

klemko® HANDLEIDING

Flush Mount Presence Detector for DALI Lighting Control (Broadcast version)



INSTRUCTION MANUAL

TECHNICAL SPECIFICATIONS

Rated Voltage	220 - 240V~ 50 / 60Hz
Output	2 channels (DA & DA) Max. 25pcs DALI electronic ballasts or LED drivers can be connected for each channel
Power Consumption	Approx. 0.5W
Auto Off Time Adjustment	Adjustable from approx. 1min to 60min and Test
Lux Adjustment	Lux1: Adjustable from approx. 10Lux to 2000Lux and learning range: 10Lux to 2000Lux Lux2: Adjustable from (25%~100%) x Lux1 value
Meter Adjustment	Adjustable from “-” (approx. Φ 4m) to “+” (approx. Φ 12m)
Load on illumination in standby mode	Adjustable from approx. 10% to 30% and OFF (Load is off in standby mode)
Detection Range	360° circular, up to Φ 12m at height of 2.5m
Environmental Protection	IP54
Operating Temperature	-20 °C to +50 °C



Installation and assembly of electrical equipment must be carried out by qualified electricians. Contact a qualified electrician in the event of fault or break down.

CAUTION!

- Do not mount on conductive surface.
- Do not open the enclosure frequently.
- Turn off power when changing the light sources.
- High in-rush current would be caused when bulbs of certain brands burned which might damage the unit permanently.

1 PACKAGE CONTENTS

- 870642

Pattern				
Item	Detector	Lens shield	Manual	IR-11DALI (optional purchase)
Quantity	1	2	1	1

2 PRODUCT DESCRIPTION

This is a Presence Detector integrated PIR motion detector and light level detector, solely designed for incorporating to the DALI (Digital Addressable Lighting Interface) intelligent lighting management system to provide multi-functions such as switching on and off and dimming the light, also can do lighting scenery setting which can offer comfort and convenience as well as energy saving benefits. This product provides 2 channels outputs for controlling lighting systems in two zones independently.

2.1 Features

- Integrated sensor and power box in one unit and using spring clamps for easy and quick installation.
- Can use IR remote control for easy and quick settings.
- The ambient Lux value can be learned as the threshold for switching on / off the loads by IR or VR if the pre-set Lux value does not match user's requirement.
- Lens shield for minimizing or blocking detection field as user desired.
- Two LEDs (red and green) are equipped as an indicator for test triggering and IR setting of each channel.
- This presence detector provides multi-functions of PIR movement detector and light level detector.
- To enlarge the detection range by connecting the slave detector to master detector, max. 10pcs slave detectors can be connected.
- Multi-functions are provided such as switching on and off and dimming the lighting, also can do lighting scenery setting.
- Easy wiring as no polarity for DALI cable connecting.
- Manual operation function is feasible by connecting with a N.O. type push button switch.

2.2 Dimension (See FIG.1-A & FIG.1-B)

- 870642 : Φ 80 x 64mm

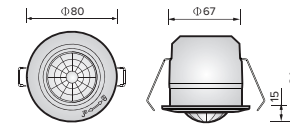


FIG.1-A

- IR-11DALI Remote control (optional purchase)

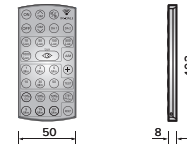


FIG.1-B

3 INSTALLATION AND WIRING

! Please disconnect power completely and read the entire instruction manual carefully before installation.

3.1 Select proper location

3.1.1 The sensor can be installed at the height of 2-4m and the height of 2.5m is recommended to gain the optimal detection pattern. The detection range can reach up to the diameter of 12m and 360° detection angle (See FIG.2).

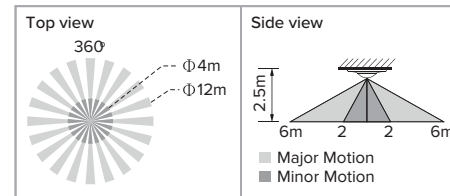


FIG.2

3.1.2 Pay attention to the walking direction in the test proceeding. It is more sensitive to movement across the detector and less sensitive to movement directly toward to detector which will reduce the detection coverage (See FIG.3).

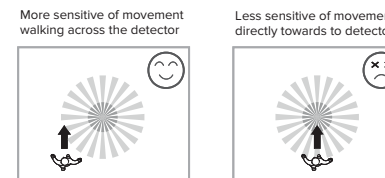


FIG.3

3.1.3 Helpful tips for installation

Since the detector is in response to temperature change, please avoid following conditions (See FIG.4-A & FIG.4-B):

- Avoid aiming the detector toward the objects which may be swayed in the wind, such as curtain, tall plants, miniature garden, etc.
- Avoid aiming the detector toward the objects whose surfaces are highly reflective, such as mirror, monitor, etc.
- Avoid mounting the detector near heat sources, such as heating vents, air conditioning, vents as dryers, lights, etc.



FIG.4-A

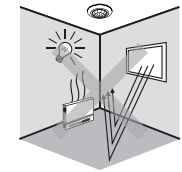


FIG.4-B

- The presence detector has two DALI outputs. DA is the “master channel” in terms of light measurement and light control. DA is subordinate to DA. Remember to bear this in mind when assigning lighting groups to the channels, we recommend that you assign the “room interior” lighting groups to DA and the “window side” lighting groups to DA.

Nevertheless, it's still possible to mount the detector on the ceiling in any place.

Please refer to the following examples:

A. Detector is located near the window (See FIG.4-C):

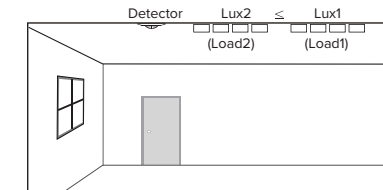


FIG.4-C

B. Detector is located far away from the window (See FIG.4-D):

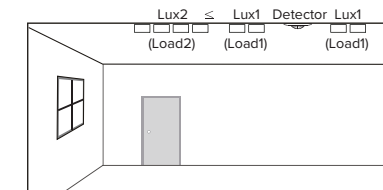


FIG.4-D

C. Without window:

$$\text{Lux1 (Load1)} = \text{Lux2 (Set 100%) (Load2)}$$

3.1.4 Installation tips specially for DALI dimming presence detector

- The detector should be placed in room where it can measure both natural light and artificial light simultaneously.
- Direct light on the detector from any illumination should be avoided.
- You should be away from the detector to avoid affecting the luminous flux that reaches the detector when making Lux value setting.
- Do not install the detector directly next to a window or sun blind which can cause incorrect measurement on the natural light (Refer to FIG.4-E).

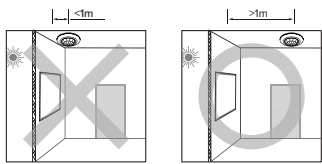


FIG.4-E

3.2 Function

3.2.1 Auto mode

- Under Auto mode, the load will turn on automatically when the movement is detected and the ambient light level is below the Lux setting value. When no movement is detected and the delay time has expired, the load will (turn off) move to standby mode automatically.

- According to the changeable ambient light level, detector can postpone delay time of turning on and off load to avoid unnecessary switching due to rapid ambient light change:
 - Ambient light level changes from bright to dark:** To avoid unnecessary switching ON/OFF load due to temporary ambient light value change caused via nature, e.g. a passing cloud, the detector has been designed with a 10 seconds delay for activating the light on and the detector will ignore any movement within the 10 seconds delay time, and the red LED will be continuous on as indication, but the detector has no reaction during the 10 seconds delay time.

Ambient light level changes from dark to bright: If the ambient light level continuously exceeds the switch off Lux value for 5min, there are different reactions according to the time setting value, time setting ≥ 5 min, the light will be automatically switched off after 5min.

Time setting < 5min, the light will be automatically switched off when the set time reached if no movement is detected during the 5min. But if there is movement detected within the 5min, the time will be reset upon detection and until 5min later, the light is switched off.

Remark: Both DA- and DA have the above mentioned functions.

3.2.2 Standby mode function

- Set "STBY%" knob to the leftward (←) under auto mode, detector will enter into standby (2-level) mode when the delay off time is expired, and load will change to turn on according to the setting of "STBY%" until the ambient Lux value is higher than pre-set Lux value. During which, if the movement is detected, load will turn on with the setting illumination (100% or the dimmed illumination) and then turn to the setting illumination of "STBY%" if no movement detected and the delay off time expired. It will be cycled until the ambient light level is higher than the switch off Lux value and lasts for 5min, then turns off and detector enters into standby mode. During which, if the ambient light level is below the pre-set Lux value again, detector will enter into 2-level mode automatically.
- Set "STBY%" knob to the rightward (→) under auto mode, detector will enter into standby mode (2-level) when the delay off time is expired, and load will change to turn on according to the setting of "STBY%" for 5min (Note: The delay time can be set to 10min/15min/60min by IR remote). During which, if the movement is detected, load will turn on with the setting illumination (100% or the dimmed illumination) and then turn to the setting illumination of "STBY%" if no movement detected and the delay off time expired. Afterwards, if it is still have no movement detected and the STBY time is expired, load will turn off.
- Set "STBY%" knob to "OFF", load will turn off when the delay off time is expired.

3.2.3 Auto dimming (constant light level control)

According to the changeable ambient light level, the load can dim to bright or dark automatically to match the Lux setting value (Lux setting value made by IR or knob is measured the mixed light level of artificial light and the ambient light).

3.2.4 Manually ON / OFF switching function

3.2.4.1 Terminal of R/S1, R/S2, R/S and push button (N.O. type)

can be series connected to control load's on / off manually. (case 1: on → off; case 2: off → on). While pressing push button (≤ 1 sec)
 Case 1: Manual off switching (Lux settings is invalid):
 Under the light on status, the light can be manually switched off by short pressing (≤ 1 sec) the push button. During this operation mode, once the detector is triggered by movement, the light keeps off within the set switch off delay time. Until there is no movement detected and the pre-set switch off delay time has reached, the detector resumes to work according to the previous operation mode set by knobs or IR. To press the push button (≤ 1 sec) during the light manual off period will activate the manual light on function (working as Case 2).

Case 2: Manual on switching (Lux settings is invalid):
 Under the light off status, the light can be manually switched on by short pressing (≤ 1 sec) the push button. During this operation mode, once the detector is triggered by movement, the light keeps on within the pre-set switch off delay time. Until there is no movement detected and the pre-set switch off delay time has elapsed, the detector resumes to work according to the previous operation mode set by knobs or IR. To press the push button (≤ 1 sec) during the light manual on period will activate the manual light off function (working as Case 1).

Remark: Push button can be connected between R/S1 (R/S2) and L for manually control DA+ (R/S1) and DA- (R/S2) respectively. And if connected with R/S terminal, it can control both DA (R/S1) and DA- (R/S2) simultaneously.

3.2.5 Manual dimming via external push button

Detector can dim the light level of lighting manually via operating the push button connected to "R/S1", "R/S2" and "R/S" terminal. ≤ 2sec) the push button, the light level of the load will change, then release the push button while the light level of the load matches the desired value.

Remark: It will lead to opposite dimming direction if next dimming is carried out. The dimming way is unidirectional and non-recyclable.

3.2.6 Dimming via IR-11DALI remote control

- IR-11DALI is locked: Press "ON" or "DIM" button to start dimming, then again pressing "ON" or "DIM" button to stop dimming while the ambient light level matches user's desire, but the value will not be saved in detector, and it will be dimmed automatically according to last Lux setting value while the light is switched on next time.
- IR-11DALI is unlocked: Press "ON" or "DIM" button to start dimming, then again pressing "ON" or "DIM" button to stop dimming while the ambient light level matches user's desire and the value will be saved in detector as pre-set Lux value, and it will be dimmed to this light level automatically while the light is switched on next time.

3.2.7 Semi-auto mode / Absence detection mode (Operation with IR-11DALI only)

- Detector enters into semi-auto mode by pressing "AM" button on IR-11DALI.
- Under semi-auto mode, load can only be manually switched on by operating external push button.
- When the load is switched on, it will keep on if the movements are detected constantly. Load will turn off if no movement is detected and the delay time has expired.

- Load can also be manually switched off by operating external push button again.
 Note: The semi-auto mode can only be equipped by operating "AM" button again, then detector returns to Auto mode.

3.3 Wiring.

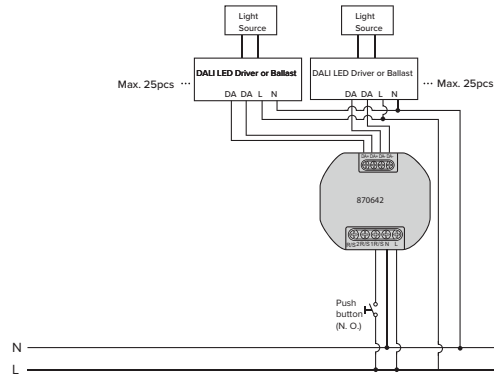


FIG.5

3.4 Installation procedure

3.4.1 Ceiling flush mounting

To install detector, please drill a hole in diameter of 68mm on ceiling board and keep the power cable outside. Please strip off 6 - 8mm of cable sheathing for wiring (See FIG.6).

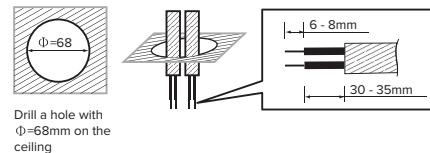


FIG.6

3.4.2 Use screwdriver to break the rubber gasket, then feed cables through it (See FIG.7).

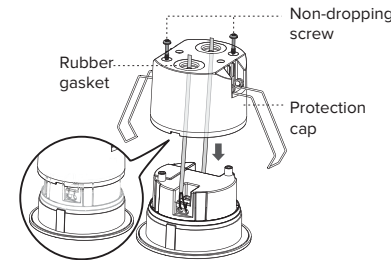


FIG.7

3.4.3 Please refer to illustration of FIG.5 for correct wiring and get the gap of the protection cap to be aligned with the bulge of housing (See FIG.7), then screw the protection cap and fit on the cable clamp.

3.4.4 Close up two spring clips on detector and insert detector into the drilled hole on ceiling (See FIG.8).

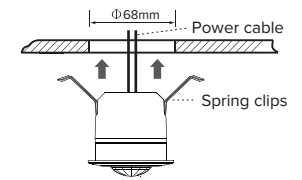


FIG.8

3.4.5 Restore the power supply.

4 OPERATION AND FUNCTION

4.1 Time, Lux1, Lux2, STBY% and Meter knobs

Knob	Function	Knob setting
	Set delay off time for lighting	Range: Adjustable from approx. 1min to 60min Test : Test mode (L load and red LED will be 2sec on, 2sec off)
	Set the ambient light value for switching on DA+	Range : Adjustable from approx. 10 to 2000Lux (learn): The actual ambient light level (10 - 2000Lux) can be read in
	Set the ambient light value for switching on DA-	Range : Adjustable from approx. 25% to 100%. Remark: Lux2 value is automatically calculated as follows: Lux2=Lux1 value x Lux2 preset percentage value
	Set load illumination in standby mode	Adjustable from approx. 10% to 30% and OFF (Load is off in standby mode), and the delay off time is 5min or unlimited
	Set the detection range	Range: Adjustable from "-." (approx. $\Phi 4m$) to "+" (approx. $\Phi 12m$)

Klemko Techniek B.V.

W klemko.nl
 @ info@klemko.nl
 T +31 (0)88 002 3300

Nieuwegracht 26
 NL-3763 LB Soest
 Nederland