

**Tender text Article number 353-852411**

Motion detector M48HC, DALI-2, master, 18-53 m, IP54, for high ceilings, for surface mounting, white



Proposed functionalities description according to BIPS 4.7.9

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**SPECIFICATIONS**

Configuration	master
Detector technology	PIR
Mounting method	surface mounting
Input voltage	230 Vac ± 10 %, 50 Hz
Detector output	DALI Broadcast/DALI Addressable
Light intensity range	20 lux – 2000 lux, ∞
Switch-off delay	pulse, 30 s – 2 h, ∞
Detection angle	360°
Detection range (PIR)	ø 53 m from a height of 12 m
Ambient temperature	-25 – +40 °C
Mounting height	4 – 12 m
Relay contact	N.O. (max. 10 A), potential-free
Potential-free contact	NO, 230 V, µ10 A
Marking	CE
Protection degree	IP54

Proposed functionalities description according to BIPS 4.7.10

**Mounting method**

The detector is suitable for surface mounting on all types of ceilings with a height between 4 m and 12 m.

**Configuration app**

All detectors in the installation can be configured using the app and 2-way Bluetooth® communication between a smartphone or tablet and the detector. No additional configuration tools are required. The settings can be stored as a template for other detectors. The firmware of the detector can be updated via the app.

## Configuration

The detector is DALI-2 certified (in accordance with IEC 62386). It supports DALI broadcast and DALI addressable, meaning a unique address can be assigned to each DALI device on the DALI bus. The DALI devices can be connected at random to the DALI bus, regardless of wiring and the subsequent configuration of daylight zones. DALI devices can be added subsequently, and their configuration can be modified without changing the wiring.

## PIN code

The detector can be protected with a 4-digit PIN code in the app to prevent others from controlling the detector or modifying its settings.

## Event log

The event log in the app shows all the changes you made to the settings of a specific detector.

## Sensitivity

The detector's sensitivity for detecting movement can be set using the app and 2-way Bluetooth® communication between a smartphone or tablet and the detector. The sensitivity can be set in 4 levels.

## Documentation

Documentation is available in digital format on an online portal. This portal also allows to store, review and share settings in PDF and/or Excel format. The detectors can be organised into specific projects or groups. Existing detector settings can be used as a template for new detectors.

## Detection range

The detection range is documented in accordance with EN/IEC 63180.

## HVAC control

The detector can control heating, ventilation and air conditioning systems. When movement is detected, the HVAC control output is switched on after the configured switch-on delay. The configured switch-off delay determines how long the HVAC device will stay on once movement has stopped.

## Standby minimization

When there is no one left in the room, a relay can be used to automatically cut the power supply to all devices after a certain time to avoid standby consumption.

## 230 V lighting control

230 V non-dimmable lighting can be controlled via the detector's internal relay (e.g. halogen or fluorescent lamps). The lights can be switched ON and OFF according to movement, a set lux level and/or a push button.

## Manual control with 230 V inputs

Up to four 230 V inputs can be wired to the detector and can control a zone, a multi-zone or an external 230 V lighting system. The input can perform 6 different actions: ON/OFF and dimming up/down, ON and dimming up/down, dimming warmer/cooler, selecting a tunable white preset, selecting a light scene or setting a percentage of the light level

## Orientation lights

The lights can be set at a lower level when there is no movement detected in the zone. 3 seconds after the switch-off delay has expired, the light will dim down to the orientation light level. The orientation light switch-off delay defines the time during which the orientation lights will dim down to a preconfigured light level between 1 % and 50 %. When the time has expired, the orientation lights will switch off entirely.

## Automatic ballast replacement

A (defective) DALI ballast/driver can be replaced without reconfiguration. The new DALI device will automatically copy the settings of the replaced device.

## **Night mode**

The night mode allows a different detector behaviour at night than during the day. The night mode can be activated with a switch, a time switch or a twilight switch. When the detector is in Night mode, two different light levels can be determined (presence or no presence). Switching between both light levels is done automatically via a twilight relay /time switch or manual switch. The light levels are infinitely adjustable between 0 % and 100 %.

## **Multi-zone**

An additional multi-zone can be created for certain use cases (e.g. for smartboard lighting). A multi-zone allows regrouping luminaires assigned to different zones into a new group that can be controlled separately. Where necessary, the luminaires in the new group can be controlled (on/off/dimming) independently of the daylight control. When this function is not active, the luminaires will continue to follow the daylight control settings.

## **Light scenes**

Up to 16 light scenes can be defined and controlled. The light scenes can be activated with a 230 V push button, a Bluetooth® push button or the control panel connected to the DALI bus via interface.

## **Adjacent areas**

Control the lighting in a nearby room (e.g. corridor), based on movement in other rooms. When the active master detector receives or sends registration of presence in an area/room, the lighting in the adjacent areas, is set to a preconfigured light level (e.g. 50 % of its daylight level). The direction of the presence detection can be configured. The communication between the detectors (master-to-master) is wireless.

## **Folding door function**

Control the lighting in rooms that use a folding door to divide the room into smaller rooms. When the folding door is open, the master detectors on both sides of the folding door will have the same detection behaviour. When the folding door is closed, the master detectors will resume their individual detector behaviour. Up to four rooms can be controlled by the detector. The communication between master detectors is wireless.

## **Daylight control when dimming manually**

The light in the daylight zones can be dimmed up or down manually. When the dimming is stopped, the new temporary lux level is stored in the detector. The light will from then on be daylight controlled according to the new lux level. When the light is switched OFF manually or automatically, the original lux level setting is reactivated.

## **Switch-off above lux level**

If 'Switch-off above lux level' is ON, the detector's priority is light and the second priority is movement. The detector controls the lights according to the ambient lux level. The lights will switch off when the lux level in the room is above the lux level setting for 10 min, even if there is still movement in the room. If 'Switch-off above lux level' is OFF, the detector's priority is movement. The detector controls the lights according to movement only. The lights will only switch off at the end of the switch-off delay.

## **Daylight zones**

The detector automatically calibrates daylight zones in function of the lux level in each daylight zone and the reflections in the room. The calibration can be activated manually.

## **External control**

The detector can set the light level to the required value based on an input from an external trigger (e.g. security alarm).

## **Tunable white - tunable white preset**

The detector can change the colour temperature of the connected DT-8 DALI luminaires.

## **Tunable white - Human Centric Lighting (HCL)**

The detector can imitate the natural light by changing the light intensity and colour temperature of the connected DT-8 DALI luminaires according to the time of the day.