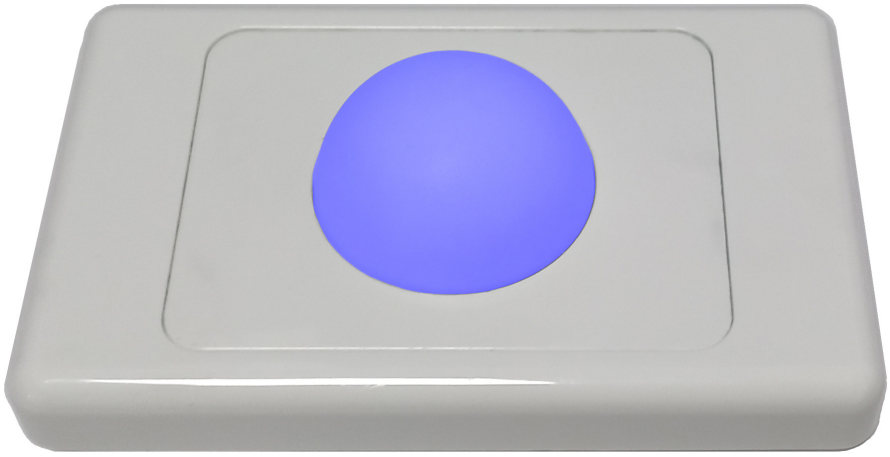
Clift Innovations



Odoor User’s Manual

2025-09-01

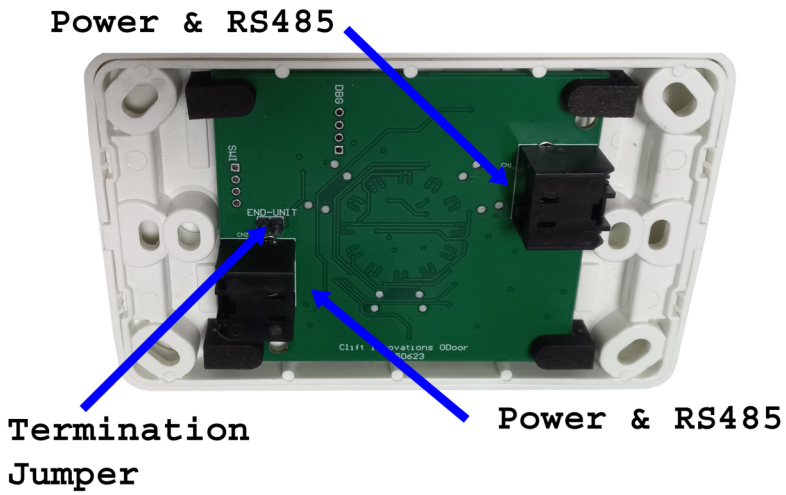
Odoor is an over door indicator, light for use in aged care facilities. It is intended to be fitted over or above client doorways within the facility, and to indicate the status of pending calls within each room using various coloured light sequences.

Key features:

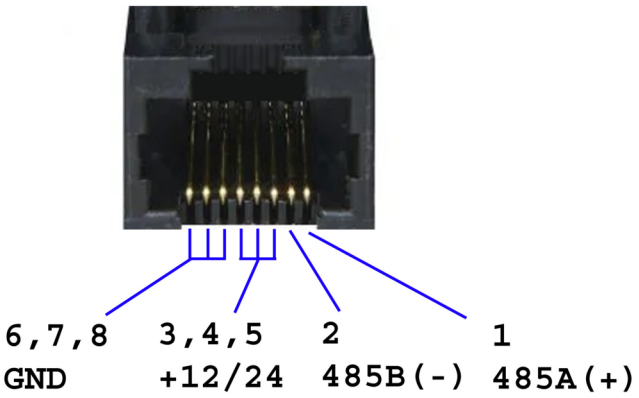
- Standard Clipsal 2000 style plate.
- 40mm dome diffuser with RGB LED illumination, up to 75 lumens.
- Low voltage 8-24V DC operation.
- Controlled by RS485 bus with addressable protocol.
- May share the RS48 bus of Bestlite displays (no protocol conflict).
- Standard modular jack 8P8C connectors; daisy chainable up to 15 units per run.
- Supported by WAC-07M (addressed by client code).
- Configured using IR remote control.

Safety note - Installation must only be carried out by suitably qualified personnel holding an Australian open cabling registration, in accordance with local regulations.

The Odoor is of a standard Clipsal 2000 form factor, intended for mounting on plasterboard using the standard c-bracket. It may be mounted in any desired orientation, and only requires a shallow wall depth of ~15mm. The 40mm diffuser dome is 1mm thick ABS, and is easily replaced if damaged. The diffuser covers an array of 12 Cree LEDs (4 of each RGB), which are capable of indicating any colour at any intensity up to 75 lumens. Light cadences include pulsating or flashing at any rate and duty cycle.



Two modular jacks are provided for daisy-chaining units, either connector can be used as input or output. All cables must have straight-through connections, crossover cables must not be used. A shunt must be placed on the termination jumper at the end of each cable run.



Electrical characteristics

	Min	Max
Supply voltage	8V	28V
Temperature range	0°C	40°C
RS485 input impedance	96kΩ	

Current consumption @24V

Colour	Brightness	Current
(off)	0/9	18mA
Red	9/9	67mA
Green	9/9	41mA
Blue	9/9	98mA
White	9/9	72mA

Current consumption @12V

Colour	Brightness	Current
(off)	0/9	18mA
Red	9/9	105mA
Green	9/9	55mA
Blue	9/9	163mA
White	9/9	105mA

Maximum Cable lengths

Voltage	Number of units	Distance between units	Notes
24V	18	9.8m	
12V	15	3m	(limited by contact rating)
12V	10	6.6m	(limited by cable drop)

Note that the above cable limitations accommodate the worst case scenario, which is every single unit displaying static blue at full brightness. If the supply voltage drops below 8V a flickering of the light will be observed.

Control Protocol

Serial settings: 9600 baud, No parity, 8 data bits, 1 stop bit (9600,N,8,1)

Message Structure

<Header><Channel><Command><Hue><Saturation><Brightness><Period mS>

<Header>

6 bytes, 0xF1, 0xF9, 0xF7, 0xF5, 0xFC, 0xFE.

<Channel>

4 ASCII decimal digits (e.g., 0000 to 9999) representing the device channel.

Channel 0000 is reserved for global (broadcast) messages.

<Command>

One of the following 3 bytes:

0x41 - Static/steady colour

0x42 - Flash single colour

0x43 - Pulsate single colour

<Hue>

3 ASCII decimal digits (000 to 360) representing the desired colour (hue angle).

<Saturation>

1 ASCII decimal digit (0-9) representing saturation. This would typically always be 9, unless producing white, in which case this would be 0.

<Brightness>

1 ASCII decimal digit (0-9) representing brightness. 0 means off.

<Period>

This parameter should only be present for flashing (0x42) or pulsating (0x43) commands. It is 4 ASCII decimal digits (0001 – 9999) representing the period of the flash or pulse in mS.

Example Messages (in hex format)

Channel 0001, Static, Hue=000(red), Saturation=9, Brightness=9

F1F9F7F5FCFE 30303031 41 303030 39 39

Channel 0001, Flash, Hue=000(red), Saturation=9, Brightness=9, Period=1000mS

F1F9F7F5FCFE 30303031 42 303030 39 39 31303030

Channel 0001, Pulsate, Hue=000(red), Saturation=9, Brightness=9, Period=1000mS

F1F9F7F5FCFE 30303031 43 303030 39 39 31303030

Channel 0001, Pulsate, Hue=240(blue), Saturation=9, Brightness=9, Period=1000mS

F1F9F7F5FCFE 30303031 43 323430 39 39 31303030

Channel 0001, Static, Hue=240(blue), Saturation=9, Brightness=9

F1F9F7F5FCFE 30303031 41 323430 39 39

Channel 0001, Static, Hue=240(blue), Saturation=9, Brightness=5

F1F9F7F5FCFE 30303031 41 323430 39 35

Configuration

Configuration is performed using a universal remote control manufactured by “One For All” part number URC1916. This is available from Jaycar CAT.NO: AR1964. This outputs the standard NEC IR protocol @38kHz.

During setup the Odoor will provide the following feedback:

- Single green flash – Button press feedback
- Double green flash – OK

Note that IR sensitivity is reduced when Odoor is producing a pulsating light. For reliable remote operation configure the device while it’s either off or showing a static colour.

Enabling setup

Press: 1975(menu button)

A double green flash will confirm this pin number is accepted. Once this is done the following menu functions are available:

Assign Channel

Press 4 numbers (eg, 0001). Each press will show a single green flash for feedback, and a double green flash when the new channel is set.

Data debug mode

Press i (info button).

In this mode the Odoor will simply change colour each time a byte is received on the RS485. It is only useful for diagnostic purposes. This will continue until the menu is exited by pressing (exit).

LED test

Pressing RED GREEN YELLOW or BLUE will display those colours at full intensity.

Exit

Press the exit button, Odoor will confirm exit with a double green flash, and resume normal operation.

Contact & Support

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Compliance

This product has been tested and found to comply with the following standards:

- **AS/NZS CISPR 15: Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment (EMC)**
- **AS/NZS 3820: Essential safety requirements for electrical equipment (Safety)**

Compliance with these standards allows this equipment to be used in residential, commercial, and light-industrial environments without causing harmful electromagnetic interference, and ensures that it meets the essential safety requirements for electrical equipment.

The product is intended for operation from a safety extra-low voltage (SELV) supply and for connection only to an RS485 communication bus. Installation must be carried out in accordance with local regulations by qualified personnel.

This equipment bears the Regulatory Compliance Mark (RCM) in accordance with the requirements of the Australian Communications and Media Authority (ACMA).

Supplied by Clift Solutions Pty Ltd, Responsible Supplier Number: E20891