

## Anytronics 16/8/4 Channel CB Packs : Installation Guidance for Electricians

These notes are intended only for guidance. Anytronics dimming systems should only be installed by competent, qualified electricians. The safety and correct operation of installed systems are the sole responsibility of the installer.

### Pack fixing

Install the pack in a ventilated area leaving at least 125mm gap round the top and sides to promote cooling by ventilation. The pack should be mounted vertically with ventilation slots uppermost and should be fixed in place using the fixing holes in the pack base. Once installed, to access the connection bay for input supplies and output circuit connections it is only necessary to remove the left hand metal cover. This is achieved by loosening the two cover fixing screws and sliding the cover off to the left.

### Mains Supply Requirements

Anytronics CB dimming packs are designed for use on 220 to 240 Volt nominal single phase 50 Hz mains supplies. [110 Volt systems are also available to order.] Supplies should contain independent Live, Neutral and Earth connections, and for domestic installations preferably be of type TN-S or TN-C-S (PME). Different packs may be safely used on different phases of the same three phase supply. Anytronics also manufactures a range of three phase dimming systems for use with both star and delta connected loads.

**The current rating of the supply and of the connection circuit to the supply must both be adequate for the total pack rating.** This still important where the pack is to be installed with only light loading on each Channel as additional loading may be added in due course without either reference to the installer or further consideration of the supply connection circuit. In practice some diversity may be thought applicable, but this is dependent on the installation and is at the discretion of the installer.

The two types of circuit breakers used in Anylight CB packs require total loop impedances of either less than 8.8 ohms (S191-C4) or 3.5 ohms (S261-C10) in order to achieve a 4 second disconnection time. To avoid damage to the dimmer such impedances should be checked by calculation, or measured only with the dimmer taken out of circuit.

### Input Supply connection

For safety, all Anylight packs are supplied as standard with double pole isolators. If required they can be factory fitted instead with a double pole RCD isolator.

The incoming supply live and neutral connections should be made to the correct terminals of the double pole isolator or RCD. **DO NOT connect the incoming neutral supply to the common neutral output busbar.** The earth connection should be made directly to the clearly labelled earth busbar in the connection chamber.

### Output circuit connections

Anytronics dimming packs have an earth busbar and a common neutral busbar and four, eight or sixteen dimmed/switched live outputs from the circuit breakers. Output circuits can be wired either

1. as outputs to lighting circuits with common neutral and earth connections and independent dimmed/switched live connections to each circuit, or
2. each output circuit may be wired as for a single appliance with independent earth and neutral connections and dimmed/switched connections from the circuit breaker outputs.

It is possible to use a mixture of these two circuit connection techniques from a single pack.

For safety and to provide correct supply isolation it is essential that the neutral connections to controlled equipment be derived from the common neutral output busbar and not from other external neutral connections which do not pass through the dimming pack's internal double pole isolator.

### Insulation/Isolation Testing

Any insulation or isolation testing must be completed before installing the dimming pack. **Do not use a Megger or similar high voltage testing equipment on any part of a circuit or equipment connected to a dimming pack.** The electronics in the pack will not withstand the voltages associated with such equipment.

In Anylight systems, the low voltage two wire data bus connecting outstations to the master dimming pack is not referenced to earth. Further the front panel of outstations is isolated from the internal low voltage electronics, providing a high degree of isolation between the supply and user. As a result though the screws fixing outstations into flush mounting boxes may be exposed, the circuitry contained in the box is both low voltage and is isolated from the mains. It is therefore not necessary to earth the box (or screws).

NOTE : It is good installation practice to route the data wires separately from all other electrical cables.