



INSTALLATION MANUAL

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1. INTRODUCTION

Mainline's track-based power distribution system means power wherever you want it. You can reposition sockets simply and safely anywhere along the track.

This installation manual provides a step-by-step guide for installing the Mainline system. It is recommended that it be readily available for reference throughout the installation process.

This manual must be used in conjunction with any safe work method statements (SWMS) and statutory requirements of the principal contractors.



WARNING!

All Mainline power track system installations must be carried out by a qualified electrician.

2. SAFETY



2.1 Work site safety

Installers must comply with all legislative requirements in regard to wiring rules and work site safety standards. These include; work, health, and safety (WHS) laws and regulations, local standards and codes of practice, etc. Care must be taken to ensure the safety of other workers while working on site. It is important to minimise trip hazards and obstructions to emergency exits.

Where surfaces are to be penetrated, installers must check if an 'asbestos register' exists and indicates the presence of asbestos in the area. If so, the installer must take appropriate action to protect all personnel likely to be affected during the installation. This may also include protection of public areas from contamination.

2.2 Personal safety

Your safety and the safety of others must always be of highest importance. Basic safety measures should always be observed before and during the installation of Mainline, please adhere to the following:

- Appropriate Personal Protective Equipment (PPE) must be correctly selected, fitted and worn, including that used for respiratory and eye protection.
- Installers are to ensure up-to-date Material Safety Data Sheets (MSDS) relevant to any hazardous compounds are available and referred to.
- Isolate power when connecting supply cables - at no time should the installer work on energised electrical circuits. Particular attention must be applied if multiple tracks are installed in a single room – always ensure that the correct circuit has been isolated before proceeding.
- Be aware of embedded conduits, water pipes, and power cables in wall cavities before drilling.

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Where surfaces are to be penetrated, installers must check if an 'asbestos register' exists and indicates the presence of asbestos in the area. If so, the installer must take appropriate action to protect all personnel likely to be affected during the installation. This may also include protection of public areas from contamination.



Important: Mainline is intended for indoor use only

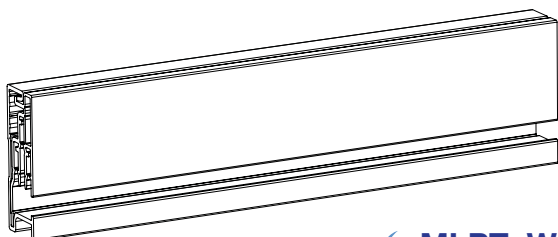
Mainline must be installed indoors or in enclosed outdoor cabinets with a minimum IP54 degree of protection (in accordance with IEC60529).

Allowable ambient temperature at max allowable current (32A) is -5°C to + 40°C, with the average value over a 24 hour period not exceeding 35°C.

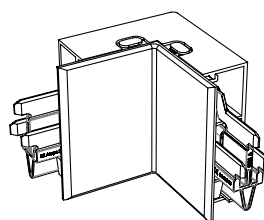
3. COMPONENTS OF THE SYSTEM

3.1 Mainline Power Track system

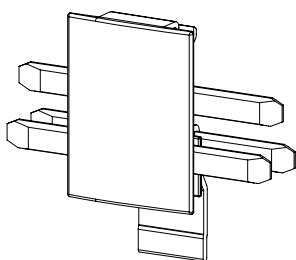
Mainline consists of a number of modular components designed for safe and easy installation, available in black (B) and white (W).



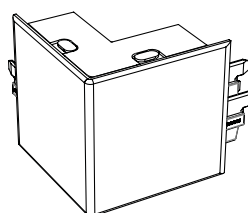
✓ **MLPT W/B**
Power Track



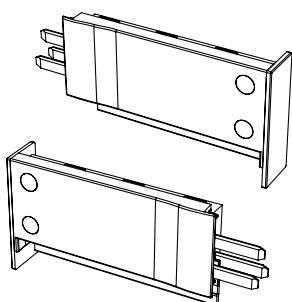
✓ **MLICJ W/B**
Internal Corner



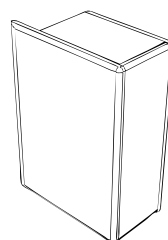
✓ **MLQCSJ W/B**
Straight Joiner



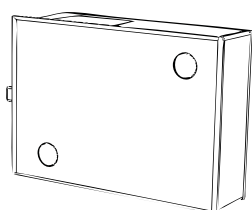
✓ **MLECJ W/B**
External Corner



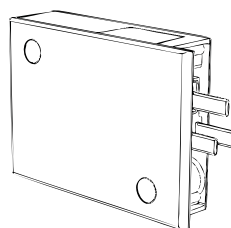
✓ **MLTS W/B**
Terminal Set



✓ **MLEND W/B**
End Cap



✓ **MLITL W/B**
Terminal Block Left



✓ **MLITR W/B**
Terminal Block Right

⚠ WARNING!

All Mainline power track system installations must be carried out by a qualified electrician.

3.2 Dressing options

The Mainline Power Track must be dressed top and bottom in order to prevent access to hazardous parts. Some dressing solutions include:



✓ **Commercial Trunking:**

Ideal for data and power track



✓ **Power Track Channel:**

Ideal for power track only



✓ **Timber:**

Using off the shelf skirting

Additional ducting solutions are available from your local distributor.

3.3 Mainline adaptors / sockets

Adaptors / sockets are supplied separately and will accommodate local plug configurations.

PREMIUM SERIES



✓ **MLP2**
UK socket (13A)



✓ **MLP3**
German socket (16A)



✓ **MLP4**
French socket (16A)



✓ **MLP6**
India socket (2.5A / 6A)

A SERIES



✓ **MLA2**
UK socket (13A)



✓ **MLA3**
German socket (16A)



✓ **MLA4**
French socket (16A)



✓ **MLA1**
AU socket (10A)

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4. TOOLS REQUIRED

4.1 Specific tools

- Drop saw - including multi-material blade (90, 100 or 120 teeth)
- Hand drill
- Drill bits suitable for steel or masonry (3.5 to 5 mm, $\frac{9}{64}$ " to $\frac{25}{128}$ ")
- Caulking gun
- Liquid adhesive or gap filler
- Nylon hammer
- Spirit level

4.2 Fasteners, screws and plugs

Recommended Fasteners	
Length: 20 to 30mm ($\frac{3}{4}$ to 1 $\frac{1}{4}$ ")	 Metal studs and brackets Self tapping screw
Head: Low profile Phillips	 Brick and concrete walls Screw and masonry plug
Gauge: 8 - 12g (4.2 to 5.5 mm) ($\frac{5}{32}$ " to $\frac{13}{64}$ ")	 Timber studs and walls Timber screw
	 Hollow walls Screw and hollow wall anchor

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5. PLANNING THE INSTALLATION

5.1 Circuit protection

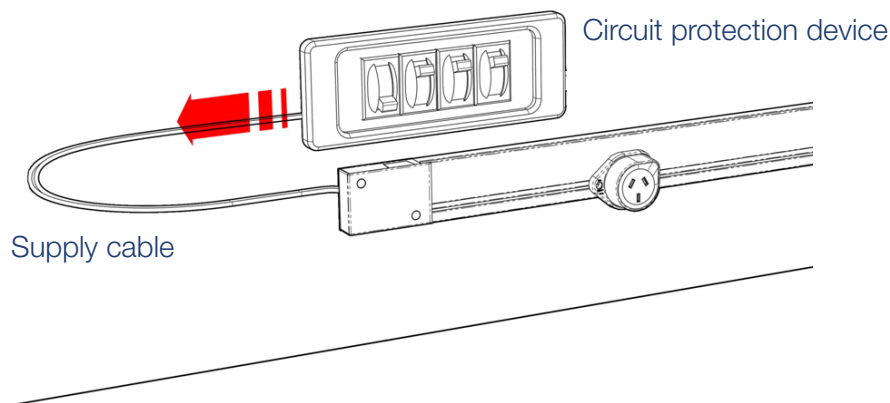
Mainline installations must comply with wiring and installation regulations.

Please ensure that an adequate circuit protection device is used in conjunction with the Mainline system. This device should:

- Limit the maximum current load
- Protect users and equipment against faults
- Restrict the available load, thus limiting the number of appliances which can be simultaneously connected to the Mainline system.



Please refer to your country's documented installation guidelines and wiring rules before starting any Mainline installation.



5.2 Supply cable requirements

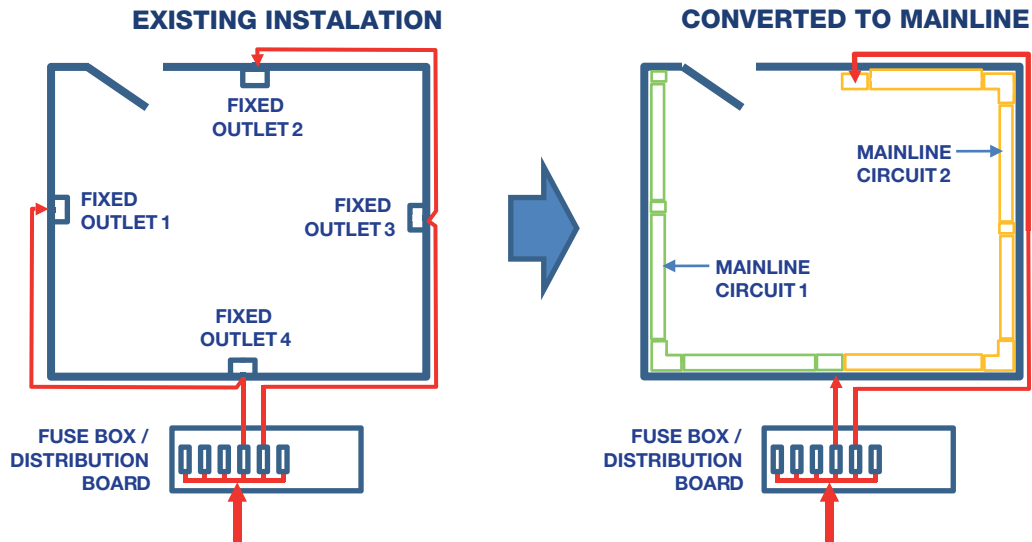
A qualified electrician should be consulted during initial power demand assessments. Circuit breaker and cable sizes must comply with relevant wiring and installation rules.

If connecting the Mainline Power Track system to circuits incorporating protection devices rated at 10A, 16A or 20A, the track system shall be connected to a supply cable with a cross sectional area of 2.5mm² or greater and / or in accordance with country specific wiring rules.

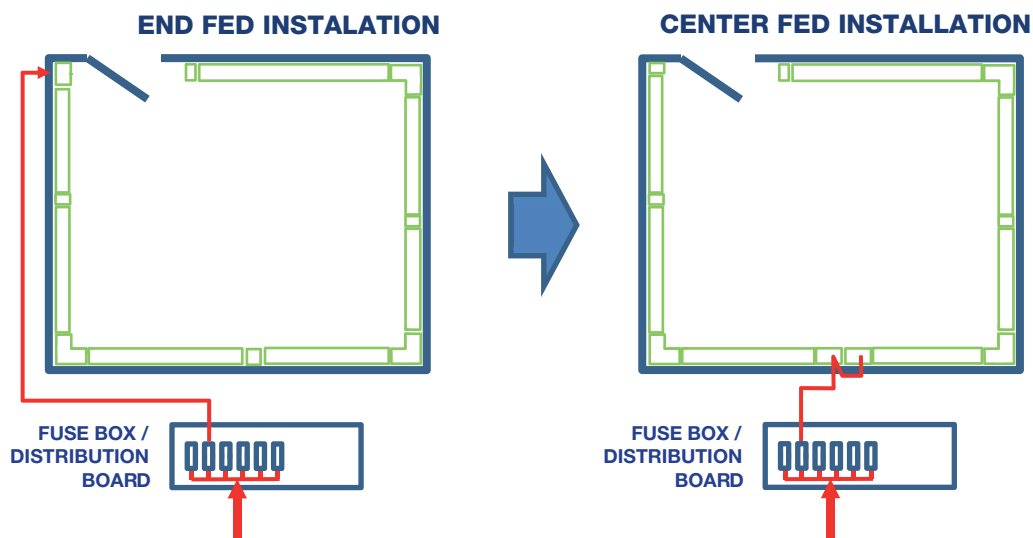
If connecting the Mainline Power Track system to circuits incorporating protection devices rated at 25A or 32A the track system shall be connected to a supply cable with a cross sectional area of 4.0mm² or greater and / or in accordance with country specific wiring rules.

5.3 Power supply options

The simplest Mainline installation replaces existing fixed wiring.



Making use of Mainline's 32Amp capability may be possible in some applications. In these cases the wiring and circuit protection must be upgraded to comply with wiring and installation requirements.



⚠ WARNING!

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Always consider the size and position of the likely electrical loads. This will dictate the number of wiring circuits and the length and position of each power track.

A Mainline installation to support a computer room, may only require a few long circuits. Alternatively, high load commercial applications may require many shorter circuits.

LOW LOAD INSTALLATION



HIGH LOAD INSTALLATION

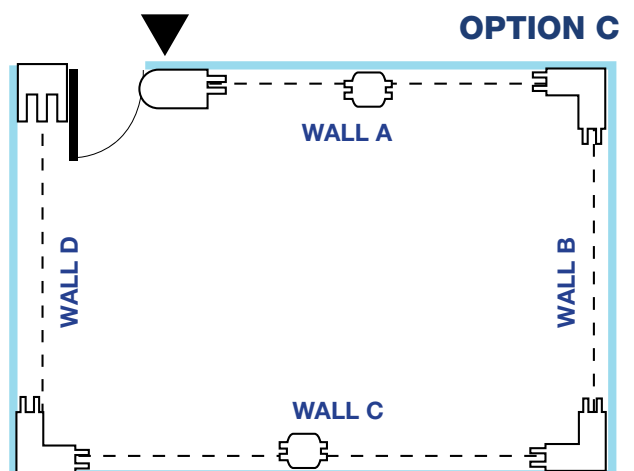
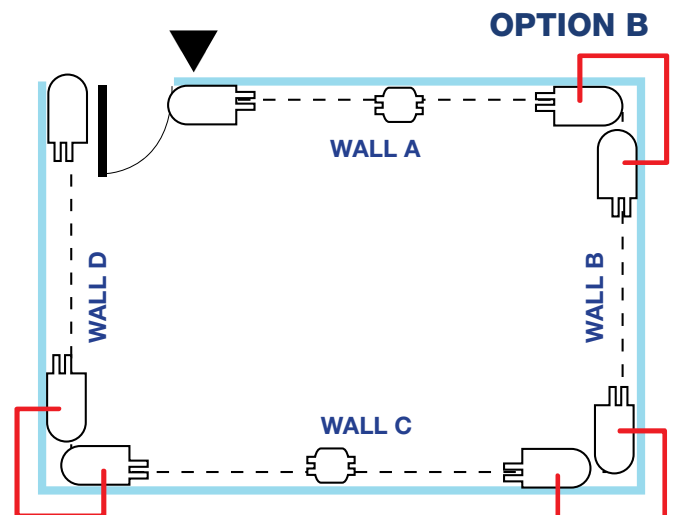
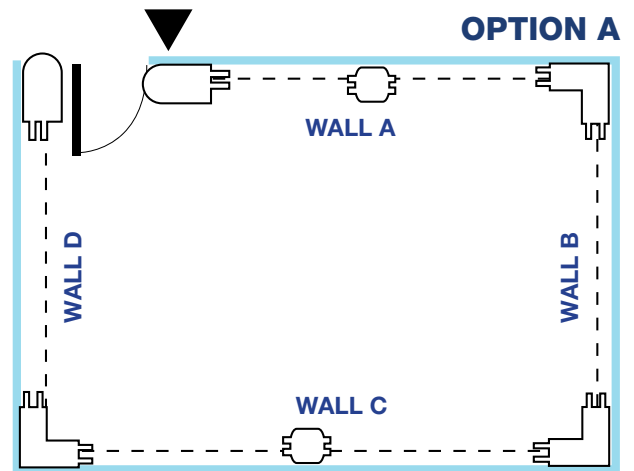
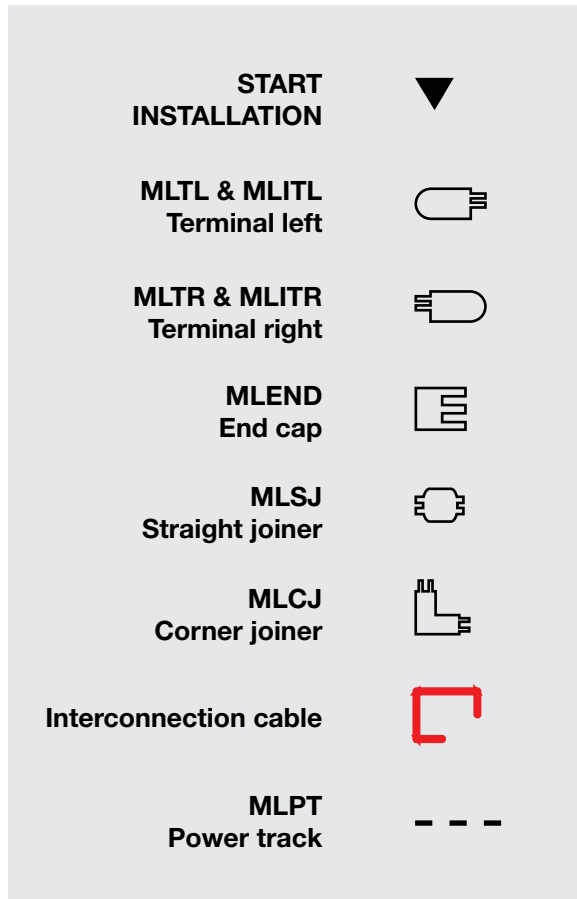


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5.4 Wiring options

Draw a rough plan of the installation area (examples below). A plan provides a quick reference point for dimensions, products required and installation procedure.



Important: The maximum number of adaptors used on a single Mainline installation will depend on the site-specific wiring rules, and on the rating of the circuit breaker protecting the Power Track.

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5.5 Condition of walls and other surfaces

Mainline should only be installed on surfaces that provide adequate structural support. It is recommended that all walls be checked prior to installation.

For all installation orientations (other than vertical and ceiling mounting), installer must refer to the relevant wiring and installation regulations for verification of the minimum IP (Ingress Protection) ratings.

5.6 Determining circuit / track length

The maximum length of the Mainline circuit (including supply/patch cables) is to be determined by the:

- Rated current of the protective circuit breaker.
- Size of the supply cable (mm²).
- Total impedance of the Mainline installation.

5.7 Dressings

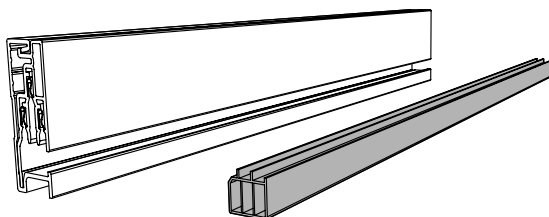
- Where Mainline is surface mounted - the product must be dressed top and bottom so as to prevent access to hazardous parts.
- Dressings (top and bottom) must be flush with the front face of the Mainline track.
- The gap between top and bottom dressings must be 55mm (2 $\frac{9}{32}$ ").
- Where Mainline is installed close to a floor or bench top it must be a minimum of 35mm (1 $\frac{3}{8}$ ") from the surface.
- When Mainline is installed flush, the track must not be recessed into the wall.

5.8 Pre installation checks

The following must be performed:

Mainline system components

- ✓ Front surfaces of the Power Track must be straight and parallel.
- ✓ All system components are colour matched and correspond with job specification.
- ✓ The three conductors are inserted correctly in their respective cavities inside the track and are flush with the ends of the track.
- ✓ Remove and discard grey shipping insert.



Job site

- ✓ Inspect wall surfaces to ensure that there is no crumbling, moistness, uneven finish, hollowness and loose material.
- ✓ The work area should be adequately cordoned off.
- ✓ All safety checks (as outlined in Section 2) have been adhered to.



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Allowable ambient temperature at max allowable current (32A) is -5°C to + 40°C, with the average value over a 24 hour period not exceeding 35°C.

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6. INSTALLING MAINLINE

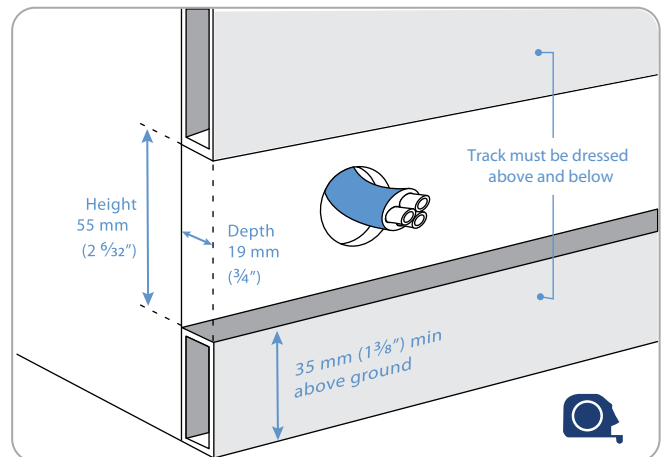


Important: Disconnect all power to supply cables before commencing the installation of Mainline®.

6.1 Installing MLPT power track with standard MLIT terminals and MLEND caps.

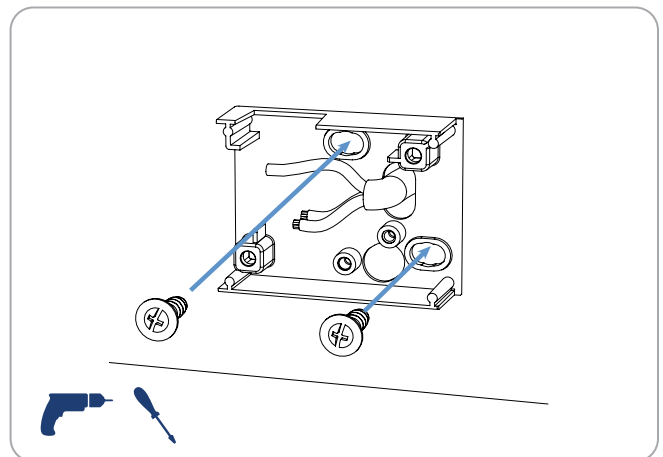
1. Locate the supply cable

- ✓ Drill a supply cable entry hole.
- ✓ Pull the supply cable through the wall.



2. Setup the inline terminal block and end cap

- ✓ Pull the supply cable through the terminal backplate hole before fixing backplate into position.
- ✓ Screw the terminal backplate into position using 20 to 30mm (3/4" to 1 1/4") pan head screws.

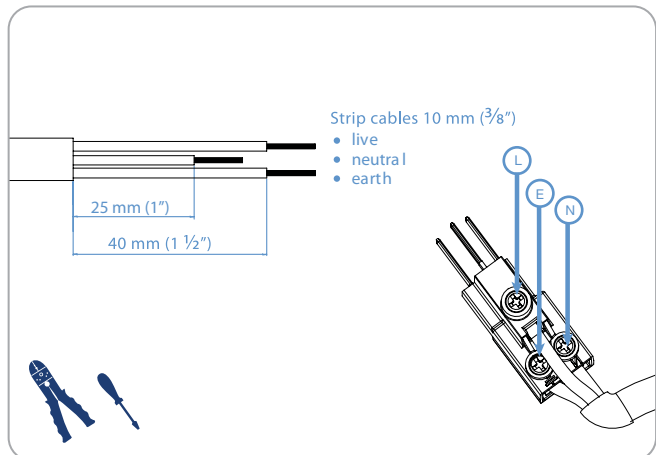


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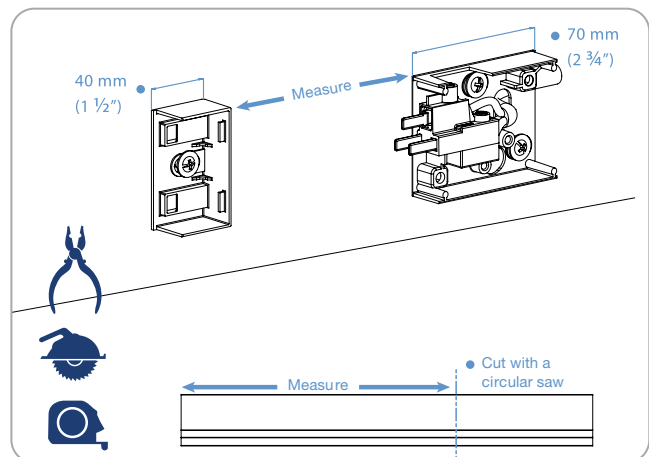
3. Connect the supply cable

- ✓ Terminate supply cable.



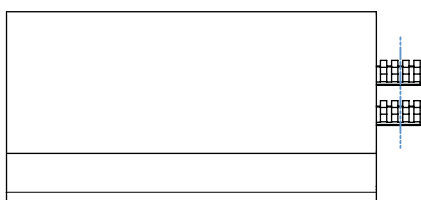
4. Measure and cut the power track

- ✓ Cut the required lengths while the front and rear track is still clipped together.



Important: When cutting Mainline:

1. A clean, sharp cut is required so as not to damage the ends of the copper conductors.
2. Once cut, clean the cut ends of the track to remove all sawdust, this is best done with a dry paint brush or clean rag.
3. Occasionally the copper conductors may be crushed or torn during cutting. If this occurs pull a small section of conductor from the track and remove 2-4mm from the end of the copper conductor to ensure a good connection.

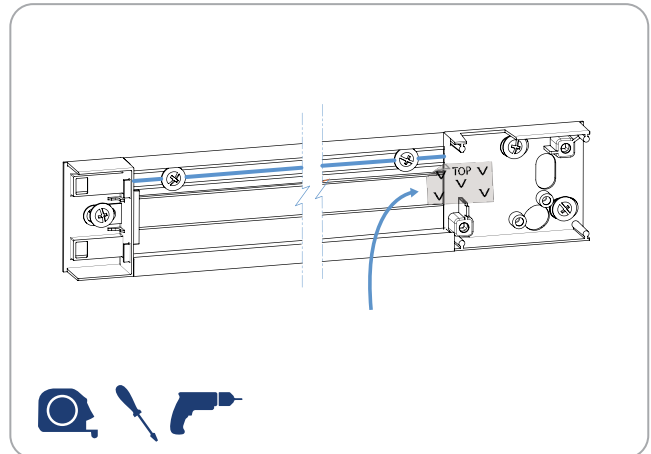


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5. Fix the rear track in place

- ✓ Remove the front track from the rear by sliding the two pieces apart.
- ✓ Fix the rear track to the wall using button head screws at intervals of 600mm (24") or less along the marked fixing line.
- ✓ Peel and attach the insulating tape (included) over terminal backplate join.



Important:

1. Fixing screws must be as close as possible to each end and join.
2. The insulating tape (supplied with each Terminal Block) must be installed as shown.

6. Insert the inline terminal block into the front track

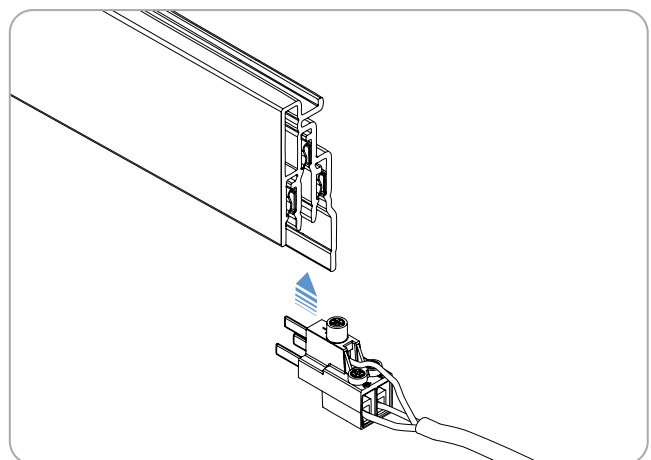


Important: Ensure that the conductors in the track are flush with both ends before the front tracks are installed

- ✓ Engage the contacts of the terminal block into the conductors of the front track by inserting upward.

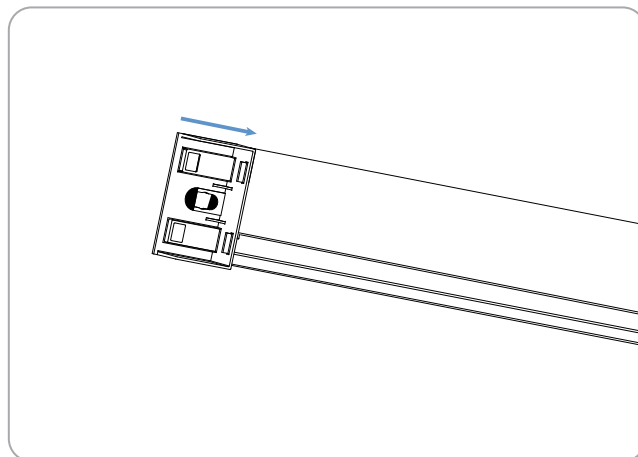
Once installed, ensure the terminal block firmly butts up against the front track.

Note: Do not push the block contacts directly into the end of the front track.



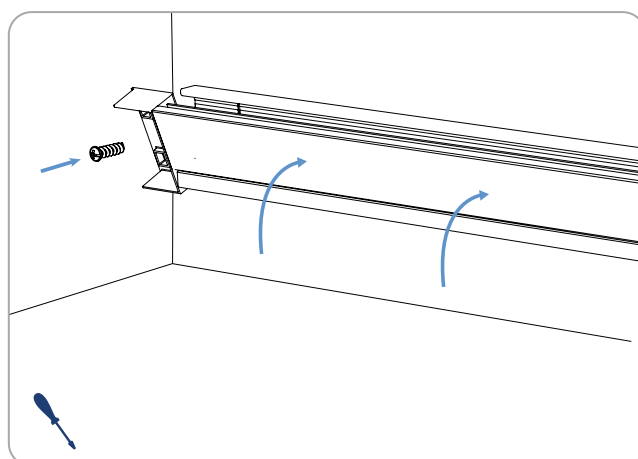
7. Add the end cap in place

- ✓ Remove the end cap backplate from the wall.
- ✓ Shorten the track conductors (busbars) at the end cap by 5mm (25/128"). After shortening the conductors they should be pushed back into the track.
- ✓ Fit the end cap backplate into the front track.
- ✓ The end cap backplate must firmly butt up against the front track.



8. Clip the front track into the rear

- ✓ Re-fix the end cap backplate to the wall.



WARNING!

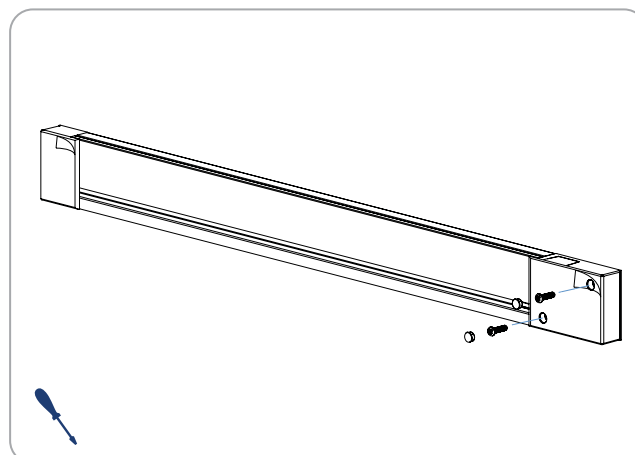
All Mainline power track system installations must be carried out by a qualified electrician.

9. Fit covers to terminal block and end cap

- ✓ Peel off protective film from both the track and accessories.

End cap covers

- ✓ Clip covers onto backplates.



Inline terminal block covers

- ✓ Check that the inline terminal block cover will fit the inline terminal block. If required loosen the screws and adjust the terminal block backplate position.
- ✓ Fit cover with supplied screws, and fit flush caps.

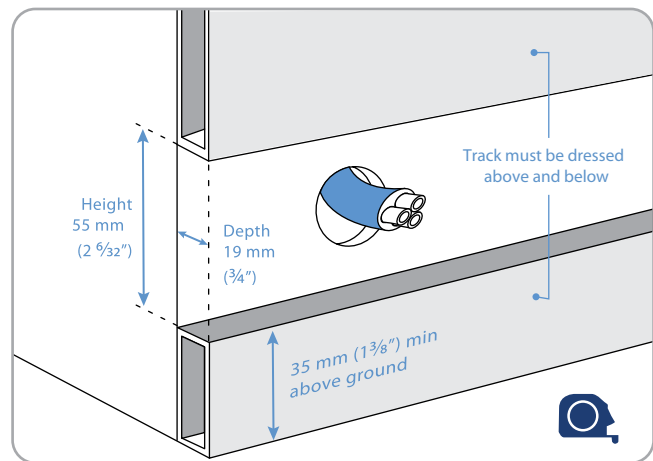
Note: Do not over tighten screws.

6.2 Installing MLPT power track with premium MLTS terminals

⚠ Important: Disconnect all power to supply cables before commencing the installation of Mainline.

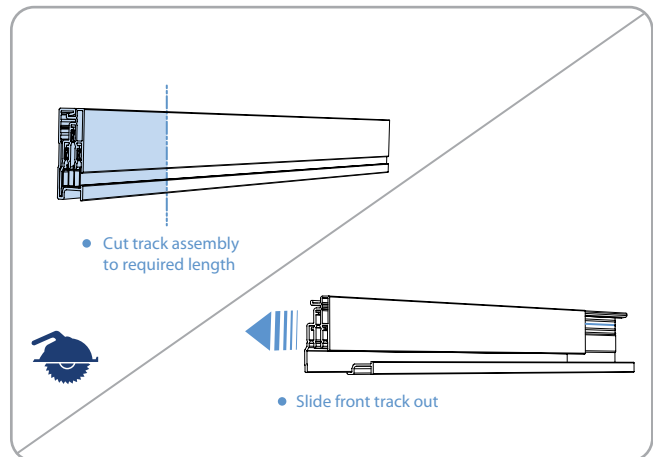
1. Locate the supply cable

- ✓ Drill a supply cable entry hole.
- ✓ Pull the supply cable through the wall.



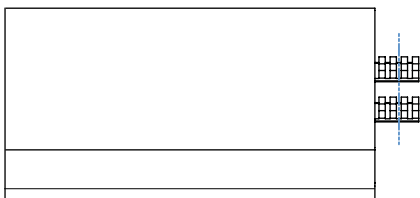
2. Measure and cut the track

- ✓ While the track is still assembled (rear and front track clipped together), cut the required lengths.
- ✓ Remove the front covers from each of the backplates by sliding the two pieces apart.
- ✓ Cut 90 mm from the front track in each position that a terminal will be installed.



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1. A clean, sharp cut is required so as not to damage the ends of the copper conductors.
2. Once cut, clean the cut ends of the track to remove all sawdust, this is best done with a dry paint brush or clean rag.
3. Occasionally the copper conductors may be crushed or torn during cutting. If this occurs pull a small section of conductor from the track and remove 2-4mm from the end of the copper conductor to ensure a good connection.

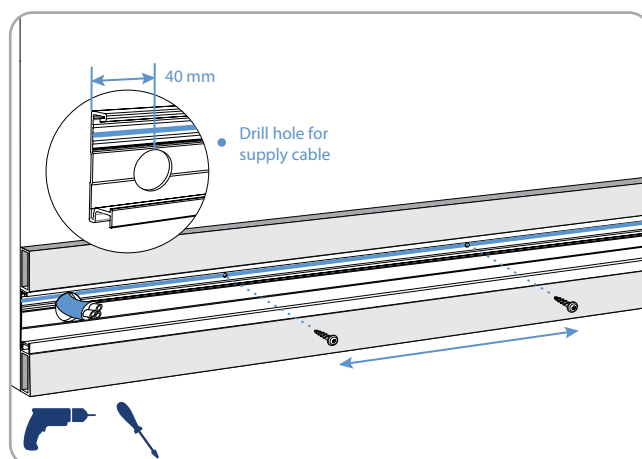


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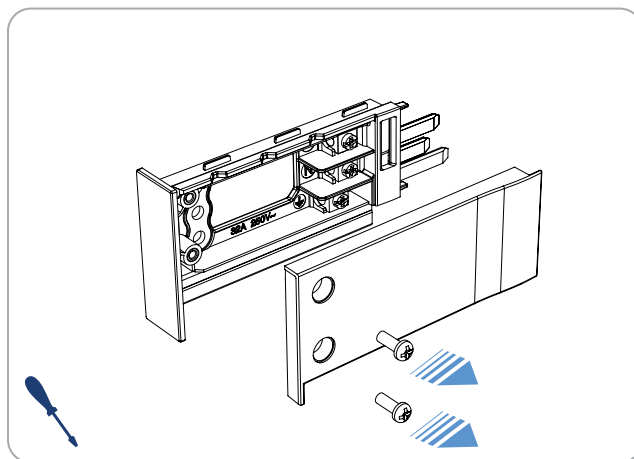
3. Fix the rear track

- ✓ Drill a 20mm diameter hole to insert the feed cable (rear track only).
- ✓ Fix the rear track to the wall using button head screws at intervals of 600mm (24") or less along the marked fixing line.



4. Remove the terminal cover

- ✓ Remove the two screws and detach the cover from the terminal assembly.

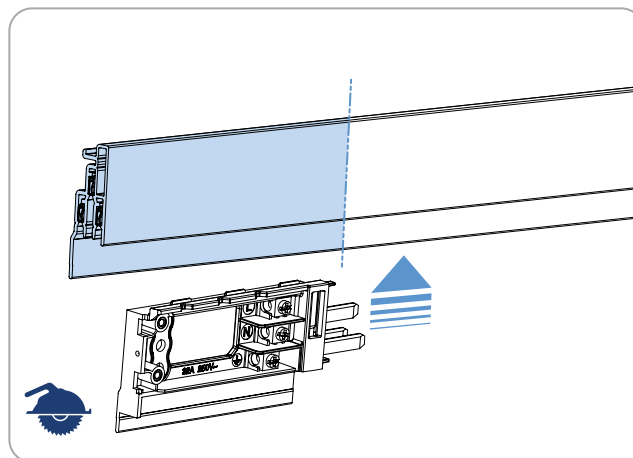


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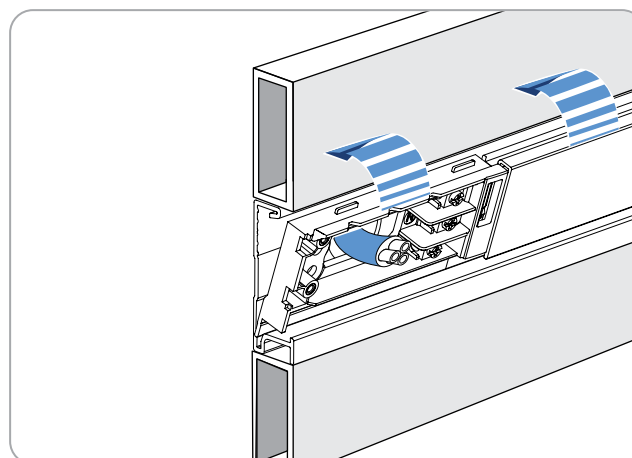
5. Insert the terminal into the front track

- ✓ Insert the terminals into each end of the front track.



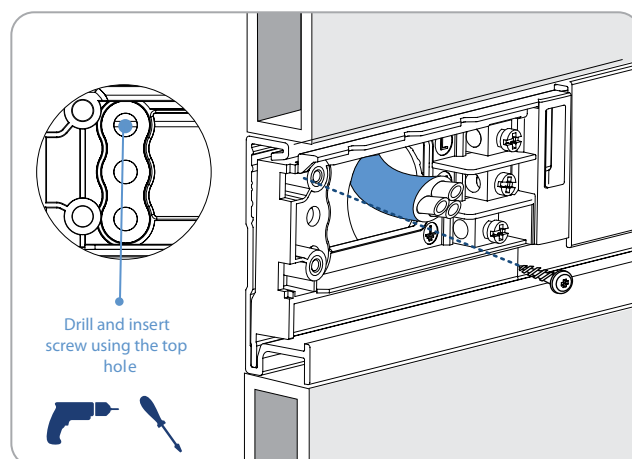
6. Snap the terminal and front track into the rear track

- ✓ Insert the assembled front track and terminals into the already mounted rear track and snap fit together.



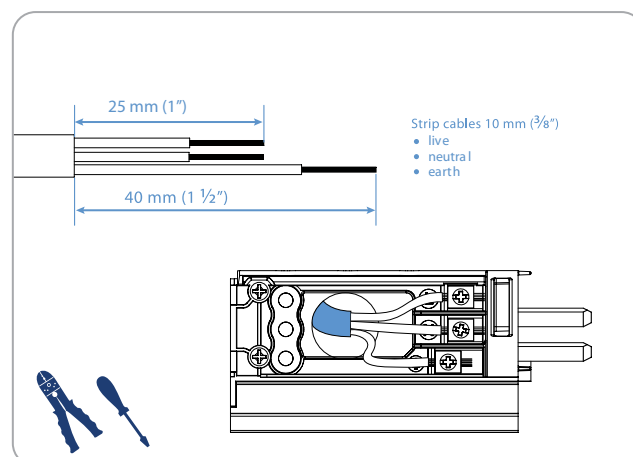
7. Fix the terminal block (s) in place

- ✓ Fix the terminal blocks using the top hole and a pan head screw.



8. Connect the terminal to the supply cable

- ✓ Cut and strip the cable ends as shown.
- ✓ Connect each cable to its corresponding terminal post.
- ✓ If installing into a metal housing. An earthed anchor point may must be connected to the terminal.

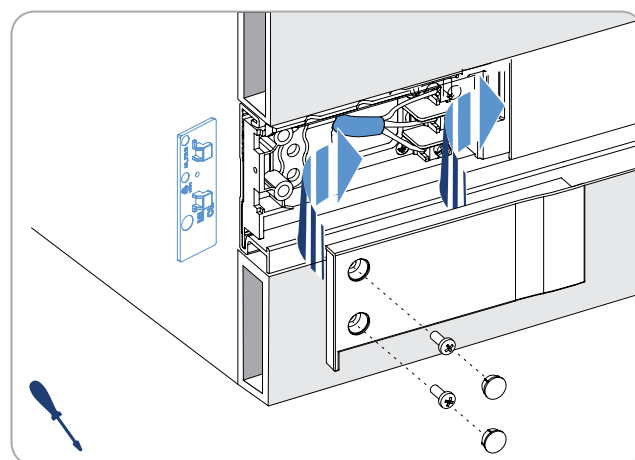


9. Fit the terminal cover and optional end plate

- ✓ Attach the cover and fix using screws provided.
- ✓ Insert the screw plugs.

Note: It is recommended to use the terminal end plates provided if the track end is visible.

Do not over tighten screws.



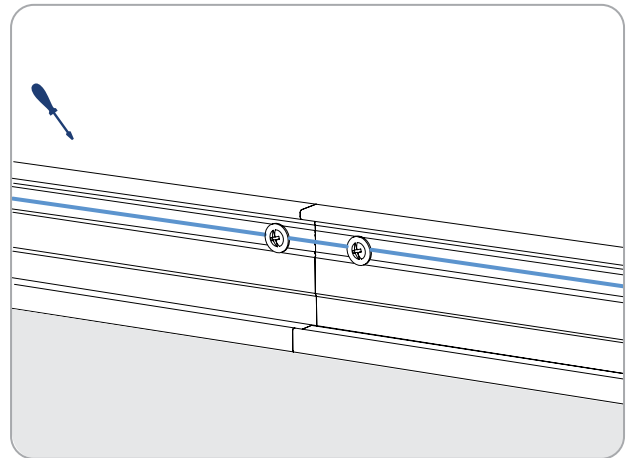
⚠ WARNING!

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6.3 Installing the QCSJ straight joiners

1. Secure the rear track ends

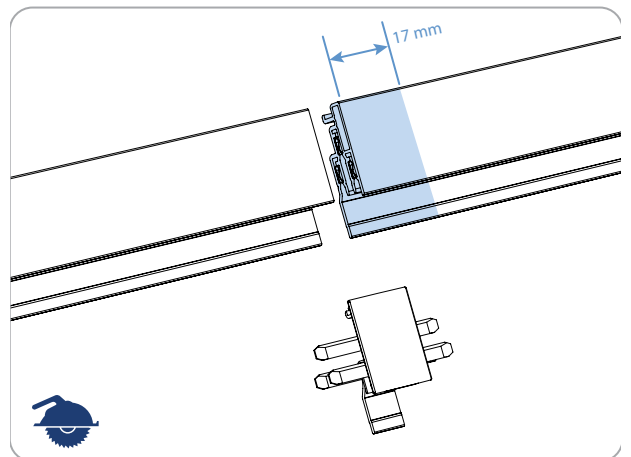
- ✓ Use low profile head screws to secure the rear track wall close to the join.



2. Cut the front track and insert the straight joiner

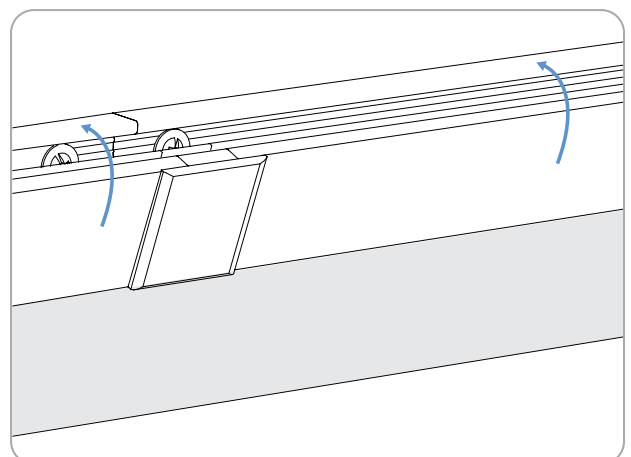
- ✓ Cut 17mm ($\frac{21}{32}$ ") from one of the front track sections to be joined.
- ✓ Insert the straight joiner into the front track.
- ✓ Ensure that the straight joiner is firmly installed into both the front tracks.

Note: Before engaging the joiner, pull back the protective film where the joiner will be located.



3. Snap the front assembly into the rear track

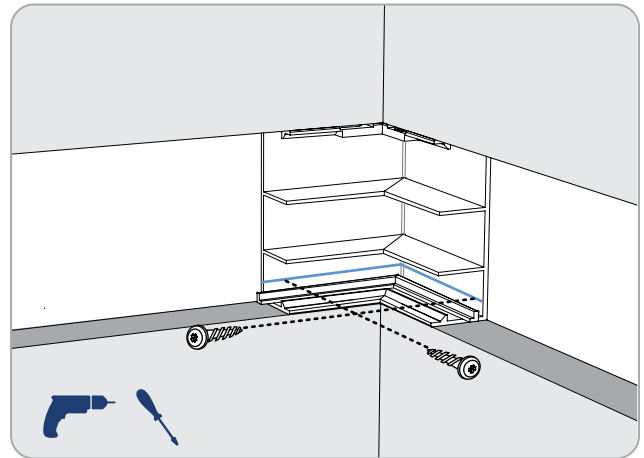
- ✓ Ensuring that both front tracks and joiner remain butted firmly together, snap the front track assembly into the rear.
- ✓ Evenly exert pressure on the top edges across all joined parts until the front assembly is fully clipped into the rear track.



6.4 Installing MLIC and MLEC corner joiners

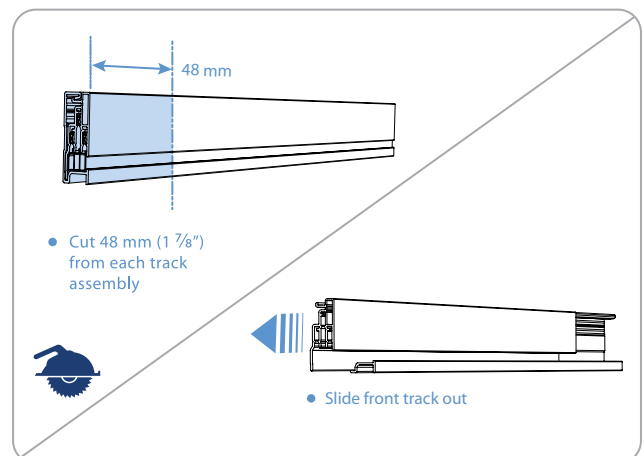
1. Secure Corner joiner backplate

- ✓ Use low profile head screws to secure the corner backplate to the wall on the marked lines.



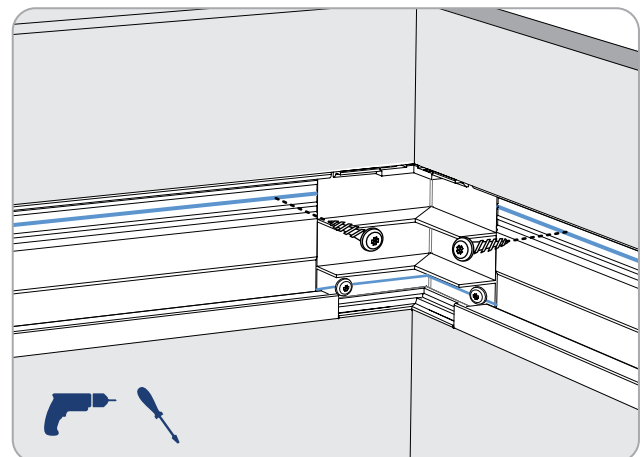
2. Measure and cut the track

- ✓ Cut 48mm (1 7/8") from the track assembly to allow space for the corner joiner.
- ✓ Remove the front track.



3. Fix the rear track in place

- ✓ Secure the ends of the rear track to the wall and ensure they are firmly butted up against the corner backplate.

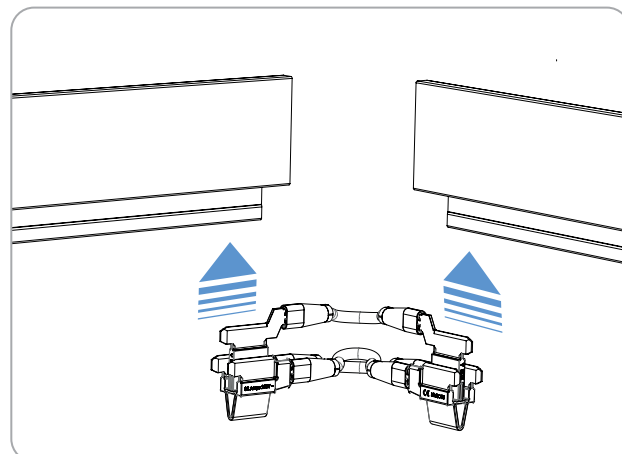


⚠ WARNING!

All Mainline power track system installations must be carried out by a qualified electrician.

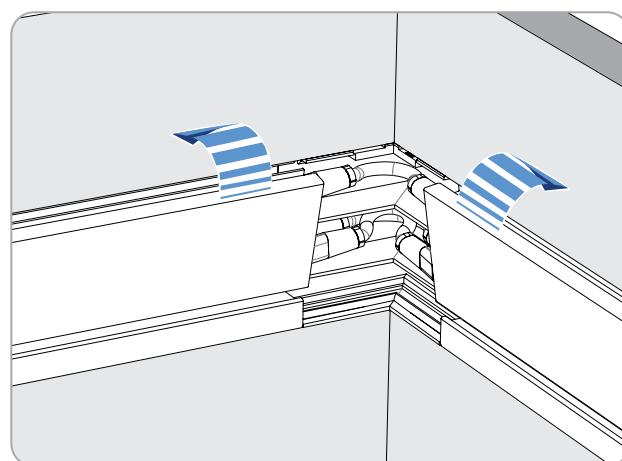
4. Insert joiner into front tracks

- ✓ Push the joiner up into the conductors of the track so that both of the lower plastic connector housings are inserted flush into the front track.



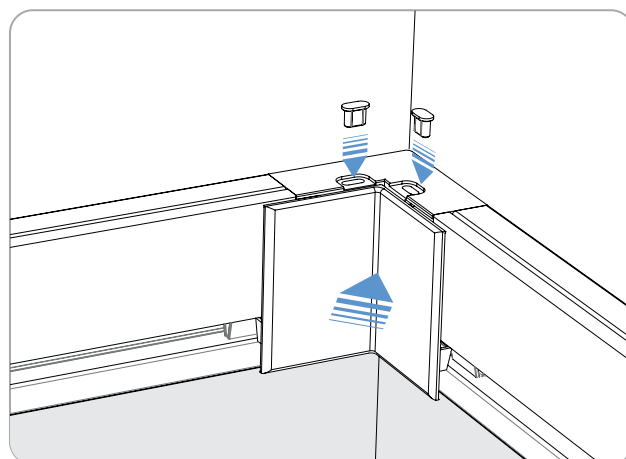
5. Snap front into rear track

- ✓ Push the joiner cables into the backplate.
- ✓ Clip the front track into the rear track.



6. Fit cover and lock pins

- ✓ Peel off the protective film from the track's front faces.
- ✓ Align the corner cover with corner backplate and push until the cover and the backplate clip together.
- ✓ Fit the retaining pins into the holes.



7. FINAL STEPS

7.1 System Testing:

An authorised electrician must perform the following checks:

- ✓ Label all supply cable terminations.
- ✓ Conduct a continuity test.
- ✓ Conduct a polarity test.
- ✓ Conduct an insulation resistance test.
- ✓ Conduct a protective circuit test.

7.2 Cleaning

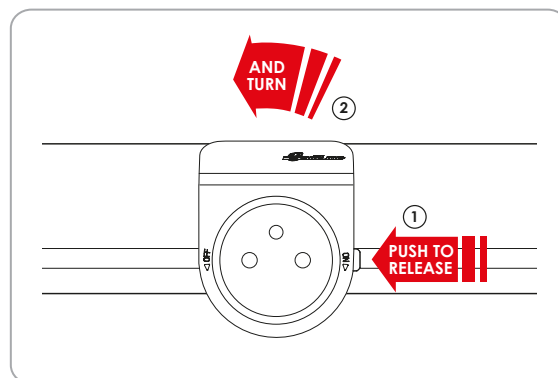
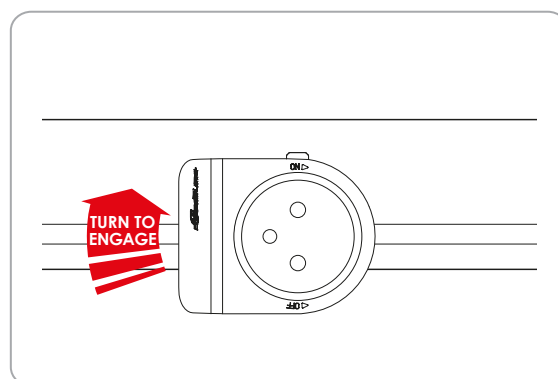
- ✓ The track's access strip can be cleaned with a vacuum cleaner fitter with an appropriate attachment.
- ✓ The track's surface is easily cleaned using suitable cleaning products. Do not use aggressive detergents, paint thinners or acetone.

7.3 Do not paint

- ✓ Do not paint any part of the Mainline system.

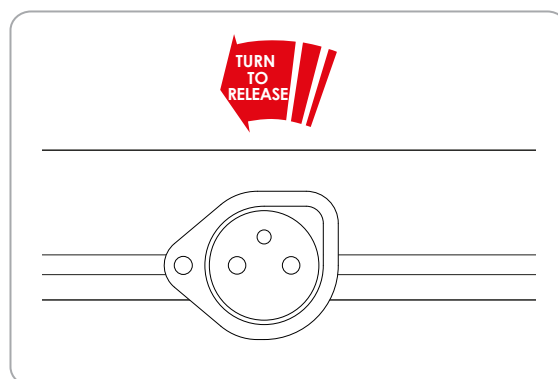
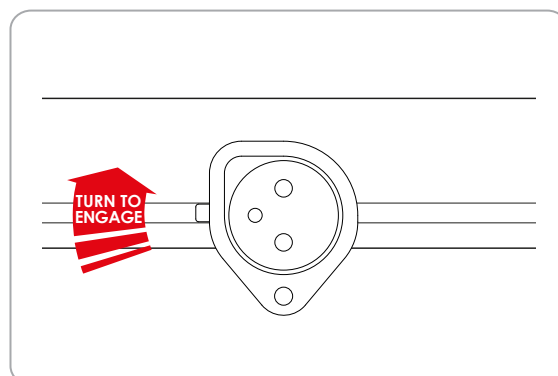
7.4 Using a premium socket / adaptor

- ✓ To add a socket, insert your Mainline socket into the track and turn 90° clockwise until you hear a click.
- ✓ To remove a socket, push the 'Lock' button and turn 90° anti-clockwise until the socket releases from the track.



7.5 Using a standard socket / adaptor

- ✓ To add a socket, insert your Mainline socket into the track and turn 90° clockwise.
- ✓ To remove a socket, turn 90° anti-clockwise until the socket releases from the track.



⚠ Important: To reposition adaptors / sockets the user must rotate and completely remove the adaptor / socket from the track before inserting in the new position. Sockets/adaptors must not be pushed, dragged or forced along the track in any way.

8. PRODUCT SPECIFICATIONS

8.1 Electrical

Rated voltage	Up to 250V a.c. single phase 50-60Hz
Rated continuous current	- Track Up to 32 Amps a.c.
	- Adaptor/Socket Up to 16 Amps a.c. (region specific, please see section 3.3)
Resistance	- Track >21m Ω /per metre (required < 50m Ω /per metre)
	- Adaptor >8m Ω (required < 50m Ω)
Insulation resistance	>2M Ω
Dielectric strength	3.5kV a.c.
Impulse strength (1.2/50 μsec rise/fall time)	4kV a.c.
Connection terminal type	3 x screw terminals
Connection capability	1 x 4 mm ² or 2 x 2.5mm ² cable(s)

8.2 Materials

Track	High impact rigid PVC compound
Busbars	ETP copper
Flammability	Self extinguishing (in accordance with IEC60695-2-11)

8.3 Environmental

IP rating	IP 2XD
General	Indoor, or enclosed outdoor cabinets with a minimum IP54 degree of protection (in accordance with IEC60529).
Operating ambient humidity range	0 to 93% relative humidity, non-condensing
Operating ambient temperature range	Allowable ambient temperature at max allowable current (32A) is -5°C to + 40°C, with the average value over a 24 hour period not exceeding 35°C.
Permissible operating pollution degree	2 (Non-conductive pollution with temporary conductivity caused by condensation).

WARNING!

All Mainline power track system installations must be carried out by a qualified electrician.



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