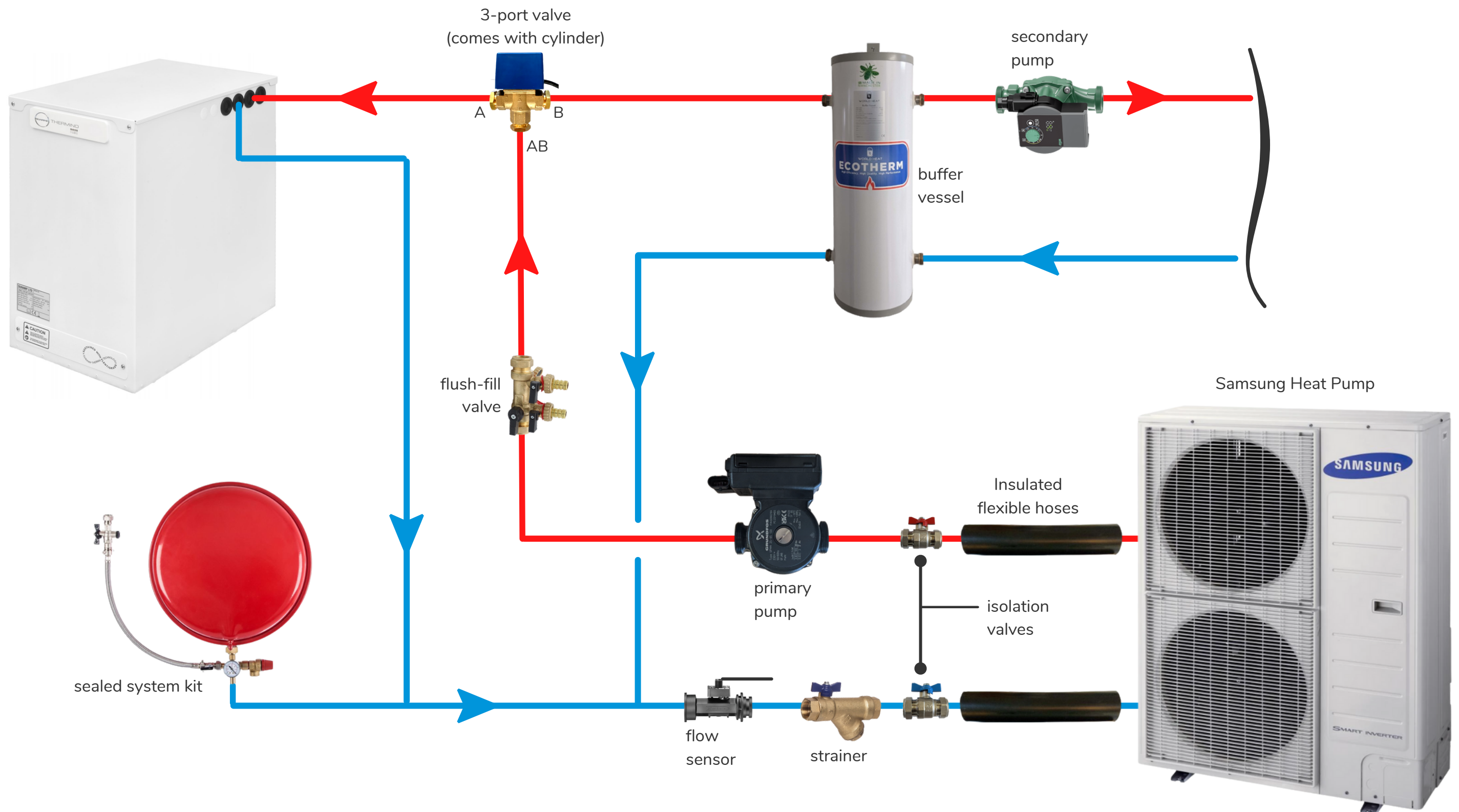


# Mechanical Schematic

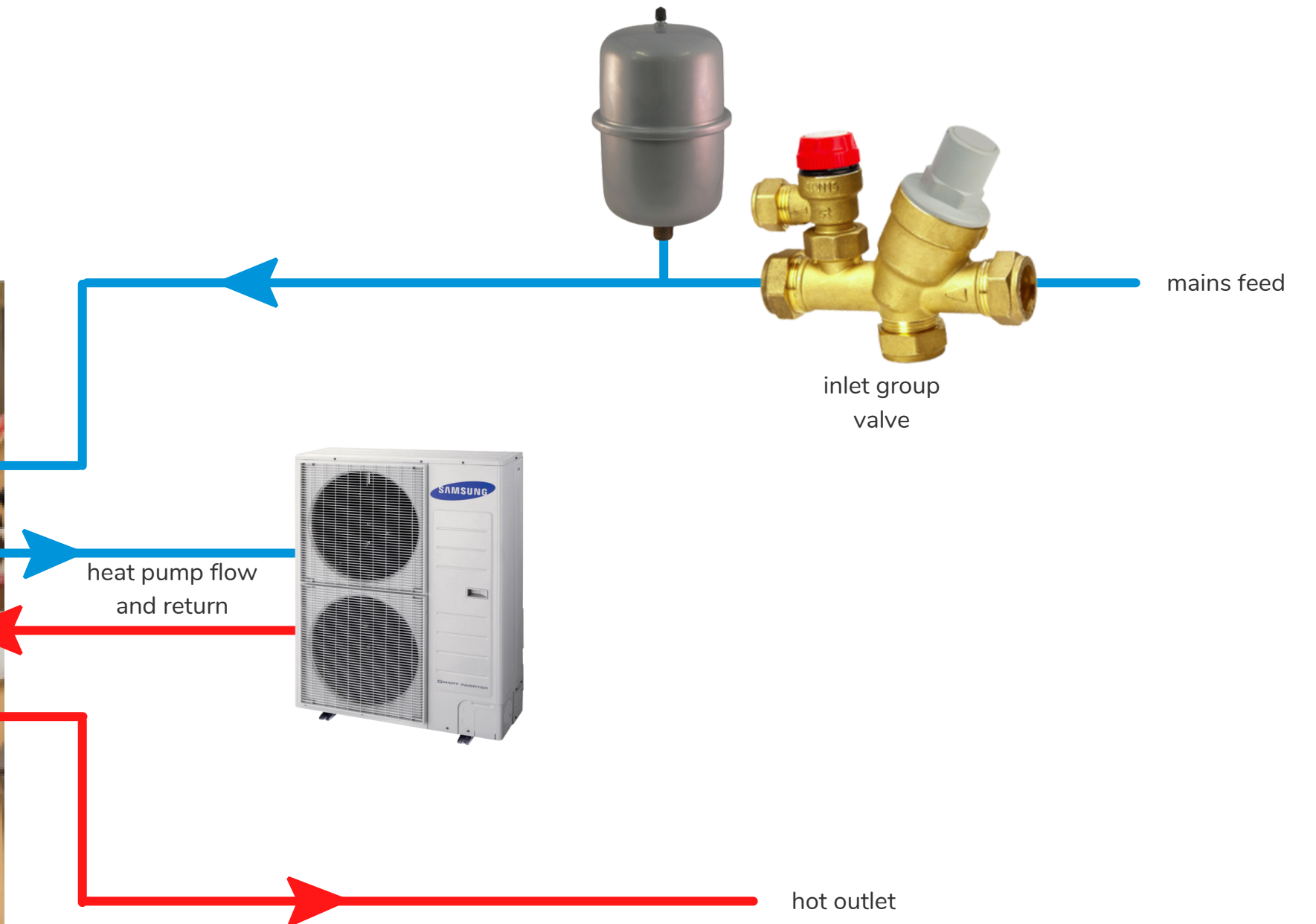
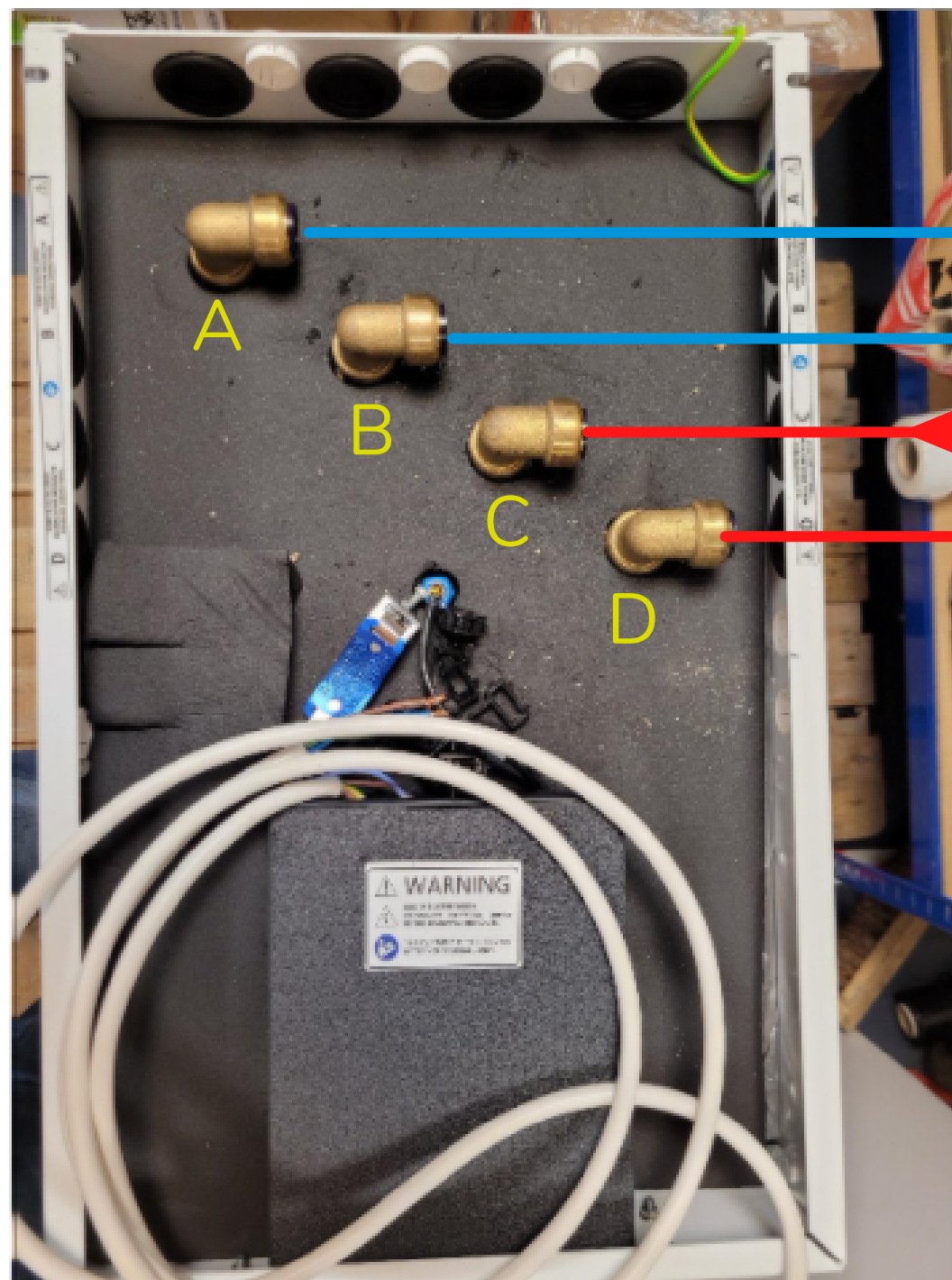
**SAMSUNG**



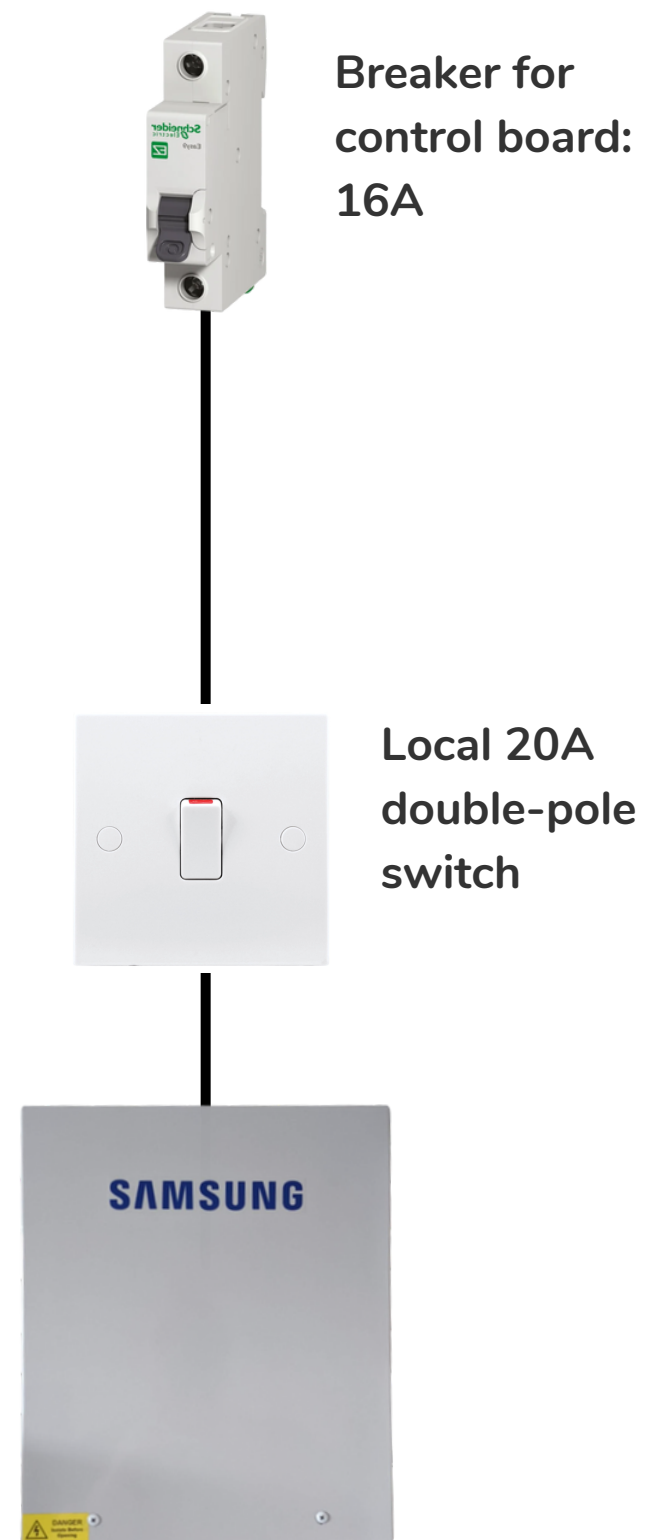
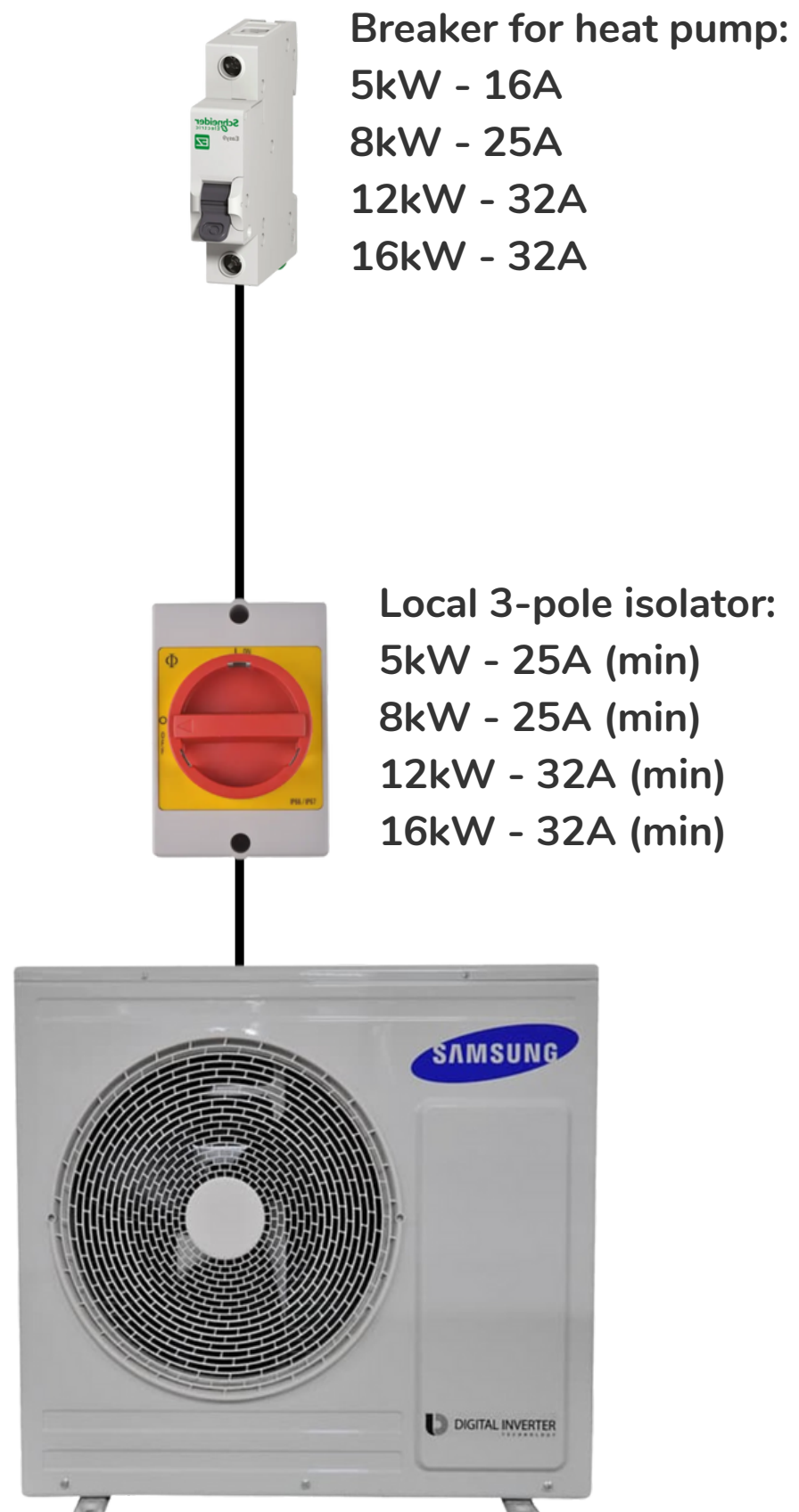
# Thermino Pipework Connections

mini-expansion  
vessel  
**SAMSUNG**

**MIDSUMMER**  
Delivering tomorrow's energy



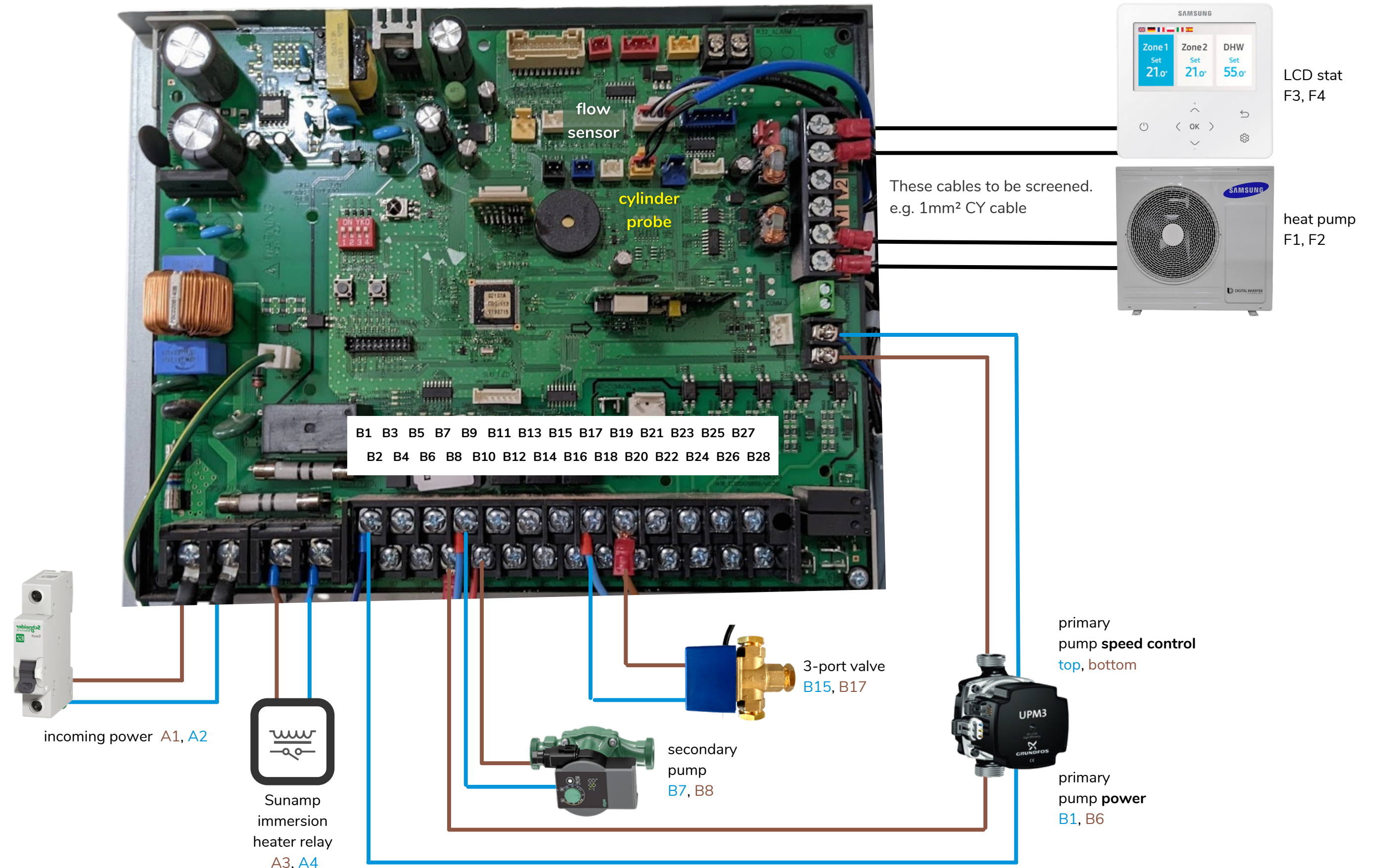
# Main Power Diagram





# Wiring Diagram

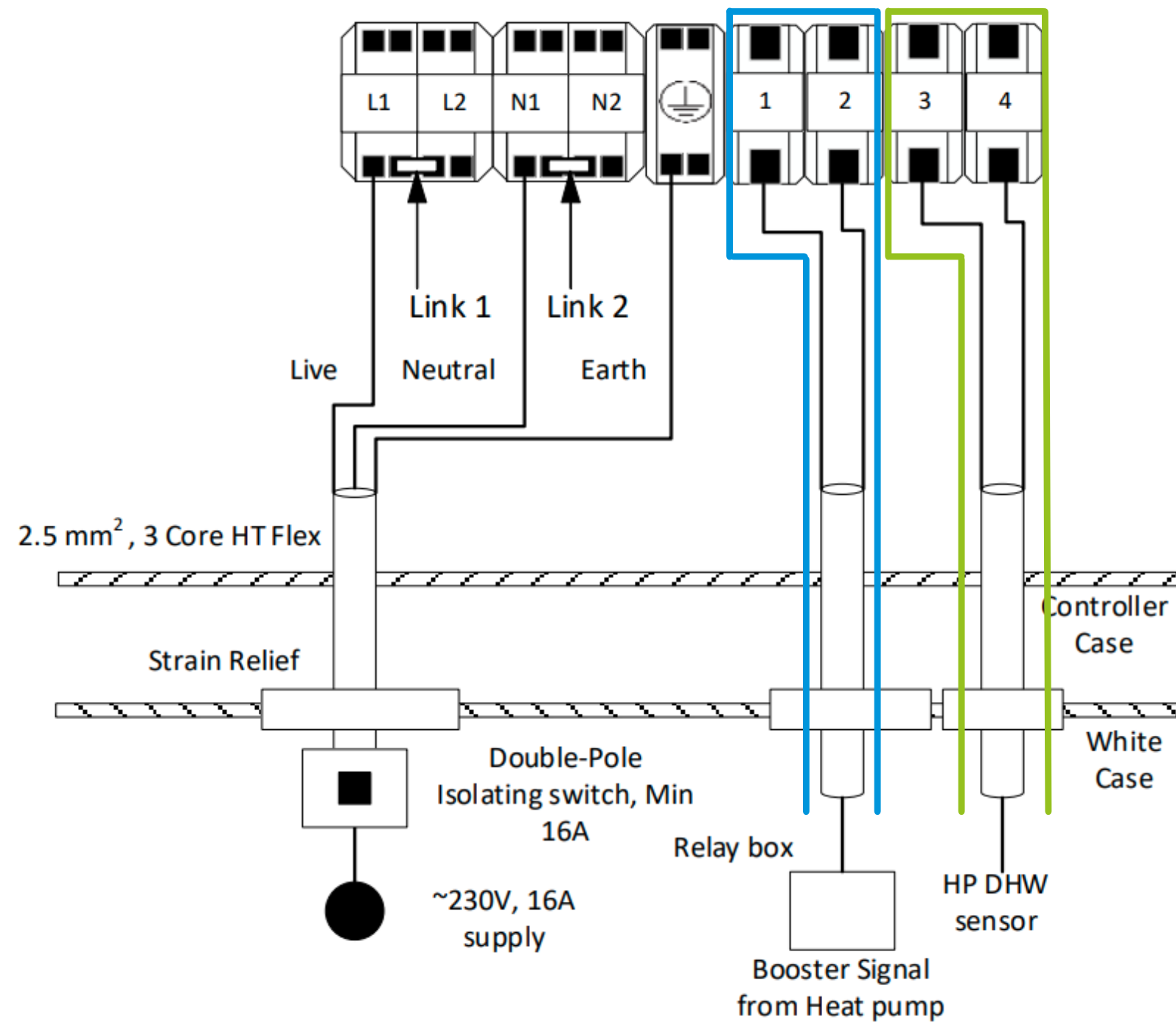
SAMSUNG



# Thermino Controls Wiring

Booster heater signal

Controls - interface with heat pump controller





## Accessing service mode

To get into service mode for testing and setting up the heat pump you need to press and hold **up and down** for 5 seconds. The controller will then ask you to enter the PIN which is **0 2 0 2**

## Check the flow-rate

Enter Service Mode, go to **Indoor Zone Option** then **Indoor Zone Status Information** and it will show a value for **flow sensor** in litres per minute.



## Samsung Thermostat

The heat pump control is a bit more clever when you use the Samsung controller as the thermostat. This is the ideal option if you can find a route for the cable to a sensible thermostat location.

To use the Samsung LCD controller as the thermostat enter service mode and go to:

### Indoor Zone Option

and set

### Standard Temperature to Indoor

Now the controller is set up to act as the thermostat with the temperature setting via the Samsung LCD.

## External Thermostat

If you need to use an external, 3rd party thermostat with a Samsung heat pump this needs to be wired up as shown below. Permanent live is **B20**, switched live is **B22**.



Then set the heat pump to use it as the signal to heat or not by setting **FSV 2091** - External Thermostat Application #1 (Floor) to **Use(Signal ON/OFF) or WL Interlink OFF(Water Pump3)**.

## Heating - Weather Compensation

Samsung's name for weather compensation is "water law". You need to set up the water law before the heat pump will perform weather compensation properly. On a Samsung you set a warm weather point and a cold weather point and then the unit interpolates between them to provide the flow temperature asked for.

To do this you need to enter service mode, "Field Setting Value" and input the settings.

### 20\*\* Water Law

#### 201\* Outdoor Temp. for Water Law (Heat)

Low = 20°C

High = -3°C

#### 202\* Water Out Temp. for WL1 Heat (WL1-Floor)

Low target value  
25°C

High target value  
50°C

Note: the two numbers inside the green boxes are the design condition, in this case shown as flow temp of 50°C at air temp of -3°C.

## Hot water settings (FSV)

**3011** - Domestic Hot Water Tank - **Use(Hysteresis Thermo ON/OFF state)**

**3025** - Max DHW Operation Time - you want to give your heat pump a decent chance of heating the water up in one go here, but not let the house get cold while you do it. If it's a well insulated house you can set this time fairly long, if it's a poorly insulated house you can set it shorter. **90 minutes** is a reasonable starting point for most cases.

**3032** - Delay time - This is how long the heat pump tries to do the hot water using the heat pump before it kicks in the immersion heater to help. You don't really want this to happen often so set this to **60 minutes**.

**3041** - No need for a disinfection/legionella cycle with a Sunamp ThermiNO. Setting should be **Not use**.

