

## iClip Range from 2W to 45W

- The iClip is a smart coupler which transfers power from the iBus to LED fixtures by induction.
- Connects to the iBus and extracts power from the iBus without piercing the insulation, hence the reference to contactless power or inductive coupling.
- Converts power into a DC current attuned to the requirements of the LED fixture.
- Factory programmable current in 4% steps of full load current

## Benefits

- The iClip can be connected anywhere on the iBus.
- Connections are easily undone, as you are not cutting into the wire insulation.
- Replaces traditional LED drivers.
- Replaces traditional connectors such as T-pieces or junction boxes.
- Very high efficiency.
- Robust, guaranteeing many years of problem-free operation.
- Range of LED drive currents from 200mA – 2100mA.
- Connecting onto the iBus in under 20 seconds.
- iBus insertion not polarity sensitive.
- Output spring clamp terminal accommodates conductor thicknesses up to 1.0mm<sup>2</sup>.
- Clamp terminal is colour coded to avoid polarity mistakes.
- Comes with a terminal cover to avoid accidental contact with live wires.
- Suitable for any constant current LED luminaire without integrated driver module.
- Will pass through 60mm diameter hole in ceiling.

## Fault Conditions

The iClip has built-in safety features to avoid damage and potentially unsafe conditions,

- If the iClip is clipped onto the iBus without a fixture connected to its DC output terminal, the iClip will shut down. To reset the iClip, attach the LED fixture and take the iClip off the iBus and clip it back on. Alternatively reset the Power Hub.
- If the LED fixture power draw exceeds the maximum capacity of the iClip, the iClip will shut down.

## Extensive Current Range

- The iClip is available in Two Power Ranges, 2-20W and 20-45W.
- Each range can be programmed in 5mA steps from 100mA to 2100mA as shown in Part Numbers below.

## Part Numbers

Isotera part number	Description
IS-H-IC-15-200-700	100mA to 700mA @ 2-20W
IS-H-IC-15-710-1050	695mA to 1050mA @ 2-20W
IS-H-IC-50-200-700	100mA to 700mA @ 20-45W
IS-H-IC-50-710-1050	695mA to 1050mA @ 20-45W
IS-H-IC-50-1100-1600	1045mA to 1600mA @ 20-45W
IS-H-IC-50-1610-2100	1595mA to 2100mA @ 20-45W
IS-H-4WC	4 Way Multi Port Connector



## Fully Controllable

- The iClip can be switched ON/OFF and dimmed down to 5%.
- Dimming to 1% available for some applications, contact Isotera support.
- Each iClip can be controlled as part of a group or individually.
- Incorporates an RJ11 control socket to allow the connection of dimmer switches and sensors with standard flat 6-core data cable.
- Responds to 0-10V control voltage input.
- The control socket also provides SELV DC power for Isotera control devices.
- Output is fully ON if input is greater than 9.5V
- Output is fully OFF between 0V and 0.5V.
- Full dimming between 0.5V and 9.5V
- Auxiliary output (to power control devices): 5.5 to 7V, 50mW.
- The fade rate is limited such that a change in output cannot occur faster than approximately 7.5% per ms when used with a switch or PIR. (i.e. 750 ms. from max. to min. or min. to max.)

## Connector pin-out on RJ11 6P/6C (6 poles – 6 circuits) and image of 4 Way Multi Port Connector.

- Pole (2): Command
- Pole (3): 0-10V control
- Pole (4): Common
- Pole (5): Auxiliary power output
- Poles (1), (6) Factory Reserved



## Power

- Regulation 5% in all cases
- Output Ripple <20mV in all cases
- Current range: 200mA to 2100mA
- Efficiency of 20W iClip at 15W nominal >95%
- Efficiency of 45W iClip at 35W nominal >95%
- Efficiency of all iClips at full load > 92.5%.

## Environment

- Normal Operating Temperature Range: -10°C to +60°C
- Nominal Operating Temperature: 25°C
- Storage: -40°C to +100°C
- Cooling: By natural convection.
- Humidity: 90% RH non-condensing
- Installation Category: The device operates to IP40

## How to attach an iClip

Before you start you will need:

- One iClip for each luminaire
- Luminaire with a DC wire tail
- iBus already installed
- iHub is installed and working
- Control cables already installed (if being used)
- Check the rating label on the iClip against the rating of the luminaire.
- Make sure that the luminaire is not rated higher than the iClip

Note: The task must be completed in the order listed.

The iClip will see a fault condition if the iBus is connected before the luminaire.

1. **Fig. 1** .Lift the cover over the output terminals.
2. **Fig. 2** Take the lead from the luminaire and insert the wire into the iClip terminal. The wires and terminals are colour coded red and black. Because this connection is polarity sensitive connect the red wire to the red terminal and black to black.
3. Push down the lever on the terminal to clamp the wire.
4. Push the cover down over the terminals.
5. **Fig. 3** Take the iBus and open out the twist of the cable where you want to position the iClip.
6. **Fig. 4** Slide the black slider on the iClip sideways to expose the channel underneath.
7. Take one of the iBus wires and push it down into the channel so that the pips in the side of channel grip it. It does not matter which wire goes in the channel; it is not polarity sensitive.

**The luminaire starts to work. However both wires must be in the iClip for it to work fully reliably.**

8. **Fig. 5** Slide the black slider in the opposite direction to expose the other channel.
9. Push the other iBus wire into the channel so that the channel grips it.
10. **Fig. 6** Slide the black slider back to its centre position covering both wires of the iBus.
11. Note: You must move the slider back to its centre position for it to work fully and reliably.
12. Plug in the control RJ11 cable (if being used).

## How to reset the iClip

If you connect, an iClip without a luminaire attached the iClip detects a fault condition and shuts down.

To reset the iClip follow the steps below:

1. **Fig. 2** Attach the luminaire.
2. And either take the iClip off the iBus and clip it back on. **Fig. 3**, or Press the reset switch on the iHub. **Fig. 7**
3. The luminaire lights up.

Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

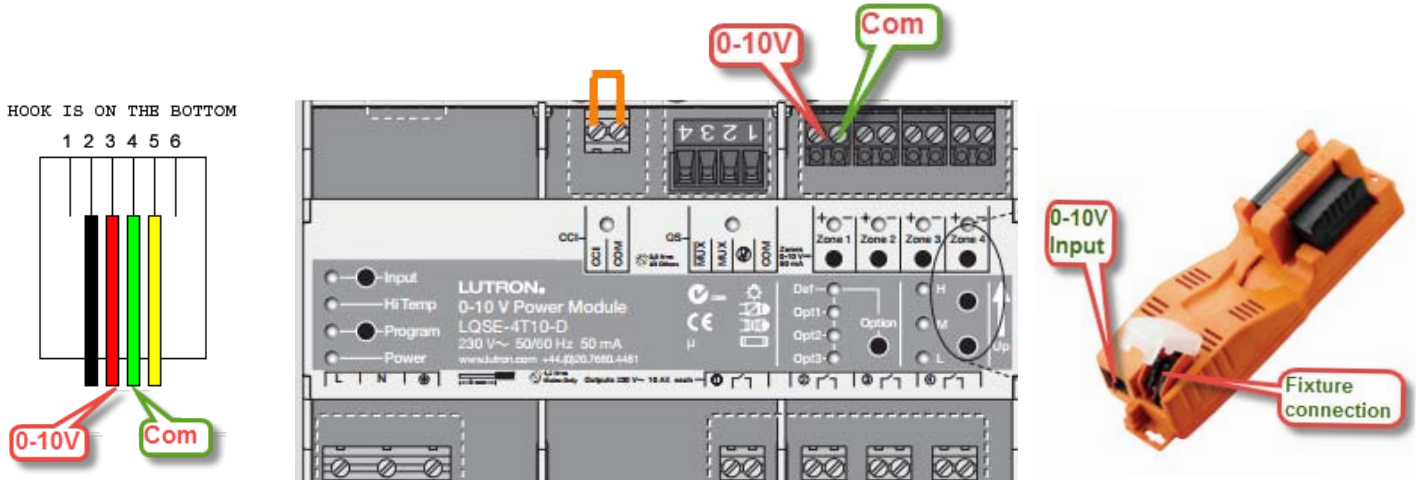


Fig. 7



## Third Party Controllers

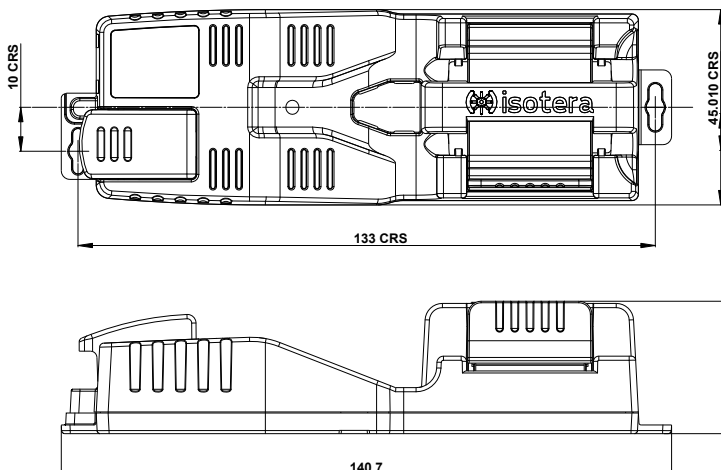
- The iSotera system can be controlled using most 0-10V industry standard controllers.
- The images detail how to connect the iClip to a Lutron system for example.
- In the example shown the CCI terminals on the controller must be shorted out or the outputs would be at 100% all the time.



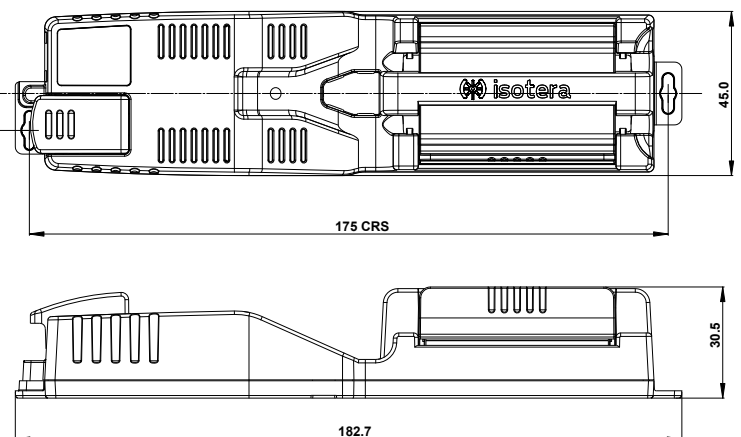
## Compliance

Title	Description	Edition/Date
EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	2006 + A2:2009
EN61547	Specification for equipment for general lighting purposes. EMC immunity requirements	2009
EN61000	Harmonic Current Emissions	EN61000-3-2:2006 EN61000-3-3:2008 EN61000-6-1:2007 EN61000-6-3:2007 & A1:2011
EN61347	Safety requirements for electronic control gear for use on DC supplies up to 250 V and AC supplies up to 1 000 V at 50 Hz or 60 Hz and at an output frequency which can deviate from the supply frequency, associated with LED modules.	EN61347-2-13:2006 used in conjunction with EN61347-1:2008.
EN62493	Human Exposure To electromagnetic fields	EN62493:2010

### 20 W Mechanical Drawing



### 45 W Mechanical Drawing



**Disclaimer.** The specifications contained herein are believed to be correct at the time of publication and are subject to change without notice.