



Take your project to the next level  
with DALI-2 lighting control

DALI-2 certified ceiling detectors -  
Niko P40 and M40 detector series

***niko***



### DALI-2: The standard protocol for digital lighting control

Building on the long-established benefits of DALI (Digital Addressable Lighting Interface), the DALI-2 product certification by the DALI Alliance brings the promise of **significantly-improved interoperability and additional functionality** including sensing and data gathering.

DALI-2 certification involves **independent verification of test results**. In contrast, DALI version-1 product compliance is based solely on self-declaration.

Source: [www.dali-alliance.org](http://www.dali-alliance.org)

# Intelligent lighting control using DALI-2 detectors

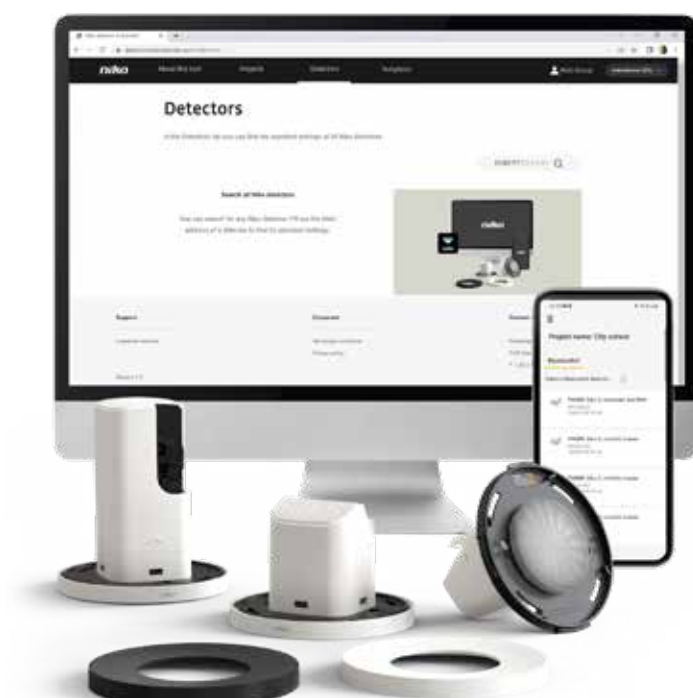
Lighting control is more than just turning your lights on and off for energy savings. It's also about improving user comfort while still optimising the energy efficiency, and using the DALI protocol is an easy way to achieve this.

The DALI-2 certified detectors from Niko fully utilise the DALI protocol, making it easy for installers to install lighting control that is both user friendly and energy efficient. This is a strong alternative to installing light control using building management systems, as the installer can do the installation completely independently of external experts, advanced programming, controllers etc. Functionality is built into the DALI detector and commissioning only requires setup with the Niko detector tool app via wireless Bluetooth® communication to the detectors.

## One design line for your entire project

Niko's DALI-2 detectors are part of the P40 and M40 series of motion and presence detectors with a discreet, contemporary look and an award-winning design that fits perfectly into any ceiling type in any building. This means you can now use the same design line for all the detectors in your project, including any combination of:

- 230 V detectors
- DALI-2 detectors
- DALI-2 secondary/BMS detectors - for extending the detection area of a DALI-2 master detector or BMS integration








# A sense for light control

Solutions that meet the needs of your entire project

The purpose of the brochure is to inspire and guide on how to apply the right functionalities into the lighting control solution you need for your project.

- 1 | Identify the application - building or room type that match your project
- 2 | Find and explore applicable the solution and function options

APPLICATION - Building or room type						
Solution & functions with Niko DALI-2 detectors	 Schools and educational institutions	 Offices and meeting rooms	 Hotels, hospitals and nursing homes	 Sports halls and arenas	 Industrial buildings and warehouses	Go to page
Daylight controlled lighting	●	●	●	●	●	16
Night mode			●			18
Control HVAC	●	●	●	●		20
Minimise standby power consumption	●	●	●	●	●	20
Control lighting in adjacent areas	●	●				22
Folding door solution	●	●	●	●		24
Lighting next to screen/ smart board	●	●	●			26
Tunable white/Human centric lighting	●	●	●		●	28
Light scenes	●	●	●	●	●	30

## What you need to know about Niko DALI-2 detectors:

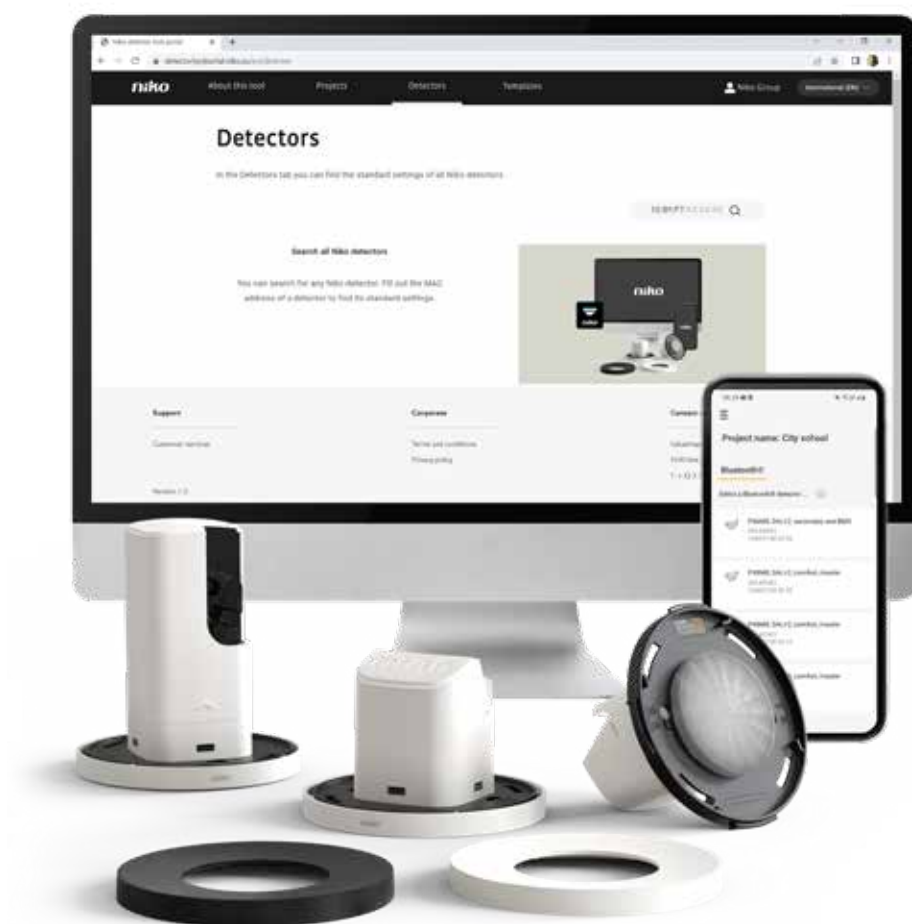
- Introducing Niko DALI-2 detectors with 2-way bluetooth communication: P46, P47, P48.....page 6-7
- A sense for easy installation - SnapFit installation and wiring without use of tools.....page 8-9
- Smart commission with Niko detector tool app.....page 10-11
- Manage your detectors with the Niko detector portal.....page 12-13
- Push-buttons and input devices for your DALI-2 solution.....page 14-15





# Niko detectors P47 and P48

A powerful line-up: DALI-2 certified detectors



It should be easy to find the right detector for your projects. Niko offers two types of DALI-2 detectors that include many integrated functions:

- **DALI-2 P47**  
Detector for a standard daylight controlled DALI installation.
- **DALI-2 P48**  
Detector with all functions integrated, to meet highly specific requirements for a daylight controlled DALI installation.

## One design line

Even though there is a difference in specifications, the design of the detectors is identical. The detectors share the same benefits of easy installation, wiring and smart commissioning using the Niko detector tool app.



## DALI-2 detectors for BMS

Our range of detectors also includes DALI-2 BMS detectors designed to be controlled by BMS systems.

The DALI-2 BMS detectors P46 can communicate with BMS systems that comply with the following DALI-2 standards:

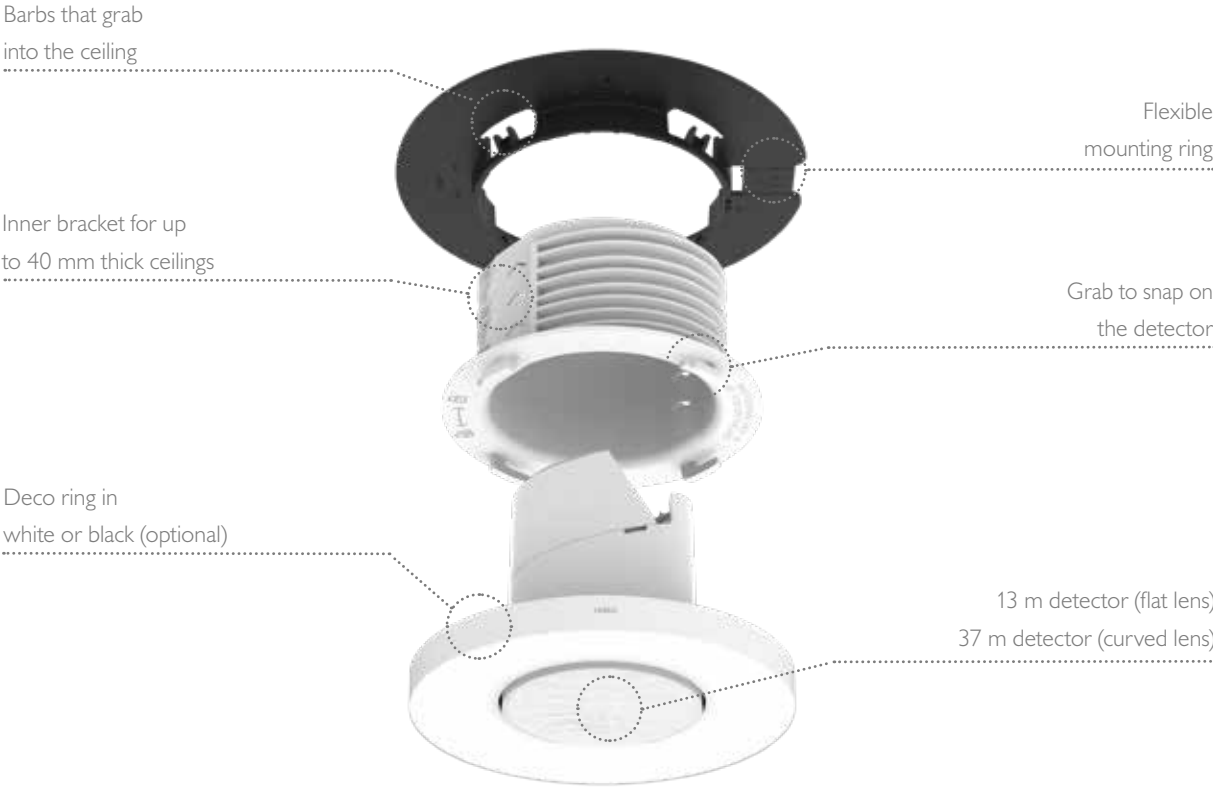
- IEC 62386-101
- IEC 62386-103
- IEC 62386-303
- IEC 62386-304

# A sense for functionality

Find the DALI-2 detector that matches your project's requirements

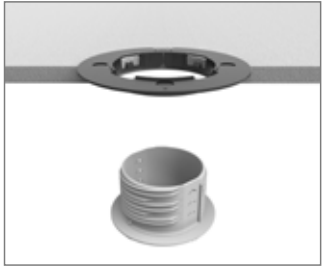
Type	DALI-2 P47 presence detectors	DALI-2 P48 presence detectors	DALI-2 P46 Secondary/ BMS presence detectors	
INPUT	230 V push-buttons	1	4	
	Free assignment of push-buttons		•	
	Wireless push-button for override of lighting control		•	
	External trigger (activation via external systems)		•	
	Wired secondary	•	•	
	External input devices via DALI bus		•	
FUNCTIONS	Automatic on/off	•	•	
	Semi-automatic on/off (manual on/off + auto off)	•	•	
	Daylight control (dimming - based on daylight)	3 zones	4 zones	
	DALI Broadcast + DALI Addressable	•	•	
	Wireless master-to-master link via Bluetooth®		•	
	Multi-zone - smart board lighting		•	
	Night mode - perfect for corridors		•	
	Fixed light level		•	
	Orientation light	•	•	
	Light scenes - define and control scenes		•	
	Folding door function- Wireless sync of lighting control		•	
	Control light in adjacent areas / corridors		•	
	Tunable white third-party integration	•	•	
	Tunable white dynamic and presets		•	
	Human Centric Lighting (HCL)		•	
	Output relay - control HVAC / standby minimisation / light (on/off)		•	
	External DALI relay for HVAC / standby minimisation		•	
	Event log	•	•	•
	Portal solution for documentation, backup and distribution of configuration files	•	•	•
	Settings and configuration can be locked with a PIN-code	•	•	•
APP	Software update of detector via app	•	•	•
	2-way Bluetooth® communication	•	•	•

# A sense for easy installation with SnapFit mounting



## Tool-free stable installation

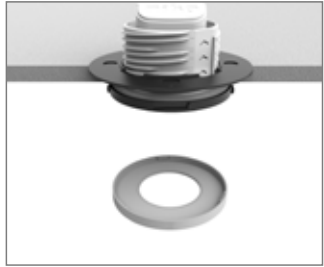
1. Insert inner bracket



2. Insert detector



3. Snap on deco ring



The SnapFit mounting system consists of an inner bracket which is screwed into the mounting ring above the ceiling. The detector is then simply inserted into the SnapFit mounting bracket and snapped on with a twisting action. No tools, screws or spring clips required.

For ceilings without removable tiles, simply screw the mounting ring through the hole.





# Wiring without the use of tools

Behind the surface of every Niko product, you'll find just as much attention to detail as the front. The same goes for the installer-friendly design of our P40 and M40 detector series. Easy access to plug-in wire connectors means you can install a large number of detectors quickly and easily, without the need for screws or tools. The housing is also designed to allow the cable to be routed sideways: great for ceilings with limited clearance.



## Release tool

A handy release tool is included in the detector's packaging, which can be used to release a wire from the wire connector.

It is easier, more convenient and safer than using a screwdriver or other tools.

When using thin stranded wire, the tool can also be used to push the wire into the connector.



# Smart commissioning

## Connect via Bluetooth® with the user-friendly Niko detector tool app

Even the commissioning of your detectors is designed to be effortless and as automatic as possible. And it all happens wirelessly with the help of the free Niko detector tool app. When you open the app it immediately detects and displays the full list of detectors installed nearby, starting with the one nearest to you. Select the specific detector you wish to configure and the app will guide you through the configuration. You can either choose one of the templates, the last used configuration or a new customised configuration. And the app even works without an internet connection; your settings will automatically upload when you have access to the internet again.



Niko detector tool app

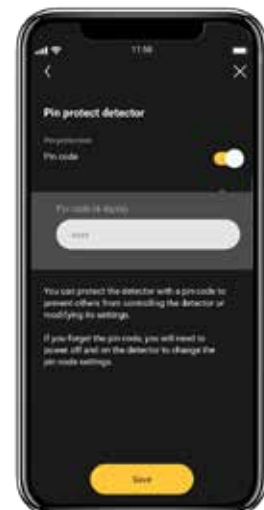


The Niko detector tool app is available for free on the App Store (iOS) or Google Play (Android).

## 2-way Bluetooth® communication ensures faster configuration

The app and detector communicate with each other wirelessly using 2-way Bluetooth® communication. This means you do not need any other tools or adaptors during the configuration process.

The 2-way Bluetooth® communication gives you instant, detailed information on the current detector settings, so you always have a complete overview in the app. This also saves time during subsequent installation service and maintenance.

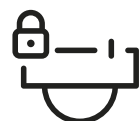


### Utilize the cloud solution

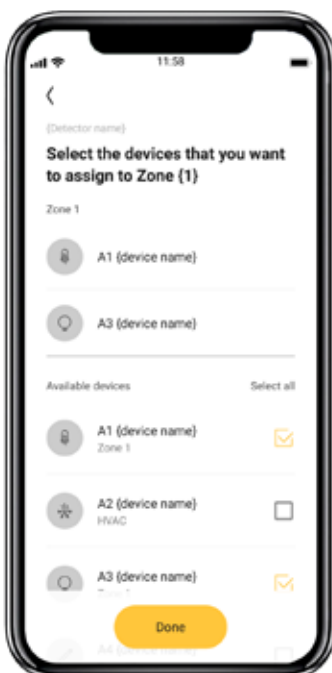
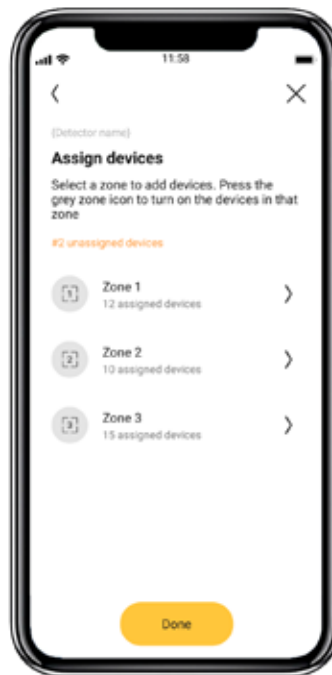
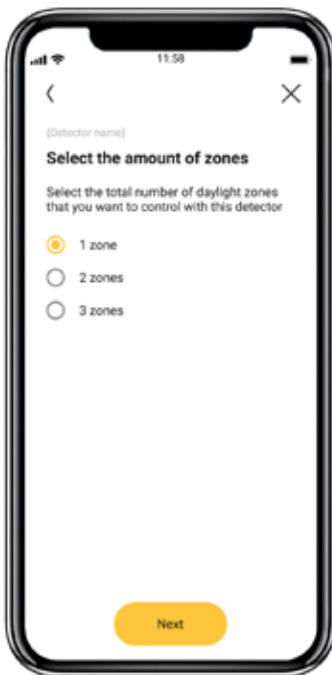
All data are stored in the cloud and the detector tool portal, which you can use for documentation, backup and distribution of configuration files.

### Lock detector

For security reasons it is possible to lock the detector with a PIN code.



## Interface and configuration with the Niko detector tool app



# Manage your detectors with the Niko detector tool portal

The Niko detector portal is the online tool that makes managing projects with the P40 and M40 detectors series easier and more efficient. In the portal you can organise detectors and commissioning information in project folders for easy re-use, sharing with colleagues or documentation for your customer. You don't need to register to use the Niko detector tool application. However, by registering for the portal and logging in to the app, you will gain several benefits.



## **A complete overview of your detector settings**

The portal allows you to efficiently find the detector configurations used in a project. And to prepare the detector configuration to upload to the detectors later while you or one of your colleagues is handling the commissioning.



## **Save time with templates**

You can mark a detector's configuration as a template so that you can easily find it again. The configuration of this detector, created by you or your colleagues, can also be reused to commission similar detectors.



## **Document and organise multiple projects**

You can document and organise one or multiple detector configurations into a project for easy documentation, re-use or sharing.



## **Share with your team**

Detector configurations can be shared with colleagues, so you can collaborate when commissioning large installations or with the building owner for quality assurance purposes.



## **Secure data in the cloud**

The information about each detector's configuration and relevant information about your installation project is automatically shared between the app and portal. This means that the configurations are accessible even if the smartphone is replaced or if access to the configurations is needed in the portal.

# Enjoy the benefits of the Niko detector tool app and portal



Features in Niko detector tool app	No account	With an account
Commissioning detectors	•	•
Project overview in Niko detector tool app	•	•
Lock/Unlock detectors with a PIN code - protect configurations with a 4-digit code		•
Save configurations in the Niko detector tool portal - ensuring backup of configurations		•
Overview of all projects/configurations in Niko detector tool portal		•
Automatically save configurations in the Niko detector tool portal - ensuring backup		•
Share configuration templates with other Niko detector tool portal users		•
Automatic creation of documentation of the settings in Niko detector tool portal - PDF- or Excel		•
Search for the settings of a detector using the MAC-address		•



You register to the Niko detector tool portal via the link in the Niko detector tool app - or via the website: [detectortoolportal.niko.eu](https://detectortoolportal.niko.eu)





# Improved usability with push-buttons

Use as many input devices as you need

In most installations it is convenient to have one or more push-buttons to override the automatic lighting control. Push-buttons can be used to dim down the light in a multi-zone next to a screen, activate light scenes, turn on board lighting, etc.

## Add input devices directly to the DALI bus

The DALI-2 P48 detectors have four inputs that can be used for either 230V push-buttons or switches (T1 - T4). However, with the DALI-2 P48 detectors you can add external input devices directly to the DALI bus, as long as they comply with the DALI-2 protocol. In most cases this will give you the ability to have all the control devices you need for your application, as the limit is 64 devices according to the DALI protocol. You can take advantage of this, by, for example, creating more scenarios, each controlled by a push-button.



## Connect alarm to the lighting control

You can use one of the four 230V inputs on the DALI-2 P48 detectors to add a switch. For example, you can connect your alarm system to the lighting control, so the light turns off when the alarm is switched on, and the light turns to 100 % intensity when the alarm is deactivated.

The switch can be used for the following actions:

- Set light at a fixed light level
- Activate a light scene
- Activate light in a certain zone

# Perfect solution for glass and moveable walls

## Use DALI-2 P48 detector for Bluetooth® push-buttons

By combining the DALI-2 P48 detector with wireless Bluetooth® push-buttons, you can set up wireless user control of the lighting control. It allows elegant and practical lighting solutions to be created in spaces with glass and movable walls for flexible office design.

### Completely wireless push-buttons

The Bluetooth® push-buttons from Niko are completely wireless and can therefore be placed anywhere. When the push-buttons are activated, enough energy is generated (using kinetic energy) to send wireless signals to the detectors. As a result push-buttons do not require a battery, which means they are completely maintenance-free.

The solution is particularly economically advantageous in renovation projects and when retrofitting push-buttons, as installation of wireless push-buttons eliminates the cost of wiring of cables, paint, etc.



### DALI-2 P48 detector

- For wireless user control of lighting control
- Works with Niko Bluetooth® push-buttons
- Perfect solution for glass and movable walls
- Cost effective solution
- Easy installation and maintenance



# Save energy with daylight control

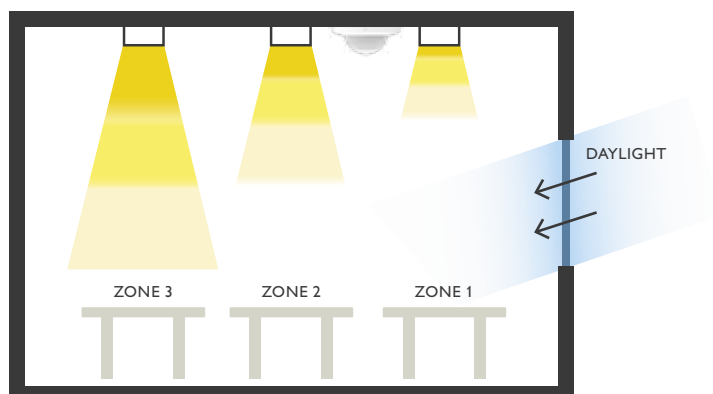
## Benefit from DALI-2 with daylight control

Using DALI-2 master detectors is an easy way for an installer to create energy efficient lighting control. This can be done with a daylight-controlled lighting installation that does not require any advanced programming, BMS-controllers etc.

### Use incoming daylight

During the commissioning of your DALI-installation, you define the required lux level in the room. The DALI-2 master detector will automatically measure the incoming daylight from the windows and take this into account, when the detector switches on the luminaires.

Early in the morning the luminaires will automatically switch to full level to meet the set lux requirement. Later in the day, when the sun rises and shines through the windows, the luminaires are automatically dimmed to a lower light level. The lux level in the room will always be at the required level, but you will save energy by dimming the luminaires as you make use of the daylight coming in through the windows. In the evening, as the sun goes down, the luminaires will again automatically light up to compensate for the reduced daylight from the windows.



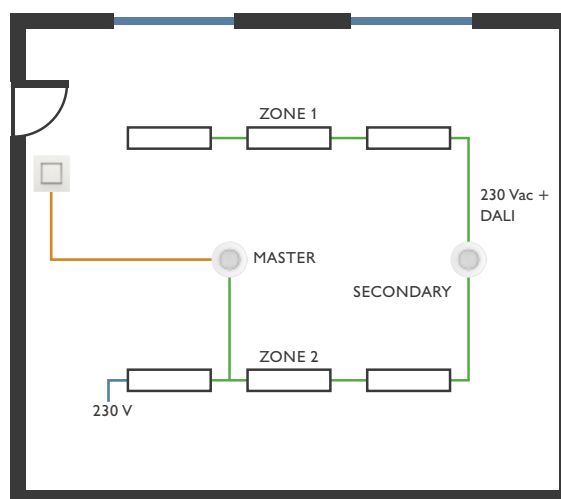
### Create more daylight zones

It is obvious that the incoming daylight will mainly light up the area next to the windows. For this reason you can create up to 4 daylight zones, and the DALI-2 master detector will continuously calculate the appropriate lighting level in each zone to ensure that the required lux level is maintained throughout the room.

### Easy installation of secondary detectors

It is possible to extend the detection range with up to 10 secondary detectors using DALI-2 P48 detectors. You simply connect the DALI-2 secondary detector directly to the DALI bus and the DALI-2 secondary detector will work immediately without any configuration.

If you want to modify settings e.g. the sensitivity, you can easily do this afterwards with the Niko detector tool app.



### Works out-of-the-box

When the DALI-2 master detector is installed, daylight control works immediately out-of-the-box, without any further configuration. The DALI-2 detector is preset to work in "broadcast mode", i.e. basic daylight-control lighting based on factory settings, which can be easily modified at a later date.

### Easy to upgrade to take full advantage of the DALI protocol

It is easy to change the basic "broadcast mode" into "addressable mode" to take full advantage of the possibilities that DALI-2 protocol offers.

In "addressable mode" you have full control over each luminaire and control gear on the DALI bus. This allows you to create more daylight zones, multi-zones, use external DALI relays, add several control gears, etc. This further increases both user comfort and energy savings.





# Get the right level of light both day and night

Use night mode to optimise light in corridors

DALI-2 master detectors automatically dim the light to orientation level when no one is present. After a while the light switches off completely. This ensures that nobody gets caught in the dark when they are out of detection range. If presence is detected while the detector is in orientation light mode, full light will switch on again. Switch-off delay time and light level can be set as required.

## Night mode - perfect for corridors

In corridors in hotels, hospitals/care homes etc. it can be unpleasant to have full light when entering the corridor at night. A light level of 50 % may be sufficient to pass through the corridor without bothering others with full light. To avoid full light when someone is present, you can use night mode to define the light level at night.

Night mode can be activated manually with a switch or automatically with e.g. a timer or a twilight switch. When night mode is not activated the light is controlled by daylight.

### Night mode



- Energy efficient solution
- User-friendly solution
- Setup using Niko detector tool app
- Perfect for corridors at night



# Save more energy with daylight control when dimming manually

## Keep daylight control when light is adjusted manually

Lighting levels in a daylight-controlled DALI installation are automatically adjusted during the day by natural daylight coming through the windows. However, the automatic lighting control can be overridden if required. This can be done with a push-button control if ever the user needs more light than set automatically by the daylight control.

When you override the automatic lighting control the energy-efficient daylight control is activated by default. The light level will now follow the push button, and the daylight control will only return after the light has been switched off.

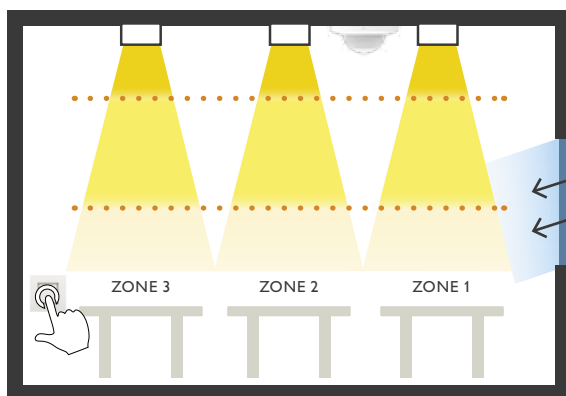
### Daylight control when dimming manually



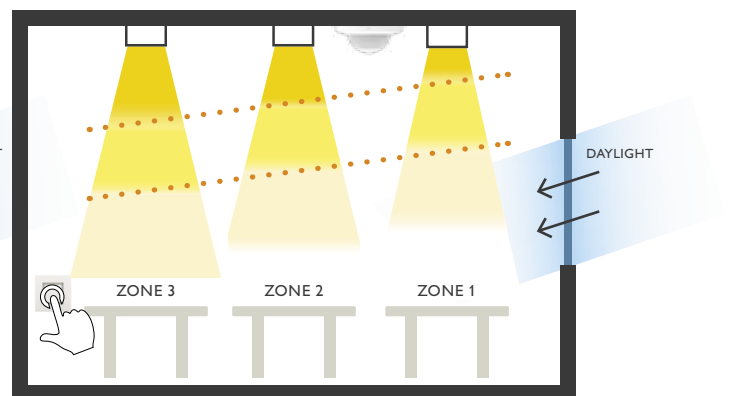
- Energy efficient solution
- User friendly solution
- Setup using Niko detector tool app

### Keep the daylight control

It is possible to continue using daylight control when manually adjusting the light level. This is done by activating the daylight-control function during manual dimming. In this way, energy-efficient daylight-based control is maintained even when the light level is adjusted by the user.



The default setting for manual adjustment is for daylight control to be deactivated.



Daylight control on manual dimming has been activated in the configuration of this installation. The energy-efficient daylight control continues at the new level after manual adjustment.

# Use relays to avoid energy waste

Minimise power consumption in HVAC and standby modes

All DALI-2 P48 detectors have an internal relay and can work with external relays. This allows functions to be installed to minimise power consumption. The following three functions are available when using relays:



## Control HVAC

Ventilation switches on and off automatically depending on presence in the room. Switch-on/off delay time can be set as required.



## Standby minimisation

If no presence is detected, power to the luminaires is disconnected and the power consumption of luminaires is 0 watts. Switch-off delay time can be set as required.



## Light on/off

Add on/off lighting to the DALI installation. The light can be switched on/off either automatically or by a push-button. Switch-off time can be set as required.

## Functions using internal and external relay

You can install these functions using the internal relay and combine them with one or more functions using external relays. The functions works with external DALI relays.

### Internal/external relay

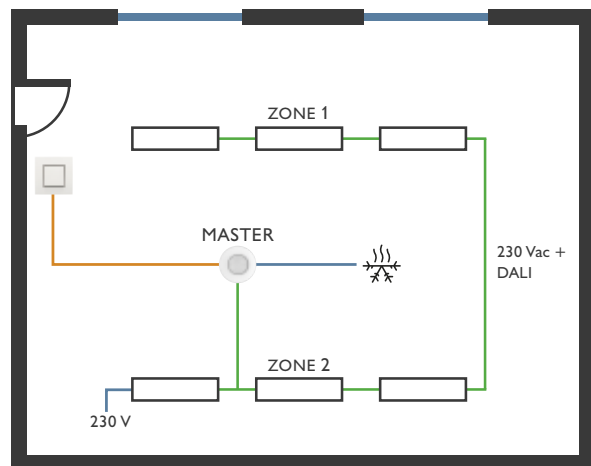


- Minimise power consumption
- Improve user comfort
- Requires no further wiring
- Settings defined in Niko detector tool app



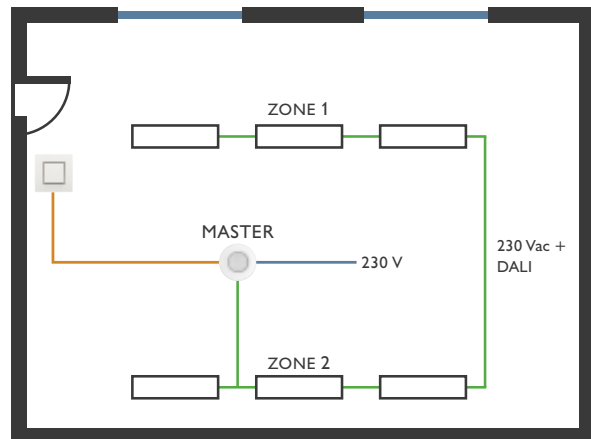
### Meeting room with control of HVAC

In this meeting room, the ventilation is connected to the internal relay of the detector. When people enter the room, the ventilation will automatically start after a delay of e.g. 2 minutes. When people leave the room, the ventilation stops after a delay of e.g. 10 minutes. In this way, the indoor climate is maintained and you save energy on HVAC when the meeting room is unoccupied.



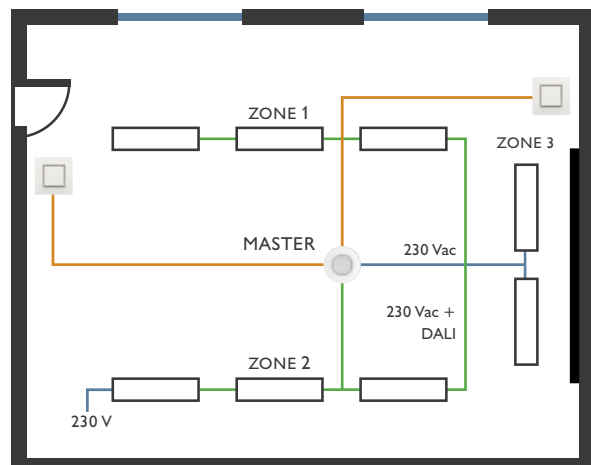
### Open-plan office with standby minimisation

In the office, the luminaires are powered by the detector's internal relay. When there is no presence in the room, the power to the luminaires is disconnected after 60 minutes and the power consumption of luminaires will be 0 watts. This eliminates the power consumption of the luminaires in standby mode.



### Classroom with on/off board light

In this classroom, the board light is powered by the internal relay. This is an easy way to combine on/off lighting with daylight control in a DALI-2 installation.



# Lighting control of adjacent areas

Use master-master link to improve user comfort

To take lighting control to the next level of user convenience, you need to be able to control lighting in adjacent rooms and areas. By using the integrated Bluetooth® master-master link, you can easily install this in a simple and cost-effective way.

## Avoid total darkness around you

In open-plan offices or offices with glass walls, users can have the unpleasant experience of sitting alone in the dark because the lights in adjacent areas are switched off when they are empty. An easy way to avoid this is to connect DALI segments in different adjacent areas using the integrated Bluetooth® master-master link.

The DALI-2 P48 detectors can wirelessly to transmit commands to each other to coordinate lighting control. This allows, for example, the lighting in the adjacent area to be dimmed to 10% when no one is present, rather than switching off the lights completely. This means that users are never in total darkness, even when the adjacent offices are empty.





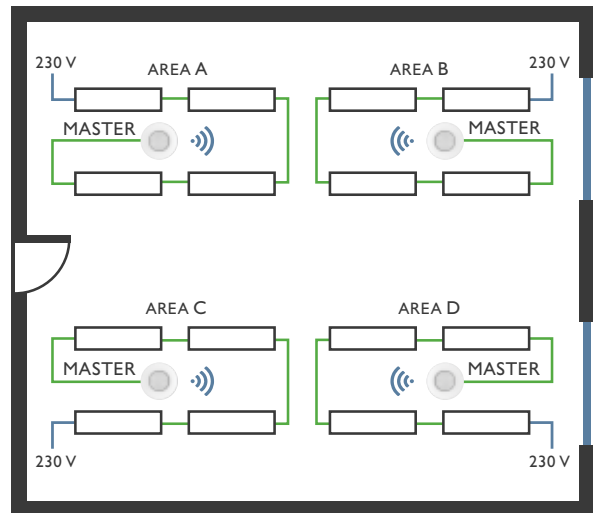
### Bluetooth® master-master link



- Align lighting control between two DALI segments
- Requires no wiring
- Setup using Niko detector tool app
- Perfect for lighting control of adjacent areas and rooms with folding doors

### Open-plan office

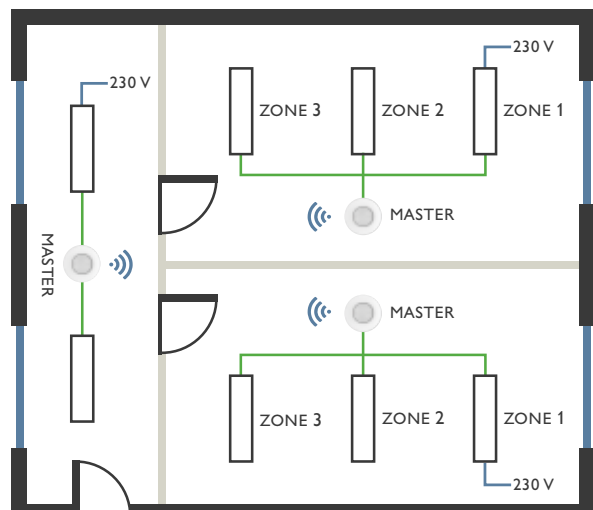
In this open-plan office you will never be plunged into darkness when colleagues in other areas of the office leave. Instead, the light in the adjacent areas is dimmed to, say, 10 % while you are still in the office.



### Adjacent room and corridor

The glass walls in this office will never become a “dark black wall” when the office next door is empty. Instead the light in the neighbouring office is dimmed down to, say, 10% as long as people are still in the office.

The same principle is used for the corridor to ensure you never have to walk in a dark corridor.





# Synchronise user control in rooms with folding doors

## Master-master link is perfect for rooms with folding doors

Daylight control in rooms separated by a folding door is not a problem. Install a DALI-2 P48 detector in each room, and they will operate independently regardless of whether the folding door is open or not.

### Easy to synchronise use of push-buttons

You can also add push-buttons to an installation in a room with folding doors, if you want users to be able to override the automatic lighting control.

The DALI-2 P48 detector has integrated Bluetooth® master-master link to ensure that this can be done in an easy and cost-effective way.

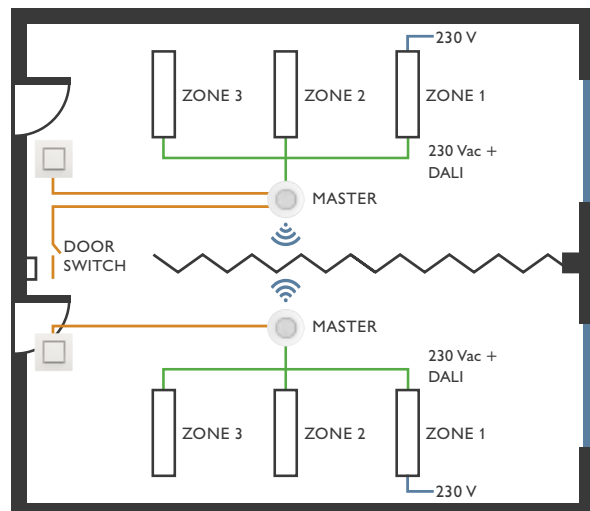
Using the Niko detector tool app, the two DALI-2 P48 detectors can be easily setup to communicate with each other via Bluetooth®. The master-master link ensures that the lighting is synchronised when users operate the push-button switches when the folding doors are open. When the folding doors are closed, the lighting control works independently, even if users are using the push-buttons.

### Room with a folding door

When the folding door is open, the master-master link ensures that the light is controlled uniformly when users modify the lighting. A switch registers whether the folding door is open or closed. It is possible to expand up to 3 folding doors.

 **Bluetooth® master-master link** 

- Align lighting control between two DALI segments
- Requires no wiring
- Setup using Niko detector tool app
- Perfect for lighting control of adjacent areas and rooms with folding door







# Perfect lighting next to screens

Use an extra multi-zone of luminaires

Many people have experienced how light from luminaires interferes with light from a screen. The result is that the screen appears unshared, which gives a poor user experience. This can be eliminated by defining a multi-zone next to the screen.

## Multi-zone across daylight zones

Using a multi-zone it is easy to prevent light from luminaires interfering with the light from a screen, even if you have installed more than one daylight zone. You simply create a multi-zone that includes the luminaires installed next to the screen. This can be done across more than one daylight zone and that is why it is called a multi-zone.

When a presentation is to be made on the screen, the luminaires in the multi-zone next to the screen are switched off, while the daylight-control lighting in the rest of the room continues. After the presentation, you switch on the luminaires in the multi-zone, and they become part of the daylight-control lighting again.

### Save luminaires for dedicated lighting

Your imagination is your only limit to what you can do with a multi-zone. For example, you can define a multi-zone next to a whiteboard, over a workbench, a meeting table or an artwork, if you would like to have 100 % light on these occasionally. This eliminates the need to install dedicated lighting in a separate and saves on luminaire, wiring and installation costs.

### Dedicated lighting

A multi zone is defined over a meeting table so that full lighting is available when meetings are held around this table. The daylight control of the luminaires remains in the rest of the room even when the multi-zone is activated.

This makes full use of the existing luminaires and saves the cost of installing dedicated luminaires above the meeting table.

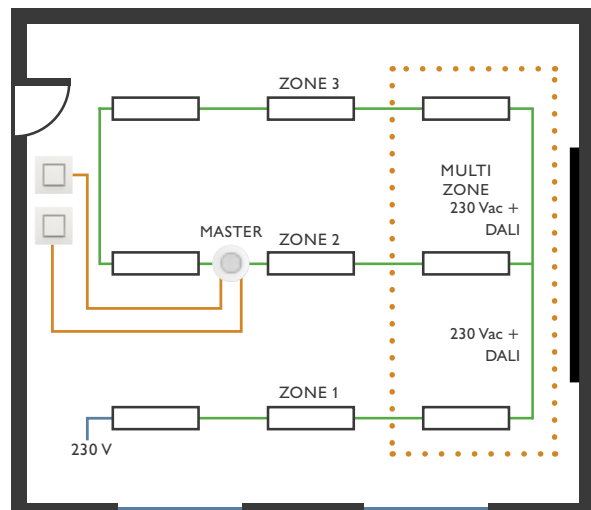
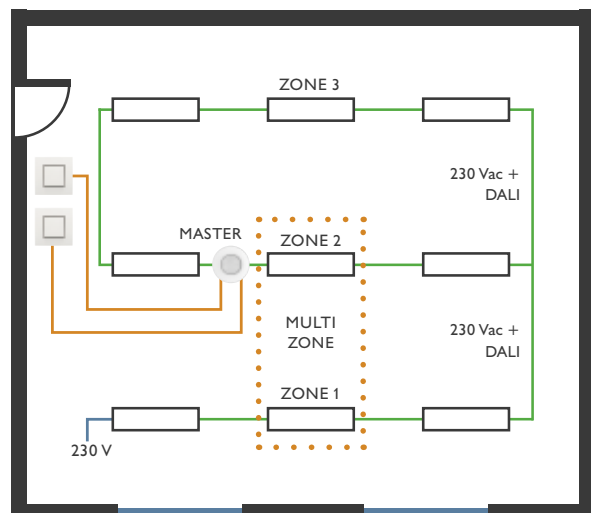
### Lighting at smart boards

In this classroom a multi-zone is defined next to the board. When the smart board is in use, the luminaires can be switched off to prevent light from the luminaires interfering with light from the board. The board remains sharp and clear, while the daylight-controlled luminaires in the rest of the room continue to operate unchanged.

### Multi zone



- Extra zone across more daylight zones
- Works independently of the daylight control
- Works independently of the wiring
- Setup using Niko detector tool app
- Perfect for smart board, screen and dedicated lighting





# Improve well-being with dynamic tunable white

Use tunable white to optimise indoor environment

Studies have shown that the temperature of light affects human well-being. Tunable white makes it possible to control the light temperature to take advantage of this knowledge. This can be particularly beneficial in buildings such as schools, offices, hospitals and other institutions where dynamic lighting control has been shown to improve well-being, learning, work efficiency and faster recovery.

## Human Centric Lighting and tunable white integrated in Niko DALI-2 detectors

A tunable white controller is integrated into the DALI-2 P48 detectors, allowing you to control light temperature without any additional components. Tunable white can be implemented in different ways:

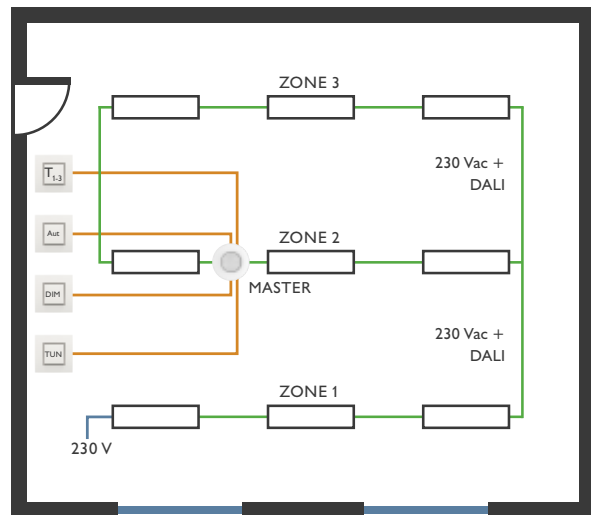
- By push-button to call a tunable white preset
- By push-button dim cooler or warmer
- Human Centric Lighting (max. 24 presets per day)



## Tunable white



- Integrated in DALI-2 P48 detectors
- Human Centric Lighting is possible
- 24 presets can be defined on Niko detector tool app
- Tunable white and daylight control can be combined
- Increase users well-being and productivity



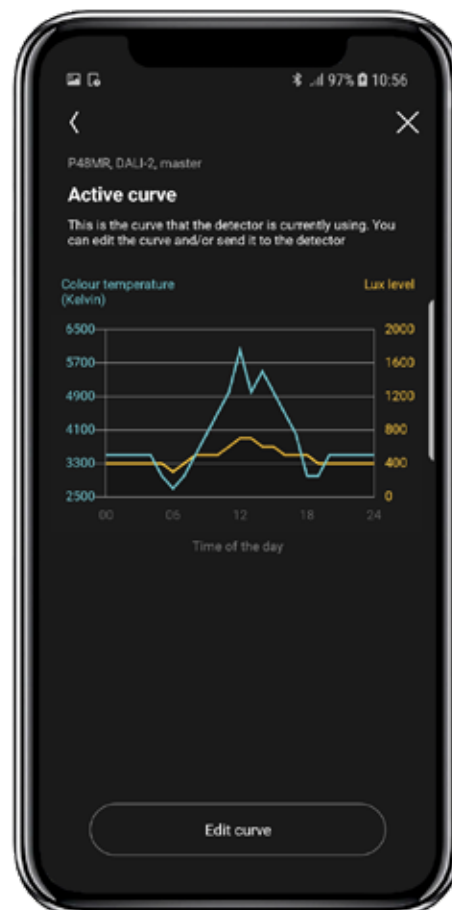
## Cost and energy efficiency solution

As the tunable white controller is integrated into the DALI-2 P48 detector, you save the cost of any other components. It is also possible to combine tunable white with daylight control to ensure an energy efficient installation. Both the DALI-2 P47 and DALI-2 P48 detectors are compatible with third party DALI-2 components to control tunable white if this is preferred. DT8 luminaires are required to install tunable white.

## Activity room in a care home with Human Centric Lighting

In this activity room, tunable white is installed using the tunable white option built into the DALI-2 P48 detector. 12 of the 24 presets have been defined to fit different activities during the day. One of the presets will automatically be recalled depending on the setting and time of the day. To ensure energy efficiency the installation is combined with up to 4-zone daylight control.

Four push buttons are installed to operate the luminaires. Push button T1-3 operates the daylight zone. AUT is used to recall daylight control. DIM is used to dim the light up and down. TUN is used to adjust the colour temperature.





# Quick settings of light scenes

## Define light scenes using Niko detector tool app

Larger meeting rooms and conference halls are used for many different types of meetings and activities. The right lighting can make the difference between an event being more or less successful. Therefore it could be beneficial to define a number of lighting scenes, which can be used for different kind of activities.

### Call up to 16 lighting scenes

The DALI-2 P48 detectors allow you to pre-define up to 16 different lighting scenes. This means you can change the entire lighting at the touch of a button. A light scene can be set for presentations or for a specific work situation.

### Define lighting scenes in Niko detector tool app

Lighting scenes are defined using the Niko detector tool app, so there is not need for a PC or other software. Each lighting scene can include light in all lighting zones with individual light intensities. Scenes are configured independently of installation and wiring and can therefore always be changed later.

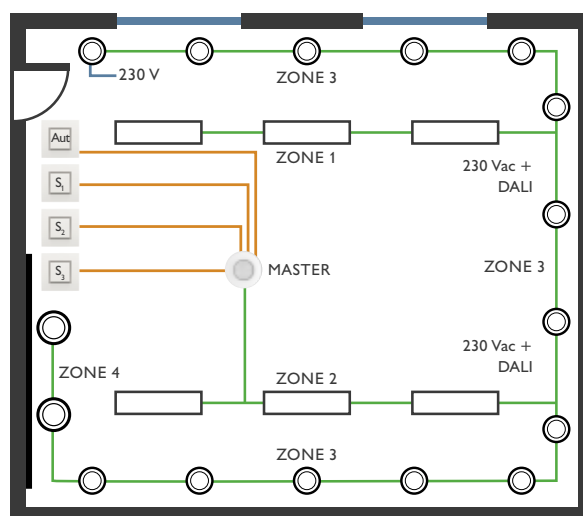
### Conference room with scenarios

There are 4 zones installed in this conference room. Zones 1 + 2 are daylight zones. Zone 3 is for effect lighting and Zone 4 is for board lighting. The daylight zones are automatically switched on when you enter the conference room. Three scenes have been defined to create the perfect lighting for presentations, meetings, etc.

The scenes can be recalled using push buttons S1, S2 or S3. The AUT button deactivates the scenes and brings back daylight control.

### Benefit from using lighting scenes

- Define up to 16 different scenes
- Call up scenes instantly by a push-button
- Define scenes using Niko detector tool app
- Easy to change scenes
- Works independently from wiring





# A sense for versatility

One powerful line-up that meets the needs of your entire project

The Niko P40 and M40 detector series are designed to fit every situation. This means any ceiling type, in any building, with a choice of detection ranges for all possible combinations of 230 V or DALI-2-certified detectors. And all within one, award-winning contemporary design.

## 13 m detection range\*

A unique flat lens that integrates seamlessly into the ceiling

## 37 m detection range\*

An effective dome lens with a long detection range

## 53 m detection range\*\*

For high ceiling use. An effective dome lens with a long detection range

### Flush-mounting with SnapFit

230 V – 1 channel (P42)  
DALI-2 (P47)  
DALI-2 secondary/BMS (P46)  
Secondary (230 V P41, DALI-2 P46)



230 V – 2 channel (P42)  
DALI-2 (P48)



### Flush-mounting box

230 V – 1 channel (P42)  
DALI-2 (P47)  
Secondary (230 V P41, DALI-2 P46)



### Surface mounting

230 V – 1 and 2 channel (P42)  
DALI-2 (P47)  
DALI-2 (P48)  
Secondary (230 V P41, DALI-2 P46,  
DALI-2 M48)  
High ceiling (detection range Ø18-53 m)



\* At 3 m mounting height

\*\* At 12 m mounting height

# A sense for functionality


Explore endless possibilities via one simple solution

		DETECTORS					
Type		1 channel M42 230 V motion detectors	1 channel P42 230 V presence detectors	2 channels P42 230 V presence detectors	DALI-2 P47 presence detectors	DALI-2 P48 presence detectors	DALI-2 P46 Secondary/ BMS presence detectors
INPUT	Inputs or push-buttons	1	1	2	1	4	
	Free assignment of push-buttons			•		•	
	Wireless push-button for override of lighting control					•	
	External trigger (activation via external systems)					•	
	Wired secondary		•	•	•	•	
	External input devices via DALI bus					•	
FUNCTIONS	Automatic on/off	•	•	•	•	•	
	Semi-automatic on/off (manual on/off + auto off)	•	•	•	•	•	
	Daylight control (dimming - based on daylight)				3 zones	4 zones	
	DALI Broadcast + DALI Addressable				•	•	
	Wireless master-to-master link via Bluetooth®					•	
	Wireless secondary-to-master link via Bluetooth®		•	•			
	Multi-zone - smart board lighting					•	
	Night mode - perfect for corridors					•	
	Turn-on level					•	
	Orientation light				•	•	
	Light scenes - define and control scenes					•	
	Folding door function- Wireless sync of lighting control					•	
	Control light in adjacent areas / corridors					•	
	Tunable white third-party integration				•	•	
	Tunable white dynamic and presets					•	
	Human Centric Lighting (HCL)					•	
	Output relay - control HVAC / standby minimisation / light (on/off)					•	
	External DALI relay for HVAC / standby minimisation					•	
	Event log	•	•	•	•	•	•
	Portal solution for documentation, backup and distribution of configuration files	•	•	•	•	•	•
	Settings and configuration can be locked with a PIN-code	•	•	•	•	•	•
	APP	Software update of detector via app	•	•	•	•	•
2-way Bluetooth® communication		•	•	•	•	•	•







# Niko P40 and M40 detector series

## One powerful line-up that meets the needs of your entire project

### 230 V detectors

Type	Mounting height	Output	Input for 230 V push button	Secondary detector max.	 Bluetooth® secondary-master link	
M42MR / M42LR	Motion detector, Master 1 channel	2 - 3.5 m	$\mu$ 10 A, NO (potential free relay)	1 input		
P42MR / P42LR	Presence detector, Master 1 channel	2 - 3.5 m	$\mu$ 10 A, NO, (potential free relay)	1 input	10 secondary detectors	Yes
P42MR / P42LR	Presence detector, Master 2 channels	2 - 3.5 m	2 x $\mu$ 10 A, NO, (potential free relay)	2 inputs	10 secondary detectors	Yes
M42HC	Motion detector, Master, High ceiling	4 - 12 m	$\mu$ 10 A, NO, (potential free relay)	1 input	10 secondary detectors	Yes
P41MR / P41LR	Presence detector, Secondary	2 - 3.5 m	-	-	-	Yes
M41HC	Motion detector, Secondary, High ceiling	4 - 12 m	-	-	-	Yes

### DALI-2 detectors










Type	Mounting height	Output	Max. zones	Secondary detector max.	 Bluetooth® push button	
P47MR / P47LR	Presence detector, Master	2 - 3.5 m		3 zones	5 secondary detectors *	-
P48MR / P48LR	Presence detector, Master	2 - 3.5 m	 $\mu$ 10 A, NO, (potential free relay)	4 zones	10 secondary detectors *	Yes
M48HC	Motion detector, Master, High ceiling	4 - 12 m	 $\mu$ 10 A, NO, (potential free relay)	4 zones	10 secondary detectors *	Yes
P46MR / P46LR	Presence detector, Secondary and BMS	2 - 3.5 m		-	-	-
M46HC	Motion detector, Secondary and BMS, High ceiling	4 - 12 m		-	-	-










\* Be aware of the maximum guaranteed current on the DALI bus

## Navigate quickly and easily through our new product range

All our detectors have been named with a:

Type of detector	Detector family	Functionality	Detection range
P or M P = presence detector M = motion detector	P4 or M4 4 = Bluetooth® generation of detectors	P46 or M41 1 = 230 V secondary 2 = 230 V master 1-channel and 2-channel 6 = DALI-2 BMS / secondary 7 = DALI-2 master default 8 = DALI-2 master advanced	P46MR or M41LR MR = medium range LR = long range HC = high ceiling

Medium detection range Ø12-13 m (MR)				Long detection range Ø32-37 m (LR)				High ceiling detection range Ø18-53 m (HC)
								
Flush-mounting box	Flush mounting SnapFit	Flush mounting SnapFit	Surface mounting	Flush-mounting box	Flush mounting SnapFit	Flush mounting SnapFit	Surface mounting	Surface mounting
353-600111 M42MR	353-601111 M42MR	-	353-602111 M42MR	353-700111 M42LR	353-701111 M42LR	-	353-702111 M42LR	-
353-600121 P42MR	353-601121 P42MR	-	353-602121 P42MR	353-700121 P42LR	353-701121 P42LR	-	353-702121 P42LR	-
-	-	353-601221 P42MR	353-602221 P42MR	-	-	353-701221 P42LR	353-702221 P42LR	-
-	-	-	-	-	-	-	-	353-802111 M42HC
353-600021 P41MR	353-601021 P41MR	-	353-602021 P41MR	353-700021 P41LR	353-701021 P41LR	-	353-702021 P41LR	-
-	-	-	-	-	-	-	-	353-802011 M41HC

Medium detection range Ø12-13 m (MR)				Long detection range Ø32-37 m (LR)				High ceiling detection range Ø18-53 m (HC)
								
Flush-mounting box	Flush mounting SnapFit	Flush mounting SnapFit	Surface mounting	Flush-mounting box	Flush mounting SnapFit	Flush mounting SnapFit	Surface mounting	Surface mounting
353-650321 P47MR	353-651321 P47MR	-	353-652321 P47MR	353-750321 P47LR	353-751321 P47LR	-	353-752321 P47LR	-
-	-	353-651421 P48MR	353-652421 P48MR	-	-	353-751421 P48LR	353-752421 P48LR	-
-	-	-	-	-	-	-	-	353-852411 M48HC
353-650021 P46MR	353-651021 P46MR	-	353-652021 P46MR	353-750021 P46LR	353-751021 P46LR	-	353-752021 P46LR	-
-	-	-	-	-	-	-	-	353-852011 M46HC



Niko designs electr(on)ic solutions to enhance buildings to better suit the needs of the people who live and work in them. By using less energy, by improving light comfort and safety and by making sure all applications work together seamlessly. Buildings with Niko are more efficient, are controllable from a distance and interact within bigger ecosystems. Niko is a Belgian family business from Sint-Niklaas with 700 employees and 10 European branches.

At Niko, there is one question that keeps us busy every day: “How can we enhance buildings to better suit your needs?”

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**niko**



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