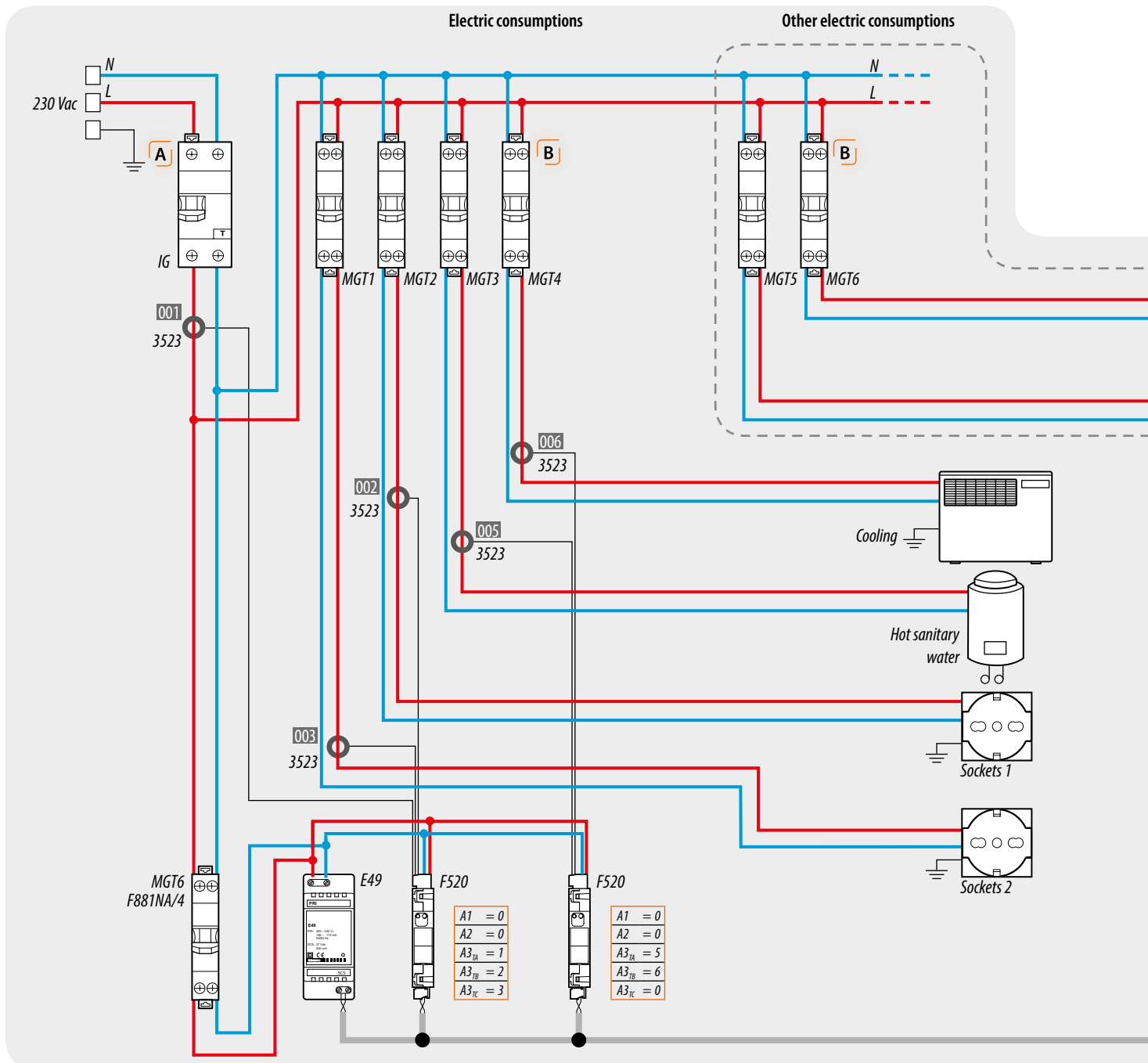| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite** software"	M1 = **5** M2 = **0**

Description

- Measurement of the electric consumptions (total consumption, sockets, hot sanitary water, cooling)
- Heating consumption with pulse measurement by GAS meter (volume)
- Hot sanitary water consumption with pulse measurement by volume meter
- Water consumption with pulse measurement by volume meter

NOTE: For the gas (page 3), it is possible to set a conversion coefficient (range from 0.01 to 100 - default 1) using the menu, to transform the volume of gas measured into energy.
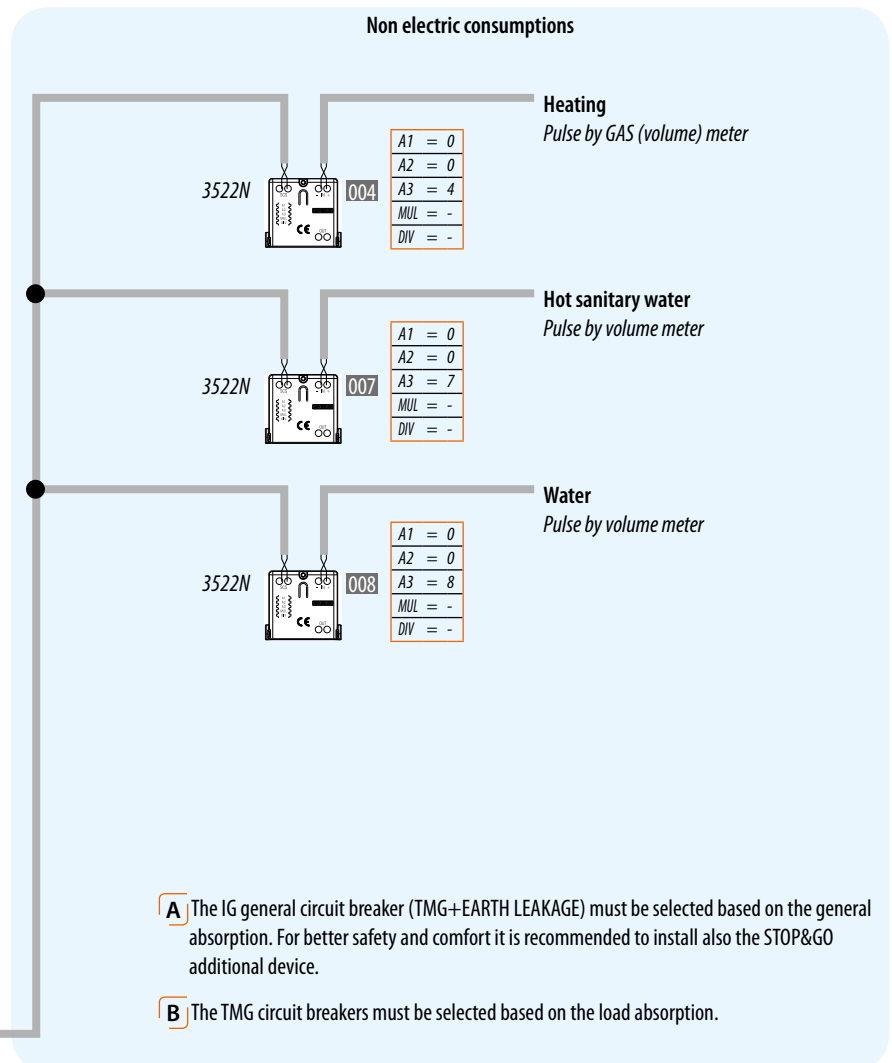For information on the calorific power of the gas refer to your local energy supplier.
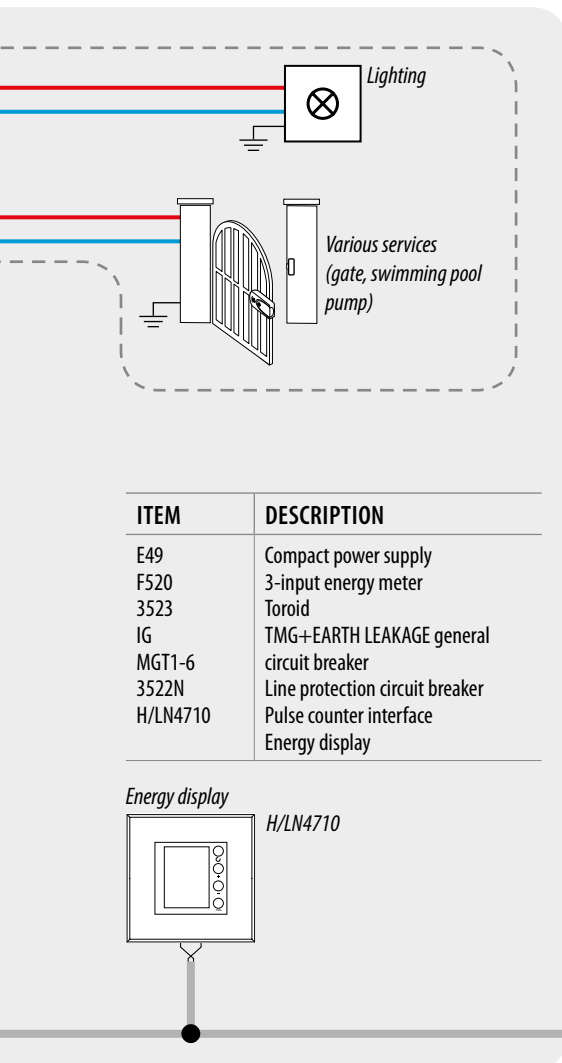
Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Pulse counter	Wh (NOTE 3)	004	Measured GAS volume multiplied by a coefficient that can be set in the menu
Page 4	Hot sanitary water		Toroid	Wh	005	
Page 5	Cooling		Toroid	Wh	006	
Page 6	Other (Electric)			Wh		001 less 002 less 003 less 005 less 006
Page 7	Hot sanitary water		Pulse counter	l (NOTE 1)	007	
Page 8	Water		Pulse counter	l (NOTE 1)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
- If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 3: if the GAS (volume) meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every cubic metre →, on the pulse counter interface this value must be multiplied by 1000 to provide the data in litres) - see technical sheet of of the interface 3522N. This value must be subsequently be multiplied by the calorific power of the gas.

Non electric consumptions

Lighting

Various services (gate, swimming pool pump)

Heating
Pulse by GAS (volume) meter

3522N — 004

A1	=	0
A2	=	0
A3	=	4
MUL	=	-
DIV	=	-

Hot sanitary water
Pulse by volume meter

3522N — 007

A1	=	0
A2	=	0
A3	=	7
MUL	=	-
DIV	=	-

Water
Pulse by volume meter

3522N — 008

A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-6	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF ELECTRIC CONSUMPTIONS AND SPLIT BETWEEN HEATING SYSTEM AND HOT SANITARY WATER (UNIQUE ELECTRIC)

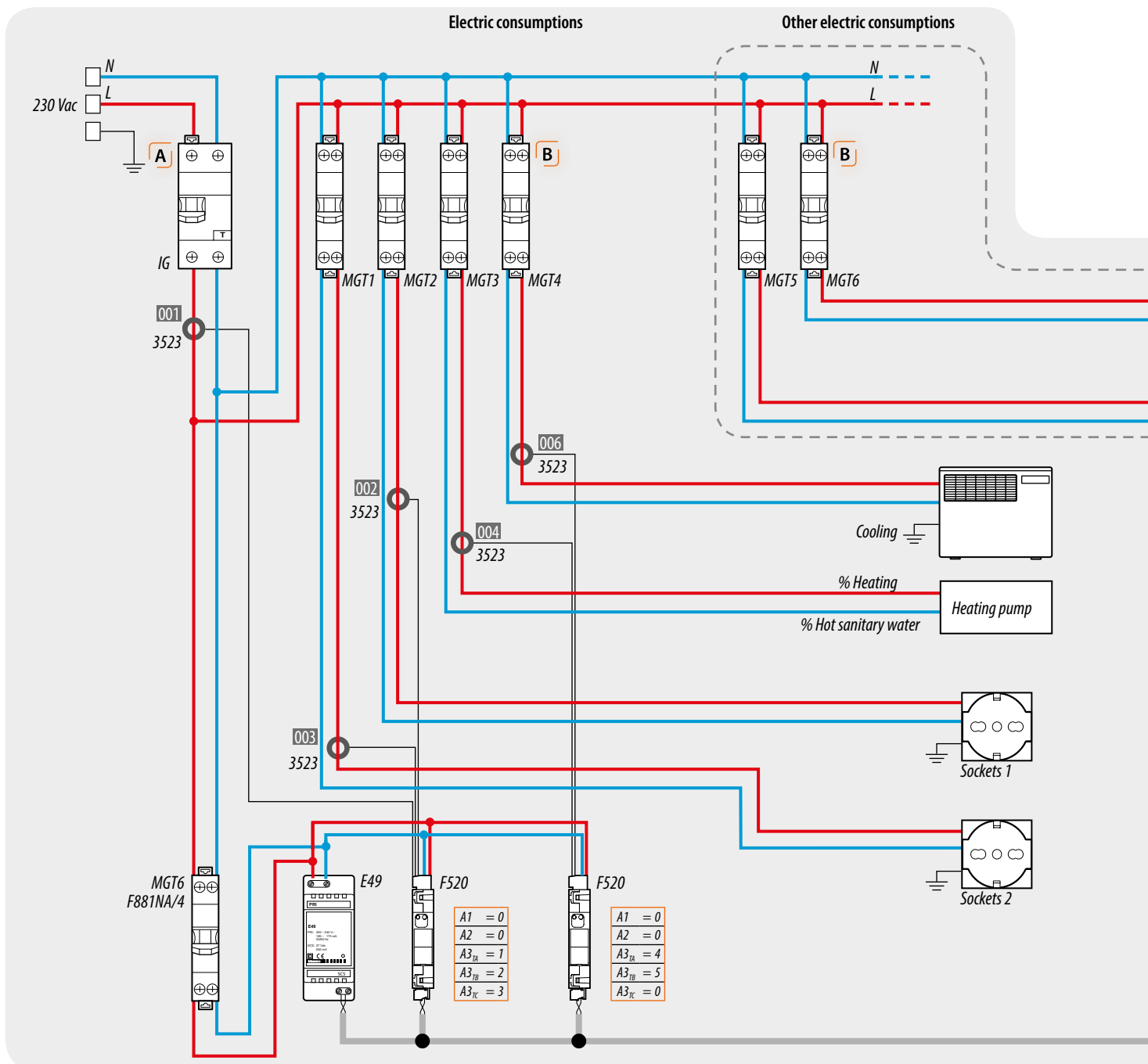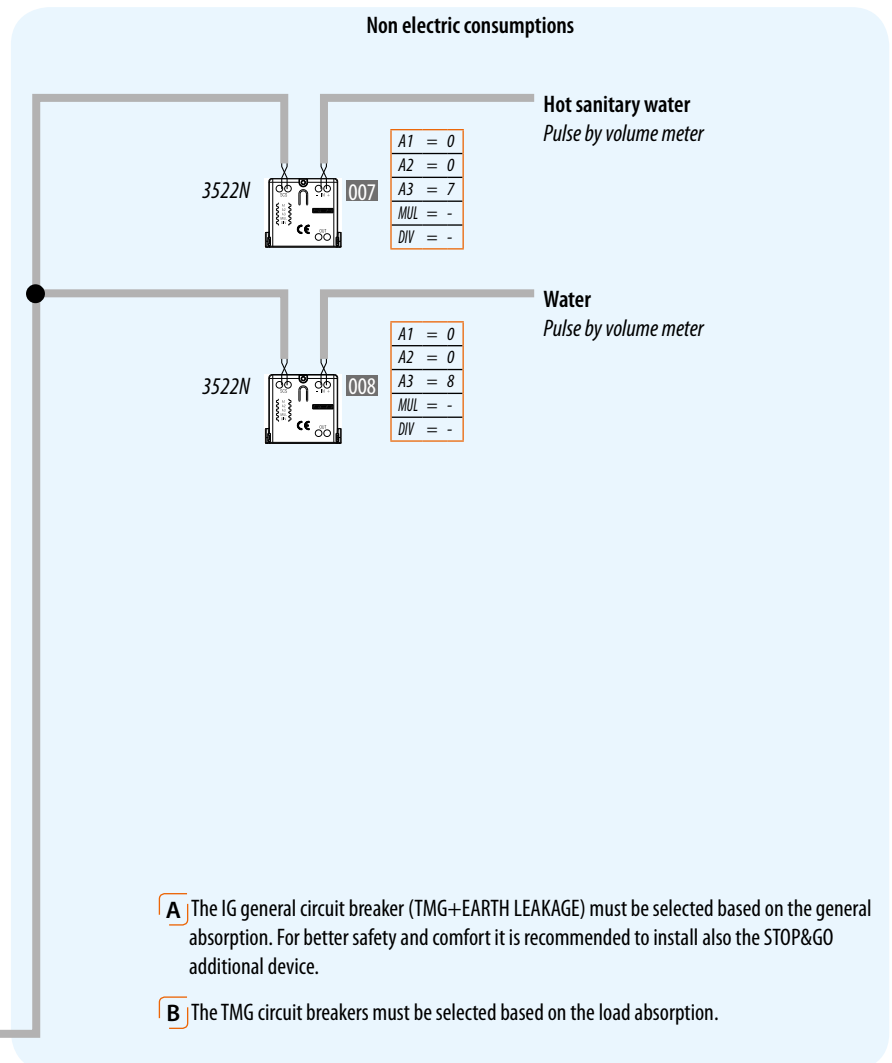| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = **6** M2 = **0**

Description

- Measurement of the electric consumptions (total consumption, sockets, cooling, only one device for heating and hot sanitary water production, for ex. electric heating pump)
- Hot sanitary water consumption with pulse measurement by volume meter
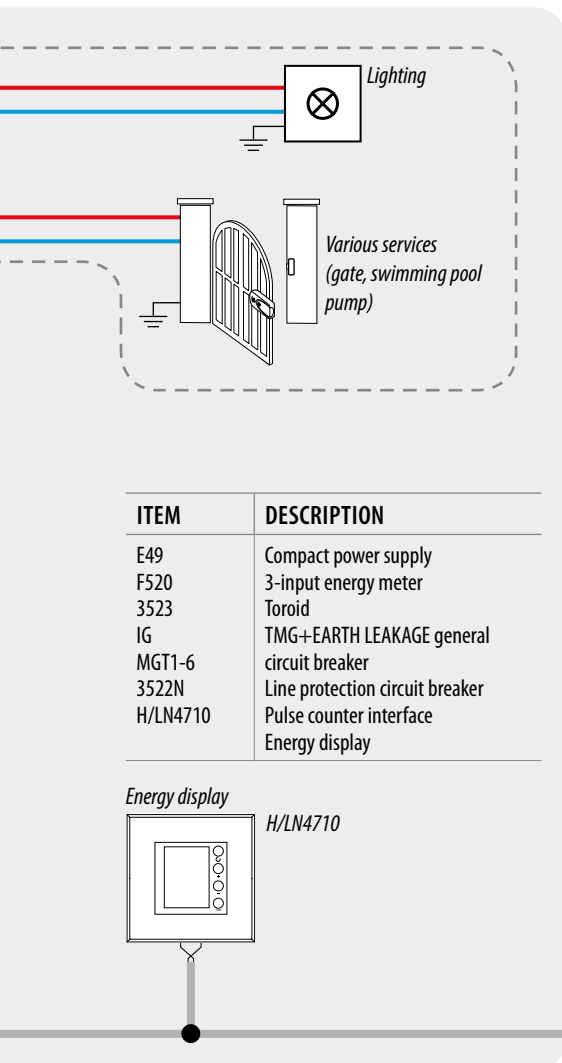- Water consumption with pulse measurement by volume meter

NOTE: It is possible to split the electric consumption measured by toroid 004 into electric consumption for the heating system, and electric consumption for the production of hot water, by assigning in Page 3 and in Page 4 a conversion coefficient (range from 0.01 to 100 - default 1), which can be set on the device.

Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	001	
Page 2	Sockets		2 x Toroid	Wh	002 and 003	Automatic sum of the consumptions from the sockets
Page 3	Heating		Toroid	Wh	004	The same toroid is used to measure the two consumptions, which must be split by percentage (%). The sum of the percentages must = 1
Page 4	Hot sanitary water					
Page 5	Cooling		Toroid	Wh	006	
Page 6	Other (Electric)			Wh		001 less 002 less 003 less 004 less 006
Page 7	Hot sanitary water		Pulse counter	l (NOTE 1)	007	
Page 8	Water		Pulse counter	l (NOTE 1)	008	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

Non electric consumptions

Lighting

Various services (gate, swimming pool pump)

Hot sanitary water
Pulse by volume meter

3522N   007

A1	=	0
A2	=	0
A3	=	7
MUL	=	-
DIV	=	-

Water
Pulse by volume meter

3522N   008

A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-6	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

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ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

ELECTRIC CONSUMPTION DISPLAY WITH SPLIT BETWEEN HEATING SYSTEM AND HOT SANITARY WATER (FROM ONE SINGLE GAS VOLUME METER)

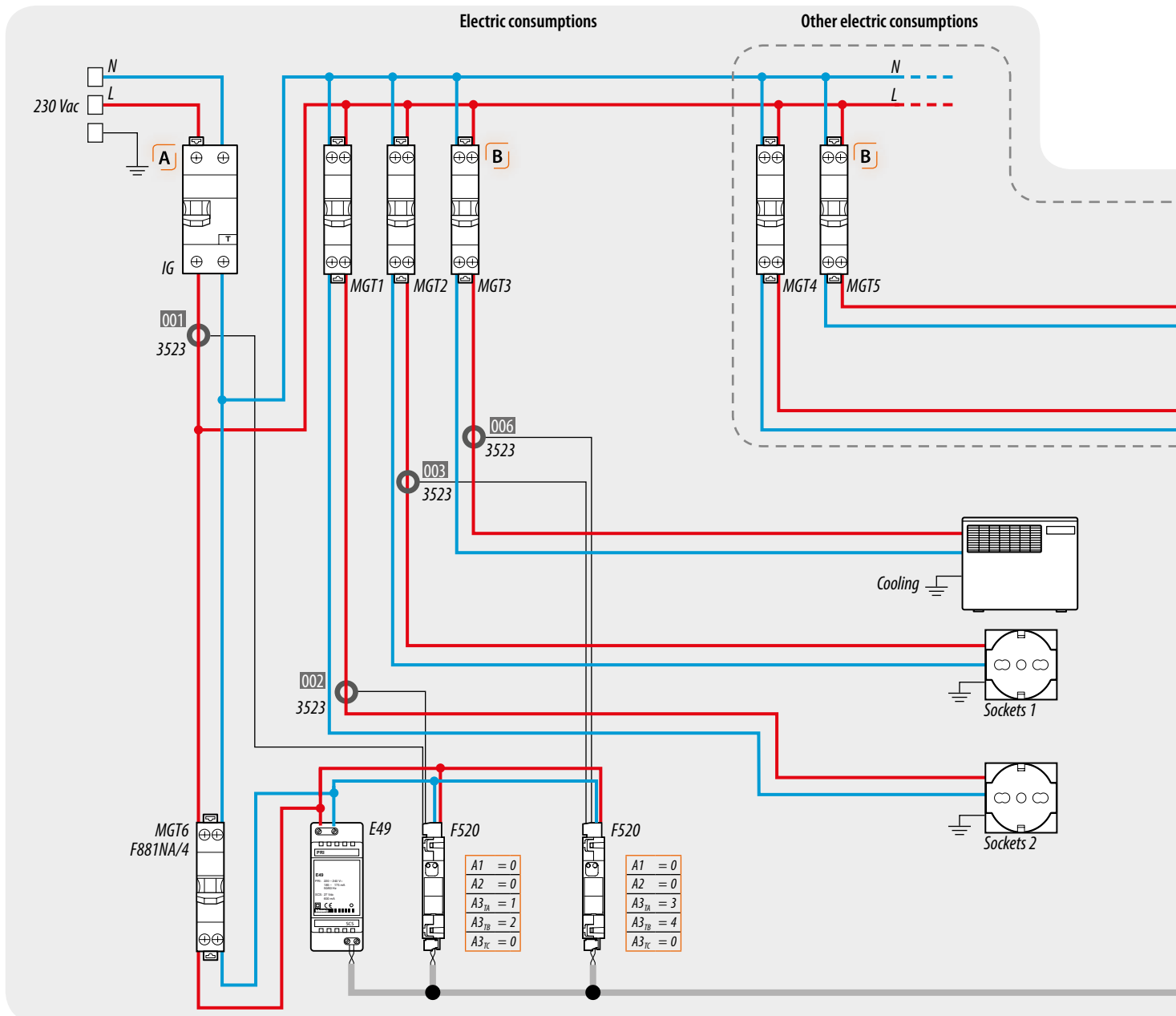| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 7 M2 = 0

Description

- Measurement of the electric consumptions (total consumption, sockets, cooling)
- Consumption in GAS volume, for heating and for the production of hot sanitary water (e.g. consumption at the boiler input)
- Hot sanitary water consumption with pulse measurement by volume meter
- Water consumption with pulse measurement by volume meter

NOTE: it is possible to split the GAS consumption into heating consumption and consumption for the production of hot water, by assigning for each measure a conversion coefficient K (range from 0.01 to 100 - default 1), which can be set using the menu.
K (page 3) = calorific power of the GAS multiplied by the percentage that can be attributed to the heating system.
K (page 4) = calorific power of the GAS multiplied by the percentage that can be attributed to the hot sanitary water.
For information on the calorific power of the GAS refer to your local energy supplier.
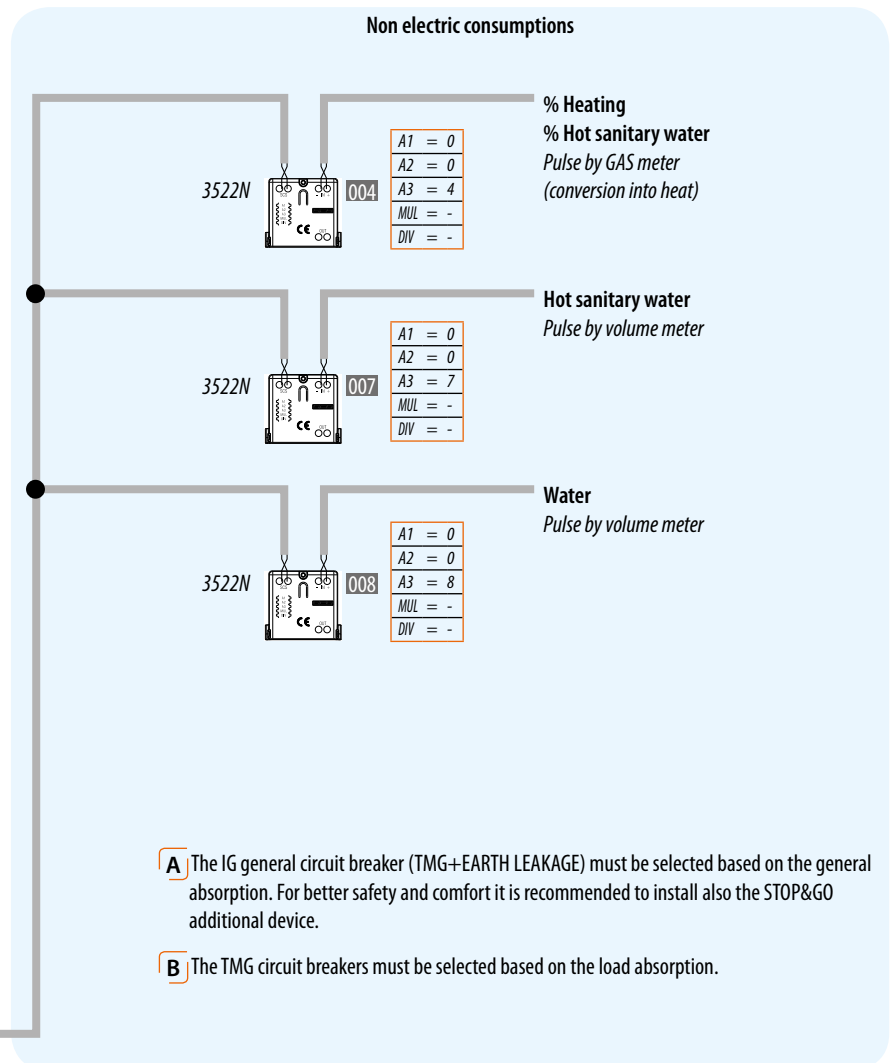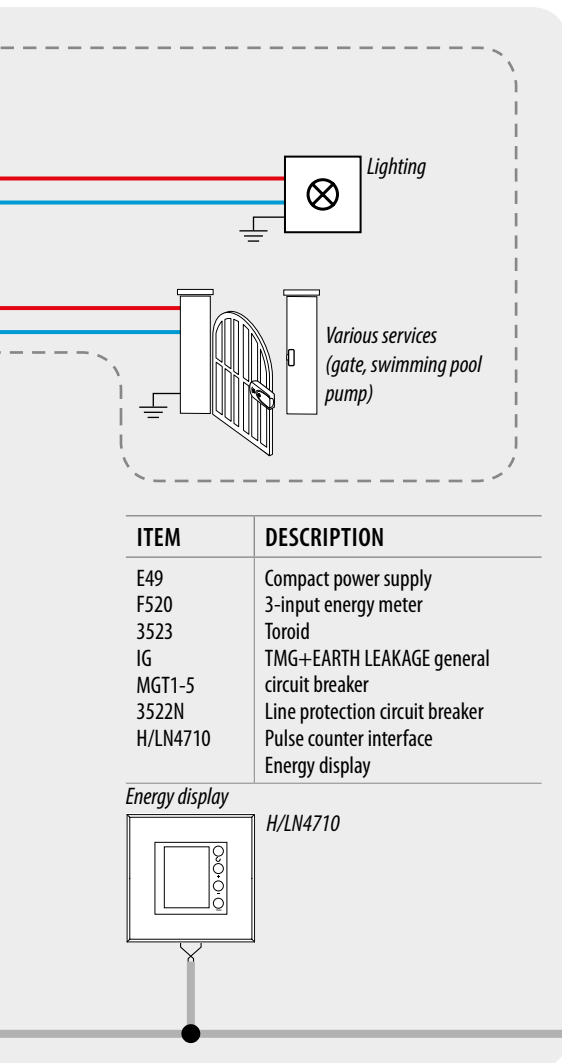
Display	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption		Toroid	Wh	`001`	
Page 2	Sockets		2 x Toroid	Wh	`002` and `003`	Automatic sum of the consumptions from the sockets
Page 3	Heating		Pulse counter	Wh (NOTE 3)	`004`	The same impulse counter is used to measure the two consumptions, which are then split by percentage (%)
Page 4	Hot sanitary water					
Page 5	Cooling		Toroid	Wh	`006`	
Page 6	Other (Electric)			Wh		`001` less `002` less `003` less `006`
Page 7	Hot sanitary water		Pulse counter	l (NOTE 1)	`007`	
Page 8	Water		Pulse counter	l (NOTE 1)	`008`	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 3: if the GAS (volume) meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every cubic metre →, on the pulse counter interface this value must be multiplied by 1000 to provide the data in litres) - see technical sheet of of the interface 3522N. This value must be subsequently be multiplied by the calorific power of the gas.

Non electric consumptions

Lighting

Various services (gate, swimming pool pump)

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-5	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

Energy display

H/LN4710

% Heating
% Hot sanitary water
Pulse by GAS meter (conversion into heat)

3522N `004`
A1 = 0
A2 = 0
A3 = 4
MUL = -
DIV = -

Hot sanitary water
Pulse by volume meter

3522N `007`
A1 = 0
A2 = 0
A3 = 7
MUL = -
DIV = -

Water
Pulse by volume meter

3522N `008`
A1 = 0
A2 = 0
A3 = 8
MUL = -
DIV = -

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

CONSUMPTION DISPLAY WITH ENERGY DATA LOGGER DEVICE

Virtual configuration	Physical configuration
See chapter "Use of MyHOME_Suite" software	M1 = 8 M2 = 0

Description

The Energy Data Logger device (F524) works as a data concentrator. It is possible to configure virtual lines to meet all the needs (operations among lines, conversion among energy magnitudes, etc.). Compliance with the SCS (virtual/physical) addresses proposed in TABLE 1 is required.

EXAMPLE: In the following diagram is an example of installation, with corresponding table (see TABLE 2) of the virtual lines to be configured in the web pages of the energy data logger device (F524).

The table mentioned suggests that the sum of the consumptions of 3 socket lines, the transformation of the hot water volume consumption into energy (by applying the K conversion factor), and the difference between the total consumption and the electric consumptions measured.
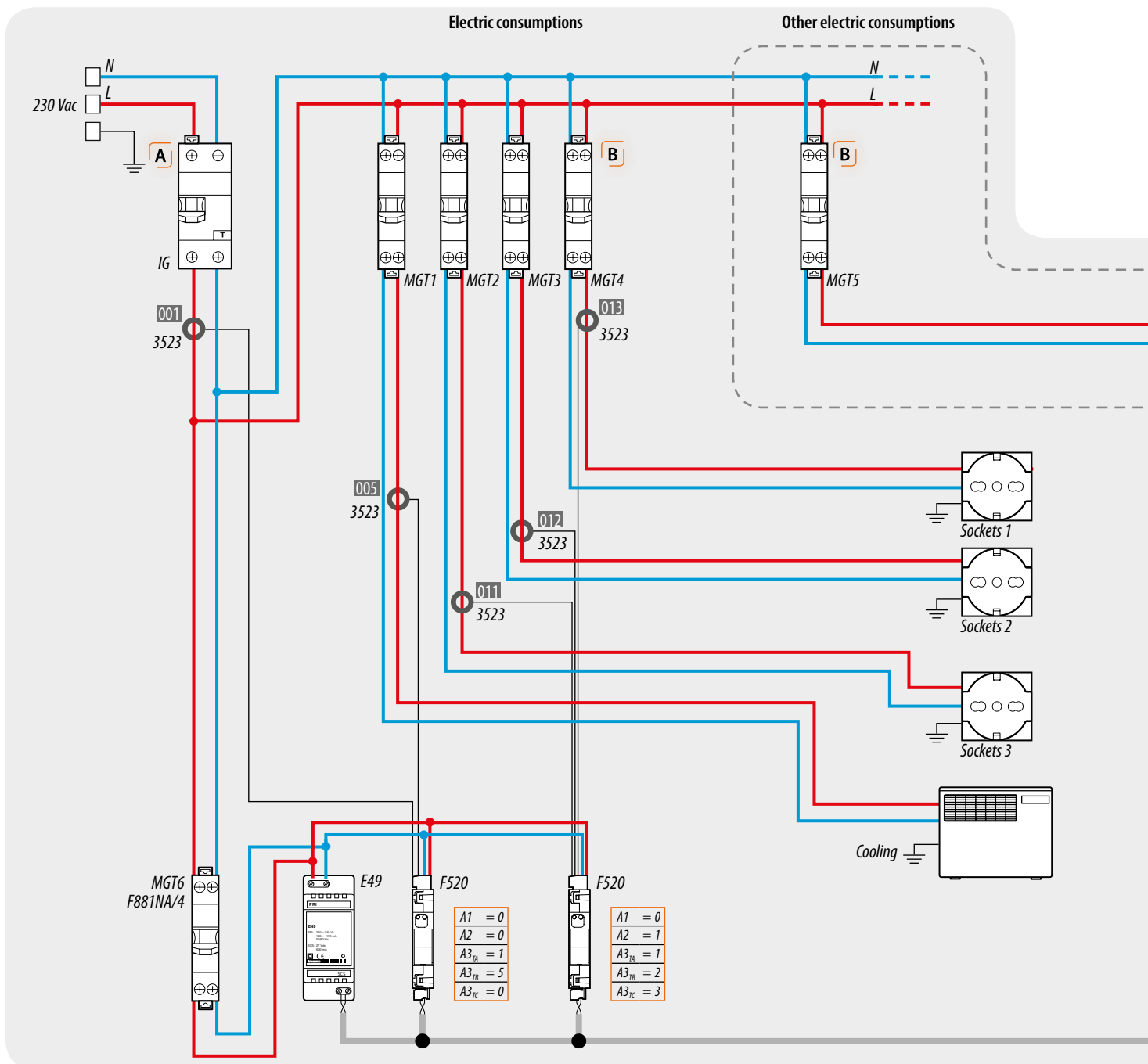
TABLE 1

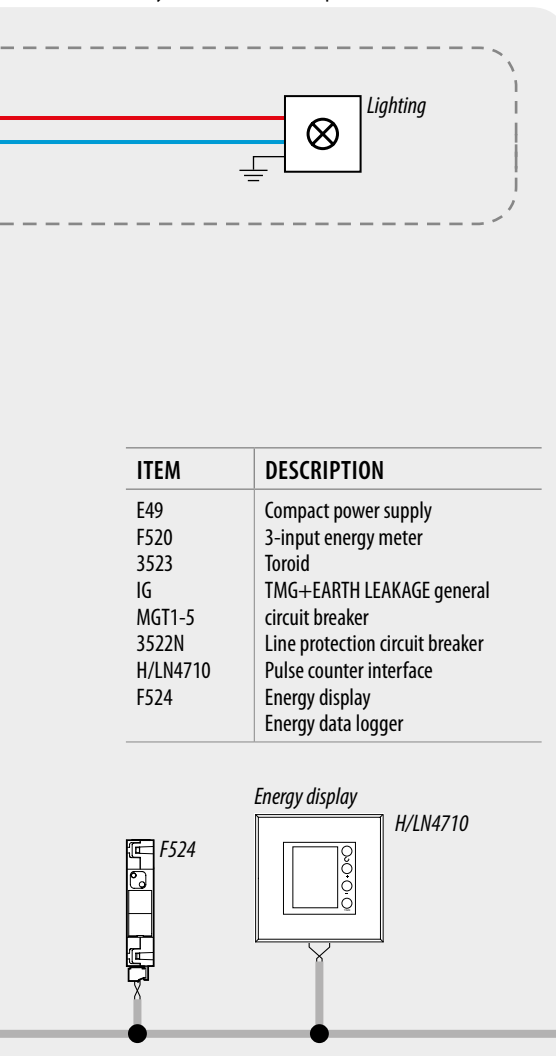| Display	Consumption	Icon	Unit of measure	Physical address of measure device or virtual address in the logger	Notes
Page 1	Total electric consumption		Wh	001	It may be the physical address **001** of a toroid
Page 2	Sockets		Wh	002	It can be the physical address **002** of a "sockets" toroid, or in alternative, and subject to configuration, the virtual address **002** of the Energy Data Logger
Page 3	Heating		Wh (**NOTE 2**)	003	It can be the physical address **003** of a "heating" impulse counter interface/toroid, or in alternative, and subject to configuration, the virtual address **003** of the Energy Data Logger
Page 4	Hot sanitary water		Wh (**NOTE 2**)	004	It can be the physical address **004** of a "hot domestic water" impulse counter interface/toroid, or in alternative, and subject to configuration, the virtual address **004** of the Energy Data Logger
Page 5	Cooling		Wh	005	It can be the physical address **005** of an "air conditioning" toroid, or in alternative, and subject to configuration, the virtual address **005** of the Energy Data Logger
Page 6	Other (Electric)		Wh	006	It indicates the virtual address **006** of the energy data logger where the differences are configured
Page 7	Hot sanitary water		l (**NOTE 1**)	007	It can be the physical address **007** of an "impulse counter" interface connected to an additional volume meter, or in alternative, and subject to configuration, the virtual address **007** of the Energy Data Logger
Page 8	Cold water		l (**NOTE 2**)	008	It can be the physical address **008** of an "impulse counter" interface connected to an additional volume meter, or in alternative, and subject to configuration, the virtual address **008** of the Energy Data Logger

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
- If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres ⟶, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.
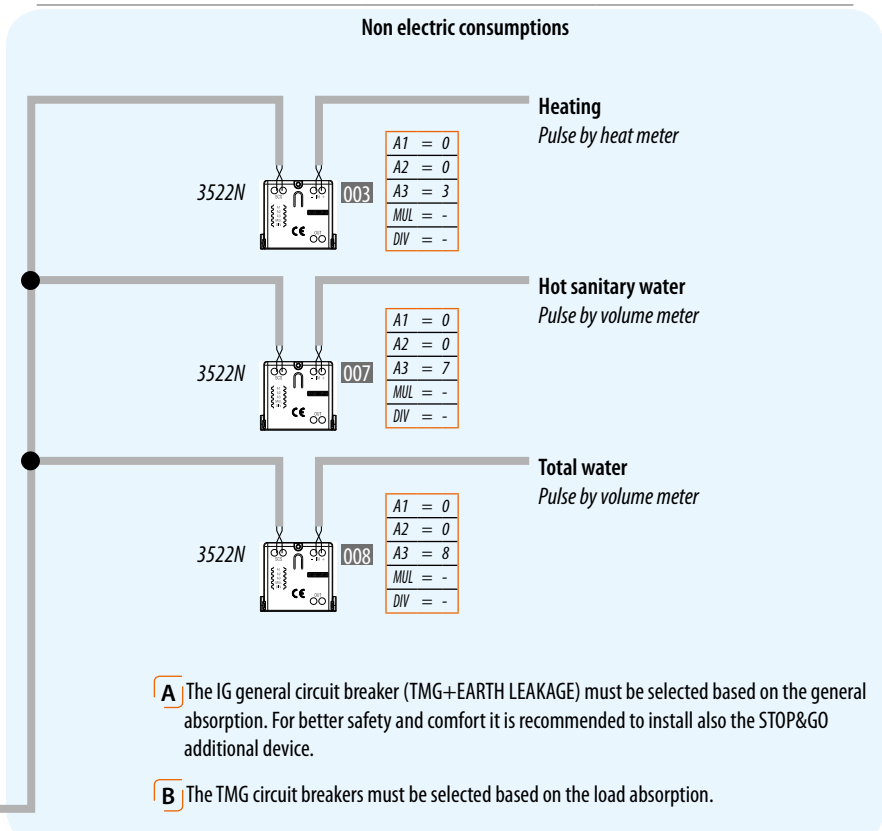
NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt ⟶, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Lighting

TABLE 2

Logger virtual lines	Logger virtual address	Operation
Socket virtual line	002	[011+012+013]
Virtual line of the hot water for domestic consumption	004	[007 * K]
"Other" line	006	[001-(011+012+013+005)]

Non electric consumptions

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-5	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display
F524	Energy data logger

Energy display

H/LN4710

F524

Heating
Pulse by heat meter

3522N 003

A1	=	0
A2	=	0
A3	=	3
MUL	=	-
DIV	=	-

Hot sanitary water
Pulse by volume meter

3522N 007

A1	=	0
A2	=	0
A3	=	7
MUL	=	-
DIV	=	-

Total water
Pulse by volume meter

3522N 008

A1	=	0
A2	=	0
A3	=	8
MUL	=	-
DIV	=	-

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

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Configuration mode M2

By assigning the address in position M2, further pre-configuration modes are also defined, some of which integrate the control of the loads.

List of preconfigured modes

M2 = **1** Display of the total electric consumption and load control 22

M2 = **2** Display of the total electric consumption, of three generic electric consumptions and load control 24

M2 = **3** Display of the total electric consumption, electric cooling, energy consumptions for water (from volume meter) and heating (from heating meter), and load control 26

M2 = **4** Display of the balance between photovoltaic energy produced, and electricity consumed, and water (from volume meter) 28

M2 = **5** Display of 7 generic electric consumptions, water energy consumptions (from volume meter), and heating (from heating meter) 30

M2 = **6** Display of three-phase total electric consumption, electric cooling, and water energy consumption (from volume meter), and heating (from heating meter) 32

TYPE OF CONSUMPTION	DISPLAY ICON	MEASUREMENT ORIGIN	UNIT OF MEASURE	CONFIGURATION MODE M2 =
Total electric		Toroid	W (electric)	M2 = 1 - 5
Total electric (three phases)		Toroids	W (electric)	M2 = 6
Generic electric consumptions		Toroids	W (electric)	M2 = 2 M2 = 5
Water		Pulse by volume meter	l	M2 = 3 - 6
Heating		Pulse by heat meter	W (thermal)	M2 = 3 M2 = 5 M2 = 6
Cooling		Toroid	W (electric)	M2 = 3 M2 = 6
Load control function		CC actuator	W (only for F522)	M2 = 1 - 4

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF THE TOTAL ELECTRIC CONSUMPTION AND LOAD CONTROL

Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 0 M2 = 1

Description

- Measurement of the electric consumptions (total consumption)
- Actuator consumption (only for actuator item F522) and load control

ITEM	DESCRIPTION
E49	Compact power supply
F521	Central unit for load management
F523	16A 1 M DIN basic actuator
F522	Actuator 16A with sensor
3523	Toroid for reading
H/LN4710	Energy display
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-2	Line protection circuit breaker

F521	
A1	= 0
A2	= 0
A3	= 1
P	= 0
TOL	= 5

F522	
A	= 0
PL	= 0
M	= 0
P1	= 0
P2	= 1
PF	= 5

F523	
A	= 0
PL	= 0
G	= 0
M	= 0
P1	= 0
P2	= 2

F522	
A	= 0
PL	= 0
M	= 0
P1	= 0
P2	= 3
PF	= 0

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device
Page 1	Total electric consumption		Central unit for load management	Wh	001
Page 2	Actuator with priority 1		CC actuator	(Wh only for F522)	01
Page 3	Actuator with priority 2		CC actuator	(Wh only for F522)	02
Page 4	Actuator with priority 3		CC actuator	(Wh only for F522)	03
Page 5	Actuator with priority 4		CC actuator	(Wh only for F522)	04
Page 6	Actuator with priority 5		CC actuator	(Wh only for F522)	05
Page 7	Actuator with priority 6		CC actuator	(Wh only for F522)	06
Page 8	Actuator with priority 7		CC actuator	(Wh only for F522)	07
Page 9	Actuator with priority 8		CC actuator	(Wh only for F522)	08

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

N
L

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

C Supplied with each F521 is a 3523 toroid for the reading of the current

D The F22 actuator with integrated current sensor is capable of measuring the consumptions of the controlled load.

Priority 4 load

F522

A	= 0
PL	= 0
M	= 0
P1	= 0
P2	= 4
PF	= 0

Energy display
H/LN4710

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF THE TOTAL ELECTRIC CONSUMPTION, OF THREE GENERIC ELECTRIC CONSUMPTIONS AND LOAD CONTROL

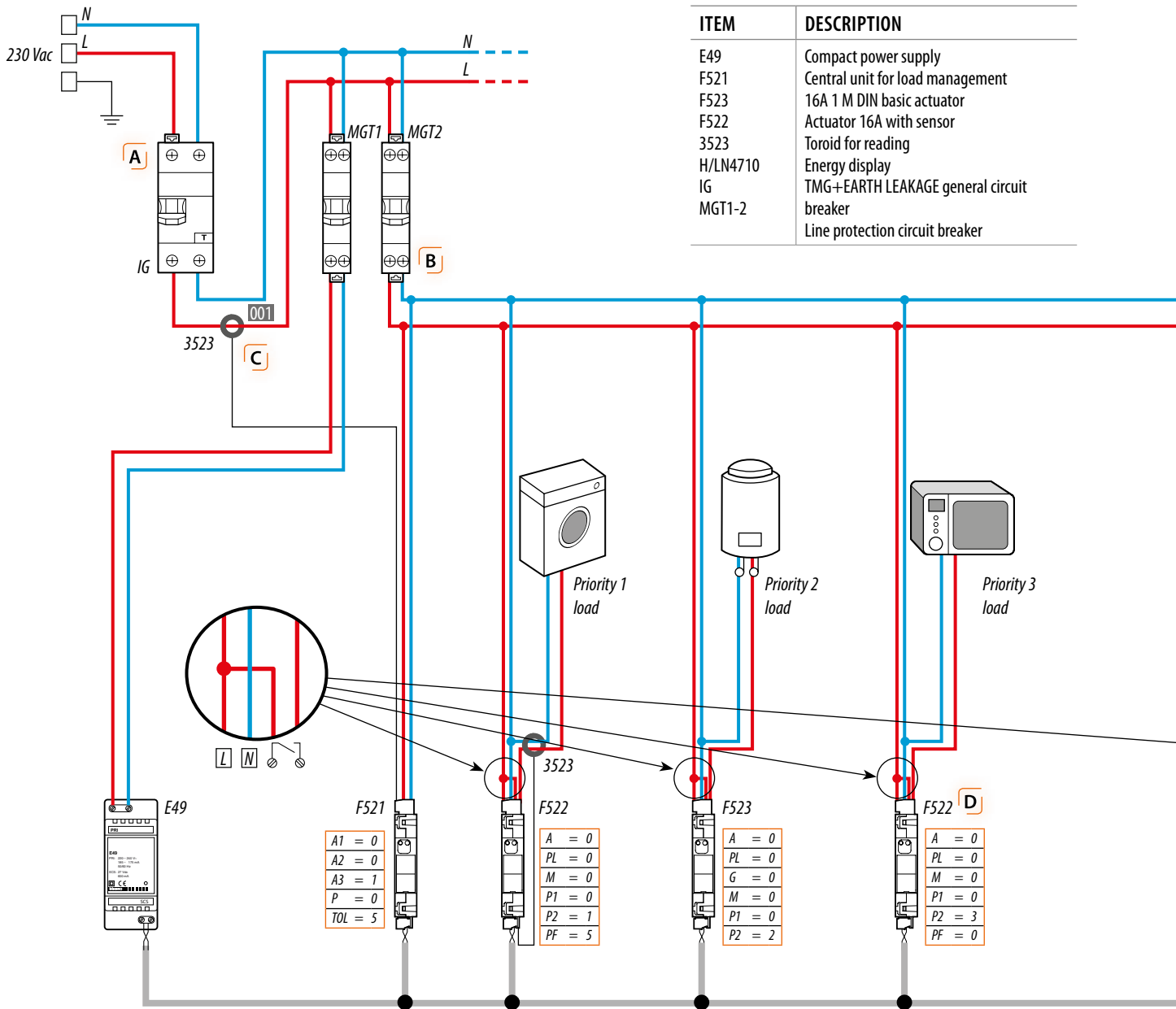| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 0 M2 = 2

Description

- Measurement of the electric consumptions (total consumption) and three electric lines.
- Actuator consumption (only for actuator item F522) and load control

ITEM	DESCRIPTION
E49	Compact power supply
F521	Central unit for load management
F523	16A 1 M DIN basic actuator
F522	Actuator 16A with sensor
3523	Toroid for reading
H/LN4710	Energy display
IG	TMG+EARTH LEAKAGE general circuit
MGT1-5	breaker
F520	Line protection circuit breaker
	3-input energy meter

F521

A1	=	0
A2	=	0
A3	=	1
P	=	0
TOL	=	5

F522

A	=	0
PL	=	0
M	=	0
P1	=	0
P2	=	1
PF	=	5

F523

A	=	0
PL	=	0
G	=	0
M	=	0
P1	=	0
P2	=	2

F522

A	=	0
PL	=	0
M	=	0
P1	=	0
P2	=	3
PF	=	0

Priority 1 load   Priority 2 load   Priority 3 load

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device
Page 1	Total electric consumption		Toroid	Wh	001
Page 2	Generic electric consumption 1		Toroid	Wh	002
Page 3	Generic electric consumption 2		Toroid	Wh	003
Page 4	Generic electric consumption 3		Toroid	Wh	004
Page 5	Actuator with priority 1		CC actuator	(Wh only for F522)	01
Page 6	Actuator with priority 2		CC actuator	(Wh only for F522)	02
Page 7	Actuator with priority 3		CC actuator	(Wh only for F522)	03
Page 8	Actuator with priority 4		CC actuator	(Wh only for F522)	04
Page 9	Actuator with priority 5		CC actuator	(Wh only for F522)	05

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
 - If one or more measurement devices are missing, the corresponding page is NOT displayed.

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

C Supplied with each F521 is a 3523 toroid for the reading of the current

D The F22 actuator with integrated current sensor is capable of measuring the consumptions of the controlled load.
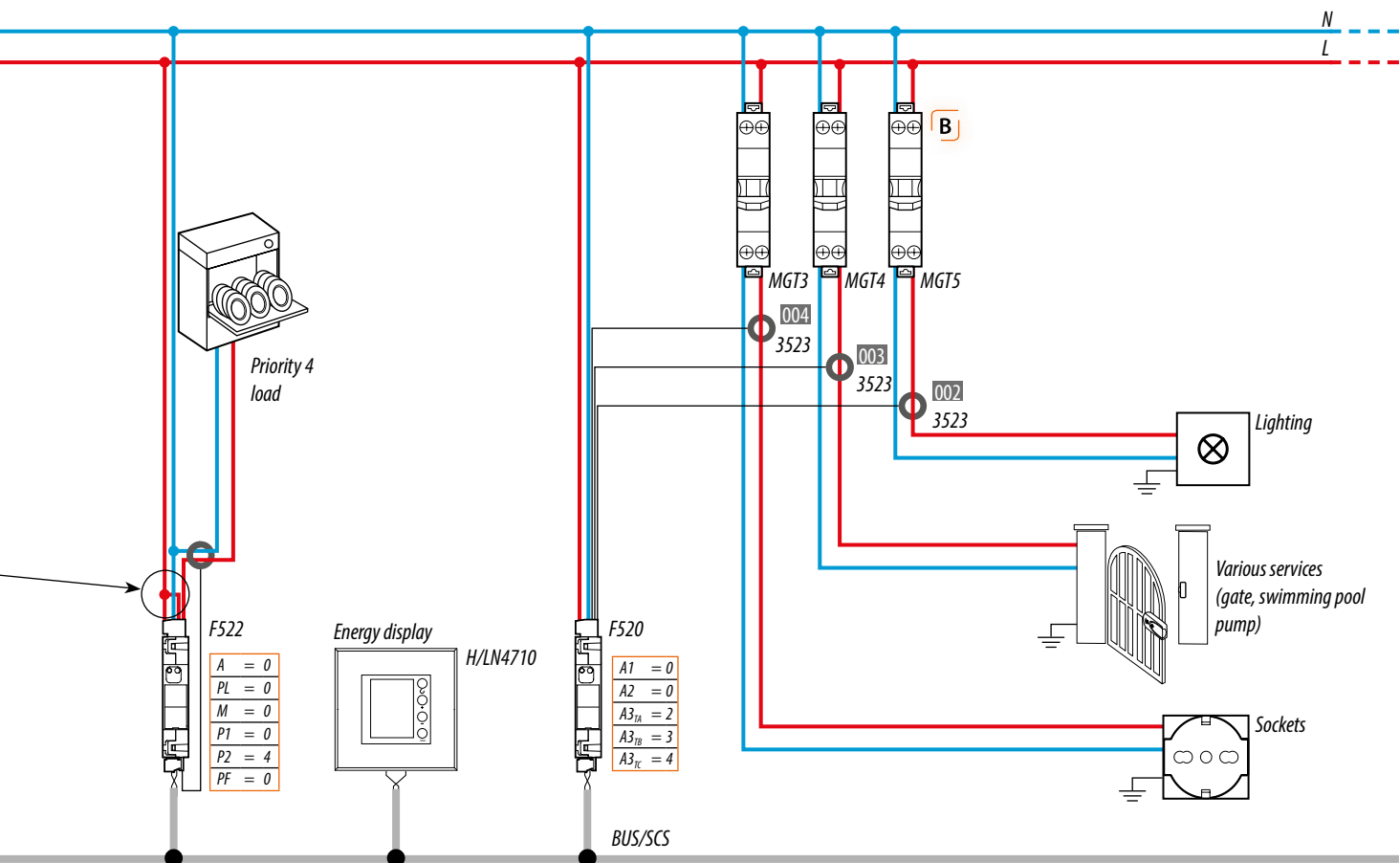
ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF TOTAL ELECTRIC CONSUMPTIONS, ELECTRIC COOLING, WATER ENERGY CONSUMPTIONS (FROM VOLUME METER), AND HEATING (FROM HEATING METER), AND LOAD CONTROL
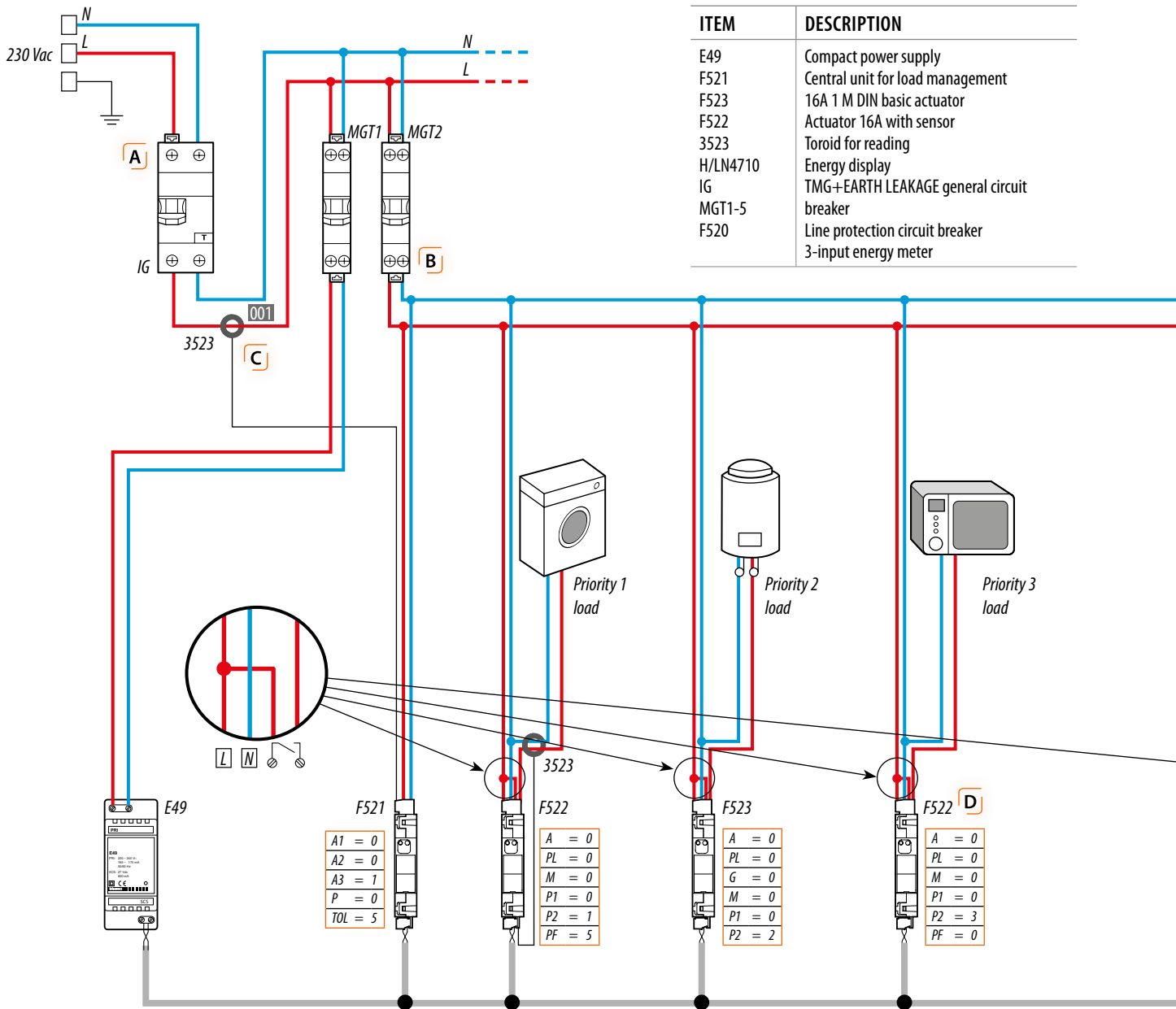
Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 0 M2 = 3

Description

- Measurement of the electric consumptions (total consumption and cooling)
- (Hot sanitary/cold) water with pulse measurement by volume meter
- Heating with pulse measurement by heat meter
- Actuator consumption (only for actuator item F522) and load control

F521		F522		F523		F522 D		F522
A1 = 0		A = 0		A = 0		A = 0		A = 0
A2 = 0		PL = 0		PL = 0		PL = 0		PL = 0
A3 = 1		M = 0		G = 0		M = 0		M = 0
P = 0		P1 = 0		M = 0		P1 = 0		P1 = 0
TOL = 5		P2 = 1		P1 = 0		P2 = 3		P2 = 4
		PF = 5		P2 = 2		PF = 0		PF = 0

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device
Page 1	Total electric consumption		Central unit for load management	Wh	001
Page 2	Water		Pulse counter	l (**NOTE 1**)	002
Page 3	Heating		Pulse counter	Wh (**NOTE 2**)	003
Page 4	Cooling		Toroid	Wh	004
Page 5	Actuator with priority 1		CC actuator	(Wh only for F522)	01
Page 6	Actuator with priority 2		CC actuator	(Wh only for F522)	02
Page 7	Actuator with priority 3		CC actuator	(Wh only for F522)	03
Page 8	Actuator with priority 4		CC actuator	(Wh only for F522)	04

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt →, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Energy display
H/LN4710

Cooling

004
3523

ITEM	DESCRIPTION
E49	Compact power supply
F521	Central unit for load management
F523	16A 1 M DIN basic actuator
F522	Actuator 16A with sensor
3523	Toroid for reading
H/LN4710	Energy display
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-3	
F520	Line protection circuit breaker 3-input energy meter

F520

A1	= 0
A2	= 0
A3$_{TA}$	= 4
A3$_{TB}$	= 0
A3$_{TC}$	= 0

Hot sanitary water pulse by volume meter

A1	= 0
A2	= 0
A3	= 2
MUL	= -
DIV	= -

3522N   *002*

Heating pulse by heat meter

A1	= 0
A2	= 0
A3	= 3
MUL	= -
DIV	= -

3522N   *003*

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

C Supplied with each F521 is a 3523 toroid for the reading of the current

D The F22 actuator with integrated current sensor is capable of measuring the consumptions of the controlled load.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF THE BALANCE BETWEEN PHOTOVOLTAIC ENERGY PRODUCED AND ELECTRICITY CONSUMED AND WATER (FROM VOLUME METER)
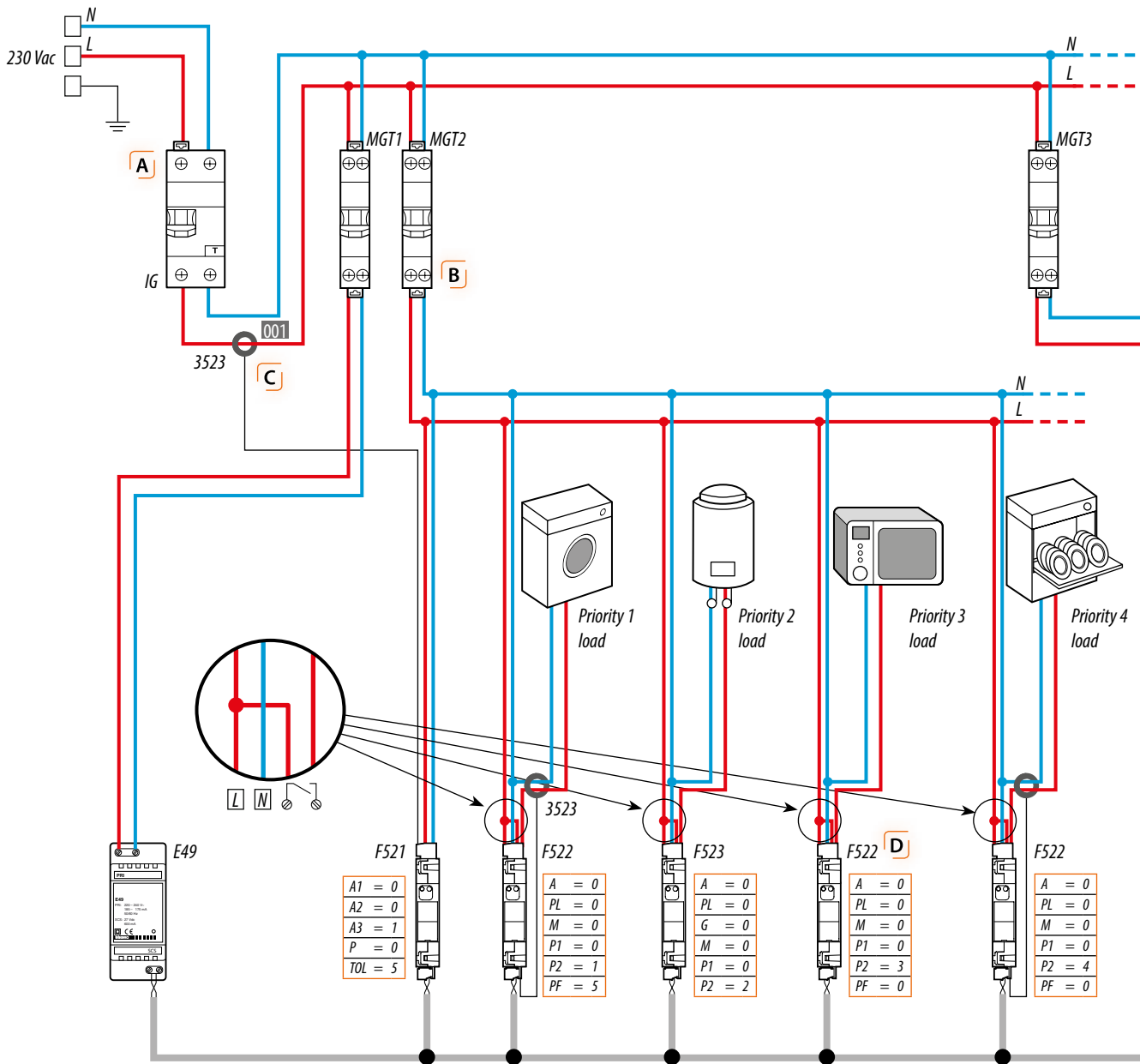
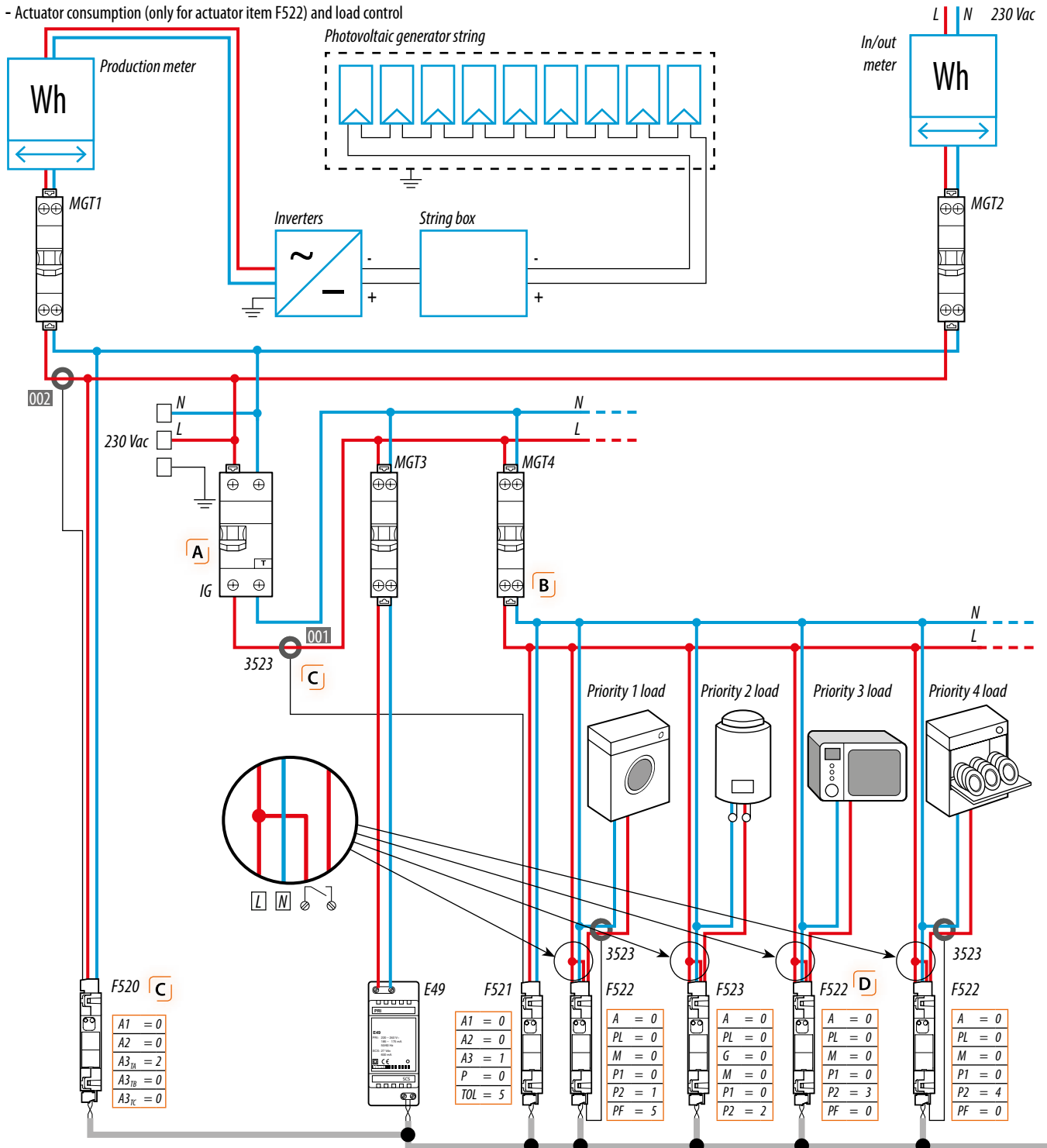| Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite" software**	M1 = 0 M2 = 4

Description

- Measurement of the electric consumptions (total consumption) and photovoltaic production
- (Hot sanitary/cold) water with pulse measurement by volume meter
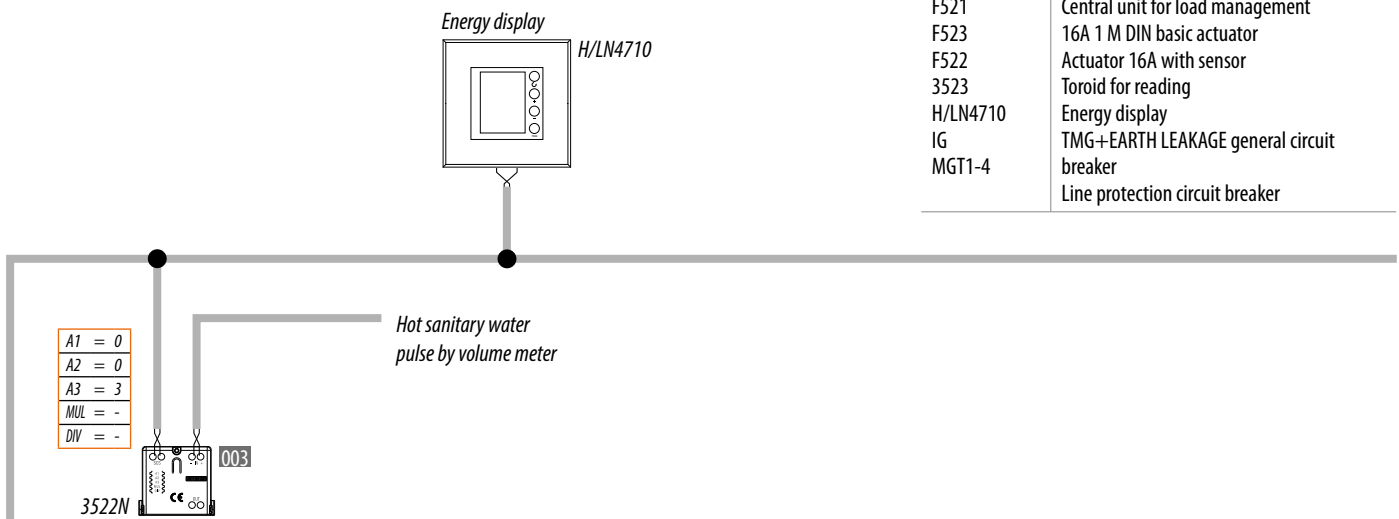- Actuator consumption (only for actuator item F522) and load control

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device
Page 1	Total electric consumption		Central unit for load management	Wh	001
Page 2	Photovoltaic panel		Toroid	Wh	002
Page 3	Consumption - Production			Wh	
Page 4	Water		Pulse counter	l (NOTE 1)	003
Page 5	Actuator with priority 1		CC actuator	(Wh only for F522)	01
Page 6	Actuator with priority 2		CC actuator	(Wh only for F522)	02
Page 7	Actuator with priority 3		CC actuator	(Wh only for F522)	03
Page 8	Actuator with priority 4		CC actuator	(Wh only for F522)	04

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

ITEM	DESCRIPTION
E49	Compact power supply
F521	Central unit for load management
F523	16A 1 M DIN basic actuator
F522	Actuator 16A with sensor
3523	Toroid for reading
H/LN4710	Energy display
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-4	Line protection circuit breaker

Energy display

H/LN4710

A1 = 0
A2 = 0
A3 = 3
MUL = -
DIV = -

3522N   003

Hot sanitary water pulse by volume meter

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

C Supplied with each F521 is a 3523 toroid for the reading of the current

D The F22 actuator with integrated current sensor is capable of measuring the consumptions of the controlled load.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF 7 GENERIC ELECTRIC CONSUMPTIONS, WATER ENERGY CONSUMPTIONS (FROM VOLUME METER), AND HEATING (FROM HEATING METER)

Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 0 M2 = 5

Description

- Measurement of 7 electric lines
- Water with pulse measurement by volume meter
- Heating with pulse measurement by heat meter

A1 = 0
A2 = 0
A3$_{TA}$ = 1
A3$_{TB}$ = 0
A3$_{TC}$ = 0

A1 = 0
A2 = 0
A3$_{TA}$ = 2
A3$_{TB}$ = 3
A3$_{TC}$ = 4

A1 = 0
A2 = 0
A3$_{TA}$ = 5
A3$_{TB}$ = 6
A3$_{TC}$ = 7

NOTE (*): as an alternative it is possible to use the central unit for load management item F521 configured A1 = 0, A2 = 0, A3 = 1, P = 0 and TOL = 5.

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device
Page 1	Generic electric consumption 1		Toroid	Wh	001
Page 2	Generic electric consumption 2		Toroid	Wh	002
Page 3	Generic electric consumption 3		Toroid	Wh	003
Page 4	Generic electric consumption 4		Toroid	Wh	004
Page 5	Generic electric consumption 5		Toroid	Wh	005
Page 6	Generic electric consumption 6		Toroid	Wh	006
Page 7	Generic electric consumption 7		Toroid	Wh	007
Page 8	Water		Pulse counter	l (**NOTE 1**)	008
Page 9	Heating		Pulse counter	Wh (**NOTE 2**)	009

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
   - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt →, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Lighting

Various services (gate, swimming pool pump)

Energy display
H/LN4710

| A1 = 0 |
| A2 = 0 |
| A3 = 8 |
| MUL = - |
| DIV = - |

3522N 008

Hot sanitary water pulse by volume meter

| A1 = 0 |
| A2 = 0 |
| A3 = 9 |
| MUL = - |
| DIV = - |

3522N 009

Heating pulse by heat meter

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid
IG	TMG+EARTH LEAKAGE general circuit breaker
MGT1-6	Line protection circuit breaker
3522N	Pulse counter interface
H/LN4710	Energy display

A The IG general circuit breaker (TMG+EARTH LEAKAGE) must be selected based on the general absorption. For better safety and comfort it is recommended to install also the STOP&GO additional device.

B The TMG circuit breakers must be selected based on the load absorption.

ENERGY MANAGEMENT - CONFIGURATION AND WIRING DIAGRAMS

DISPLAY OF THREE-PHASE TOTAL ELECTRIC CONSUMPTIONS, ELECTRIC COOLING AND WATER ENERGY CONSUMPTIONS (FROM VOLUME METER), AND HEATING (FROM HEATING METER)
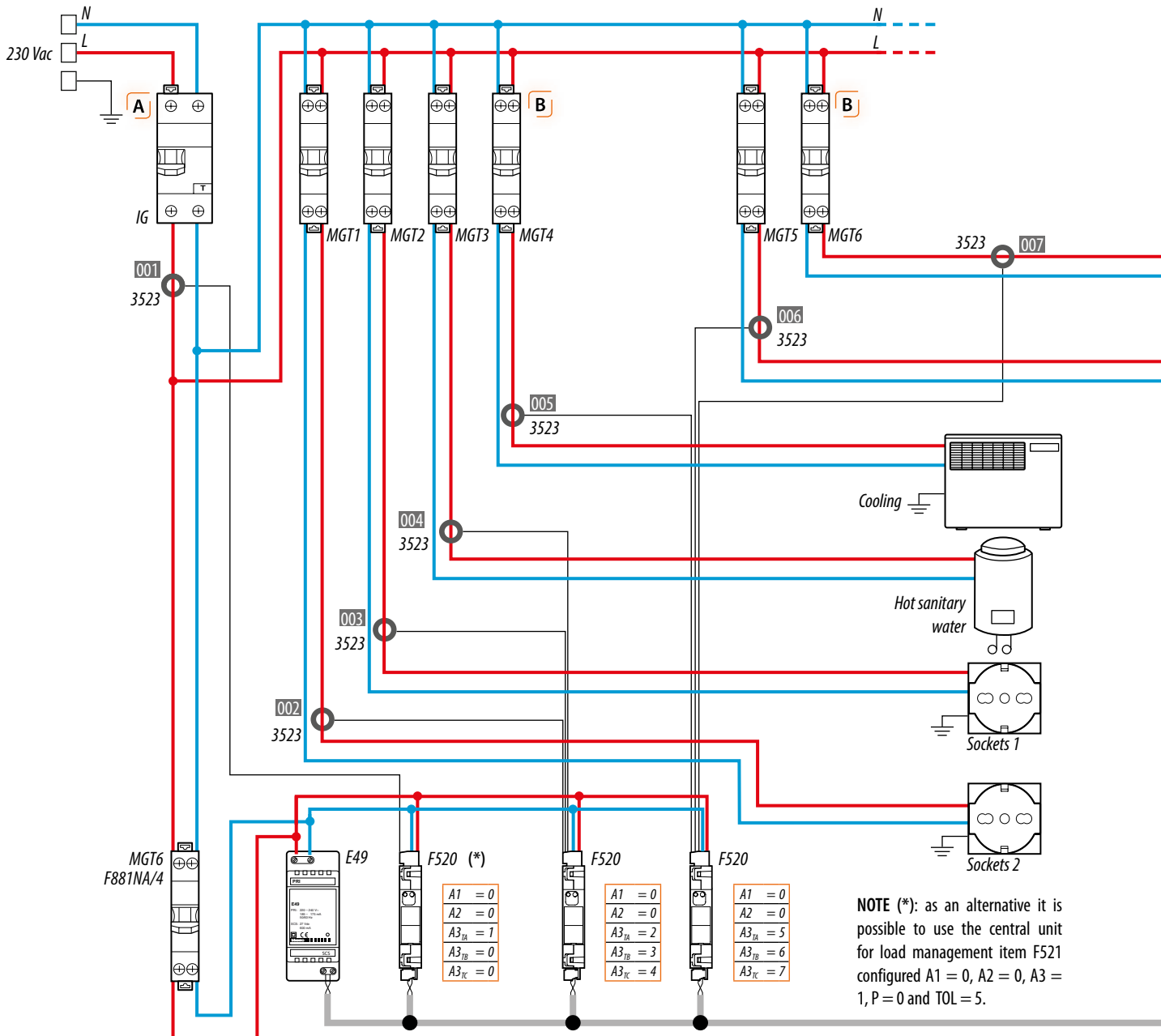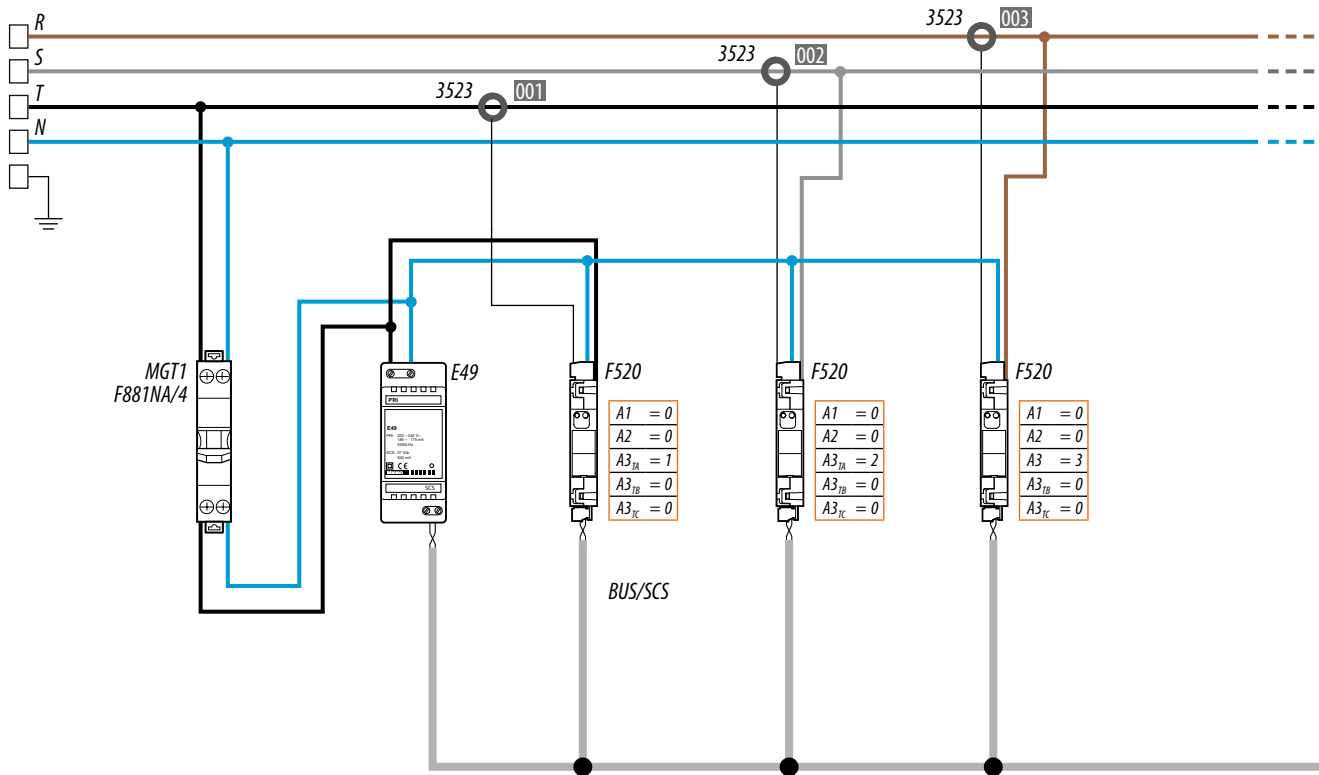
Virtual configuration	Physical configuration
See chapter "**Use of MyHOME_Suite**" software	M1 = 0 M2 = 6

Description

- Measurement of the electric consumptions (Phase 1, phase 2 and phase 3, cooling)
- (Hot sanitary/cold) water with pulse measurement by volume meter
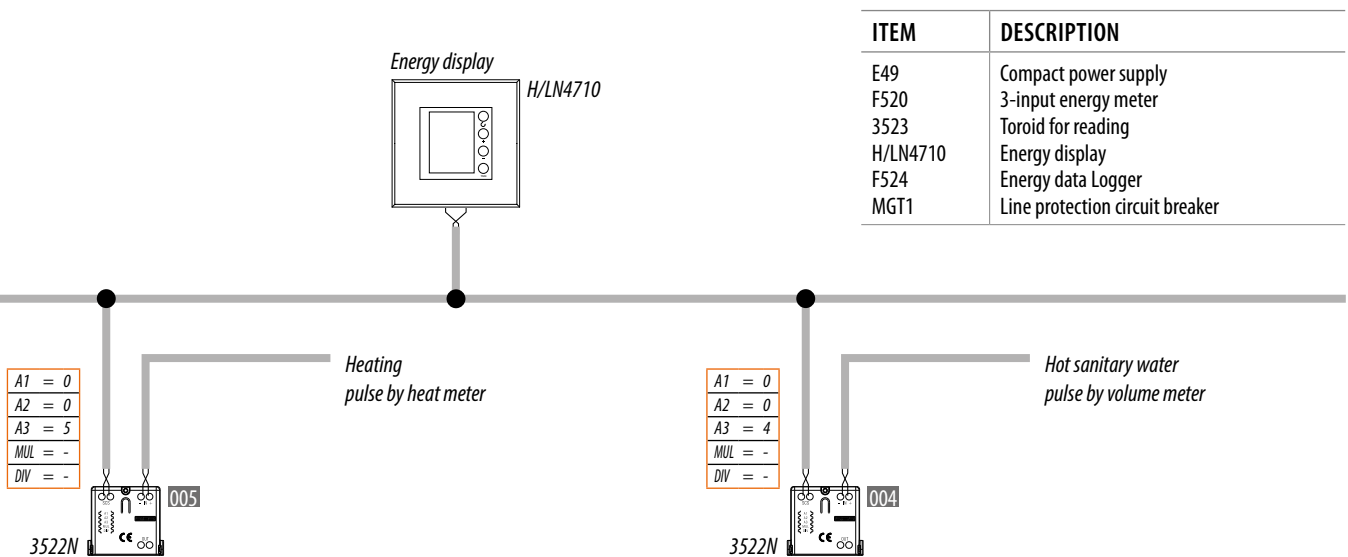- Heating with pulse measurement by heat meter

Display page	Consumption	Icon	Measure device	Unit of measure	Address of measure device	Notes
Page 1	Total electric consumption (sum of the 3 phases)	⚡		Wh		Automatic sum of the 3 phases
Page 2	Phase 1	⚡	Toroid	Wh	001	
Page 3	Phase 2	⚡	Toroid	Wh	002	
Page 4	Phase 3	⚡	Toroid	Wh	003	
Page 5	Water	💧	Pulse counter	l (**NOTE 1**)	004	
Page 6	Heating	🔥	Pulse counter	Wh (**NOTE 2**)	005	
Page 7	Cooling	❄	Toroid	Wh	006	

⚠ - Compliance with the addressing shown in the table (**meter address column**) is necessary to ensure correct operation of the device.
  - If one or more measurement devices are missing, the corresponding page is NOT displayed.

NOTE 1: if the volume meter does NOT supply 1 pulse for each litre, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 10 litres →, on the pulse counter interface this value must be multiplied by 10 to provide the data in litres) - see technical sheet of of the interface 3522N.

NOTE 2: if the heat meter does NOT supply 1 pulse for each watt, it is possible to configure the pulse counter interface to multiply/divide the measured value (E.g. the meter emits 1 pulse every 100 watt →, on the pulse counter interface this value must be multiplied by 100 to provide the data in watt) - see technical sheet of of the interface 3522N.

Energy display
H/LN4710

ITEM	DESCRIPTION
E49	Compact power supply
F520	3-input energy meter
3523	Toroid for reading
H/LN4710	Energy display
F524	Energy data Logger
MGT1	Line protection circuit breaker

Heating
pulse by heat meter

A1	=	0
A2	=	0
A3	=	5
MUL	=	-
DIV	=	-

005

3522N

Hot sanitary water
pulse by volume meter

|		
A1	=	0
A2	=	0
A3	=	4
MUL	=	-
DIV	=	-

004

3522N

Use of MyHOME_Suite software

Below is the description of the "fundamental" parameters to enter in the software for the configuration of the Energy display. For the general description of the software refer to the documentation supplied with the application.

Procedure

1.   Select the device from the left column and drag it to the central area.

2.   On the right area are the configuration parameters. The pages to configure in the Energy display are called "Modules".
     It is possible to configure up to 9 pages (module 1 to 9). Module 10 is used to enable the device setup page.

⚠ Modules are enabled by default. Disable the pages not to be displayed.

3.   For each module selected, the following parameters are available (see following image):
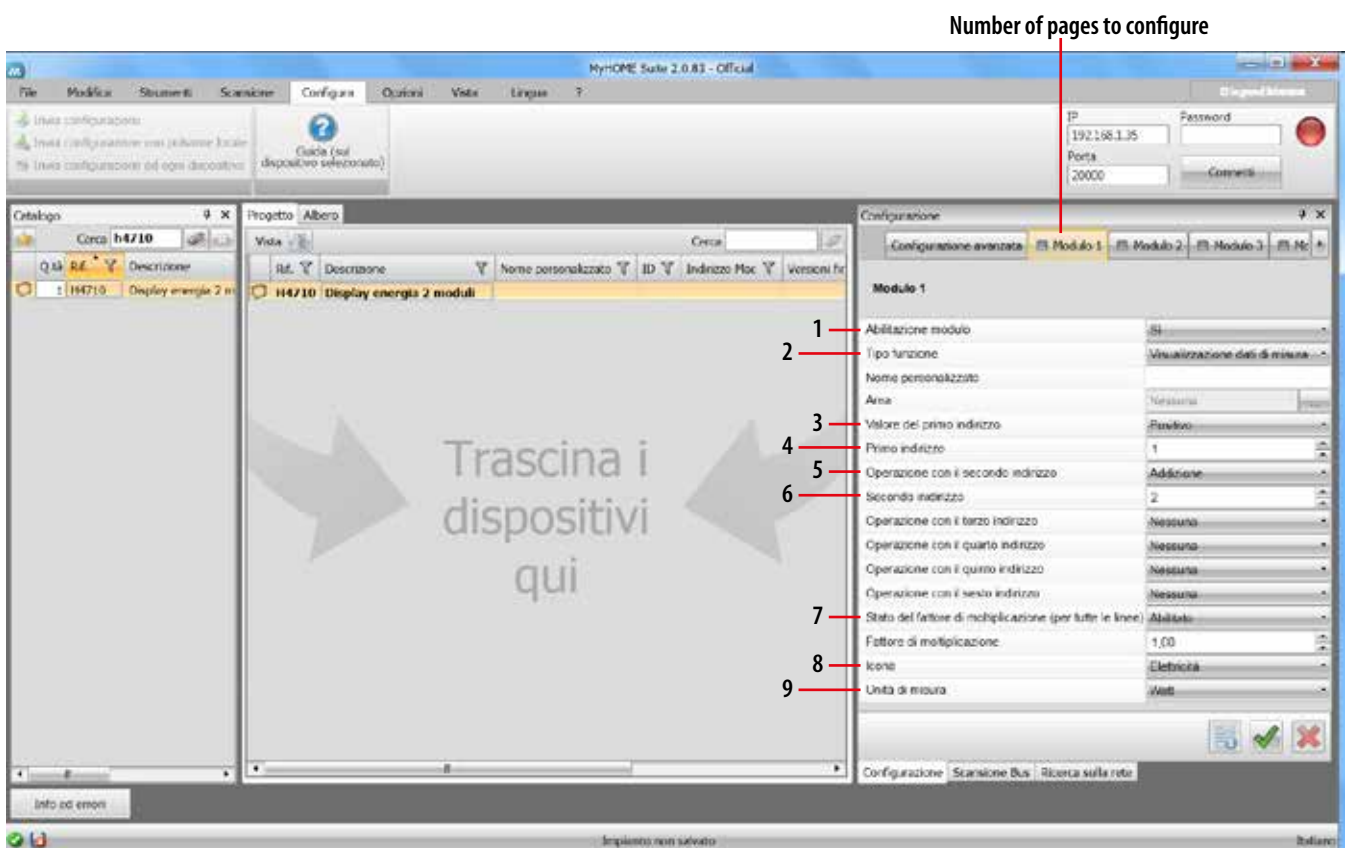
Number of pages to configure

Legend

1.   Enabling of the displaying of the Energy Display page.

2.   Definition of the function performed by the device:
     - Display of measurement data:
     - Display of load control actuator

3.   Define the value (positive or negative) of the data detected by the meters.
     If the data is unique, only select the term "Positive" in "Value of the first address", and in the "None" status leave "Operations with the second, third ... address.

4.   Specify the address of the meter, or impulse counter

5. - 6. If the measurement to display is the result of the sum or the difference of several measurements, configure the items "Operation with the second, third ... address".
     In this case, define from the menu the arithmetic to perform (sum or subtraction) for each operation, and the address of the corresponding meter.
     The first measured value to which to add or subtract the other measurements must be specified in "Value of the first address"; the measurements and the operations to perform will be specified by selecting "sum" or "subtraction" in the subsequent menus "Operation with the second, third ... address".
     For clarifications see the example in the next page.

7.   If a conversion or multiplication factor is applied to the measurement, enable this item and enter the corresponding value in the window below.

8.   Define the icon (energy, sockets, water, etc...) shown in the display of the device.

9.   Define the unit of measure of the value displayed.

Example of mode configuration M1=0 and M2=3

The table below lists the parameters that must be selected or entered in MyHOME_Suite to display the data in each page of the device.

	Page 1	Page 2	Page 3	Page 4
Item in MyHOME_Suite	Module 1	Module 2	Module 3	Module 4
Module enabling	YES	YES	YES	YES
Type of function	Display of measurement data	Display of measurement data	Display of measurement data	Display of measurement data
Value of the first address	Positive	Positive	Positive	Positive
Line 1 address	1	2	3	4
Operation with the ....address	None	None	None	None
Status of the multiplication factor	Disabled	Disabled	Disabled	Disabled
Icon	Electricity	Water	Heating	Cooling
Unit of measure displayed	Watt	Litre	Watt	Watt

Particular configurations

Display of the sums of the values measured.
Page 2 of the Energy Display shows a value obtained from the sum of the values of the meters with addresses 002 and 003.

Item in MyHOME_Suite	Module 2
Module enabling	YES
Type of function	Display of measurement data
Value of the first address	Positive
First address	2
Operation with the second address	Sum
Second address	3
Operation with the third ... sixth address	None
Status of the multiplication factor	Disabled
Icon	Socket
Unit of measure displayed	Watt

Transformation of a volume into energy using a conversion coefficient.
Page 3 shows a Watt value of the gas consumption measured in litres (from the impulse counter interface with address 4). In this case, the item "status of the multiplication factor" is enabled, and the value of the calorific power of the gas, as supplied by the gas provider, is entered in the "multiplication factor" field.

Item in MyHOME_Suite	Module 3
Module enabling	YES
Type of function	Display of measurement data
Value of the first address	Positive
First address	4
Operation with the second ... sixth address	None
Status of the multiplication factor	Enabled
Multiplication factor	Value supplied from the gas provider.
Icon	Heating
Unit of measure displayed	Watt

Display of the subtractions of the values measured.
Page 6 shows a value obtained from the total electric consumption (meter with address 1), minus the consumption of the sockets (meters with addresses 2 and 3), minus the consumption of hot sanitary water (meter with address 5), minus the consumption of the cooling system (meter with address 6).

Item in MyHOME_Suite	Module 6
Module enabling	YES
Type of function	Display of measurement data
Value of the first address	Positive
First address	1
Operation with the second address	Subtraction
Second address	2
Operation with the third address	Subtraction
Third address	3
Operation with the fourth address	Subtraction
Fourth address	5
Operation with the fifth address	Subtraction
Fifth address	6
Operation with the sixth address	None
Sixth address	None
Status of the multiplication factor	Disabled
Icon	Lightning
Unit of measure displayed	Watt

Software configuration parameters for the load control actuators
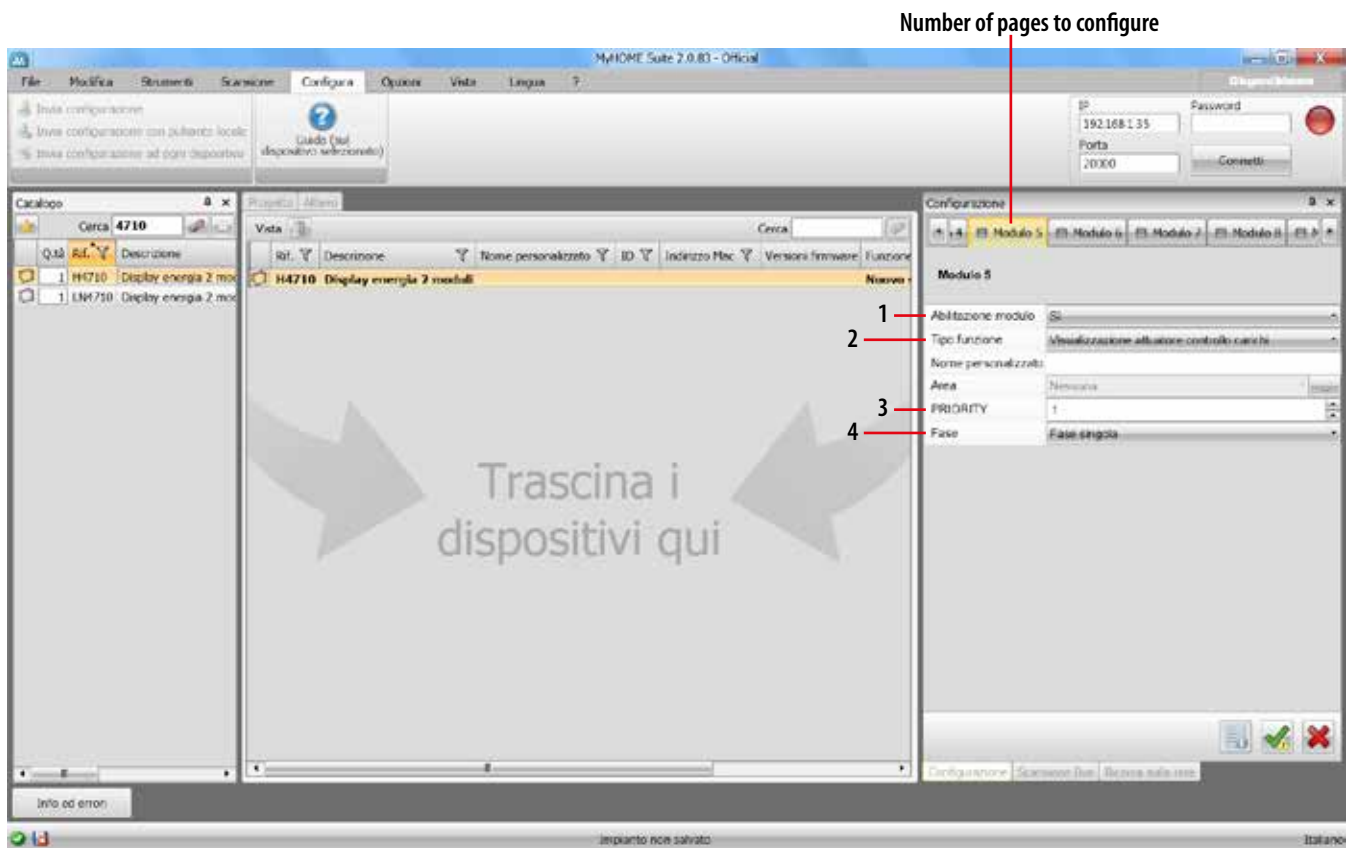
Number of pages to configure

Legend

1. Enabling of the displaying of the Energy Display page.
2. Definition of the function performed by the device: select Display of load control actuator.
3. Specify the priority assigned to the actuator.
4. Indicate the phase of the line to control: Single Phase or 1 to 3 Phase in case of a three-phase system.

The table below lists the parameters that must be selected or entered in MyHOME_Suite to display the data in pages 5 to 8 of the device.

	Page 5	Page 6	Page 7	Page 8
Item in MyHOME_Suite	Module 5	Module 6	Module 7	Module 8
Module enabling	YES	YES	YES	YES
Type of function	Load control actuator display	Load control actuator display	Load control actuator display	Load control actuator display
PRIORITY	1	2	3	4
Phase	Single phase	Single phase	Single phase	Single phase