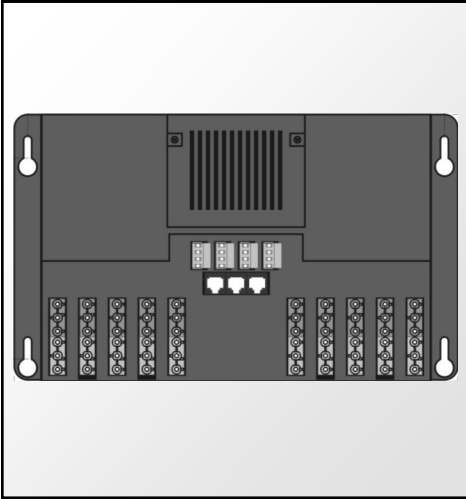


THORN

96239814 CONNECT DUC10 DSI 96239815 CONNECT DUC10 DALI

Overview

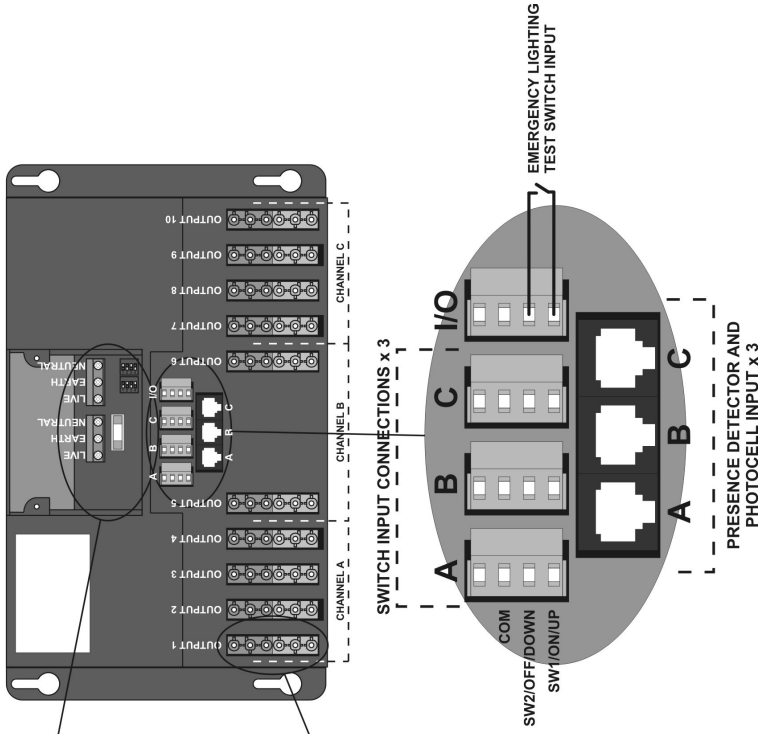
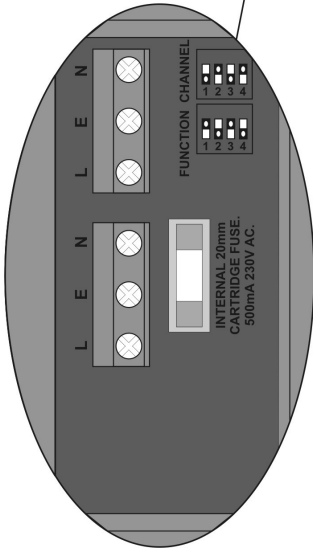


CONNECT is a flexible lighting control system which provides effective power delivery and control for lighting installations in commercial, educational and healthcare buildings. CONNECT is designed for ease of installation: mains input is connected using the spacious wiring compartment; control inputs and outputs are pluggable using industry standard connectors. The CONNECT marshalling box has 10 luminaire outputs, which can be configured as three separate channels if required. All control inputs are SELV and provide a variety of functions, a connection for the testing of emergency luminaires is also provided.

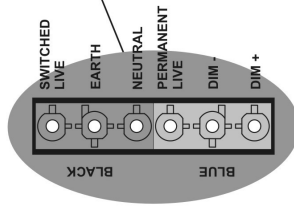
Summary of functions

- Presence detection
- Absence detection
- Daylight linking
- Manual dimming

WIRING COMPARTMENT CONNECTIONS



LUMINAIRE CONNECTIONS



IMPORTANT NOTICE!

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE wiring regulations.

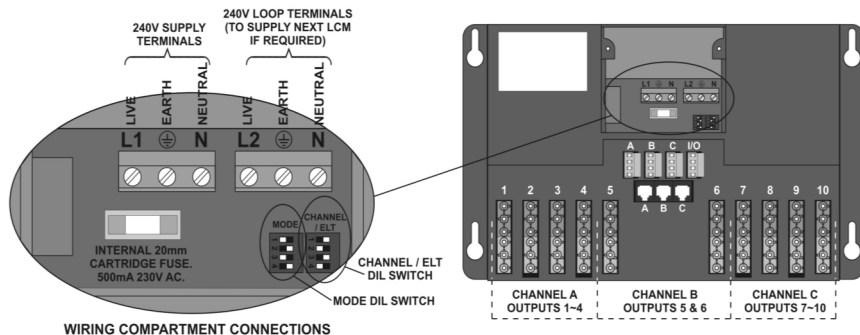
Warning. This device works at mains potential. Be sure to take care when working with electricity.

- The box should be fixed on a smooth, flat surface or using drop rod fixings. Optional track fixings can be used.
- Ensure that there is easy access to the wiring compartment and all connectors once the box is in-situ.
- Wire the box using the diagram opposite.
- Connect permanent Live, Earth and Neutral connections to the terminals in the wiring compartment. There is an extra set of terminals to loop through the wiring; these do not have to be used.
- Plug in the luminaires ensuring that the connector latches to the box (pre-wired luminaire leads are available, please contact our sales office).
- Connect presence detectors and/or photocells using RJ45 connections and a suitable CAT5 cable.
- Connect switches to the *switch input connection* terminals, between input and the common. Switches must be isolated. Centre biased retractable switches are recommended for all applications.

The terminals are as follows:

- COM** common for switch input and power supply
- SW2/OFF/DOWN** can be used as an override off or connected to the “down” of a centre biased switch
- SW1/ON/UP** can be used as an on switch or connected to the “up” of a centre biased switch

- An SELV emergency lighting test input is provided. Simply short these two connections to start the test. These terminals can be commoned across multiple boxes. See diagram on page 7 for details on emergency test modes.
- Set the Function and Channel DIL switches according to the tables overleaf.



Function Selection

- 11 standard functions are available on the CONNECT marshalling box.
- There are a further 5 reserved functions. Also the box can be customised to provide a further set of functions to encompass the needs of all common applications. **If the function required is not listed opposite, please contact our systems department.**
- Select the standard functions using the table opposite. Allow a few seconds for the new settings to be read in.
- Where a dimming box has a mixture of dimming and non-dimming luminaires connected, the dimming functions can still be used but they will have no effect on the non-dimming luminaires.
- The functions can be summarised as follows:

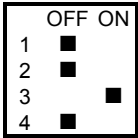
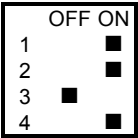
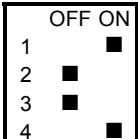
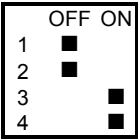
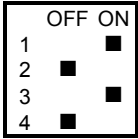
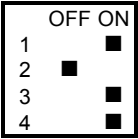
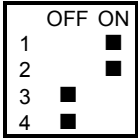
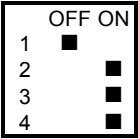
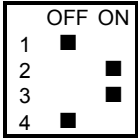
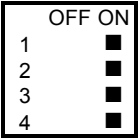
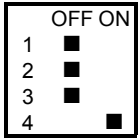
PRESENCE DETECTION	lights turn on and off with occupancy.
ABSENCE DETECTION	lights turn off with occupancy and require a manual on.
DAYLIGHT LINKING	light output adjusts to ambient conditions.
MANUAL DIMMING	light output is manually controlled using switches.

Function DIL Switch Options & Functions

Black Square indicates DIL Switch Position

Absence detection functions support "Power up on" functionality after incoming power disruption.

If this function is required with only manual switching, use the "absence" option.

	Function DIL Switch	Mode Function	Ref.	Function DIL Switch	Mode Function
1		Dimming LCM Absence detection with daylight linking (maintained illuminance). Manual switch control including up/down dimming override	7		Dimming LCM Presence detection with daylight linking using detector. Manual switch control including up/down dimming override. 5 min. fade period before switch off
2		Dimming LCM Absence detection with daylight linking (maintained illuminance) on Ch. A (outputs 1 to 4) with manual switch override. Channels B and C (outputs 5 to 10) absence detection with dimming level set by switch – last level not memorised.	8		Dimming LCM Presence detection with daylight linking using detector on Ch. A & B (outputs 1 to 6) with manual switch override. Ch. C (outputs 7 to 10) level determined by switch. Level not memorised. 5 min. fade period before switch off
3		Dimming LCM Presence detection. Dimming level determined by manual up/down switches Last level not memorised.	9		Dimming LCM Presence detection. Daylight linking (maintained illuminance) via photocell (VITP-PC) on Ch. A (outputs 1 to 4) with switch override. Channels B & C (outputs 5 to 10) level determined by switch. Level memorised.
4		Dimming LCM Presence detection with daylight linking (maintained illuminance). Manual switch control including up/down dimming override	10		Dimming LCM Absence detection. Daylight linking (maintained illuminance) via photocell (VITP-PC) on Ch. A (outputs 1 to 4) with switch override. Channels B & C (outputs 5 to 10) level determined by switch. Level not memorised.
5		Dimming LCM Presence detection. Daylight linking (maintained illuminance) via photocell. Manual switch control including up/down dimming override	11		Dimming LCM Absence detection with daylight linking using detector. Manual switch control including up/down dimming override. 5 min. fade period before switch off
6		Dimming LCM Presence detection with daylight linking (maintained illuminance) on Ch. A (outputs 1 to 4) with manual switch override. Channels B and C (outputs 5 to 10) presence detection with dimming level set by switch – last level memorised.			

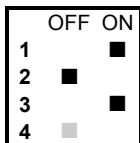
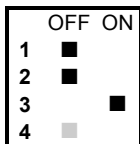
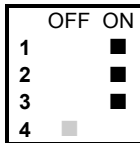
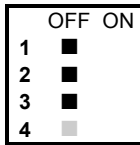
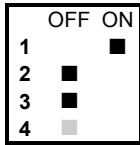
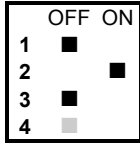
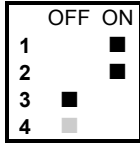
Remember after changing the DIL switch positions, isolate the 230V supply to the LCM; leave it powered down for approx. 20 seconds, then re-supply power to the LCM again. When the LCM powers back up, it will take on the new mode of operation.

Channel Selection and ELT DIL Switch Options

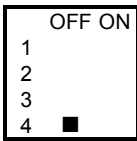
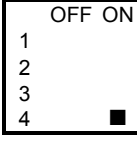
The “**CHANNEL / ELT**” (Emergency Lighting Test) Selection DIL Switch can be found inside the front grille cover, on the bottom right hand corner of the wiring compartment, to the right of the **MODE** DIL switch (please see below).

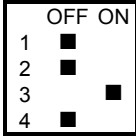
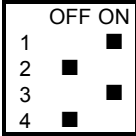
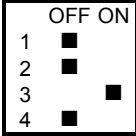
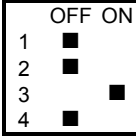
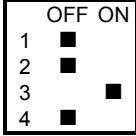
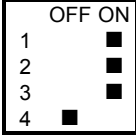
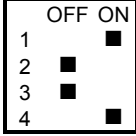
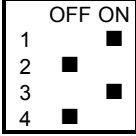
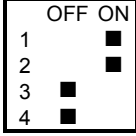
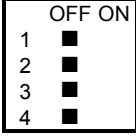
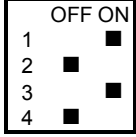
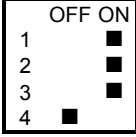
By changing DIL switch positions 1 to 3 on the “**CHANNEL / ELT**” DIL switch, channels can be grouped together or separated as shown below.

DIL switch position 4 is for the Emergency Light Test function.

	Channel / ELT DIL Switch	Description and Input / Output Relationship	Config. Ref.	Lux / Channel Association
1		All three channels switched together through detector, but manually switched separately:- Channel A output = Manual Input A Channel B output = Manual Input B Channel C output = Manual Input C	AC,B +DO	Channel A output = Lux Input A Channel B output = Lux Input A Channel C output = Lux Input A <i>Only Input A referred to for lux levels on all channels</i>
2		All three channels switched together through detector, but manually switched Channel A & B grouped together, Channel C separately:- Channel A output = Manual Input A or B Channel B output = Manual Input A or B Channel C output = Manual Input C	AB,C +DO	Channel A output = Lux Input A Channel B output = Lux Input A Channel C output = Lux Input A <i>Only Input A referred to for lux levels on all channels</i>
3		All three channels switched separately:- Channel A output = Input A Channel B output = Input B Channel C output = Input C	A,B,C +DO	Channel A output = Lux Input A Channel B output = Lux Input B Channel C output = Lux Input C <i>Independent lux levels on all channels, each input referred to separately</i>
4		All three channels switched separately:- Channel A output = Input A Channel B output = Input B Channel C output = Input C	A,B,C	Channel A output = Lux Input A Channel B output = Lux Input B Channel C output = Lux Input C <i>Independent lux levels on all channels, each input referred to separately</i>
5		All three channels switched together:- Channel A,B and C output = Input A Channel A,B and C output = Input B Channel A,B and C output = Input C Any input will switch all outputs together	ABC	Channel A output = Lux Input A Channel B output = Lux Input A Channel C output = Lux Input A <i>Only Input A referred to for lux level on all channels</i>
6		Channels A and B switched together, Channel C switched separately Channel A output = Input A or B Channel B output = Input A or B Channel C output = Input C	AB,C	Channel A output = Lux Input A Channel B output = Lux Input A Channel C output = Lux Input C <i>Only Input A referred to for lux levels on Channels A and B; Channel C refers to Input C separately</i>
7		Channels A and C switched together, Channel B switched separately Channel A output = Input A or C Channel B output = Input B Channel B output = Input A or C	AC,B	Channel A output = Lux Input A Channel B output = Lux Input B Channel C output = Lux Input A <i>Only Input A referred to for lux levels on Channels A and C; Channel B refers to Input B separately</i>

Emergency test mode selection

	Channel DIL Switch	Example details
1		Normal lighting remains energised during emergency test.
2		Normal lighting is de-energised during emergency test.

	Function DIL Switch	Channel DIL Switch	Example details
1			Classroom Absence detection, window row dimming and whiteboard luminaire switching.
2			Classroom Absence detection, window row dimming and whiteboard row switching.
3			Classroom Absence detection, window row dimming and individual switching for each row of luminaires.
4			Classroom Absence detection, window row dimming and white board luminaire manual dimming control.
5			Office Presence detection and daylight dimming.
6			Conference room Presence detection and individual switching / dimming for each row of luminaires.

Specification

LOAD

10 Amp total per box
Dimming units: 20 ballasts per box
Per channel:
6 Amp fluorescent and incandescent lighting
3 Amp compact fluorescent lighting
3 Amp low energy lighting
3 Amp low voltage lighting (switch primary of transformer)
3 Amp fans and ventilation equipment
Switch SON lighting loads via a contactor
Dimming units: 10 ballasts per channel

DETECTORS

CONNECT MRE DUC PIR up to 6 per box
CONNECT MRE DUC MW up to 3 per box
CONNECT MRE DUC MWADJ up to 3 per box

SUPPLY VOLTAGE 220-240 Volts AC 50 Hz

TERMINAL CAPACITY 4.0mm²

MATERIAL Flame retardant nylon and ABS

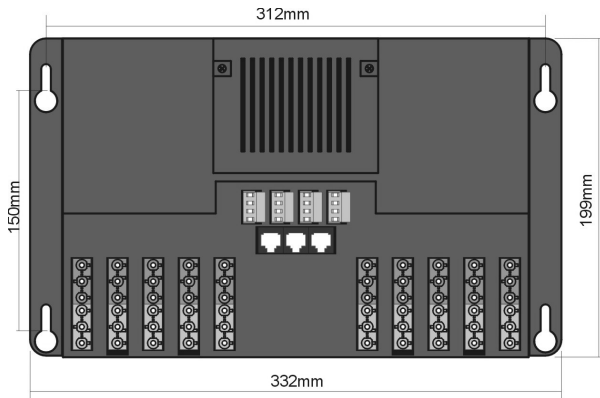
TYPE Class 2

TEMPERATURE -10°C to 35°C

CONFORMITY EMC-2004/108/EC
LVD-2006/95/EC



Dimensions



THORN

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technical@thornlighting.com

IMPORTANT NOTICE!

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE wiring regulations.

Due to our policy of continual product improvement Thorn reserves the right to alter the specification of this product without prior notice.

Ref #WD435 Issue 2