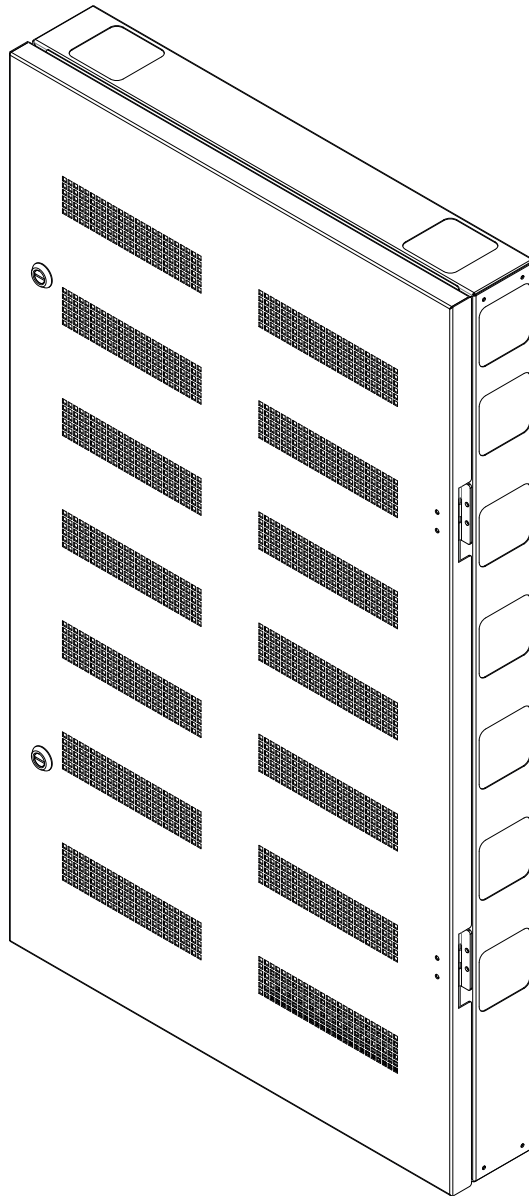




future automation

ELECTRICAL ENCLOSURES



INSTALLATION GUIDELINES

ISSUE 002

SAFETY DISCLAIMER

IMPORTANT SAFETY INSTRUCTIONS BELOW

WARNING: Failure to provide adequate structural strengthening, prior to installation can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure the structure to which the component is affixed can support four times the weight of the component and any additional apparatus mounted to the component.

WARNING: Enclosure should be safely affixed to a wall in a dry area above any flood lines and away from any hazards as detailed in electrical regulations.

WARNING: if enclosure is fitted somewhere hotter than average room temperature you will need to de-rate the load on dimmers. See individual lighting controller module specification. Do not block any ventilation and install away from any heat sources.

ADDITIONAL WARNINGS:

1. Keep all documentation/instructions after fitting.
2. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on to the end user and read fully before operation.
3. Do not use near water or outdoors unless the product has been specifically designed to do so.
4. Protect any cables or cords being used near this enclosure from being walked on or pinched to prevent damage and risk of injury.
5. Use this product only for its intended purpose as described in the product instructions and only use attachments/accessories specified by the manufacturer.
6. Do not install the product if it is damaged in any way, or the enclosure has been exposed to rain or moisture. Contact the original installer/manufacturer to arrange repair or return.

Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without prior notice or obligation of any kind. Future Automation makes no representation of warranty, expressed or implied, regarding the information contained herein. Future Automation assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

ELECTRICAL SUPPLY

Always observe the installed electrical modules correct operating voltage and ensure you have the correct supply (e.g. 230V AC 50Hz in the UK)

The enclosure should be connected to a suitable electrical supply from a consumer unit (fuse board) with a 63A maximum circuit breaker.

Always ensure correct cable size is used.

- Feed breaker rating is dependent on the calculated electrical load and rating of the fitted modules and cabling used (max 63A)
- Conduct a risk assessment to see if over-voltage Surge Protection Devices (SPDs) are required up-chain of the panel (e.g. risk of transient voltages such as lightning on high-rise building). Also down-chain AFDD Arc Fault Detection Devices maybe required.
- Some panels may require a 3 phase supply.
- If RCBO's are fitted in enclosure then main feed is usually an MCB to avoid tripping several circuits

Whilst connected to live mains the internal covers should always be fitted with all fixing screws in place to avoid non technical or unaware persons coming in to contact with any live parts.

PANEL WIRING INFORMATION

Future Automation pre-wired enclosures for Lutron and Crestron (LCP-RCBO / CCP-RCBO) are supplied with RCBO's and their outputs are supplied temporarily wired to the terminal blocks.

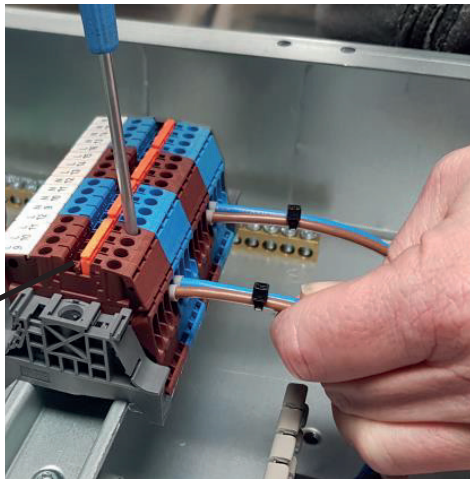
You can connect the house circuits to the terminal blocks and power the lighting directly with no modules fitted.

This is useful on new build or total refit properties to provide temporary lighting while the building interior is being completed.

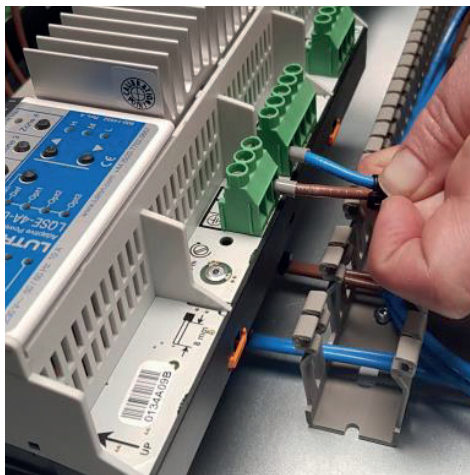
MAKE SURE POWER IS SAFELY DISCONNECTED BEFORE COMMENCING ANY WIRING WORK

Once you have fitted the DIN lighting modules you will need to remove the 4 way orange links on the brown (live) terminal blocks (also black and white on 3 phase wired panels).

Remove orange links on
live phases



Undo the terminals and remove the power feed wires from the terminals. Route these back down the trunking to become your "live feed" for the associated DIN lighting module.



Then wire from the DIN module outputs to the terminal blocks (usually 4 outputs using correct wire).

Remember to refit all internal lids and lock door once unit is left powered.

Its good practice to keep them fitted even if not powered so there is no tampering or risk of debris entering, will also ensure the lids door and fixings don't go missing on site.

EXTERNAL WIRING INFORMATION

All external house circuits should be tested prior to connecting to the lighting DIN modules to avoid risk of damage.

All cables entering and exiting the enclosure should be through sealed glands or IP4X conduit trunking system to ensure it meets relevant wiring regulations e.g. UK BS7671 Amendment 3. U-Channel rubber grommet strip supplied.

Check with wiring regulations for correct cable type / size.

Recommended Torque Settings:



Main Supply isolator switch;
ABB (Pre April 2019) - 2.5 N-m (22.13 in-lb)
Schneider (Post April 2019) - 3.5 N-m (30.98 in-lb)



RCBOs ;
ABB (Pre April 2019) - 1.2 N-m (10.62 in-lb)
Schneider (Post April 2019) - 2 N-m (17.7 in-lb)



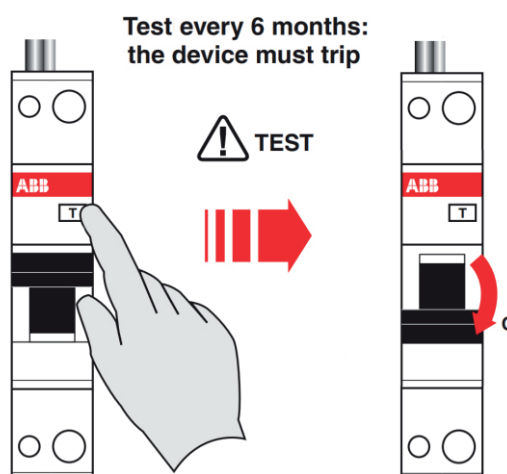
Terminal Blocks - 0.6 N-m (5.31 in-lb)

Some Lighting Control Modules may need to be disconnected or overridden before performing high voltage electrical tests - See module manufacturers documentation for more information.

ROUTINE RCBO /RCD ROUTINE TESTING

Residual Current Devices (RCBO or RCD's) should be routinely tested a minimum of every 6 months, to check that they trip when pressing the test button.

Note: It is normal to see some arcing inside the switch during a trip



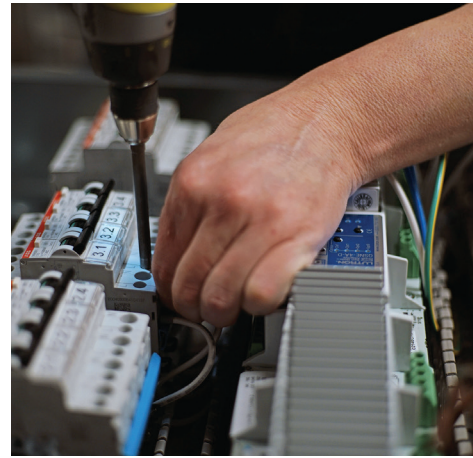
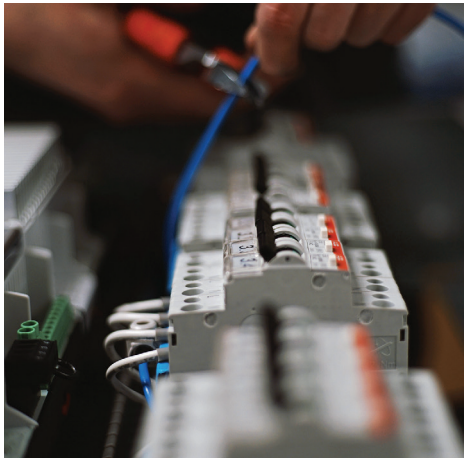
ENCLOSURE WIRING SERVICE

PROFESSIONAL DIN RAIL ENCLOSURE WIRING AND TESTING

Enclosure wiring and testing can be a timely and expensive process, so our in house Enclosure Wiring Service has been set up to streamline the process while maintaining our usual high level of quality.

Our manufacturing facilities are built to enable our teams to create large volumes of enclosures from scratch. Each process follows the same level of stringent quality control and assessment to ensure that every panel we produce is of the highest standard.

Our range of enclosures have been engineered to offer maximum compatibility with modules and can be configured to suit a wide variety of use cases. By ordering our DIN Rail Enclosures pre-wired with RCBOs, isolators and terminal blocks, dealers can save large amounts of time and money spent on site wiring enclosures themselves.



We also offer a “Site Ready” wiring service, enabling dealers to supply us with their DIN rail modules , along with a full wiring schedule for our team to follow. The panels will be professionally wired using high quality components before being tested and debugged.

This ensures that our panels are ready to install the moment they arrive, saving unnecessary pressure on-site.

Our team will be on hand to assist with any technical information about any of our panels, giving you peace of mind during installation.

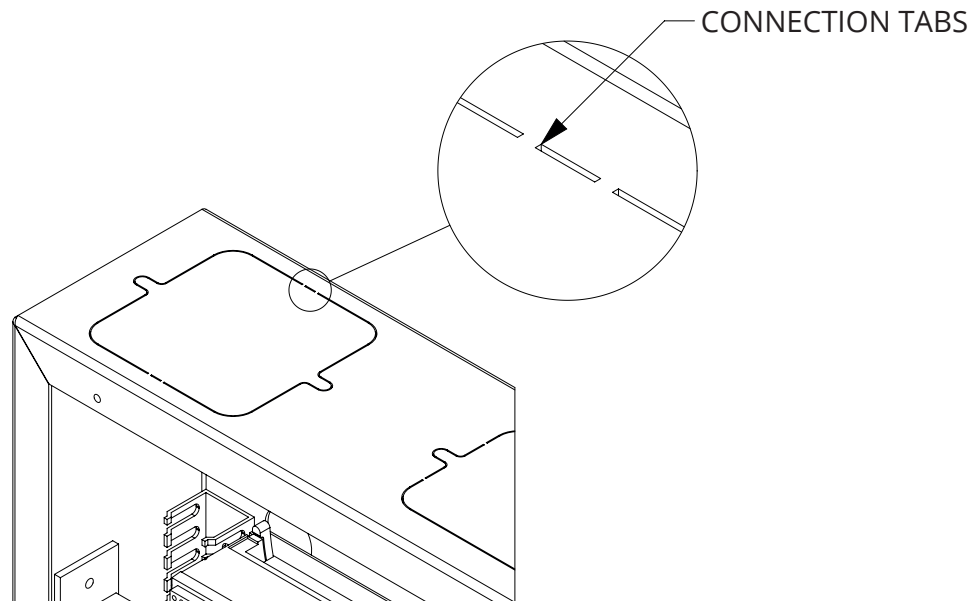
For pricing, please contact a member of our team.

CABLE HOLE EDGING (PART 1)

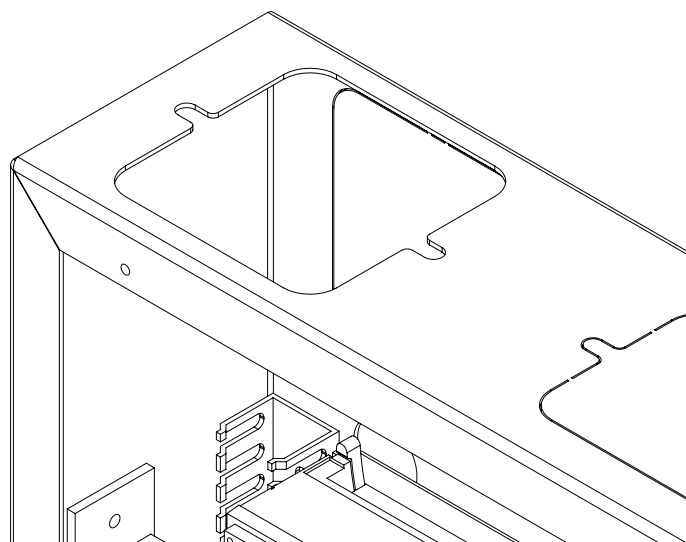
Rubber edge trims are included with all Future Automation electrical enclosures, enabling installers to safely and professionally trim the edges of the enclosures cable entry/exit holes.

To open the cable entry/exit holes and install edge trims;

1 - Remove the sheet metal cover plate by twisting it and breaking the connection tabs.

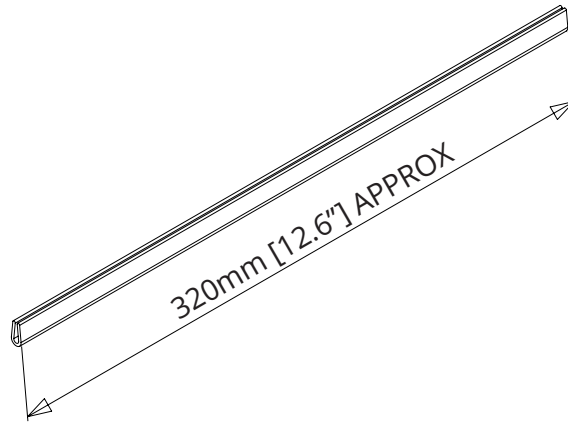


2 - Remove any sharp edges or burrs to prevent injury or damage to the rubber edge trims.

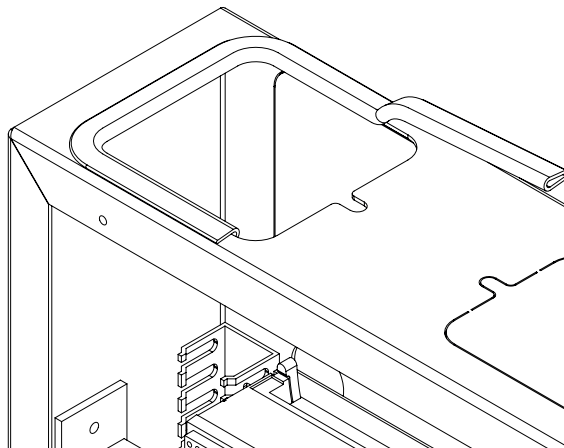


CABLE HOLE EDGING (PART 2)

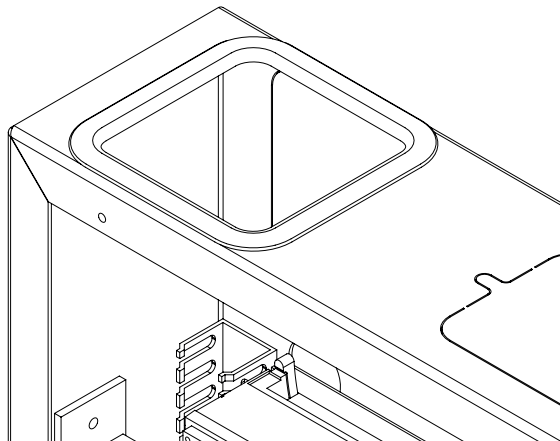
3 - Make sure the rubber cable edge trims are cut to the correct length - approx. 320mm (12.6").



4 - Wrap the rubber cable edge trim around the cable entry/exit holes, making sure the C shape profile is securely pressed all the way around the hole.



5 - Butt the ends of the edging together for neat finish. Trim off any excess length as required.





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