

## Project report Logasoft Hydraulik-Assistent

### Project: Kotelna Ptašínského, Brne

#### Project data

Project number:

Address of the  
system:

Author:

Comment:

#### Contact partner

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Prospective customer  
no.:

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Telephone:

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## 1 Technical data

### 1.1 Heat source (HG)

|                          | <b>HG 1</b>                   | <b>HG 2</b>                   | <b>HG 3</b> |     |
|--------------------------|-------------------------------|-------------------------------|-------------|-----|
| Make                     | Buderus                       | Buderus                       | -           |     |
| Model                    | Logamax plus<br>GB192-50 iW H | Logamax plus<br>GB192-50 iW H | -           |     |
| Boiler material          | Aluminium                     | Aluminium                     | -           |     |
| Fuel                     | Natural gas                   | Natural gas                   | -           |     |
| Rated output 40/30 °C    | 48                            | 48                            | -           | kW  |
| Rated output 75/60 °C    | 0                             | 0                             | -           | kW  |
| Rated output 80/60 °C    | 0                             | 0                             | -           | kW  |
| Perm. operating pressure | 4,0                           | 4,0                           | -           | bar |
| Weight                   | 48                            | 48                            | -           | kg  |
| Water content            | 2                             | 2                             | -           | l   |
| Flue outlet inner dia.   | 80                            | 80                            | -           | mm  |
| Length L                 | 0                             | 0                             | -           | mm  |
| Width B                  | 1                             | 1                             | -           | mm  |
| Height H                 | 1                             | 1                             | -           | mm  |

### Fuel type and net calorific value

|                 |                          |                          |
|-----------------|--------------------------|--------------------------|
| Hu Natural gas: | 36 252 kJ/m <sup>3</sup> | 10,07 kWh/m <sup>3</sup> |
| He Natural gas: | 40 140 kJ/m <sup>3</sup> | 11,15 kWh/m <sup>3</sup> |

## 1.2 Control units, Central

### 1.2.1 Boiler control

Boiler 1: BC30  
Boiler 2: BC30

### 1.2.2 RC310 Buderus black DE,AT,LU

RC310 Buderus black DE,AT,LU

MC400 DE,LU,AT,CH,IT,BE,FR,ES,PT,GB

System functions

MM100-C Buderus DE, AT, CH, IT, BE, LU

Heating circuit Outl. 2

MM100-C Buderus DE, AT, CH, IT, BE, LU

VAC Outl. 3

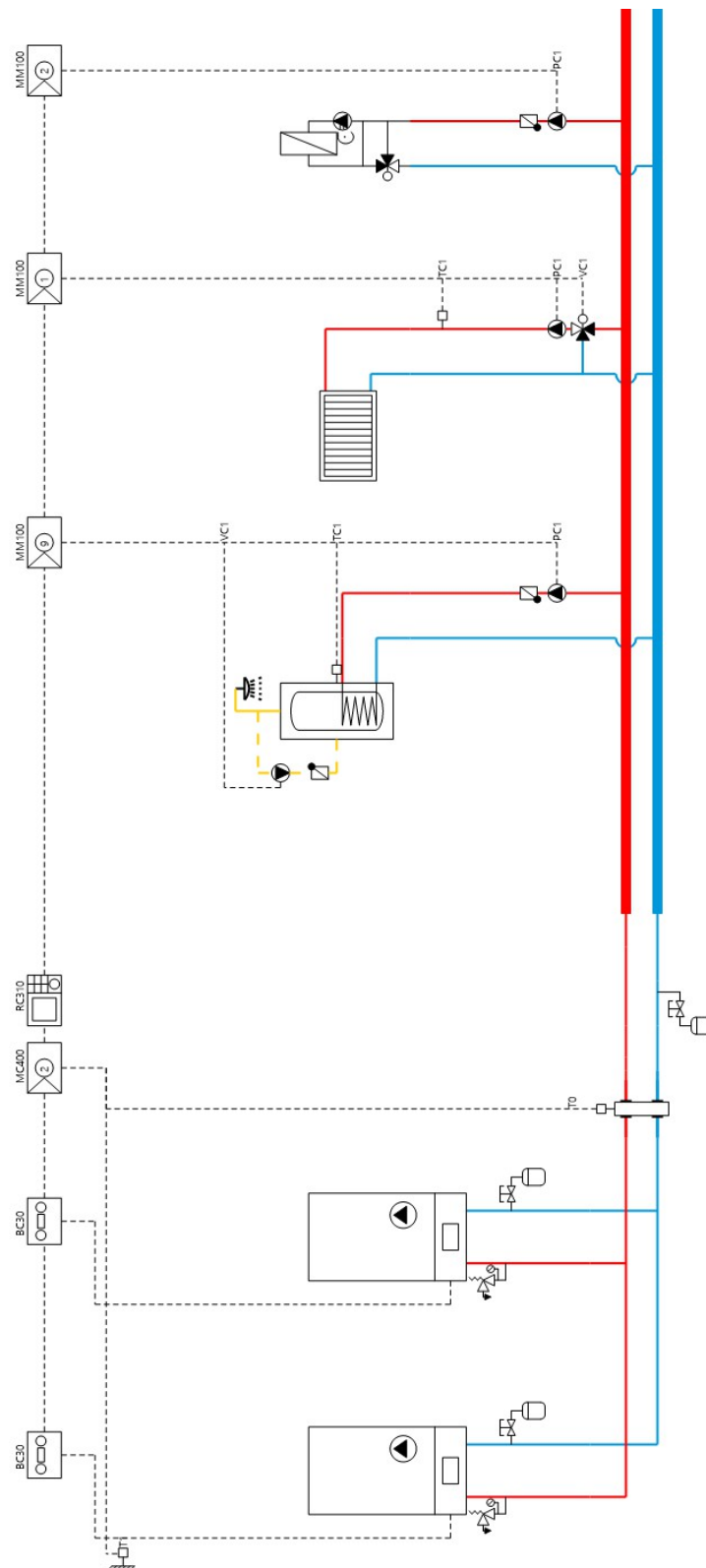
MM100-C Buderus DE, AT, CH, IT, BE, LU

DHW heating Outl. 1

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## 2 System view

This wiring diagram is a schematic representation only and a non-binding indication of a possible hydraulic arrangement. The safety equipment must be implemented in accordance with the applicable standards and local regulations.



### 3 Cable list

The cable types selected here are recommendations. The selection and dimensioning as well as proper and professional installation of cables and lines is the responsibility of the specialist tradesmen carrying out the work. The selection must therefore be adapted to local conditions. Technical documents such as installation instructions and connection diagrams of the supplier must be taken into account.

When selecting the components for a cable and line system and their installation, the following standards must be observed in particular:

- DIN VDE 0100-520 establishing of power installations with nominal voltages up to 1000 volts; selection and establishing of electrical equipment; cables and line systems (installations)
- DIN VDE 0298 use of cables and insulated cables for power installations, Part 4: Recommended values for current carrying capacity of cables.

It must be ensured that a standard-compliant disconnecting device in accordance with DIN EN 60335 for all-pole disconnection from the power supply is available. Cables with supply voltage (230V or 400V) must not run parallel to low voltage cables (BUS cable, remote control cable, sensor cable). Particular attention must be paid to correct earthing and faultless connection of the protective conductor (PE).

Note on cable type NYM, e.g. NYM-J 3x1.5mm<sup>2</sup>: only permissible with non-moving / vibrating parts (pumps, mixers, burners "vibrate"). Further information on the areas of application of sheathed cables (e.g. NYM) can be found in VDE 0100-520 ("Erection of low-voltage systems Part 5-52: Selection and erection of electrical equipment - Cable systems").

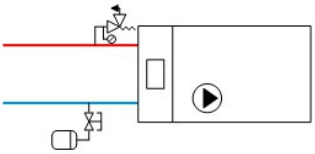
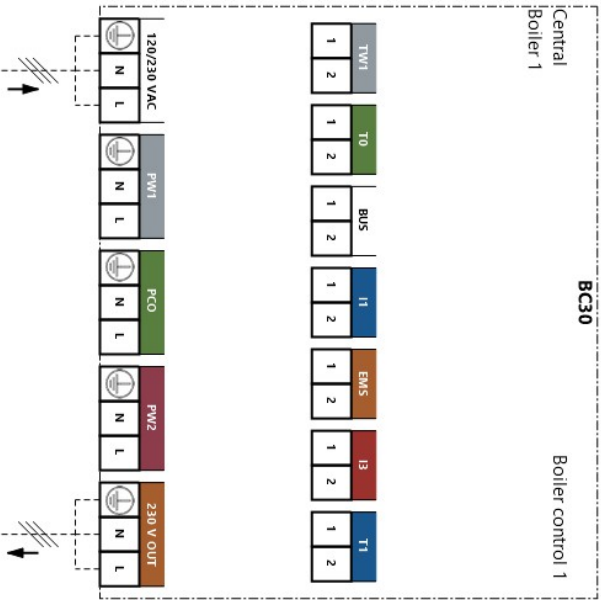
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| Source                          | Connection  | Destination                   | Function text                    | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|-------------|-------------------------------|----------------------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Boiler control 1 BC30   | 120/230 VAC |                               | Power supply                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Boiler control 1 BC30   | I3          | Central Safety technology     | Safety technology                | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |
| Central Boiler control 1 BC30   | EMS         | Central Module MC400 2        |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Boiler control 2 BC30   | 120/230 VAC |                               | Power supply                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Boiler control 2 BC30   | I3          | Central Safety technology     | Safety technology                | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |
| Central Boiler control 2 BC30   | EMS         | Central Module MC400 2        |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module RC310            | BUS         | Central Module MC400 2        |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module MC400 2 Coding 2 | 120/230 VAC |                               | Power supply                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MC400 2 Coding 2 | T1          | Central System functions      | External temperature sensor      | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |
| Central Module MC400 2 Coding 2 | T0          | Central System functions      | Strategy flow temperature sensor | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |
| Central Module MC400 2 Coding 2 | BUS         | Central Module RC310          |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module MC400 2 Coding 2 | BUS1        | Central Boiler control 1 BC30 |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module MC400 2 Coding 2 | BUS2        | Central Boiler control 2 BC30 |                                  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |

|                                       |                |  |                                       |             |                              |               |  |  |
|---------------------------------------|----------------|--|---------------------------------------|-------------|------------------------------|---------------|--|--|
| Central<br>Module MM100 1<br>Coding 1 | 120/230<br>VAC |  | Power supply                          | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 1<br>Coding 1 | PC1            | Central<br>Heating loop Outlet 2                                 | Power supply Pump                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 1<br>Coding 1 | VC1            | Central<br>Heating loop Outlet 2                                 | Three-way valve                       | 230 V       | 4 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 1<br>Coding 1 | TC1            | Central<br>Heating loop Outlet 2                                 | Heating circuit temperature<br>sensor | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y |  |  |
| Central<br>Module MM100 2<br>Coding 2 | 120/230<br>VAC |  | Power supply                          | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 2<br>Coding 2 | PC1            | Central<br>VAC device Outlet 3                                   | On/Off pot.-free                      | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY         |  |  |
| Power supply Pump                     |                | Central<br>VAC device Outlet 3                                   | Power supply Pump                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 9<br>Coding 9 | 120/230<br>VAC |  | Power supply                          | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 9<br>Coding 9 | PC1            | Central<br>DHW facility with smooth pipe heat exchanger Outlet 1 | On/Off pot.-free                      | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY         |  |  |
| Power supply Pump                     |                | Central<br>DHW facility with smooth pipe heat exchanger Outlet 1 | Power supply Pump                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 9<br>Coding 9 | VC1            | Central<br>DHW facility with smooth pipe heat exchanger Outlet 1 | Power supply Pump                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J        |  |  |
| Central<br>Module MM100 9<br>Coding 9 | TC1            | Central<br>DHW facility with smooth pipe heat exchanger Outlet 1 | DHW heating sensor                    | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y |  |  |



**Connection plan: BC30 - Boiler 1**

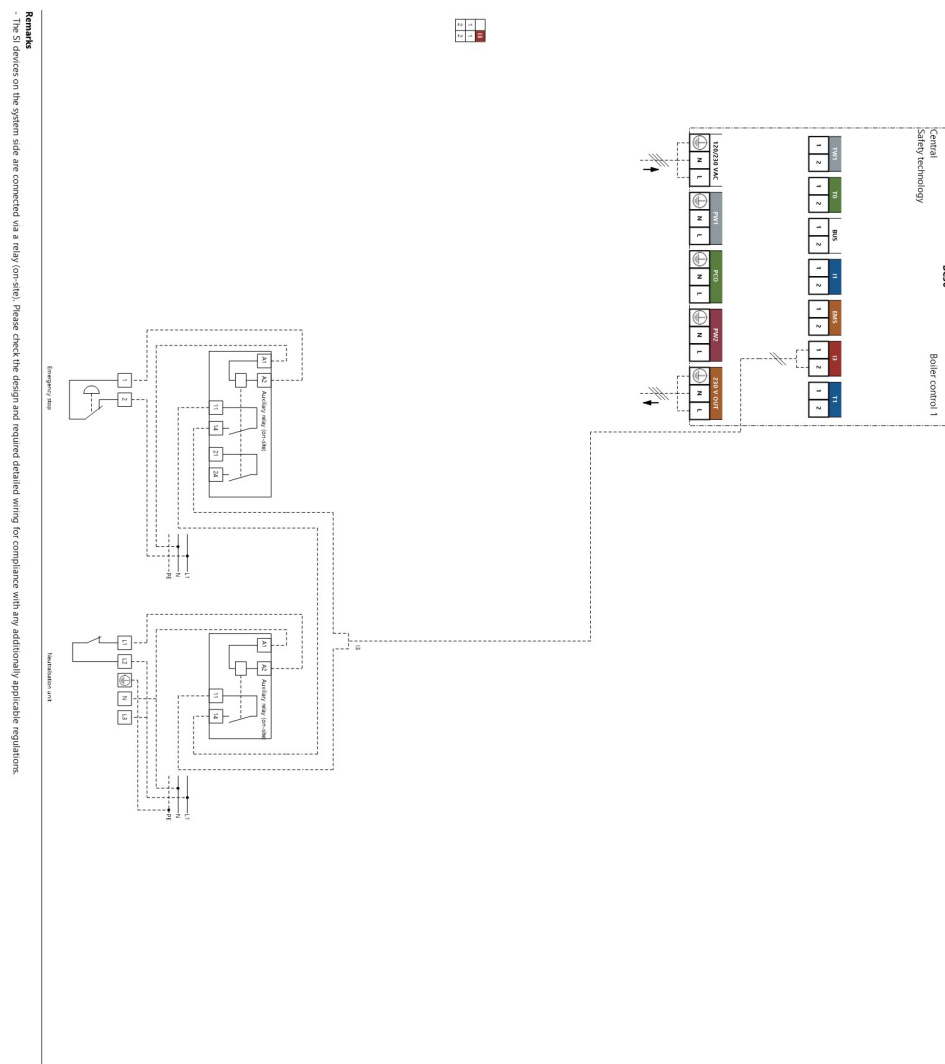


**Remarks**  
--- none ---

### Cable list: Central Boiler control 1 BC30

| Source                        | Connection  | Destination | Function text | Voltage | Cable                    | Recommended cable type | Selected cable type | Length |
|-------------------------------|-------------|-------------|---------------|---------|--------------------------|------------------------|---------------------|--------|
| Central Boiler control 1 BC30 | 120/230 VAC |             | Power supply  | 230 V   | 3 x 1,50 mm <sup>2</sup> | YSLY-J                 |                     |        |

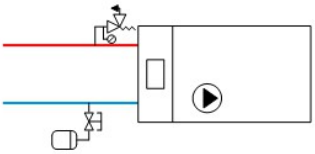
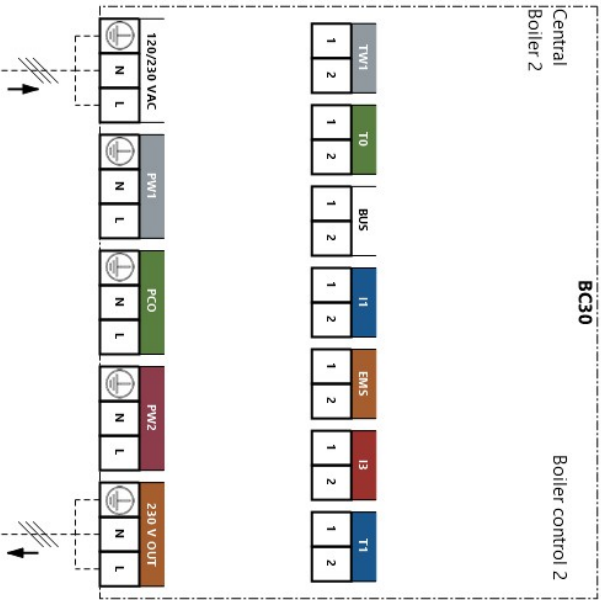
## Connection plan: BC30 - Safety technology



### Cable list: Central Boiler control 1 BC30

| Source                        | Connection  | Destination               | Function text     | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|-------------------------------|-------------|---------------------------|-------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Boiler control 1 BC30 | 120/230 VAC |                           | Power supply      | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Boiler control 1 BC30 | I3          | Central Safety technology | Safety technology | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |

**Connection plan: BC30 - Boiler 2**

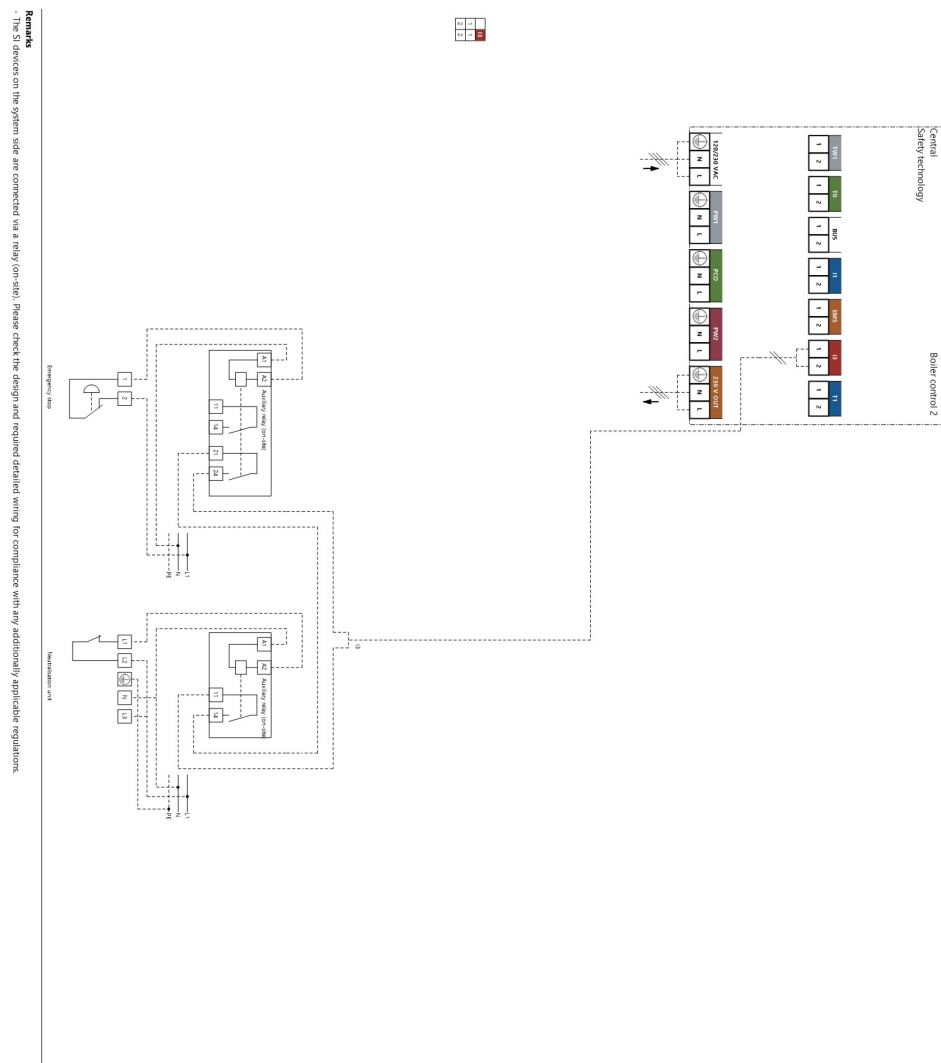


**Remarks**  
--- none ---

**Cable list: Central Boiler control 2 BC30**

| Source                        | Connection  | Destination | Function text | Voltage | Cable                    | Recommended cable type | Selected cable type | Length |
|-------------------------------|-------------|-------------|---------------|---------|--------------------------|------------------------|---------------------|--------|
| Central Boiler control 2 BC30 | 120/230 VAC |             | Power supply  | 230 V   | 3 x 1,50 mm <sup>2</sup> | YSLY-J                 |                     |        |

## Connection plan: BC30 - Safety technology

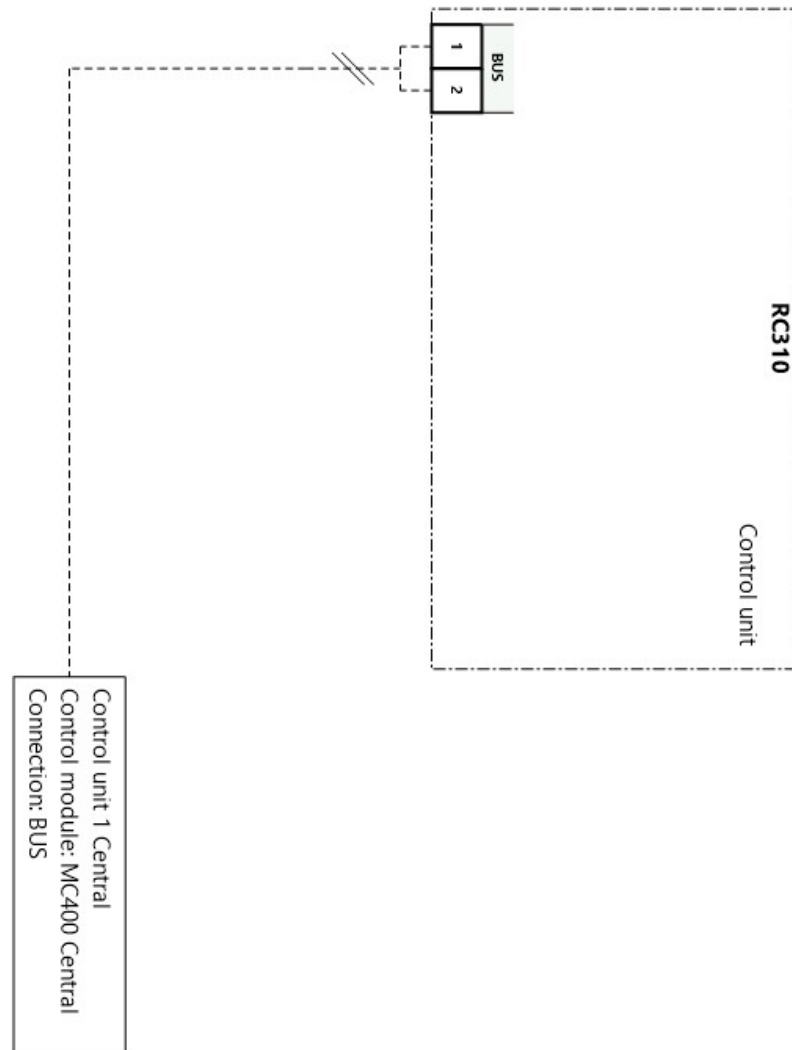


**Cable list: Central Boiler control 2 BC30**

| Source                        | Connection  | Destination               | Function text     | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|-------------------------------|-------------|---------------------------|-------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Boiler control 2 BC30 | 120/230 VAC |                           | Power supply      | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Boiler control 2 BC30 | I3          | Central Safety technology | Safety technology | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |



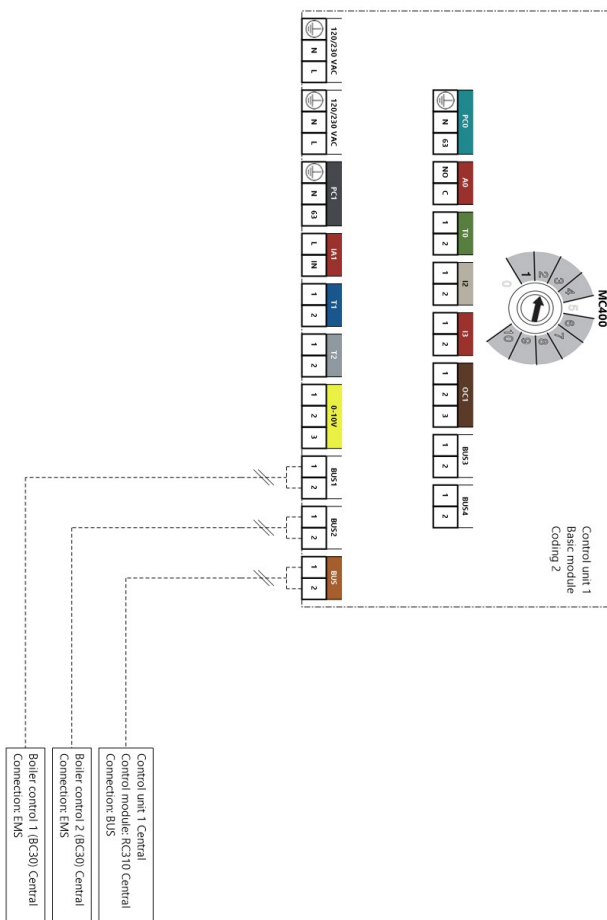
## Connection plan: RC310



**Cable list: Central Module RC310  
Central Module MC400 2**

| Source                  | Connection | Destination               | Function text | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|-------------------------|------------|---------------------------|---------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central<br>Module RC310 | BUS        | Central<br>Module MC400 2 |               | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |

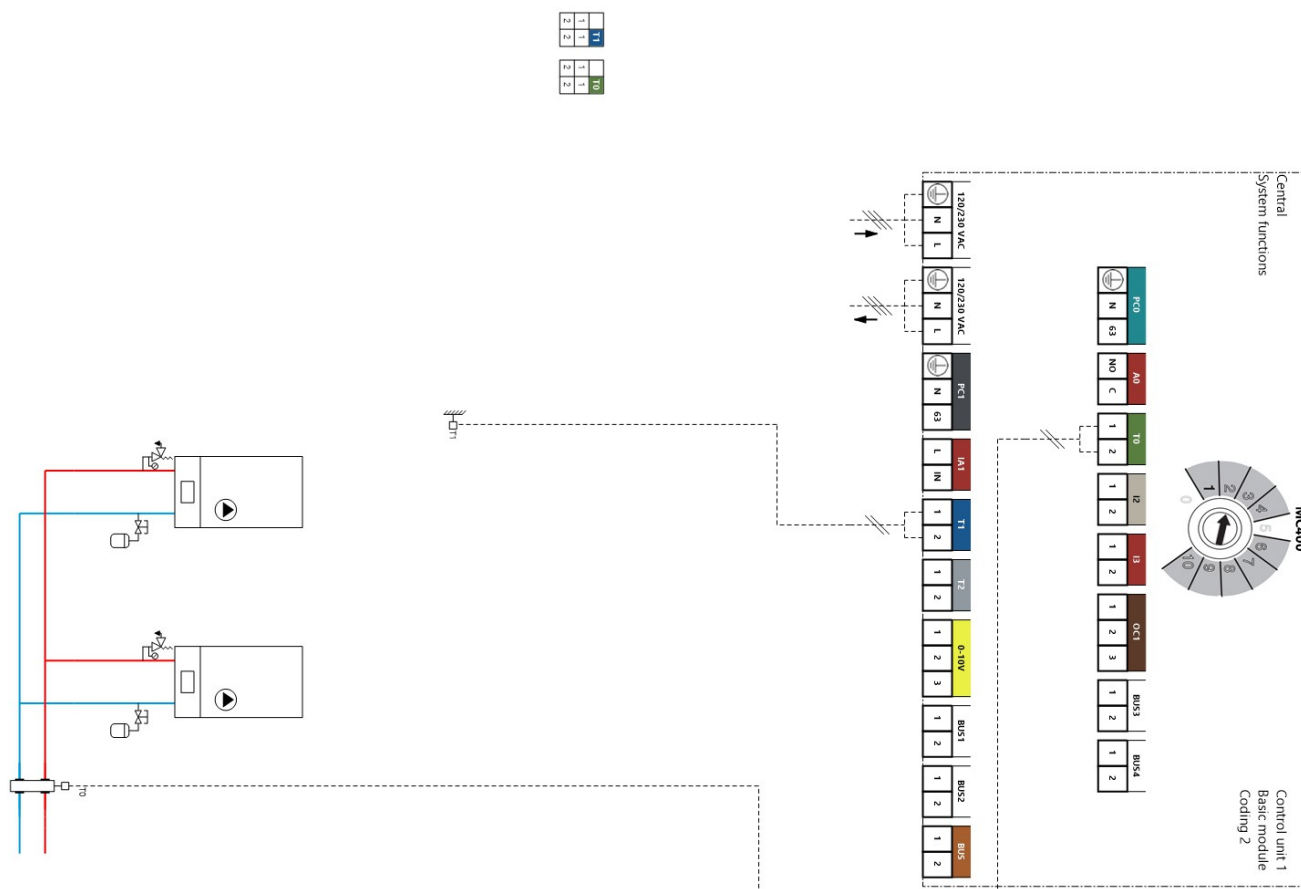
## Connection plan: MC400



### Cable list: Central Module MC400 2 Central Module RC310

| Source                          | Connection | Destination                   | Function text | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|------------|-------------------------------|---------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Module MC400 2 Coding 2 | BUS        | Central Module RC310          |               | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module MC400 2 Coding 2 | BUS2       | Central Boiler control 2 BC30 |               | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Central Module MC400 2 Coding 2 | BUS1       | Central Boiler control 1 BC30 |               | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |

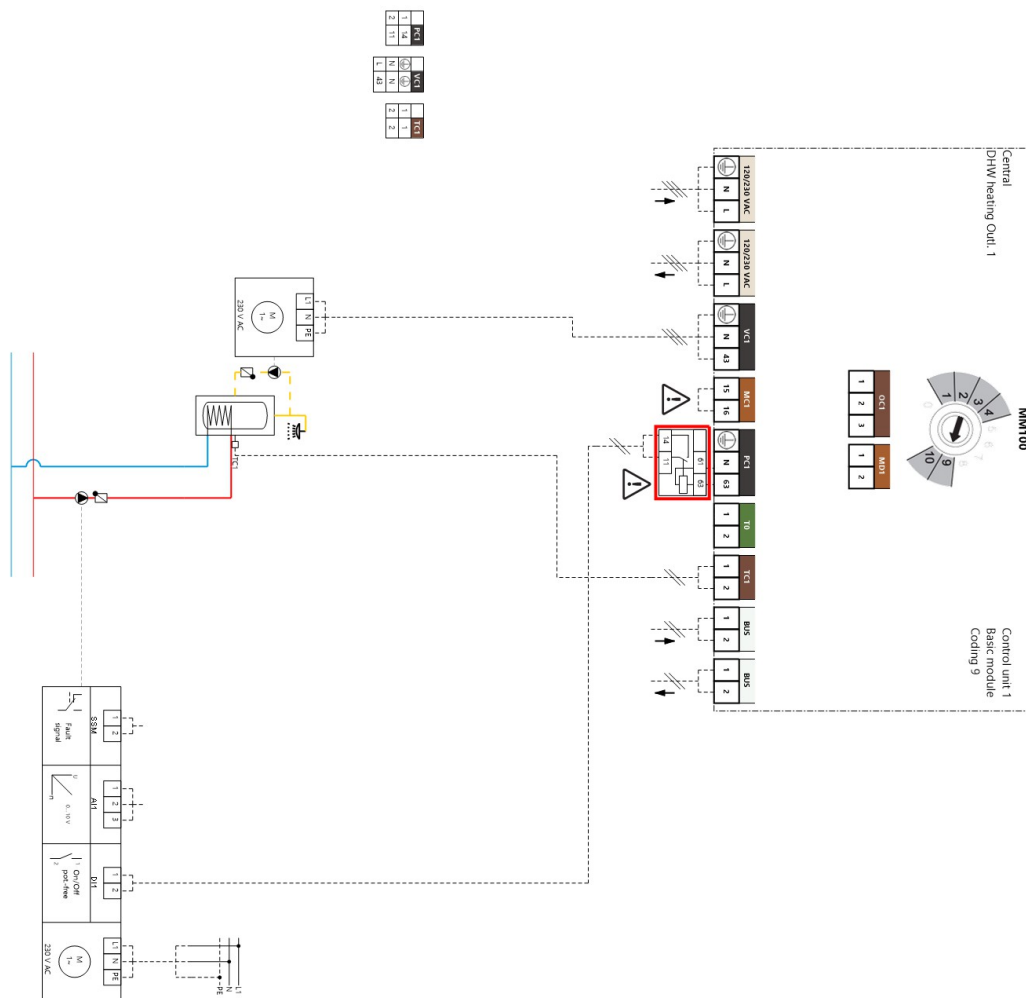
## Connection plan: MC400 - System functions



## Cable list: Central Module MC400 2

| Source                          | Connection  | Destination              | Function text                    | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|-------------|--------------------------|----------------------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Module MC400 2 Coding 2 | 120/230 VAC |                          | Power supply                     | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MC400 2 Coding 2 | T1          | Central System functions | External temperature sensor      | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |
| Central Module MC400 2 Coding 2 | T0          | Central System functions | Strategy flow temperature sensor | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |

## Connection plan: MM100 - DHW facility with smooth pipe heat exchanger Outlet 1

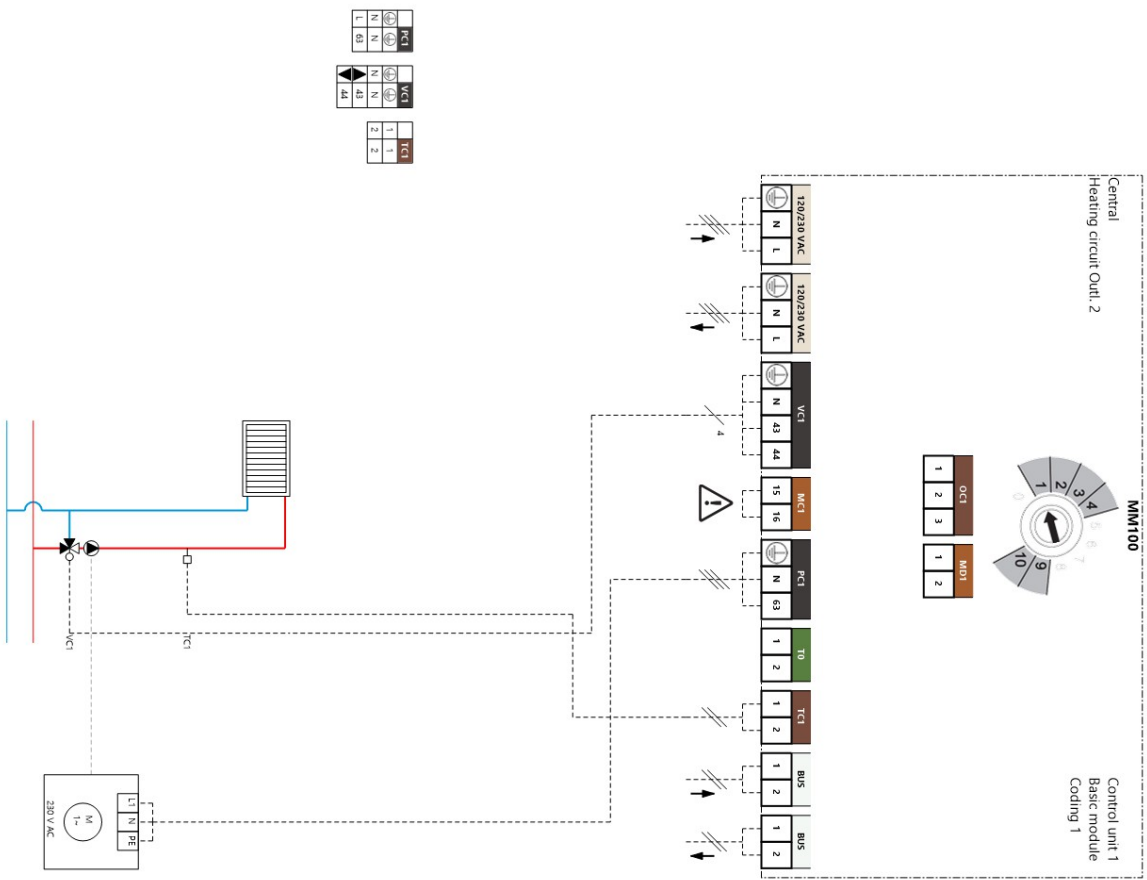


## Cable list: Central Module MM100 9

| Source                          | Connection  | Destination   | Function text      | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|-------------|---|--------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Module MM100 9 Coding 9 | 120/230 VAC |   | Power supply       | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 9 Coding 9 | PC1         | Central DHW facility with smooth pipe heat exchanger Outlet 1 | On/Off pot.-free   | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Power supply Pump               |             | Central DHW facility with smooth pipe heat exchanger Outlet 1 | Power supply Pump  | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 9 Coding 9 | VC1         | Central DHW facility with smooth pipe heat exchanger Outlet 1 | Power supply Pump  | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 9 Coding 9 | TC1         | Central DHW facility with smooth pipe heat exchanger Outlet 1 | DHW heating sensor | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |



**Connection plan: MM100 - Heating loop Outlet 2**

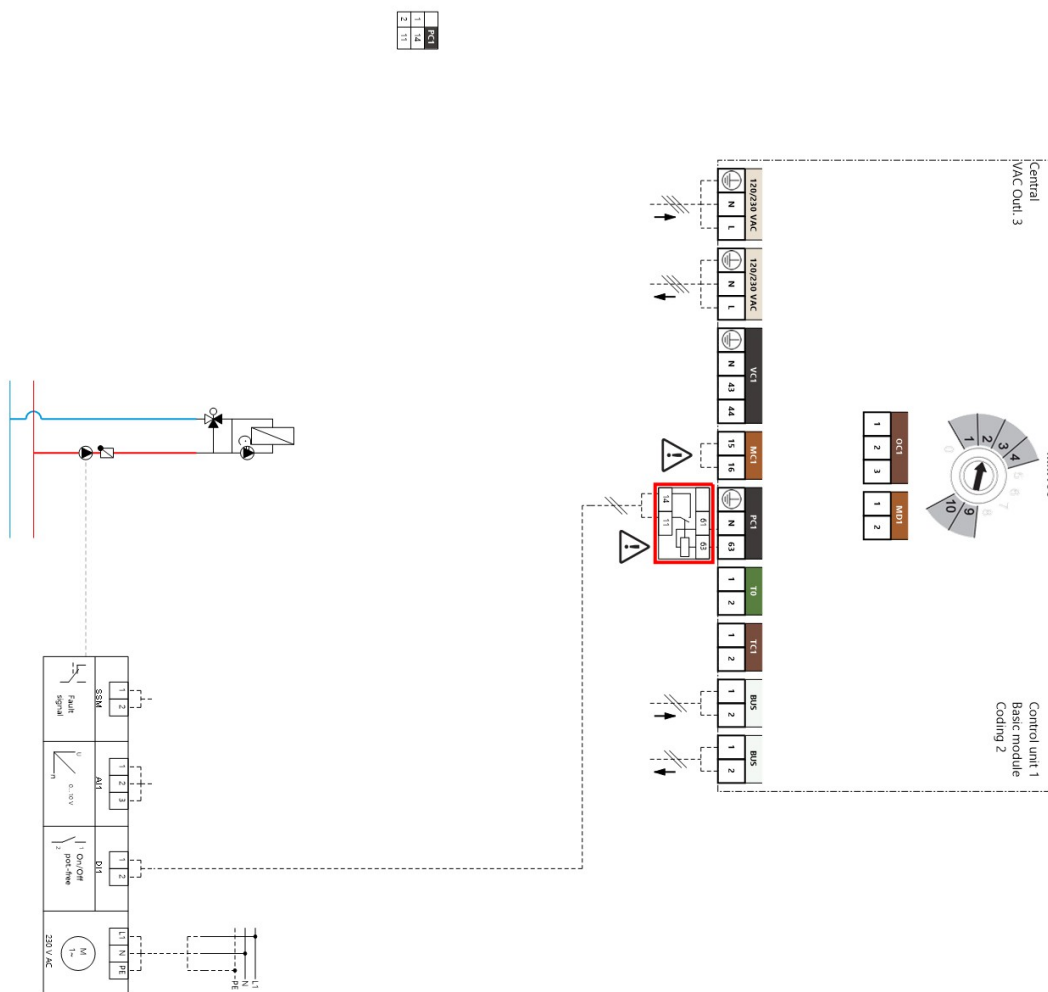


Remarks  
--- none ---

## Cable list: Central Module MM100 1

| Source                          | Connection  | Destination                   | Function text                      | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|-------------|-------------------------------|------------------------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Module MM100 1 Coding 1 | 120/230 VAC |                               | Power supply                       | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 1 Coding 1 | PC1         | Central Heating loop Outlet 2 | Power supply Pump                  | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 1 Coding 1 | VC1         | Central Heating loop Outlet 2 | Three-way valve                    | 230 V       | 4 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 1 Coding 1 | TC1         | Central Heating loop Outlet 2 | Heating circuit temperature sensor | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY/JY(ST)Y          |                     |        |

## Connection plan: MM100 - VAC device Outlet 3



**Cable list: Central Module MM100 2**

| Source                          | Connection  | Destination                 | Function text     | Voltage     | Cable                        | Recommended cable type | Selected cable type | Length |
|---------------------------------|-------------|-----------------------------|-------------------|-------------|------------------------------|------------------------|---------------------|--------|
| Central Module MM100 2 Coding 2 | 120/230 VAC |                             | Power supply      | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |
| Central Module MM100 2 Coding 2 | PC1         | Central VAC device Outlet 3 | On/Off pot.-free  | Low voltage | 2 x 2 x 0,60 mm <sup>2</sup> | LIYCY                  |                     |        |
| Power supply Pump               |             | Central VAC device Outlet 3 | Power supply Pump | 230 V       | 3 x 1,50 mm <sup>2</sup>     | YSLY-J                 |                     |        |