

**niko**  
Illuminating ideas.

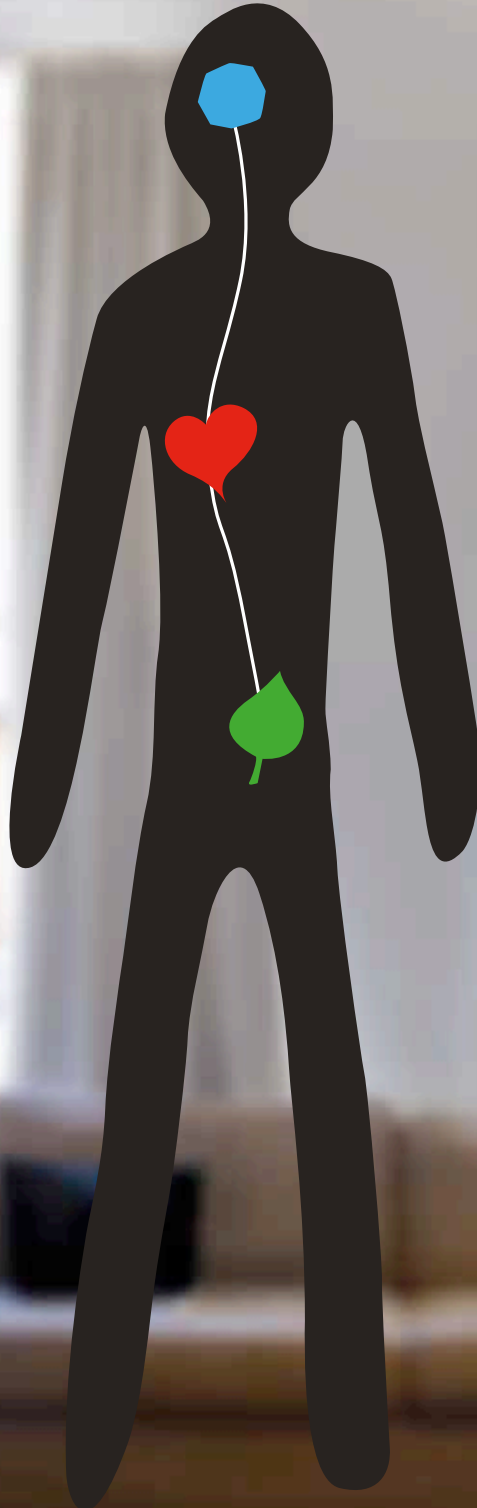
# Niko Home Control

Export



PROFESSIONAL

# Niko Home Control



**Live it, love it.**

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# 1. Introduction

**This brochure serves as an introductory guide to Niko Home Control, a new electrical installation allowing residents to operate all functions in their home from one central location, and to monitor – and therefore possibly reduce – their energy consumption. In addition, Niko Home Control also helps to create a safer and more comfortable living environment.**

## **Niko focuses on a new electrical installation**

Why? Because it is time for progress. Ever-changing technologies and today's digital age have a strong impact on our lives and the world we live in. Encyclopaedias have been replaced by the internet and online search engines; hard disks have replaced filing cabinets. Mobile devices have replaced traditional telephones whilst Walkman devices have been speedily replaced by iPods.

So what happened to the traditional electrical installation? The general set-up of electrical networks and the options they offer have largely remained unchanged over the past 30 years. This is very surprising, when you consider the major changes we have witnessed in our way of life and in the way we communicate with the rest of the world. Niko believes now is the time for change and progress. Niko Home Control exceeds the possibilities offered by traditional electrical installations in terms of comfort, user-friendliness and sustainable energy consumption. Niko Home Control focuses on the resident who wishes to control every device within the home.

## **Established market presence**

Niko is a company with an established name. We are the market leader in Belgium and maintain a significant presence in the rest of Europe. Niko Home Control reconfirms the innovative character of our business. A new era has arrived with the development of our latest electrical installation.



**Niko Home Control**

## 2. The installation

**Niko Home Control is the first electrical installation allowing families to actively reduce their energy consumption levels at home. Residents are able to operate the installation from one central location and actively reduce their energy bill whilst at the same time creating a safer and more comfortable home environment. In times such as these, where a reduction in energy consumption is so important both for the environment and financially, this installation provides a unique solution.**



The installation includes an **eco-display in combination with** a number of **basic functions**:

- saving energy
- lighting control (switching, dimming)
- motor control (e.g. operation of roll-down shutters)
- switching of socket outlets
- automated scenarios (ventilation, roll-down shutters, etc.) based on time or external sensors

### Add-ons:

- central operation via touchscreen and/or smartphone
- regulation for zone heating
- security management scenarios (burglary protection)

All additional modules are available separately, allowing the building supervisor to determine which functions he wants to include in the installation. Whereas all these various applications used to be stand-alone functionalities, Niko Home Control now makes it possible for the resident to operate all these modules from one central location.

A number of simple guidelines have been developed to introduce and guide you – being an installer – through the **installation requirements** for Niko Home Control to ensure an easy and fault-free set-up of the installation.



## 2.1 Controller and power supply – two basic elements of Niko Home Control



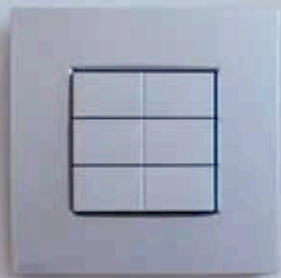
### **Controller = nerve centre of the installation**

The controller is responsible for processing all the logical information within the Niko Home Control installation. Programming is done via the programming software on the PC and is then saved to the controller. The controller includes a test button that allows you to verify the proper functioning and status of the other modules in the installation at any time. Alternatively, basic functions such as lighting and roll-down shutter control can be programmed manually via the programming button on the module. The controller records all installation data, which can be read at any time. The programming software also allows the programming of time-controlled functions and conditions.



### **Power supply = provides power to the bus, the modules and the controls**

If the installation includes more than one power supply (e.g. larger installations or back-up power supply), you select a master via the button on the module. Power supply, status and bus activity are indicated by LEDs on the module.



## 2.2 Structured set-up of the electrical cabinet

The internal layout of the electrical cabinet uses a **left to right** assembly system. The **power supply** is mounted **first**, followed by the **controller**. All **additional modules** are mounted onto the DIN rail to the right of the controller and are interlinked **via a unique sliding contact**. This method requires less cabling inside the cabinet, reducing your workload as an installer and offering a clearer overview of the set-up. As soon as a **row** is **complete or the maximum number of 12 rail modules** has been reached, you use the **next row**. A **rail coupler**, or a second power supply if needed, should be used first at the **beginning of every new DIN rail**. In order for the subsequent rows of DIN rail modules to communicate with one another, only interconnect the four wires of the bus and power supply from the previous row to the connection terminals.

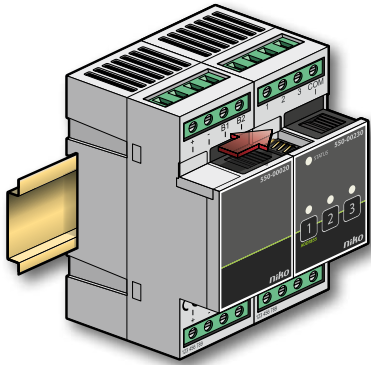
The **assembly process stays** just as **easy** even if the installation grows.

### **What if the installation includes several cabinets?**

- If the distance between the cabinets is **less than 20 meters**, they are treated as one single cabinet. There is no need for an additional controller or power supply. Interconnect again the four wires of the bus and power supply.
- If the distance between the cabinets **exceeds 20 meters**, you use a new power supply for the second cabinet. In this case, only the bus should be interconnected.



## 2.3 Cabling



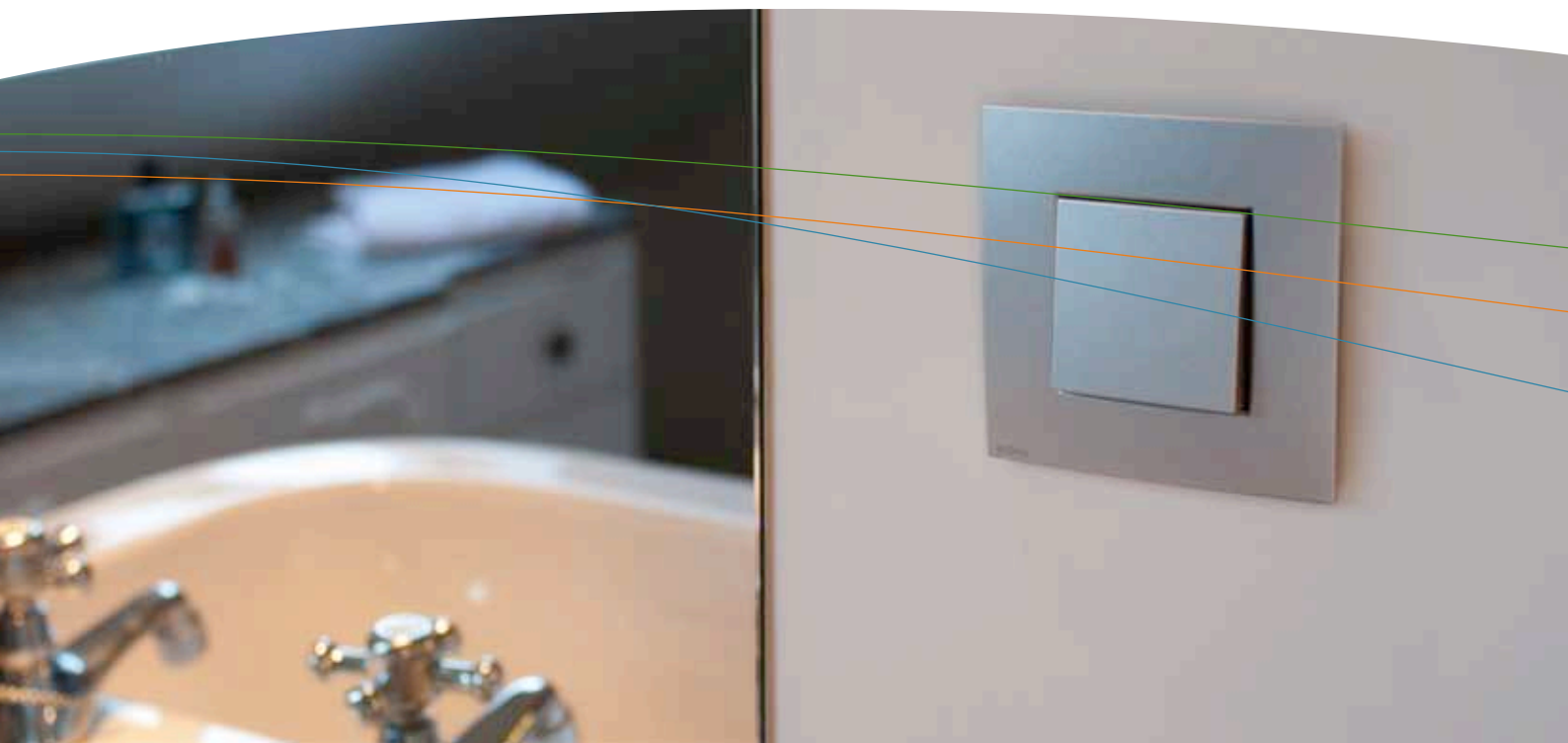
### **Cabling inside the cabinet is kept to a minimum.**

All modules in one row are interconnected via a sliding contact, which supplies power and provides bus communication. Simply interconnect the various rows via the rail coupler to the four wires of the bus and power supply.

A **two-wire bus cable** provides power to the various control elements **outside the cabinet**. The wiring diagram has a **free topology**, which means you are not bound by a fixed cabling diagram. All controls are easily and quickly connected thanks to the **non-polarised cabling**. Simply connect the two wires in the terminals without any risk of a faulty connection.

The distance between the controller and the furthest point in the installation depends on the **cross-sectional area of the cable**:

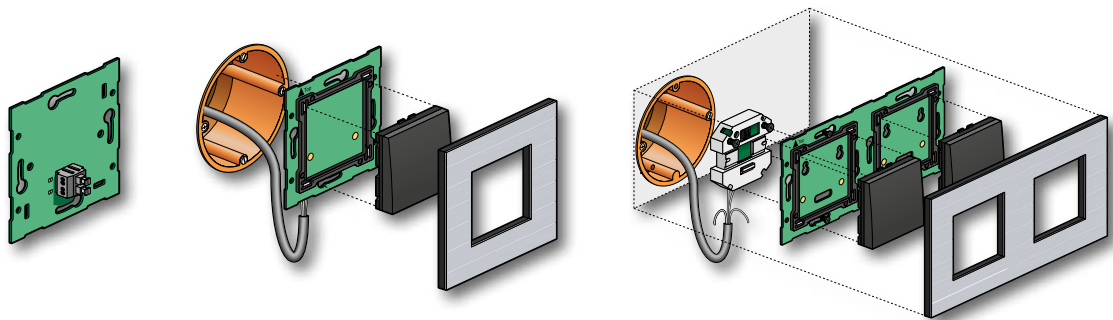
- diameter: 0.8 mm (section: 0.50 mm<sup>2</sup>) → 250 m (e.g. SVV, JYSTY)
- diameter: 0.6 mm (section: 0.25 mm<sup>2</sup>) → 150 m (e.g. TPVF)
- diameter: 0.5 mm (section: 0.20 mm<sup>2</sup>) → 100 m (at least AWG24, e.g. UTP, FTP, STP)





## 2.4 Wall-mounted printed circuit boards

**Niko has a unique wall-mounted printed circuit board concept**, which allows you to easily integrate controls into the installation. **Only one flush-mounting box** is required at each control location. Being an installer, you only have to decide between single or multiple wall-mounted printed circuit boards during the last stage of the project. This allows the resident to delay the decision about the number of controls required at each location until the last stage as well. As needs change, the installation can be adjusted to continue to suit the resident's needs, by only selecting a different wall-mounted printed circuit board and flush surround plate.



### Only need one wall-mounted printed circuit board?

Choose between the traditional **wall-mounted printed circuit board with connector** and the **wall-mounted printed circuit board with bridge**. The wall-mounted printed circuit board with bridge is ideal for use on very uneven walls or in situations where you need to combine the control with functions other than those of Niko Home Control.

### Prefer multiple wall-mounted printed circuit boards?

Even in this case, **one flush-mounting box** will suffice. Decide whether you prefer to work towards the bottom, top, left or right from the flush-mounting box. Need more push buttons? The wall-mounted printed circuit board concept allows you to add controls without the need for additional drilling or channelling work. You connect the installation cables onto the multiple wall-mounted printed circuit board via a **connection unit**. You mount this connection unit anywhere on the wall-mounted printed circuit board.

You mount the printed circuit boards onto the wall using screws or claws. A set of claws is to be ordered separately.

## 2.5 Controls

Depending on the resident's preference, Niko Home Control can be operated using push buttons (with or without display), a touchscreen or a smartphone.

### 2.5.1 Push buttons

The controls in the Niko Home Control installation follow the design of switch series **Niko Pure**, **Niko Intense** and **Niko Original**. The push buttons are also available with LED to indicate the status of that particular control function. All controls can be mounted onto a flush-mounting box using a wall-mounted printed circuit board.

#### Choose from the following options:



- **lighting control**  
single, double, four-fold or six-fold



- **dimming control**  
single or double



- **push buttons for motor control**  
(e.g. roll-down shutters, curtains or sun blinds), single or double



- **ventilation control**



- **intelligent push buttons with back-lit colour display:**
  - **mood control:** The resident creates different mood settings for different occasions. These mood settings can be changed at any time. Includes also the option of automatic sensor-controlled mood control.



- **thermostat:** The thermostat can be mounted in any room fitted with a radiator, underfloor heating system, heating unit or cooling installation. You select zone heating or cooling with up to four different zones or rooms per module.



- **eco-display:** Depending on the installed measuring module (electricity meter or pulse counter), the resident will be able to monitor his electricity consumption and/or gas and water consumption. He presses of the eco-button to switch off all lights and connected circuits upon leaving the home. Also the presence simulation will be activated with the press of a button.



- **wireless Easywave controls**

**Recommended mounting height:**

- standard controls: installation on a wall-mounted printed circuit board, 90 to 110 cm above floor level.
- intelligent controls with display: installation in a flush-mounting box, 120 to 150 cm above floor level.

Want to **replace** a double **push button** by a six-fold? Need an **additional control unit** or a new design? All this can be achieved **without any problems** because of the assembly system based on wall-mounted printed circuit boards. Also an **indoor** and/or **outdoor motion detector** can be added to the installation at any time. Niko Home Control supplies power to these controls via the two-wire connection. No additional module is required in the cabinet.

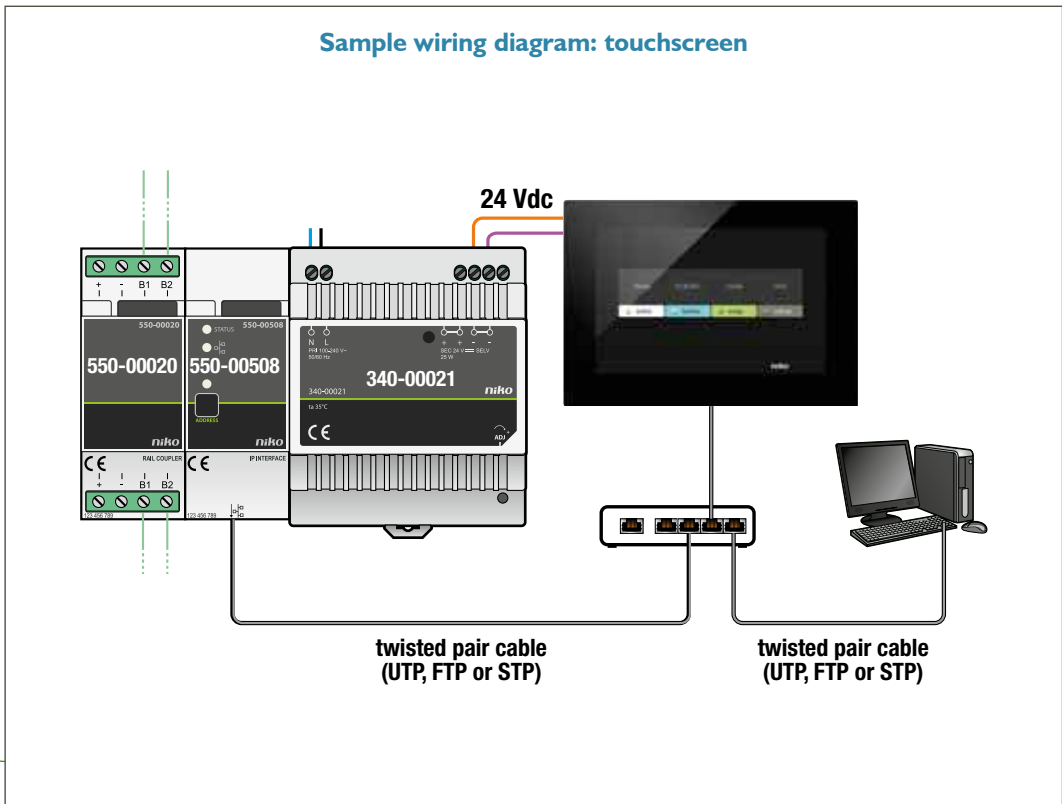




### 2.5.2 Touchscreen

The Niko Home Control installation is **conveniently operated** by the resident via the touchscreen. Through the **user-friendly interface** he operates all functions within the home from one **central** location. Switching/dimming lights, operating roll-down shutters, etc. The touchscreen also displays details about electricity, gas and water consumption at any time.

To connect the touchscreen, you fit the installation with an **IP interface**. Similar to the controls, you simply mount the screen onto **only one flush-mounting box**. Connect the touchscreen via one twisted pair cable (UTP, FTP or STP) to the Power over Ethernet (PoE) power supply. Alternatively, you can add a separate 24 Vdc power supply to the cabinet, in which case you will need a power supply cable (SVV, JYSTY, TPVF, UTP, etc.) as well as a UTP/STP cable for data communication. If you opt for a connection with one UTP/STP cable only, you will need less cabling and the installation process will be quicker. It is recommended to mount the touchscreen at eye level and at a height of at least 150 cm above floor level. This way, the screen can easily be viewed by all residents.

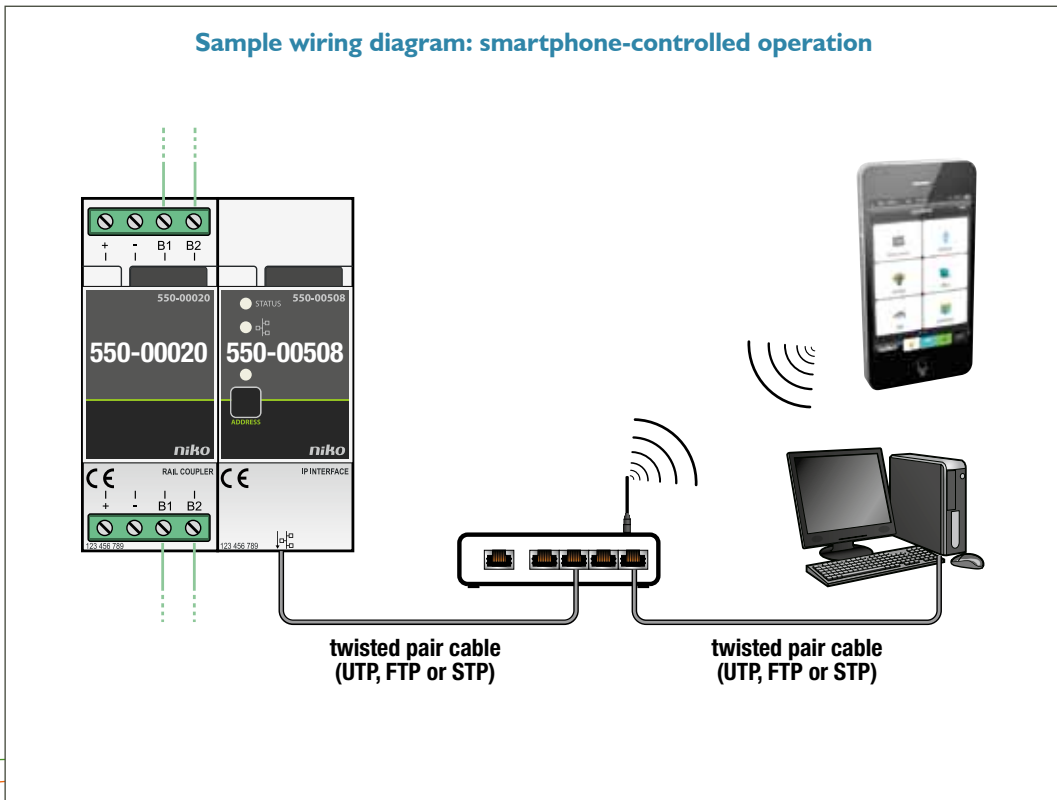




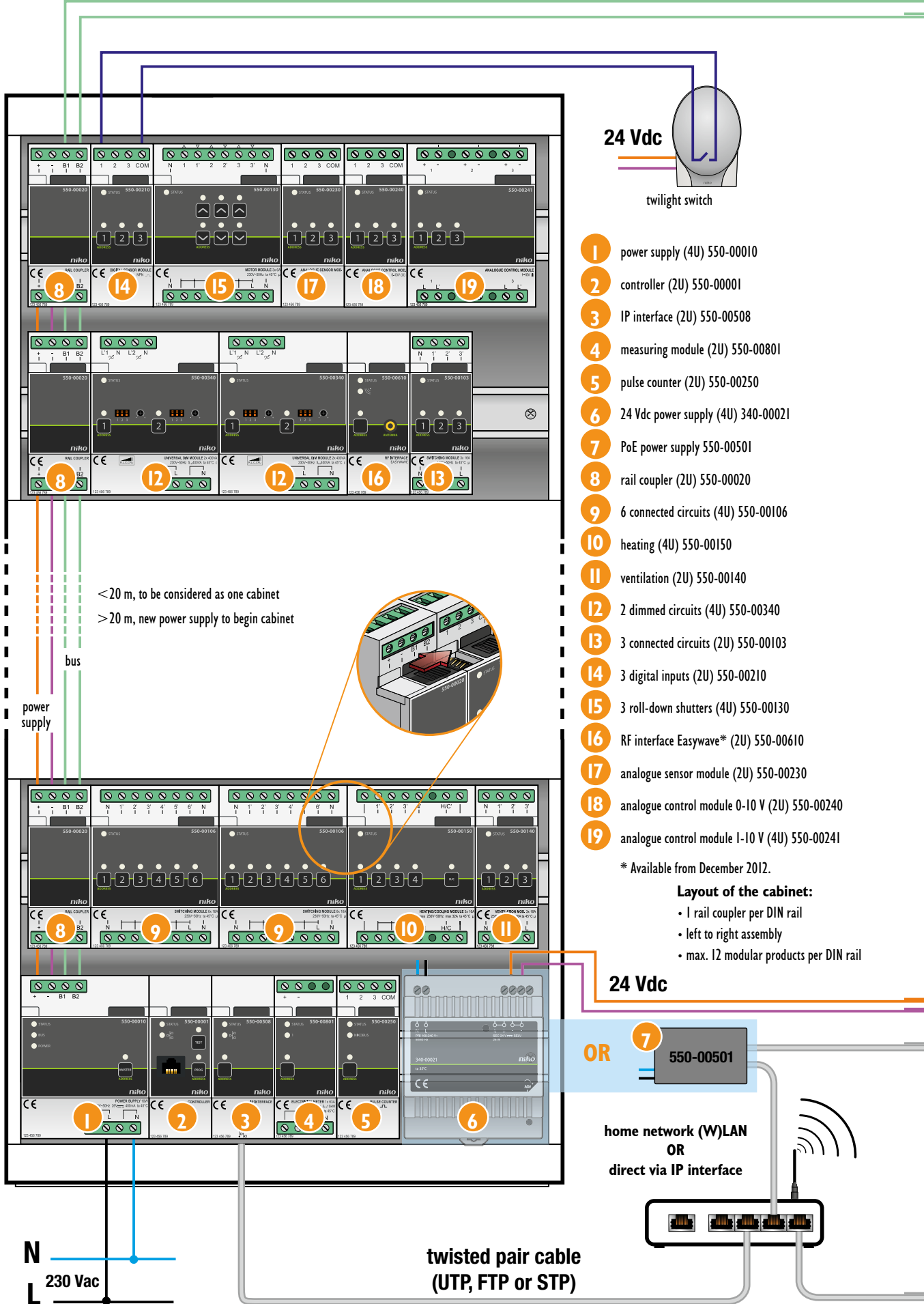
### 2.5.3 Smartphone

**Smartphone-controlled** operation offers user-friendliness similar to the Niko Home Control touchscreen, and it controls the same functions. This portable remote control application is only meant for use **inside the home** and within reach of the WiFi network. This application also requires the **IP interface** to establish a connection between the smartphone and the WiFi router.

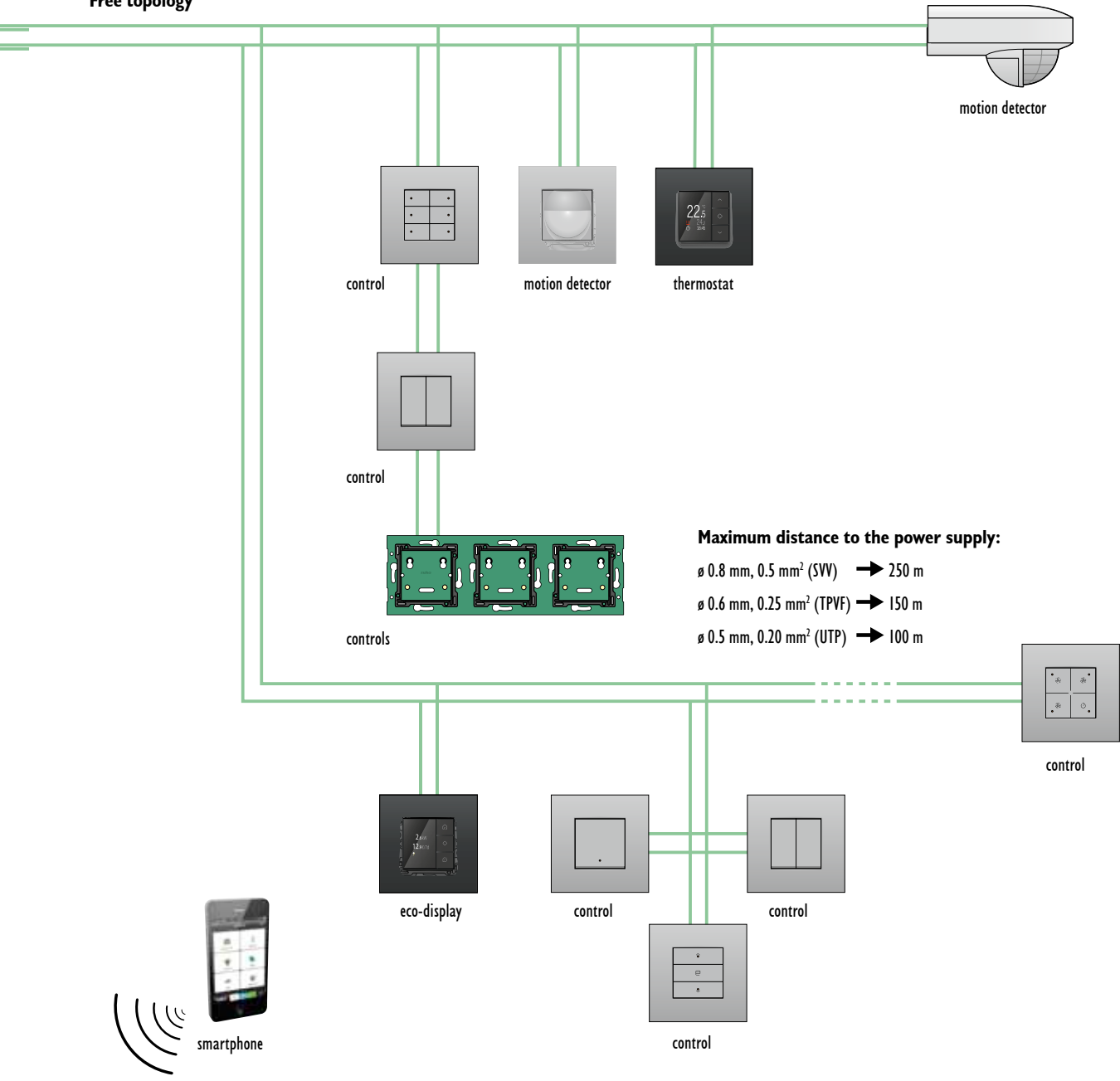
One IP interface per installation will suffice for all IP applications that you will connect to the installation. At the same time, this module also logs and records the data on energy consumption for future reference.



Schematic installation diagram



Two-wire, non-polarised  
Free topology



**Maximum distance to the power supply:**  
 ø 0.8 mm, 0.5 mm<sup>2</sup> (SVV) → 250 m  
 ø 0.6 mm, 0.25 mm<sup>2</sup> (TPVF) → 150 m  
 ø 0.5 mm, 0.20 mm<sup>2</sup> (UTP) → 100 m



twisted pair cable  
(UTP, FTP or STP)



**Specifying of the installation:**

- per power supply (maximum 3):
  - maximum 24 modular Niko Home Control products inside the cabinet
  - maximum 70 controls, including 20 with indication LED / motion detector / thermostat / eco-display
- if an additional power supply or controller is provided, they will operate as a back-up



## 3. The possibilities of Niko Home Control

### 3.1 Monitoring energy consumption



**Saving energy in the home** is becoming **more important** than ever before, though it may not always be easy to achieve. Especially as energy is something we cannot 'see'. Many people have no notion of the amount of energy daily consumed in their home. They are only faced with the facts every time a new energy bill arrives.

#### Think

- **Very accurate meter readings** give a **clear insight** into the energy consumption and the amount of energy generated by solar panels. This ensures that **energy is used more sensibly** and that residents **can reduce** their energy consumption by **5 to 15%**. Monitoring energy consumption also helps to detect faults in the installation. A sudden increase in energy consumption may indicate that a device is faulty or requires service. Detection of defects also increases the overall sense of safety in the home.
- The **eco-display always** shows the **current** energy consumption **and** the **total energy consumption** of the previous seven days, both in terms of cost as well as in absolute figures.
- **Simple** and **ultrareliable** gas and water readings with **pulse counts**.
- **Automatic configuration** of basic functions via the programming software.
- **Simple and modular installation of measuring modules:**
  - **1-channel module** – logs the total consumption of a **single-phase supply network** (up to 63 A)
  - **3-channel module** – logs the total consumption of a **three-phase supply network or partial consumption** (solar panels, specific circuits or a particular combination of circuits)

#### Love

- The eco-display provides a combination of energy monitoring and an 'all off' function.
- Both the **touchscreen** and **smartphone** display current and past electricity consumption, the difference between daytime and nighttime rates, and a comparison between current and previous reference periods.
- **Smartphone application (iPhone as well as smartphones using the Android operating platform)**.

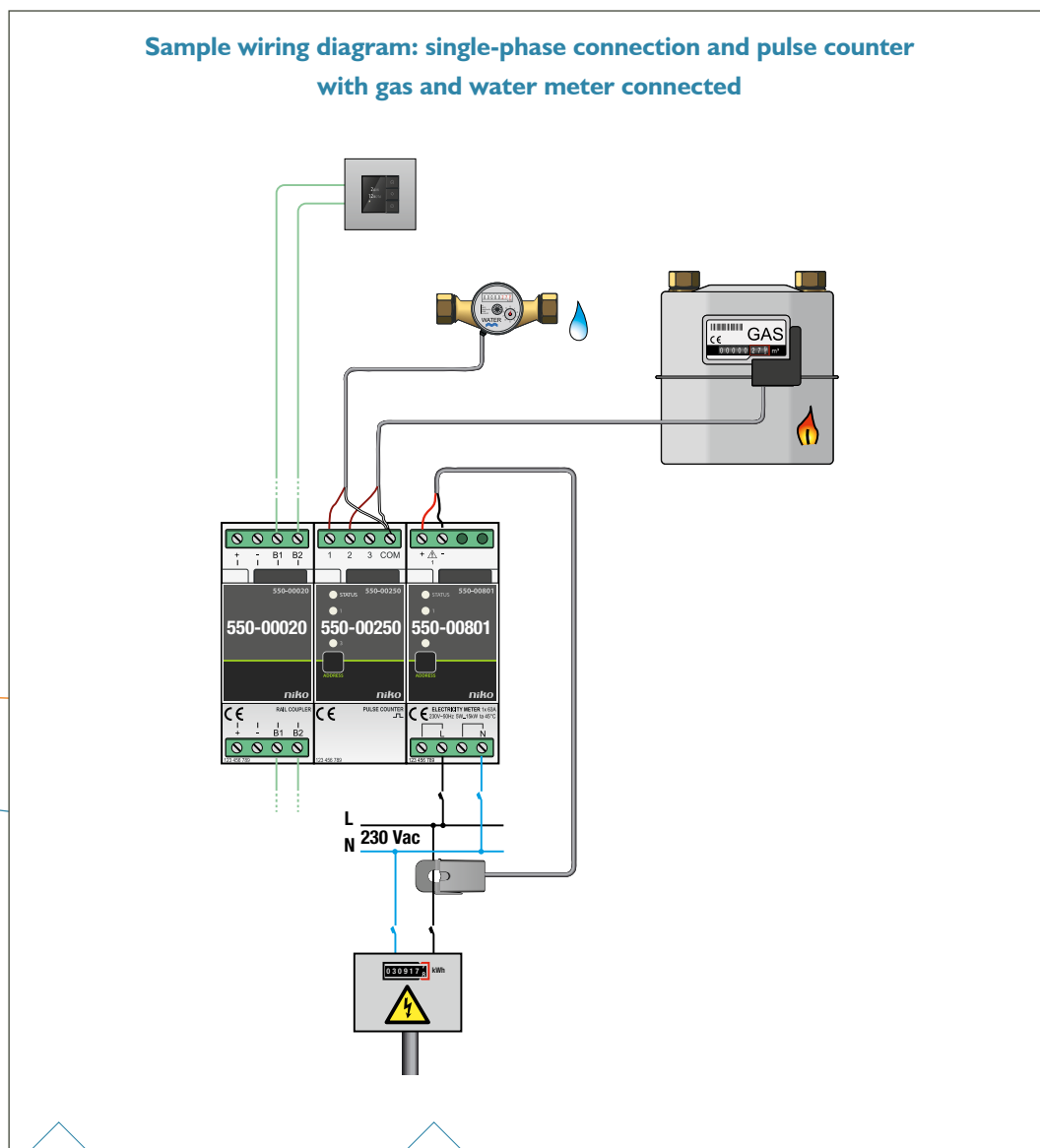
#### Care

- The **eco-display** shows:
  - **current and total energy consumption** (standard)
  - **stand-by power consumption:** what is the consumption of the house whilst on standby? (standard)
  - **amount of energy generated by solar panels** as well as **gas and water consumption** (optional)
- By **simply pressing the eco-button**, the resident switches off automatically all lights and socket outlets, or switches the ventilation and heating to a lower setting. The **reduction in energy consumption** will be registered immediately.

## Measuring electricity consumption and production

Niko Home Control **measures both the electrical current and voltage**. This is the only way to **accurately** assess how much energy is consumed in the home. The measuring module is therefore fitted with a **current clamp** to register the current, and with **connection terminals** to measure voltage:

- Attach the accompanying current clamp by clipping it around the conductor of the circuit to be measured.
- Use the connection terminals to establish a connection with the circuit to be measured.



**Caution!**  
*The current clamp and the connection terminals should **always** be connected to the same circuit.*

**Caution!**  
*Only the data recorded by the meter of the energy supplier is valid for billing purposes. In the event of variances between the data registered by the measuring module and the data registered by the meter, **only the data registered by the supplier shall be considered valid.***

required for measuring total consumption and production	electricity measuring module with one channel (550-00801)	electricity measuring module with three channels (550-00803)
single-phase connection	1	-
single-phase connection with solar panels*	minimum 2	1
three-phase connection (3N 400 Vac)	-	1
three-phase connection (3N 400 Vac) with single-phase solar panels	1	1
single-phase connection with three-phase solar panels	-	2

\* In this case, use several measuring modules with one channel, or one measuring module with three channels.

It is also possible to measure the consumption in specific circuits. Install the **required number of measuring modules** as soon as you know which circuits need measuring. A **maximum of 20 circuits** can be measured.

### Measuring gas and water consumption

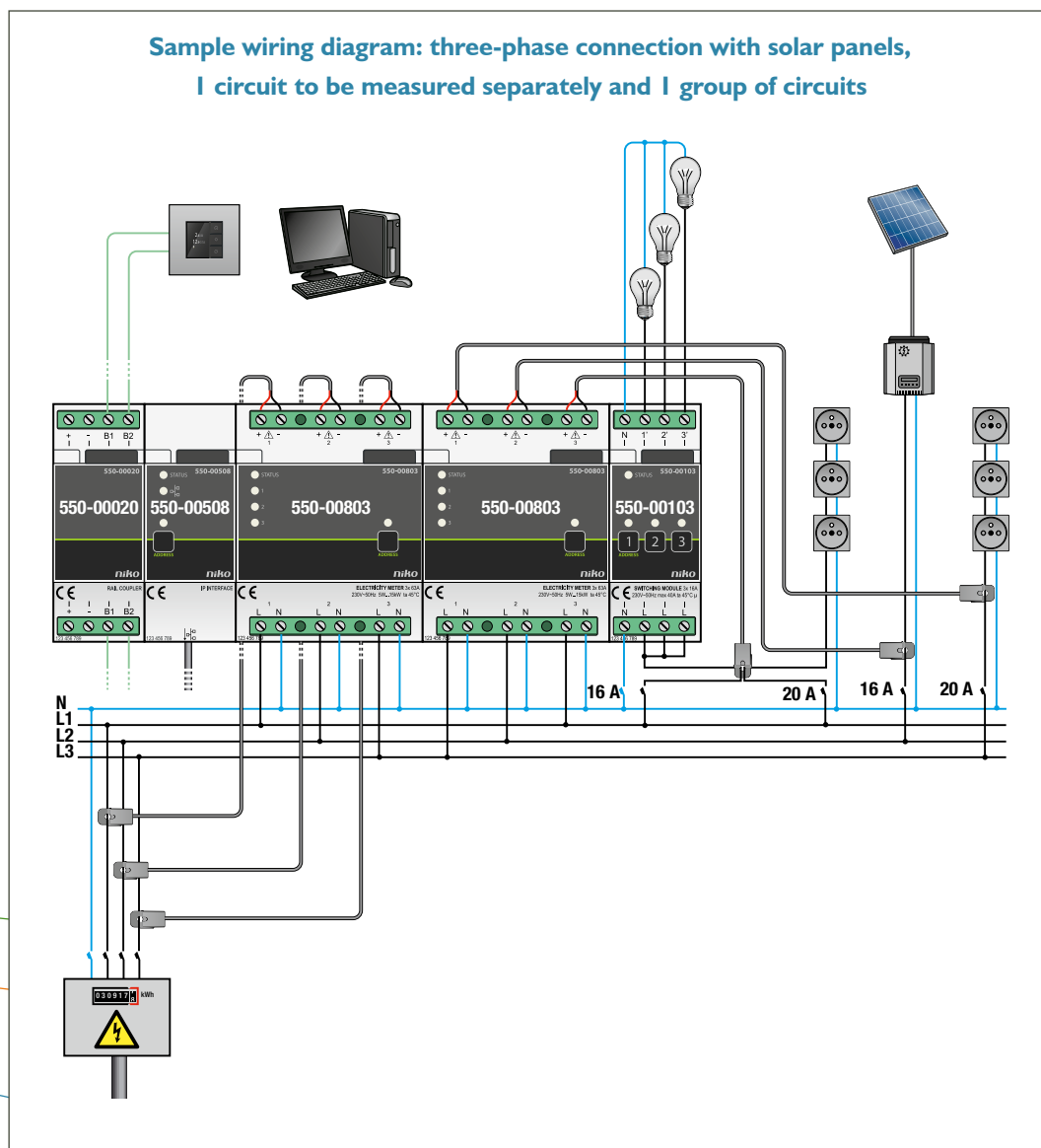
- Include a meter with pulse output.
- Connect the pulse output to the pulse counter.  
Note: A maximum of three meters per pulse counter.
- Enter the scale factor and the unit of measurement of the pulses into the programming software (e.g. 1 pulse = 10 litres).

Niko Home Control can monitor gas and water consumption via a meter that provides a pulse output.

### Display of measuring data

The **eco-display** saves all the measuring data from the previous seven days. If the resident wishes to save these data for a longer period of time, then you include an **IP interface** to log the measuring data from the measuring modules and the pulse counter. Every ten minutes, this interface will log the consumption for each channel. At any time, you will be able to read the current consumption statistics, as this information is updated every three seconds.

The resident uses the **energy software** to **back up the measuring data**. Go to [www.niko.eu](http://www.niko.eu) for a free download of this software (available for PC and Mac).



## 3.2 Lighting control



Every home deserves to be nicely lit. Having easy **control** over all the lights within the home **from a comfortable position** is more of a necessity than a luxury. Lighting developments have also brought new changes. Several types of **new light sources** have been introduced while traditional incandescent lamps are disappearing. This has created a whole new range of possibilities in the field of **mood, colour and accent lighting** for the home. New light sources such as these also use much less energy than traditional bulbs. Niko Home Control operates the various light sources in a user-friendly way and adjusts dimmable lighting.

### Think

- **Indication LEDs** ensure that the resident easily finds the control unit in the dark, and show whether any of the lights have been left on.
- The resident can **switch socket outlets**, thus providing **comfort, extra safety** (especially with children around) and **reduced consumption**.
- **Modular installation:**
  - **specifying:** three- or six-fold switching module
  - **two circuits** dimmable **per dim module**
- **A simple, quick and orderly installation process:**
  - **dimmer** and **dimming control** in **one module**
  - by using a **sliding contact**, you do not need to interconnect the bus via cables
  - if the cabinet does not include a terminal block, you connect the neutral conductor to the modules via screw terminals
  - **ultracompact modules** require minimal space in the cabinet
  - on the six-fold switching module, the contact points are interconnected in groups of three on the fuse side
- **Long lifespan** as a result of the innovating and patented technology used in the dim and switching module.

### Love

- **User-friendly operation:**
  - push button
  - mood control with display
  - automatic operation via the motion detector
  - central operation via the touchscreen
  - smartphone
  - automatic control using analogue or digital sensors
- The resident dims any light with the press of a button or by using a **light-specific dimming control unit with personal settings**.
- **Compact controls** (up to six-fold) require minimal space on the wall.
- **Wireless Easywave controls** can be installed **where drilling or channelling work is not possible or not desirable**.

### Care

- **Effortless connection** of all light sources (LED lamps, economy lamps, halogen lamps and incandescent lamps) **and dimming** of new energy-saving light bulbs (dimmable LED, economy and fluorescent lamps).
- **Ultralow energy consumption** due to the bistable relays in the switching modules.

### Switching light circuits and socket outlets

Every contact in the switching module switches a maximum of 16 A if the load is purely ohmic. Check the table below to find out the **maximum load for each type of lighting**.

Type of lighting	Maximum rms current
incandescent lamps, 230 V halogen lamps (ohmic load)	16 A
low-voltage halogen lamps with ferromagnetic or electronic transformers	10 A
fluorescent lamps, non-compensated or serial-compensated	10 A
fluorescent lamps, parallel compensated	6 A
economy lamps (CFLi), LED lamps and HF fluo (lighting with electronic control gear – ECG)	3 A

#### Important points:

- Total load on a module should not exceed 32 A.
- Do not switch different phases on the same module.
- Provide a 16 A fuse for the outlet circuit when switching socket outlets.

#### Dimming lights

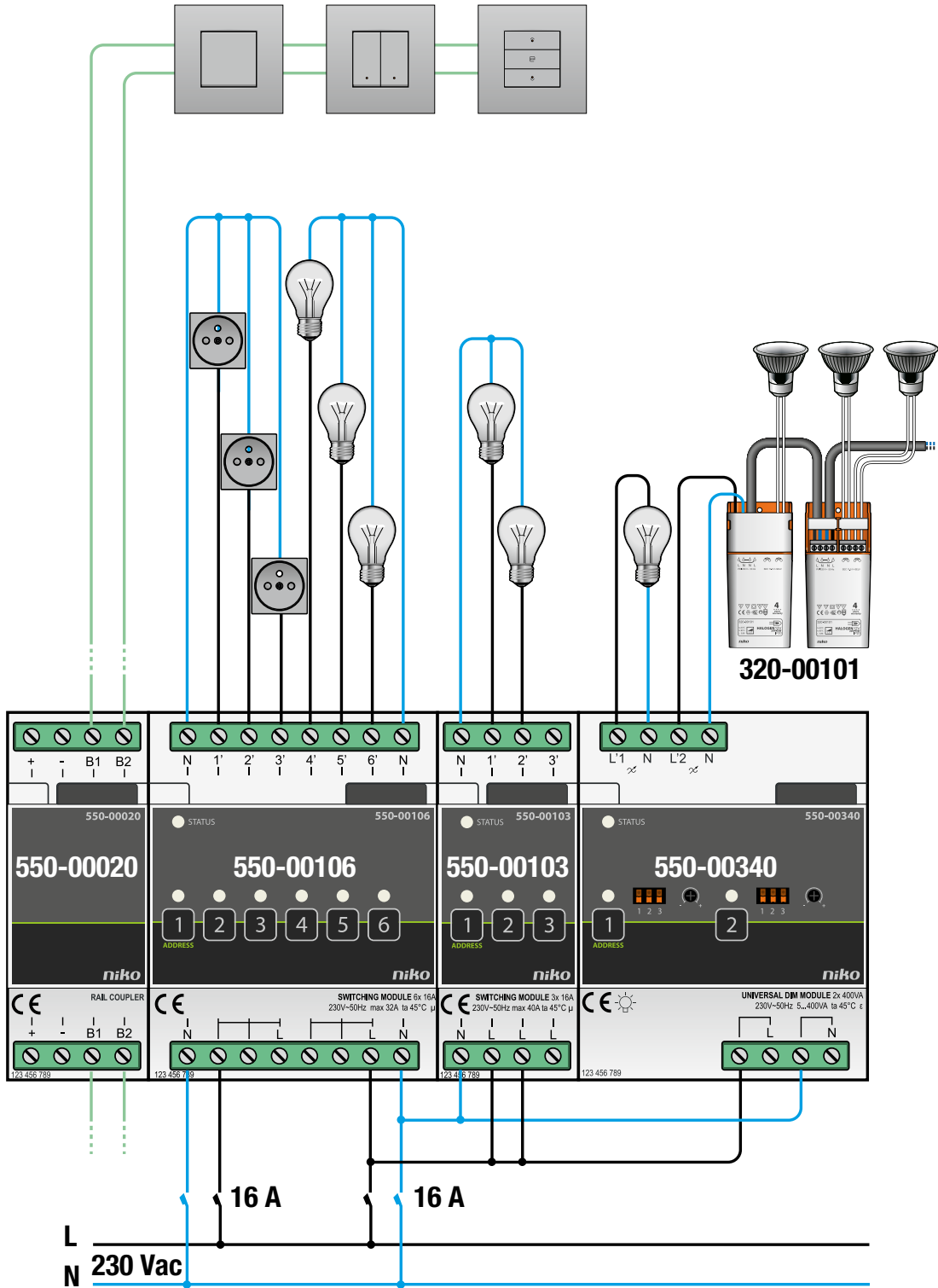
The universal dim module is a DIN module with two channels for dimming lights from 10 to 400 VA (at 45°C) or 500 VA (at 35°C) per channel. You set the minimum level and the type of lighting using the DIP switches and potentiometer on the front of the module.

The resident dims the following light sources using the dim module:

- incandescent lamps
- 230 V halogen lamps
- 12 V halogen lamps with ferromagnetic transformer
- 12 V halogen lamps with electronic transformer
- dimmable LED lamps or LED fittings
- dimmable economy lamps (CFLi)

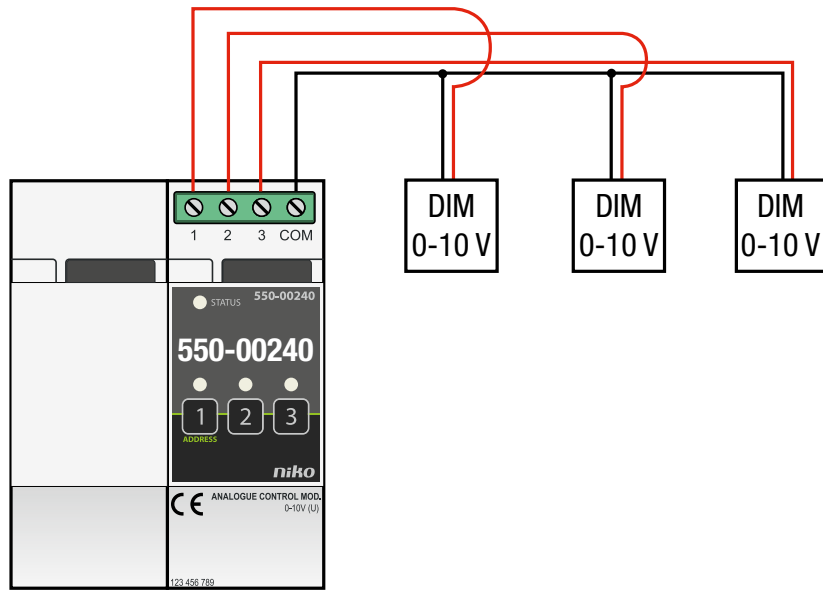
Analogue control modules 0-10 V and 1-10 V allow residents to control high-power dimmers and electronic control gear for dimming fluorescent lamps and LED strips.

Sample wiring diagram: 5 connected light circuits, 3 switched socket outlets and 2 dimmed light circuits

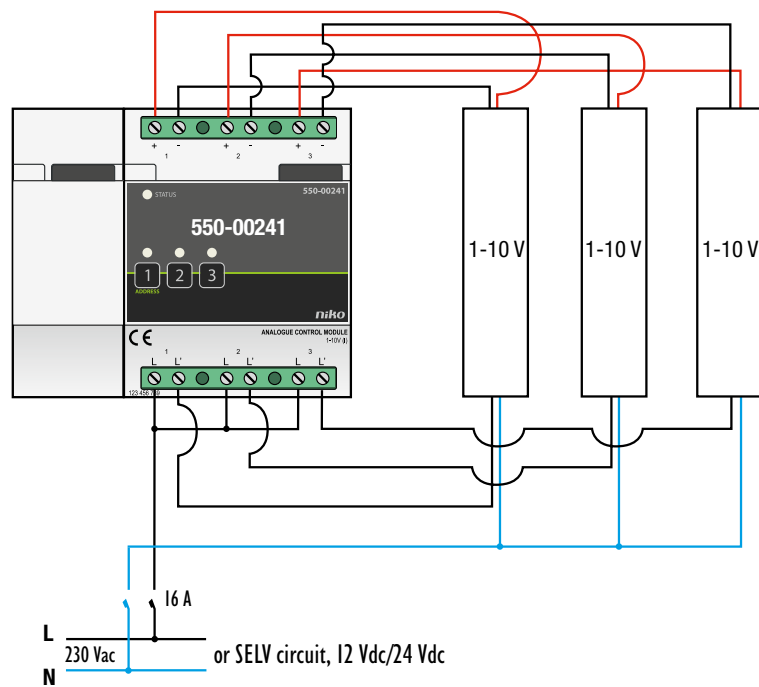




Sample wiring diagram: 3 dimmers (0-10 V)



Sample wiring diagram: 3 dimmers (1-10 V)



### 3.3 Ventilation control

A ventilation system will help maintain a **healthy climate** within the home and reduce the loss of energy compared to traditional windows that open. Unfortunately, even ventilation systems create energy loss. By extracting hot air, part of the heating capacity is lost. In new homes, this translates into a heat loss of 20 to 25%. Heat loss during ventilation and electricity consumption are some of the main reasons why you should opt for **smart ventilation control**. This way, the home will only be ventilated when required, without unnecessarily wasting energy.

#### Think

- **Easy installation:**
  - same connection as the traditional three-way switch
  - **only one module** required for the operation of several types of ventilation (two- or three-wired)
  - suitable for **whole house ventilation systems** (mechanical extract ventilation or mechanical supply and extract ventilation with heat recovery)
  - ventilation control via **NO contacts without complex integration**
  - **control logic** located inside the module and software

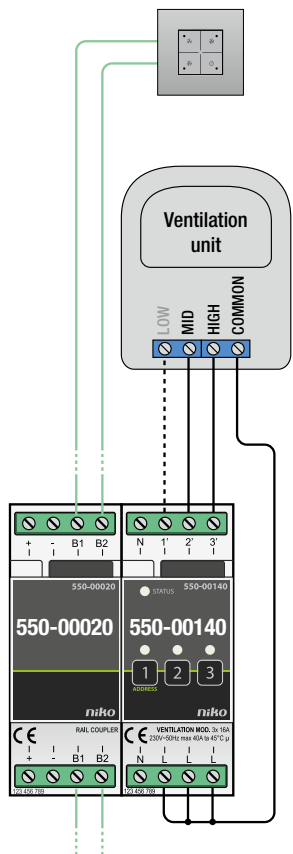
#### Love

- **Living more comfortably:**
  - Is the bathroom in use or are the lights above the kitchen counter switched on? Then the ventilation system will **automatically** and **temporarily** switch to a higher setting.
  - The resident enters his **personal preferences** in the user-friendly ventilation control unit. All settings are LED-indicated so the resident always 'sees' at which setting the ventilation system operates.

#### Care

- Niko Home Control and the ventilation control system help the resident **save energy**. The ventilation function automatically switches to a lower setting when the resident leaves his home. Upon his arrival back home, the ventilation function automatically returns to the resident's personal setting. This **reduces the loss of hot air**, whilst at the same time, **less energy** is being **used** by the ventilation motor and a **healthy indoor climate** is created.

Sample wiring diagram: ventilation control



Niko Home Control includes a **ventilation module in the cabinet** that takes over the function of the three-way switch (in a traditional installation) and controls the ventilation system.

The ventilation unit can be operated via a **two-wire or three-wire control**. Check the manual of the ventilation unit for the correct operating instructions.

- With a **two-wire control**, you connect the common (from the ventilation unit) in between two control wires. If no control wire is selected, the ventilation system will function at the lowest setting.
- With a **three-wire control**, you connect the common (from the ventilation unit) in between three control wires. Each control wire represents a certain setting.

	three-wire		
	contact 1	two-wire	
		contact 2	contact 3
low	✓		
medium		✓	
high			✓



### 3.4 Heating control



A living room is used at different times of the day to a kitchen or bathroom. Children use their bedroom as a place to play or study after school. Not all rooms within the home need heating at the same time. Niko Home Control offers a **comfortable and energy-efficient solution**.

#### Think

- Comfortable **zone-based** adjustments.
- Selection between various programs with personal settings in line with the resident's needs.
- **Easy installation:**
  - zone control and heating system control via **NO contacts without complex integration**
  - **control logic** located inside the module and software
  - **energy-saving logic** can be easily added via the programming software
- You can apply **the same logic also to the cooling system**. The thermostats can be set to the cooling or heating function.
- **Modular installation:**
  - **one module** controls **four zones**
  - **extra modules** can be added easily

#### Love

- **User-friendly thermostat**
- **Automatic heating control:** no need for the resident to go around the house to turn on/off thermostatic taps

#### Care

- The heating control function of Niko Home Control offers an **energy-saving solution:**
  - Zones are no longer heated unnecessarily.
  - Upon arrival back home, certain rooms are already preheated using the eco-setting.
  - The heating system switches to the eco-setting when the resident leaves the house or goes to sleep.
  - The heating system is turned off, for instance, when one of the windows is opened.

## Zone heating with hydraulic system

### What does Niko Home Control do to achieve zone heating?

Modern boilers are fitted with several intelligent controls to establish a heating line that takes into account the outside temperature, the running of the circulation pump after the heating process has been completed, etc. Niko Home Control is not meant to change these functions. Manufacturers of boiler systems do know what is best and how certain functions should be controlled.

Niko Home Control **adjusts the heat supply to each individual zone** and **notifies the boiler** when **more heating is required** in one or several zones. This is possible in modern boilers by using the dedicated contact input.

### How does Niko Home Control adjust the temperature in all the different zones?

The Niko Home Control **thermostat determines** whether a certain **room** requires **heating or cooling**. An **electronic valve adjusts** the **supply** fed to that room. You mount this electronic valve onto a manifold or radiator.

The most commonly used electronic valves are 'on/off' valves with control voltage (230 V) or low voltage (24 V or 12 V). After the electronic valve has been activated, it takes 30 to 40 seconds for the throughput to start. After approximately two to three minutes, the electronic valve will be entirely opened or closed.

The heating and cooling module of Niko Home Control take into consideration the response time of the electronic valve and the running of the heating system after the heating process has been completed.



## Connecting the heating control unit to the heating system

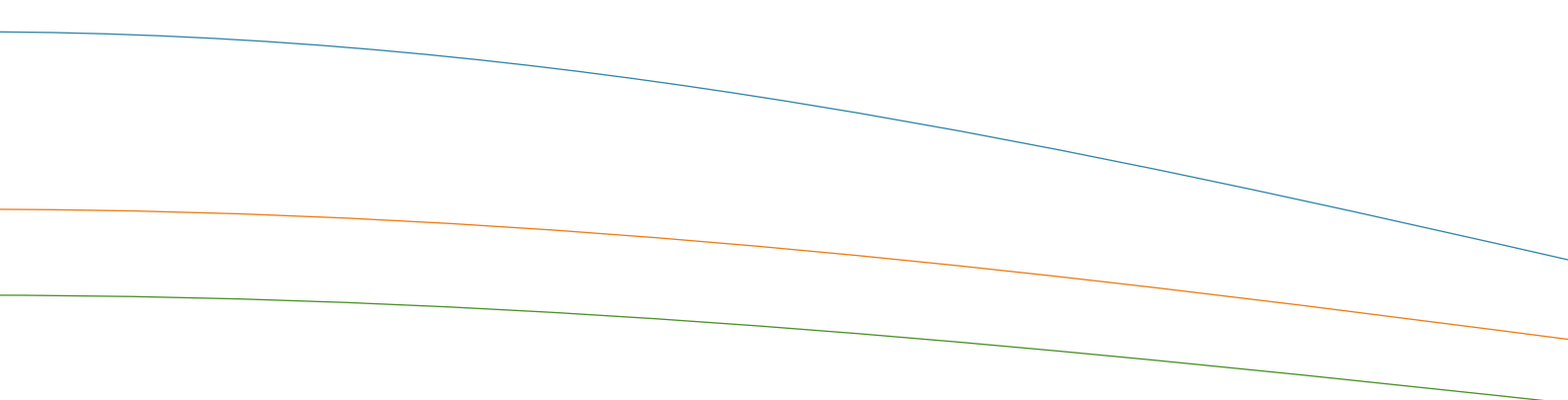
### 2 options:

#### 1) The heating system controls the heating unit whenever heating is required

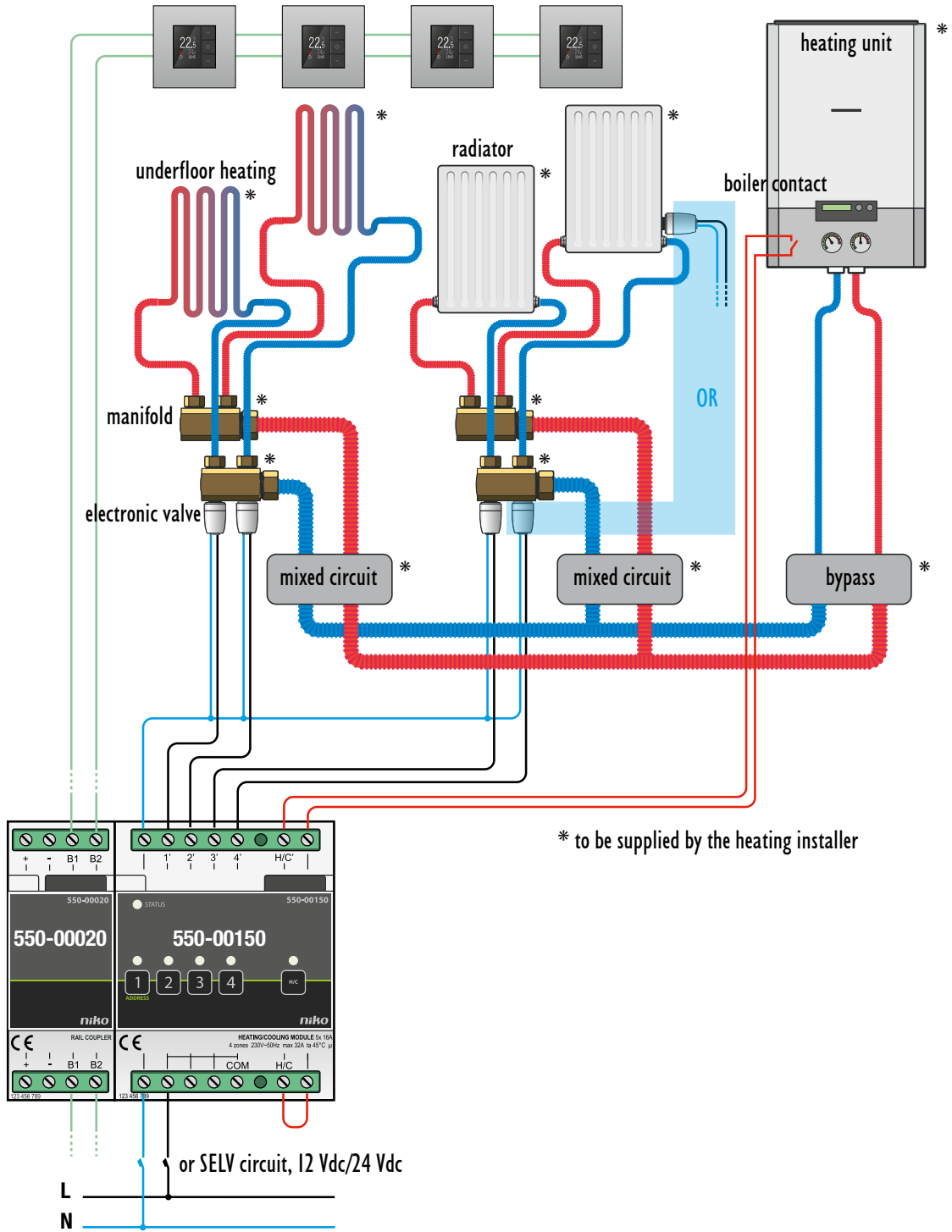
The heating system can be controlled via the dedicated contact input in addition to its own thermostat. Connect the Niko Home Control HC contact to this contact input.

When more heat is required, the Niko Home Control HC contact closes. This informs the boiler that the water needs to be heated. As soon as the contact opens, the boiler knows that heating is no longer required. The boiler will then initiate its own procedure to close down, which includes letting the circulation pump run for a few minutes to reduce the heat within the boiler.

The heating unit maintains its modular capacity because the boiler adjusts its water temperature based on the outside temperature and the return temperature of the water.

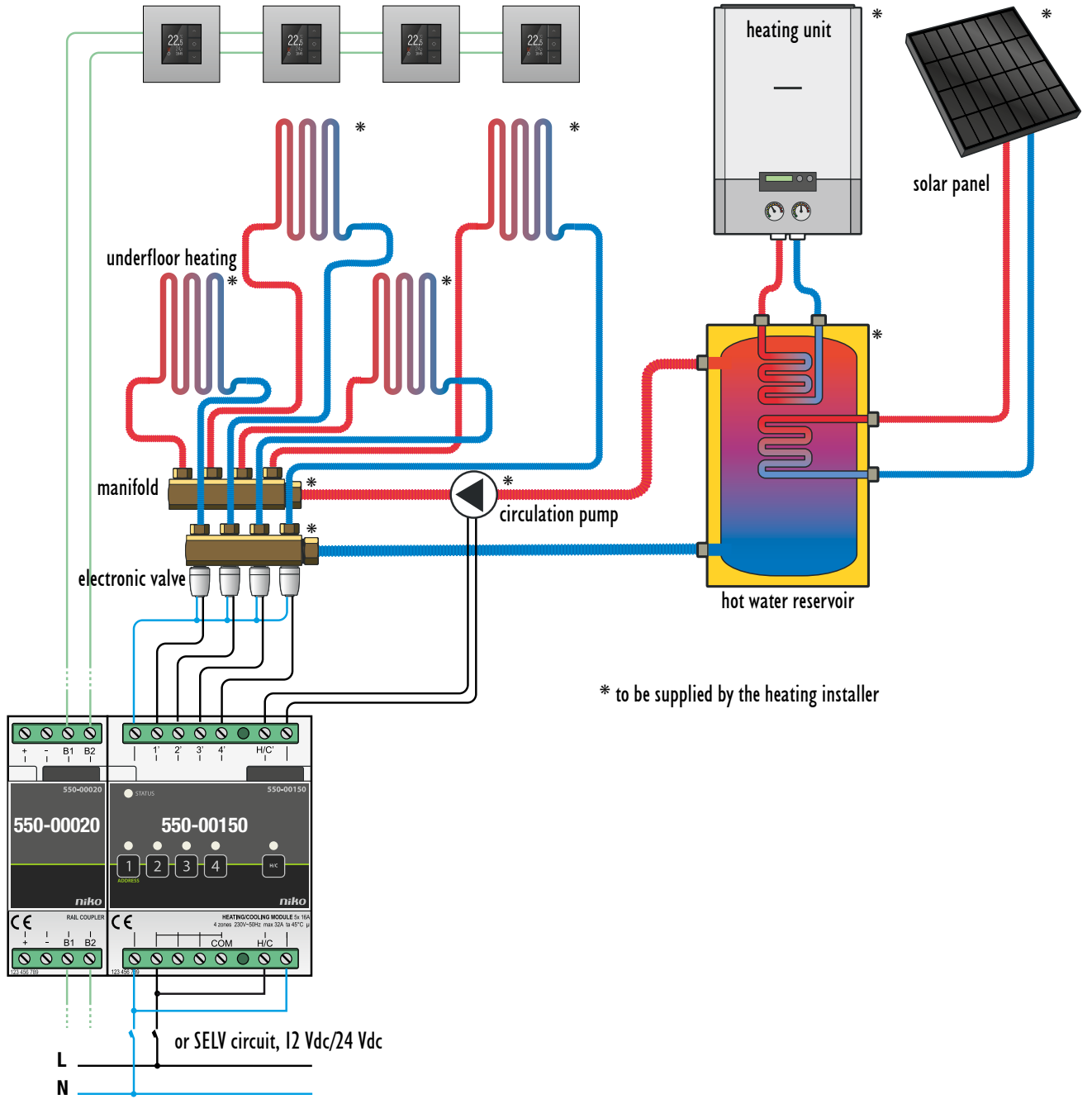


### Sample wiring diagram: installation with boiler





Sample wiring diagram: installation with hot water reservoir and circulation pump



**2) Niko Home Control controls the circulation pump in an installation including a hot water reservoir**

In installations like these, the boiler or hot water pump maintains a certain temperature for the water. Niko Home Control controls the circulation of the water whenever heating is required in one or several zones.

The heating unit maintains its modular capacity because the boiler adjusts its water temperature based on the outside temperature and the temperature of the water in the hot water reservoir.

If no heating is required in the summer months, simply deactivate the hot water reservoir as it no longer needs to keep hot water at all times.

**Zone heating using electric heating**

The heating module of Niko Home Control allows you to control electric heating systems as well. In this case, the HC contact will not be used.

**Caution!**

*The complete module can control a maximum capacity of 16 A, divided over four contacts.*

**Caution!**

*Use an external relay contact for larger heating units.*



### 3.5 Motor control of roll-down shutters, sun blinds and curtains

These days, many houses are fitted with motorised roll-down shutters, sun blinds or curtains. At night, roll-down shutters provide **protection** and a feeling of **security**, whilst **keeping out unwanted sunlight** during the day. Sun blinds help maintain a **comfortable temperature inside the home** and help **reduce glaring sunlight**. These features are useful, but they require a lot of running back and forth each day. Niko Home Control lets the resident close the roll-down shutters automatically at night while he is away, or roll down the sun blinds automatically when needed. **Once again, Niko Home Control addresses the resident's needs.**

#### Think

- **User-friendly and comfortable:**
  - **indication LEDs** ensure that the resident easily finds the control unit in the dark
  - **personal settings** possible, e.g. when watching television
- **Sense of security:**
  - even when the resident is not at home, the roll-down shutters will be closed automatically or the curtains will close, at whichever time and for however long he wants
- **Modular installation:**
  - **specifying made ultrasimple:** one module controls up to three motors
- **A simple, quick and orderly installation process:**
  - by using a **sliding contact**, you do not need to interconnect the bus via cables
  - if the cabinet does not include a terminal block, you connect the neutral conductor to the modules via screw terminals
  - **ultracompact modules** require minimal space in the cabinet
  - operation mode programmable via the **programming software:** preference settings, run times to open and close, etc.

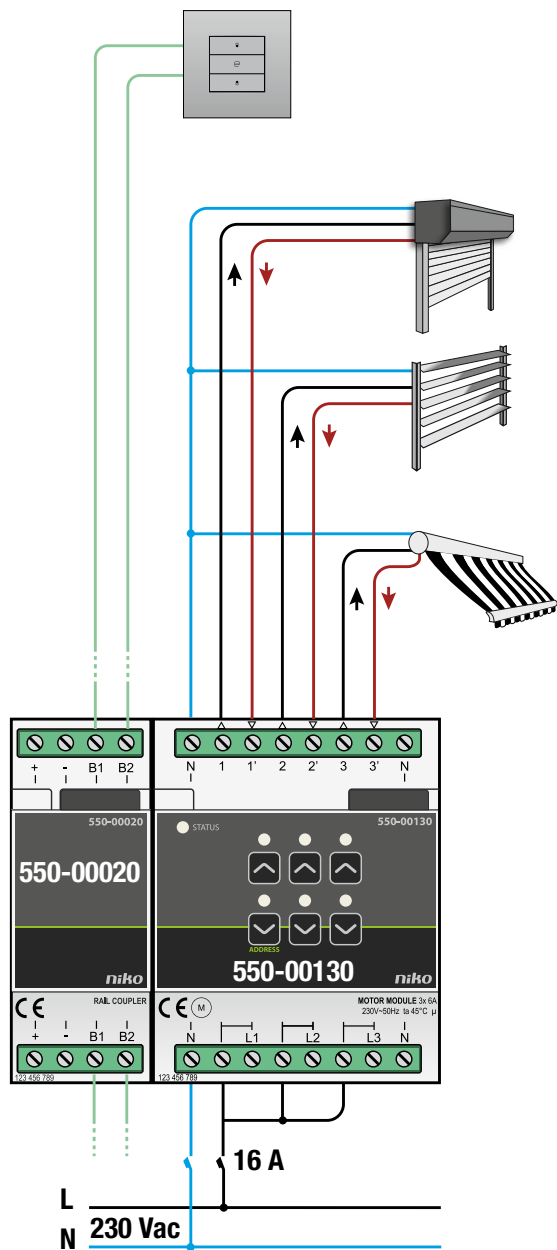
#### Love

- **User-friendly and comfortable operation to suit the resident's needs:**
  - push-button control
  - automatic operation based on calendar settings
  - central operation via the touchscreen
  - smartphone
- **Compact control units** require minimal space and follow the design of other Niko switching materials.

#### Care

- **Automatic operation of sun blinds** adds **extra comfort** and eliminates the need to run air-conditioning units which waste energy. As soon as the heat reaches a certain temperature, the sun blinds are closed, even when no one is at home at the time, thus guaranteeing **maximum use of the heat generated by the sun, reduced energy consumption** and **cooler temperatures inside the home.**

**Sample wiring diagram:**  
**control of 230 V motors for roll-down shutters or sun blinds**



**Caution!**

- Do not connect different phases to the same module.
- Do not switch different voltage levels on the same module.
- Each channel has a maximum capacity of 6 A.

### 3.6 Control of venetian blinds and vertical blinds

Venetian blinds and vertical blinds offer **privacy** and **keep out unwanted sunlight**. Niko Home Control makes it **user-friendlier** to operate these blinds. The operation runs automatically, even when the resident is not at home. This energy-efficient solution ensures that indoor temperatures are kept within limits.

#### Think

- **User-friendly and comfortable:**
  - **indication LEDs** ensure that the resident easily finds the control unit in the dark
- **Modular installation:**
  - **specifying made ultrasimple:** one module controls up to three venetian blinds or vertical blinds
- **A simple, quick and orderly installation process:**
  - by using a **sliding contact**, you do not need to interconnect the bus via cables
  - you select the **control logic** via the software
  - **ultracompact modules** require minimal space in the cabinet
  - **venetian blinds/vertical blinds and motors** are controlled via **the same module**
  - operation mode programmable via the **programming software:** preference settings, run times to open and close, etc.

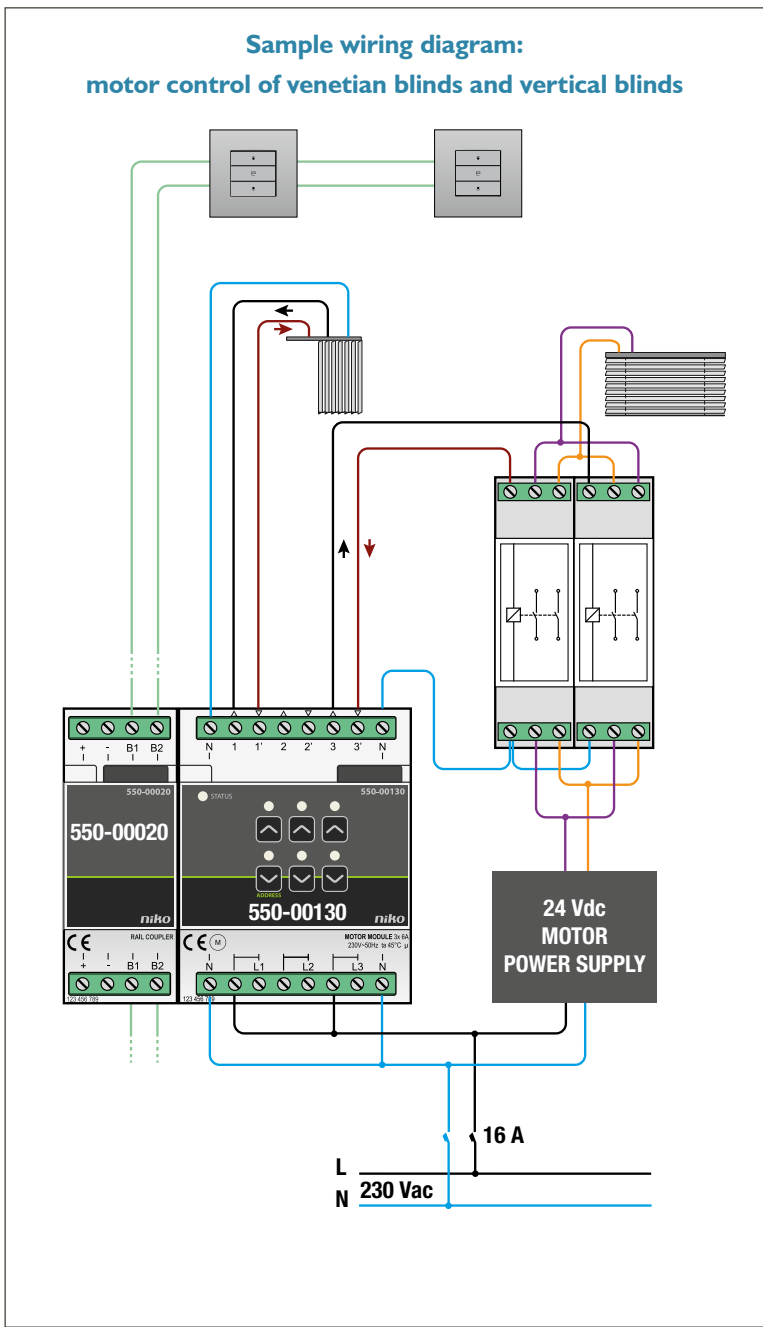
#### Love

- **User-friendly and comfortable operation to suit the resident's needs:**
  - push-button control
  - automatic operation based on calendar settings
  - central operation via the touchscreen
  - smartphone
- **Compact control units** require minimal space and follow the design of other Niko switching materials.

#### Care

- **Automatic operation of venetian blinds and vertical blinds** adds **extra comfort** and eliminates the need to run air-conditioning units which waste energy. As soon as the heat reaches a certain temperature, the venetian blinds or vertical blinds are closed, even when no one is at home at the time, thus guaranteeing **cooler temperatures inside the home** upon arrival back home.

Sample wiring diagram:  
motor control of venetian blinds and vertical blinds



### A motor for operating venetian blinds and vertical blinds

A 230 Vac or 24 Vdc motor operates the venetian blinds or vertical blinds. 230 Vac operation works the same as roll-down shutter operation. For 24 Vdc operation, you need **two switching contacts for each venetian blind or vertical blind**. These contacts are available from the supplier.

### Position adjustment of venetian blinds or vertical blinds

You can tilt or turn venetian blinds or vertical blinds in **several different positions** to let in or keep out the desired amount of light.

### Two operation modes for venetian blinds or vertical blinds:

- stepping mode for brief tilting or turning time
- standard roll-down shutter control with longer tilting or turning time

Use the programming software to set the operation mode. The motor module is able to generate very brief pulses (minimum 40 ms) to allow for accurate control adjustment.

## 3.7 Security

The resident feels safe and secure in his own home. Yet, unfortunately, there are still many things that can potentially go wrong. In case of fire, he wants to get out of the house as soon as possible. Or, after having unwanted trespassers on the premises, the feeling of security can be difficult to recover.

Niko Home Control helps the resident maintain his feeling of security without having to go through an experience like that.

### Think

- With **presence simulation**, it looks as though there is someone home: lights switch on intermittently in the house when it is dark outside.
- By way of a **connection with the emergency centre**, the lights will flicker together with the indoor siren.
- **Motion detectors** not only automatically control the lighting, they can also **activate the indoor siren** when there is no one home.
- A **smoke detector** detects fire: the **lighting switches on** and the **roll-down shutters raise** so the resident can quickly make his way outside.
- **Sun blinds** can be **operated automatically in function of the sunlight, wind and temperature measured**.
- **Simple installation:**
  - **convenient programming** due to the naming of sensors using the programming software
- **Modular installation:**
  - maximum of **three sensors per module**
  - simple addition of **extra modules**

### Love

- When leaving the house, the resident activates presence simulation **using the same button** with which the eco-setting is activated.

### Care

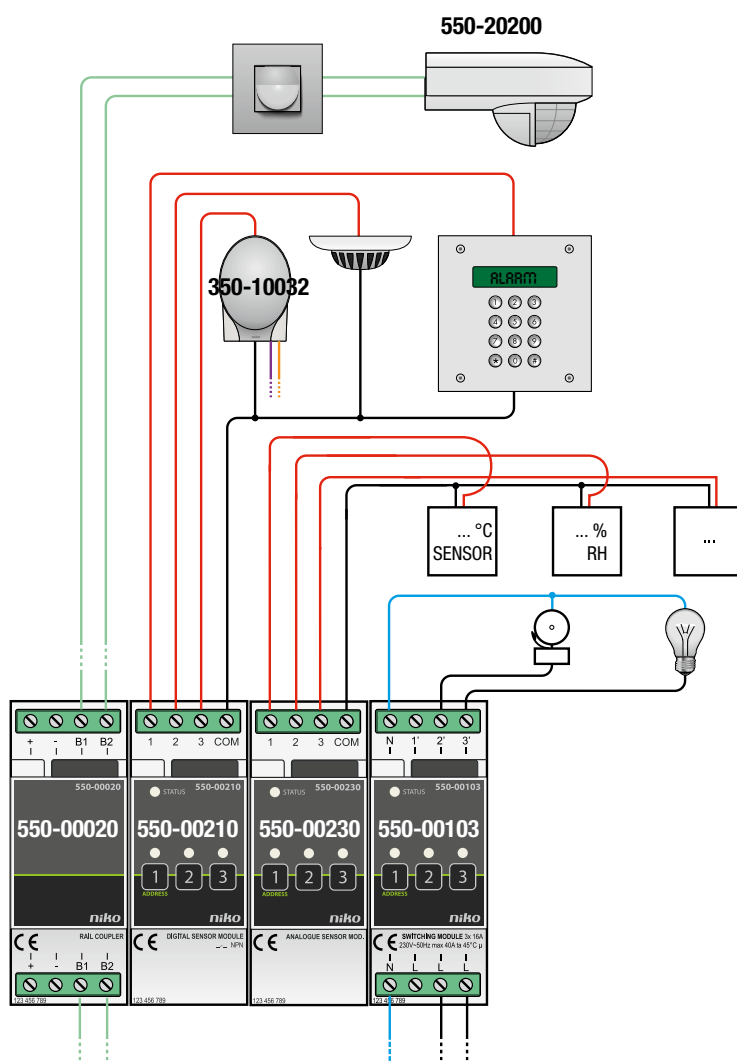
- Via the program, the resident chooses to use **only the energy-efficient lighting sources** in presence simulation.

With the digital potential-free sensor module, you connect a maximum of three sensors via an NO contact or an NPN transistor output.

The module has a common (common terminal) to which you connect the earth of the sensors.

The analogue sensor module allows you to connect up to three external analogue sensors to the Niko Home Control installation.

**Sample wiring diagram:**  
sensors, connected directly to the bus or connected via a sensor module



**Caution!**  
Always use sensors that are suitable for applications with a safety extra-low voltage (SELV).





## 4. Summary

Below is a summary of the main reasons why installers and builders/renovators choose Niko Home Control.

### **Niko Home Control for installers**

Niko Home Control focuses on the resident's needs. By choosing a Niko Home Control installation, the installer has all the tools necessary to meet the builder's/renovator's needs. Niko Home Control can be easily and quickly installed and tailored to suit each installation. Its programming software is very intuitive and includes many preprogrammed logical functions. Niko Home Control offers great added value to the installer by reducing the workload and eliminating difficulties.

### **The Niko Home Control installation**

- two-wire non-polarised cabling to all controls
- free topology with standard wiring, such as SVV or JYSTY (UTP, STP, TPVF, etc.)
- neatly arranged set-up requires minimal space in the cabinet
- minimal cabling in the cabinet, because modules are connected via a unique sliding contact
- minimal programming required: each function has a dedicated module
- components with exceptionally low energy consumption
- minimal heat dissipation in the electrical cabinet, giving the modules an ultralong lifespan

### **Easy and very quick installation process**

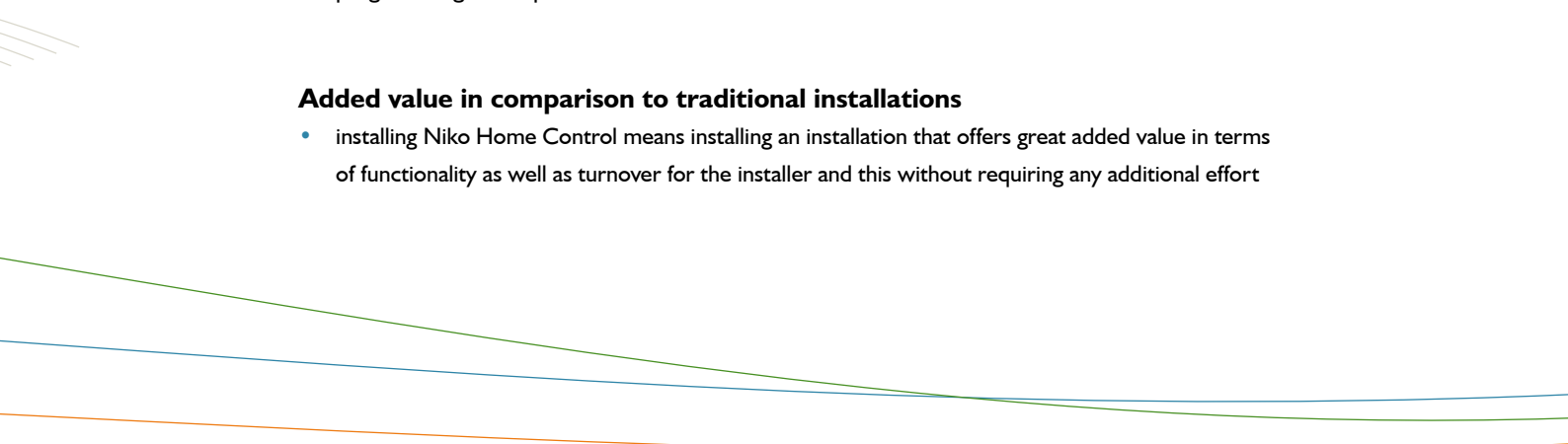
- simple connection via two-wire non-polarised cabling
- touchscreen connection only requires one wire
- wall-mounted printed circuit board concept only requires one flush-mounting box, even for multiple controls
- possibility to add wireless Easywave controls

### **User-friendly programming**

- graphical visualisation of the installation via the programming software
- floor plan can be loaded or drawn in the software
- programming back-up stored within the installation

### **Added value in comparison to traditional installations**

- installing Niko Home Control means installing an installation that offers great added value in terms of functionality as well as turnover for the installer and this without requiring any additional effort



## Why do consumers prefer Niko Home Control?

International consumer research revealed that people want a user-friendly electrical installation with energy-saving capabilities that also creates a greater sense of security in the home. Feeling at home is something everybody wants – whether young or old, no matter where he lives. Niko Home Control offers the resident the opportunity to have full control over his electrical installation at home.

### 6 reasons why builders/renovators choose Niko Home Control!

#### User-friendliness

- easy-to-use controls: push buttons, display, touchscreen and smartphone
- Niko Home Control
  - operation of all functions at home, such as lighting, ventilation, heating, roll-down shutters, motion detectors, etc.
  - switching and dimming of new energy-saving lamp types, such as dimmable economy, LED and fluorescent lamps
- low-threshold, flexible installation
- the building supervisor decides which functions he wants to include in the Niko Home Control installation
- the resident maintains ultimate control by selecting different settings and preferences himself (e.g. how long the garage or driveway lights should stay lit after leaving the property)
- compact Niko Home Control modules require minimal space in the cabinet



### **Energy efficiency**

- Niko Home Control measures the energy consumption and production of the home
  - energy-saving features such as zone heating, ventilation and displayed consumption
  - provides insight into the resident's energy consumption at any time (electricity, gas and water)
  - promotes active energy savings and helps prevent energy wastage
- the installation itself uses a minimal amount of energy
- with the simple press of a button, the resident switches off all lights and selected socket outlets and switches the heating and ventilation to a lower setting leaving the home

### **Increased security**

- Niko Home Control integrates several security functions, such as presence simulation, motion detectors, a burglar alarm, a panic button, etc.
- the risk of fire or overheating is reduced by switching off socket outlets

### **Modular installation**

- the building supervisor decides whether or not to include certain functions in the installation: monitoring energy consumption, lighting control, heating, ventilation, etc.

### **Budget-friendliness**

- great added value for a limited additional cost to the construction project

### **Timeless design**

- controls available in any Niko finish
  - the Niko Home Control touchscreen follows the same design
- 



## 5. Training

Niko Home Control: Live it, love it!

As soon as you get to know Niko Home Control, you are going to love it. That is why, with its extensive training course, Niko wants to introduce as many installers as possible to its new electrical installation.

### Purpose

Being an installer, you have a decisive or an advisory role in the choice of electrical installation. During a professional training course, you will discover the many possibilities of Niko Home Control, an extremely installation- and user-friendly solution which allows you to offer **optimal service to your customers**. Customers must also be inspired to spread the word about their love of Niko Home Control. This is why Niko ensures that installers are given the best training and information to be able to deliver and install this exciting new solution.

### Sessions

During training sessions you will be introduced to Niko Home Control while learning the basics of this new electrical installation.

This extensive introduction will thoroughly acquaint you with the new concept.

In addition, you will receive useful facts and tips. You will learn to identify the customer's needs and be able to quickly anticipate all of his questions. You will also learn how to explain the benefits of the installation.

Theory is supported with practical exercises. At the end of this training day, you will be able to efficiently build and program an installation yourself.

**Follow-up sessions** will allow you to increase your technical knowledge. You will learn to work with the more advanced functions of Niko Home Control, such as zone heating.

### Practical information

The sessions will be offered via the local distributors. Check [www.niko.eu](http://www.niko.eu). There you will find an overview of the next sessions, the number of available places and a detailed course programme.

## Discover Niko Home Control online!

Niko Home Control is available from your wholesaler. You can also go to our website for more information about this new electrical installation. There you will find product information, a trade show calendar and price estimates for a small, medium-sized and large installation. You can also request a price estimate based on a floor plan or a quotation for a traditional installation, so you immediately know what the extra costs are, and you can provide your customer with correct and detailed information. Brochures can either be downloaded or sent to you by regular mail.

Quickly go to [www.niko.eu](http://www.niko.eu) !

Haven't you found what you are looking for straightaway?  
Then contact our sales representative in your region.



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Niko is the market leader in Belgium and produces solutions for switching material, access control, lighting control and home automation from its headquarters in Sint-Niklaas (Belgium). Niko invests heavily in research and development as part of its ongoing commitment to focus on well-considered design and to produce the highest quality products in an environmentally-friendly manner. Niko's design philosophy is to consistently create the most innovative, aesthetically pleasing and user-friendly products on the market today. The company is actively expanding into new markets, employs more than 630 people and has an annual turnover in excess of 125 million euros. Niko currently has offices across Europe in Belgium, France, the Netherlands, Slovakia and Denmark.

***niko***  
*Illuminating ideas.*

Need more information?  
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