

## Variants

DANLERS design and manufacture other ControlZAPP high bay variants, coded by the following order codes:

CZ HB (xx)	Suitable for mains switching
CZ HB (xx) 10VDC	Suitable for 1-10VDC ballasts

## Troubleshooting

### The load will not switch on:

- The LUX setting as specified by the ControlZAPP App is set too low and is inhibiting the switch.
- The moving body is not emitting more IR than the background.  
(Person wearing insulating clothing in a warm environment)
- Person is too far from the PIR switch, see detection diagram.
- Person is moving unusually slowly (perhaps when testing).
- The control unit battery is not engaged (ON).  
Switch RED dip switch next to the telejack connector on the CZ HB (xx) DALI control unit towards the centre of the control (see diagram D).

### The load switches on when nobody is present:

- Heater causing infra-red variations in a small cold room.  
Resite the CZ HB (xx) DALI control away from heater.
- Please contact DANLERS for further technical support.

## Precautions and Warranty

This product conforms to BS EN 60669-2-1, BS EN 55015 and BS EN 60730.

Please ensure the most recent edition of the appropriate local wiring regulations are observed and suitable protection is provided (protected with the appropriate MCB) 1kV over voltage. Please ensure that this device is disconnected from the supply if an insulation test is made.

This product is covered by a warranty which extends to 5 years from the date of manufacture.

## Products available from DANLERS

- PIR occupancy switches • Daylight linked dimmers • Manual high frequency dimmers
- Photocells • Radio remote controls • Time lag switches • Outdoor security switches
- Dimmers • Heating, ventilation and air-conditioning controls • Bespoke / O.E.M. products

Please call for more information or a free catalogue, or visit our website.

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# DANLERS

## Installation notes

### ControlZAPP high bay controls for DALI ballasts

CZ HB ND DALI

CZ HB SP DALI

CZ HB WD DALI

ControlZAPP high bay passive infra-red occupancy switches (PIR) can be mounted directly onto solid ceilings or onto a range of different mounting boxes (diagram A). These PIR switches incorporate a passive infra-red quad sensor to detect movement of a warm body within their detection zone (diagram B) and a photocell to monitor the ambient light level.

**ALL adjustments are made via a freely downloadable ControlZAPP App available from the DANLERS website.**

If the control set as PIR with LUX input, upon detecting movement, if the ambient light is dark enough, the ControlZAPP device will turn the load ON. The ambient threshold can be set to between approximately 30 lux to 1000 lux and infinite lux (photocell inactive) via the 'Respond to Daylight' settings on the ControlZAPP App.

If no more movement is detected within a pre-selected time as determined by the ControlZAPP App, then the ControlZAPP device will turn the load off. This 'Time Off Timeout' or time lag can be set via the ControlZAPP App adjuster between 10sec and 23hrs 59min 59sec.

These high bay controls are available in three types - each with a particular detection pattern which is optimised for particular applications.

**CZ HB ND DALI:** Narrow Detection version is ideal for covering storage aisles.

**CZ HB SP DALI:** Spot Detection version is ideal for smaller areas, such as the entrances to storage aisles.

**CZ HB WD DALI:** Wide Detection version is ideal for large open areas, such as factories, sports halls and entrance halls.

## Loading

These controls are suitable for switching and dimming DALI ballasts (broadcast only). They can control up to 40mA, eg. 20 ballasts at 2mA (varies according to make and model of ballasts). They can also switch up to:

- 10 amps (3000W) of resistive loads
- 6 amps (1500W) fluorescent lamps, high frequency or switch start, incandescent or mains halogen lamps (recommended with integral safety fuse)
- 3 amps (750W) of electronic or wire wound transformers.
- 2 amps (500W) of low energy lamps: CFL, LED, 2D etc.
- 1 amp (250W) of fans or most metal halide lamps.

**IMPORTANT:** To control DALI ballasts you will require a DALI Power Supply Unit. Please refer to your ballast instructions. DANLERS DALI Power Supply Unit (order code DBPSU) is rated at 40mA (DALI standard allows 250mA maximum). The controls interface of a DALI ballast normally sources at 2mA.

## Start-up and default settings

When the control is powered up, it will take 1 minute for the circuitry to stabilise (detection LED flashing) and ensure the output is off, the control will then enter its Default Operating Mode.

**Please Note:** When in the Default Operating Mode the control is set up as an occupancy switch with a 20 minute turn OFF timeout (time lag) and photocell disabled.

## Installation procedure

1. Please read these notes carefully before commencing work. In case of doubt please consult a qualified electrician. Ensure wires and cables are securely held within the connection terminals.

**IMPORTANT: The CZ HB (xx) DALI Control Unit clock battery must be engaged (ON) prior to installation by switching the RED dip switch (see diagram D) to the DOWN position.**

2. POSITIONING: The CZ HB (xx) DALI switch should be installed to achieve correct coverage of the area, see diagram B. If the photocell override facility (enabled via ControlZAPP app) is required, the switch must be located above an area where daylight can give greater illumination than the artificial light. Avoid locating this product where it is exposed to drafty conditions (exposed lobbies, open ceiling voids or near fans) or near heat sources.
3. Disconnect the ControlZAPP device from the circuit before performing insulation testing of the wiring circuit.
4. Do not connect on a circuit with large inductive loads, as induced spikes may cause false triggering or damage the device.
5. CZ HB (xx) DALI must be connected to the ControlZAPP Power Supply (CZPS) via the ControlZAPP communication cable (telejack) provided, for wiring see diagrams C and D. NOTE: The use of non ControlZAPP connectors may damage the CZ HB (xx) DALI or CZPS and will invalidate the warranty).
6. Knockout or drill the appropriate holes on the mounting plate for attaching the plate to the ceiling or back box (if applicable). Feed telejack through the appropriate (side or rear) entry hole. Screw the back mounting plate to the ceiling or back box via the mounting holes. Push the telejack connector into the sensor head terminal. Push the sensor head onto the mounting plate and align the side clips with the slots on the sensor heads.

## Settings and calibration

**NOTE: ALL settings are adjusted by ControlZAPP App as specified in the ControlZAPP App User Guide** (downloadable from the DANLERS website) including: MODE settings, SCHEDULER settings and photocell settings and intelligent photocell calibration procedure.

MODE settings include: Detect Movement (enable or disable), Sensitivity, Short Visit Mode (with timer), Turn ON automatically (Presence detection or Absence detection), Turn OFF timeout (from 10sec to 23hrs 59min 59sec), Respond to Daylight (enabled or disabled) the calibration process must be run for the intelligent photocell to work. Delay before ON or Delay before OFF timers, Scene Recall (ON or OFF).

SCHEDULER settings include:

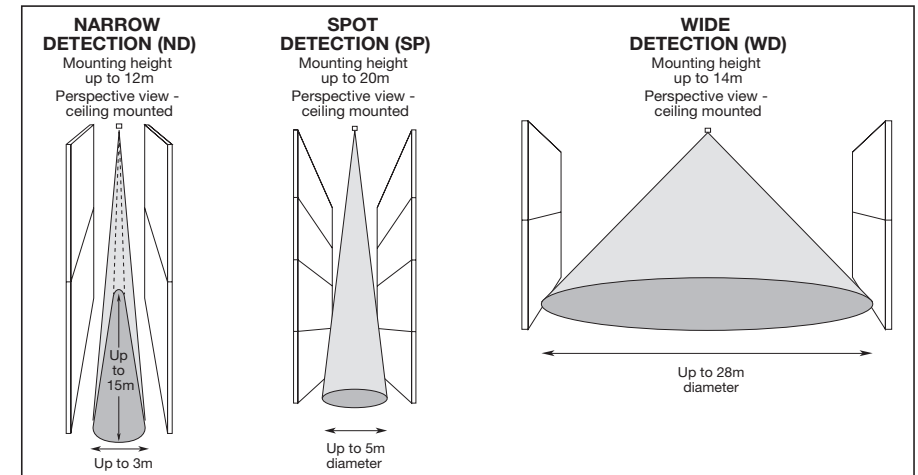
DAY TYPES (defining times for each of the different Modes to occur).

WEEKLY SCHEDULE (defining which Day Types are assigned to different days of the week).

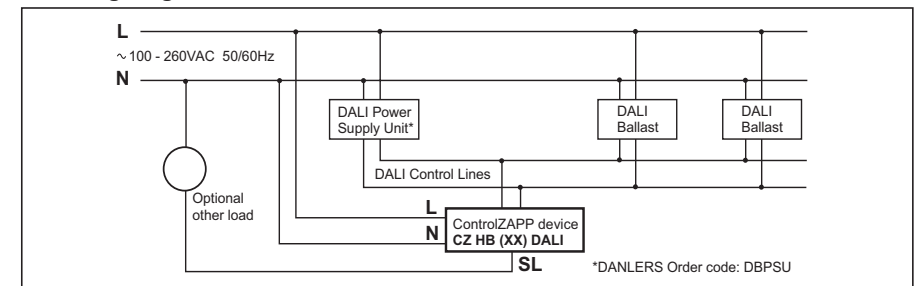
EXCEPTIONS (defining exceptions to the schedule such as holidays).

VIEW ON CALENDAR (overview of schedule).

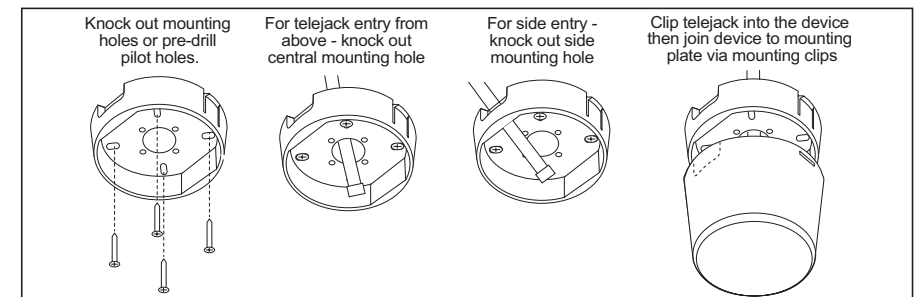
## A: Detection diagrams



## B: Wiring diagram



## C: Mounting plate fixing



## D: Connector diagram

