



BRIGHTBLU

JOLT

INSTALLATION GUIDELINES





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INTRODUCTION

Thank you for choosing **BRIGHTBLU**. This manual aims to provide easy to use installation & operational instructions.

For a safe installation and smooth operation, we recommend reading this manual carefully. While we strive to make it comprehensive, please note that it may receive occasional updates and enhancements. For the latest information, **visit our website: www.brightblu.com.**

We're here to empower your EV charging experience as we aim to make EV charging Affordable, Accessible and Easy to use.

Best regards,

The BRIGHTBLU Team



1 IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT: Safety instructions to be followed for JOLT are mentioned below:

Before setting up, ensure the MAINS are switched OFF.



DANGER! Turn off mains to 240/415V outlet. Do not restore power until setup is complete, otherwise it may result in electrocution.

- Read and follow all warnings and instructions before installing and operating the JOLT charger. Install and operate only as instructed to avoid property damage, injury, or death. Not following the instructions will also void the Limited Warranty.
- Connect the charger to a grounded, metal wiring system which is permanent, or use an equipment grounding conductor with circuit conductors connected to the grounding terminal.
- Keep the charger away from flammable, explosive, or combustible materials as it's not safe for use in hazardous locations.
- **Operating Temperature:** Do not use the charger outside its operating range of -30°C to 55°C. The charger has no user-serviceable parts, so do not attempt to repair any other parts of the unit yourself.



- **Servicing:** If the unit requires servicing, contact BRIGHTBLU. Ensure that the charging cable is positioned such that it will not be stepped on, tripped over, or subjected to damage or stress.

Safety: Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

Damages: BRIGHTBLU INDIA PVT LTD is not responsible for damages due to custom installations or failure to follow recommended installation guidelines.

Warranty: Please send the commissioning report to in.support@brightblu.com to validate the warranty.

Storage: Store the charger indoors, in a clean, dry place between -10°C to 45°C.

1.1 SAFETY GUIDELINES



Danger - High potential danger: Immediate action required to prevent death or serious injury.



Warning - Failure to follow safety guidelines may result in overheating or fire.



Info - Installation and usage info. Doesn't contain personal or equipment safety-related information.



High Voltage - High voltage alert: Contact may cause death or serious injury.



Protective Earth - Signifies a grounding or earthing connection for electrical safety.



1.2 WARRANTY PERIOD

This product comes with a 2-year warranty. The manufacturer warrants that the product is free from defects in material and workmanship under normal operating condition and use for a period of 24 months from the date of dispatch by the manufacturer or date of invoice whichever is earlier.

Exclusion of Warranty:

Warranty will void under the following conditions:

- **Warranty expired.**
- **Unauthorized disassembly, repair or modification.**
- **Improper installation.**
- **Man-made faults.**
- **Product damage due to natural disasters.**
- **Force majeure factors.**





RECOMMENDED MATERIAL DESCRIPTION

JOLT Home & Buisness : 7.4 KW Single Phase AC Type 2 Charger		
	Material Description	Comment
Cable Type	Armoured/Flexible	for Flexible Cable, use flexible Conduit or Pipe
Type of Conductor	Copper/Aluminium	Recommended: XLPE
No. of Core	3	Recommended
Cable Size	10 Sqmm (Cu)/16 sqmm (Al) or More	Cable Size may vary as per the distance between the Main Supply & Charger Location
Cable Brand	Standard	Brands: Polycab, Havels, KEI....
MCB	2 Pole 40 AMP MCB, C-Curve	Brand: L&T, Siemens, Schneider...etc
Lug	Pin Type & Ring Type Copper Lugs	As per Cable Size
Heat Shrink Sleeve/Tube	Multi Colour	Recommended to use Heat Shrink Sleeve/tube.
Gland	Metal, PVC Polyamide	As per Cable Size

JOLT Home & Buisness : 11 KW & 22 KW 3-Phase AC Type 2 Charger		
	Material Description	Comment
Cable Type	Armoured/Flexible	for Flexible Cable, use flexible Conduit or PVC Pipe
Type of Conductor	Copper/Aluminium	Recommended: XLPE
No. of Core	4+1 or 5	Use 4 Core for supply & 1 Core for earthing (Size Min. 6 Sqmm) Or use 5 Core cable
Cable Size	10 Sqmm (Cu)/16 sqmm (Al) or More	Cable Size may vary as per the distance between the Main Supply & Charger Location
Cable Brand	Standard	Brands: Polycab, Havels, KEI....
MCB	4 Pole 40 AMP MCB, C-Curve	Brand: L&T, Siemens, Schneider...etc
Lug	Pin Type & Ring Type Copper Lugs	As per Cable Size
Heat Shrink Sleeve/Tube	Multi Colour	Recommended to use Heat Shrink Sleeve/tube.
Gland	Metal, PVC Polyamide	As per Cable Size



3 WHAT'S INSIDE THE BOX

Inside the **JOLT** box, you'll find:

- **1 JOLT charger unit.**
- **1 Metal bracket for wall mounting.**
- **2 Metal brackets for the back of the charger.**
- **1 holder for cable and connector placement.**
- **A set of screws & nail grippers for installation.**
- **1.5 meter charger input supply cable. (applicable only for 3-phase)**





4 PRECAUTIONS

Only an assigned technician should perform the installation according to the recommended guidelines, adhering to all safety protocols.

- Wear safety shoes, hand gloves, and goggles when working on any electrical equipment.
- Ensure proper grounding to avoid electric shock before opening the equipment.
- Do not modify, alter, or add any part to this product without consulting the back-end team.
- Verify that the input voltage, frequency, and other conditions meet the requirements of the JOLT Charger before switching the power on.
- To ensure the proper service life and stable operation of the JOLT Charger, avoid using it in environments containing volatile gases or flammable materials.

4.1 RECOMMENDED PPE KIT



Industrial Safety Shoes

Design Std : EN 345-1/BS EN ISO 20345 - CE Certified and meeting the requirements of IS 15298 :2002 Part 2



General Purpose Helmet

MOC : HDPE
Weight : 400 Gms (+ 10 gms)
Design Std : IS 2925 : 1984 /EN: 397 /ANSI :Z89
Certification Authority : BIS / DGMS / CMRI / CLI
Shell Dimension : Between 43 to 63 cm(as per EN 960)



Safety Gloves

Design Std : EN:60903:2003
Non Irritant To Skin : Yes
Class : Class-0 Volt-1000V



Safety Jackets

Design Std : IS 2925 : 1984 /EN: 397 /ANSI :Z89
Certification Authority : BIS / DGMS / CMRI / CLI



Safety Goggles

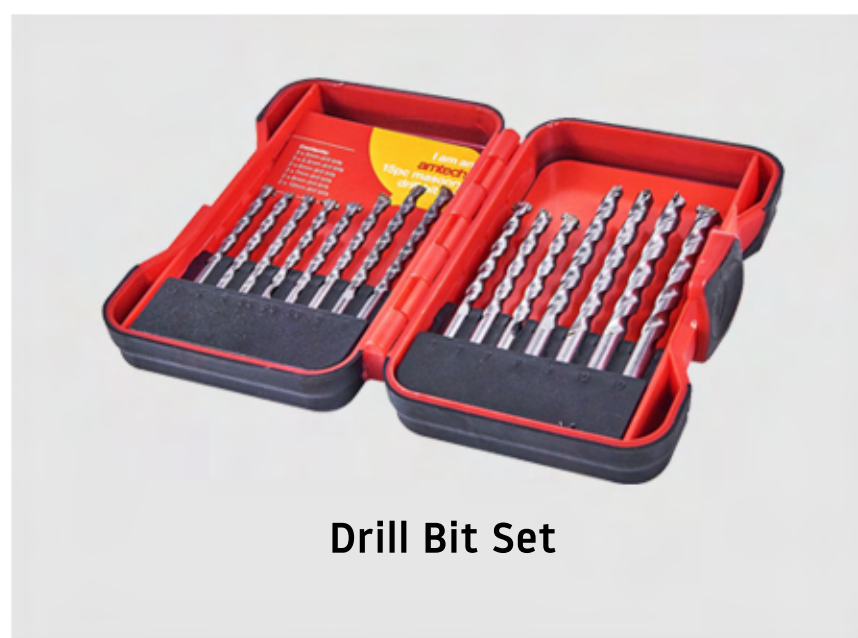
Design Std : EN ISO 16321:2022

5 TOOLS AND CONSUMABLES REQUIRED

5.1 TOOLS REQUIRED



Hammer Drill - Bosch or equivalent- recommended for concrete drilling



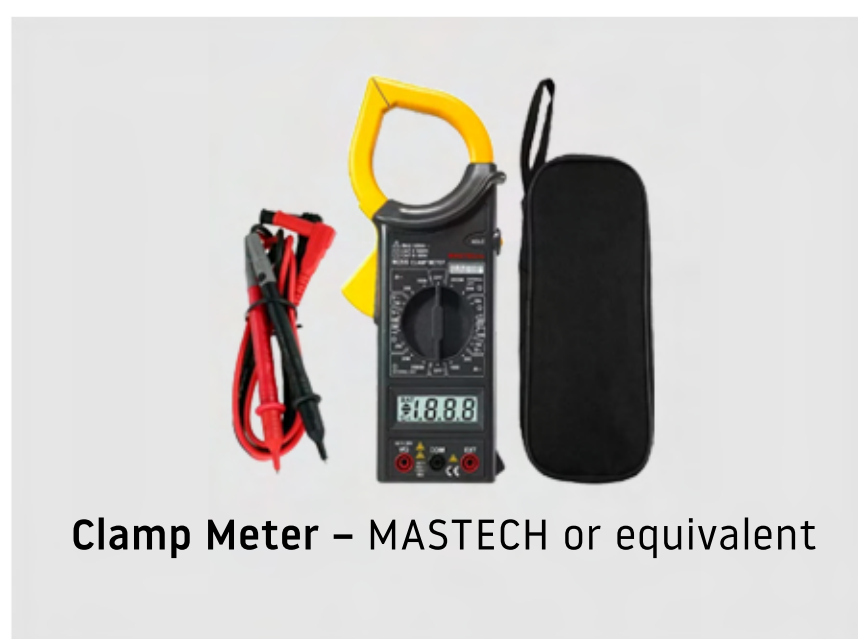
Drill Bit Set



Spirit Level Gauge – for measuring mounting alignment



Measuring Tape – for cable length measurement



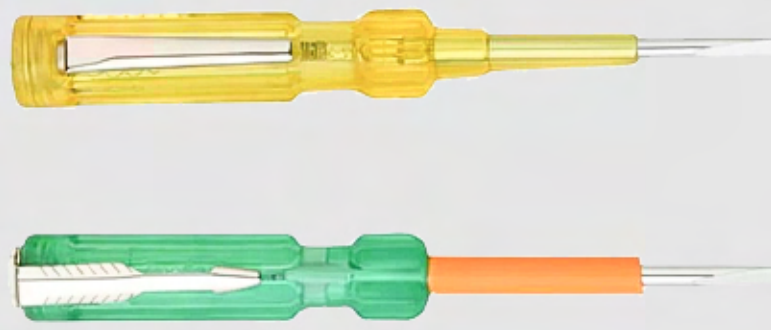
Clamp Meter – MASTECH or equivalent



Crimping Tool – Taparia/Stanley or equivalent



Wire Stripper - Taparia/Stanley or equivalent



Line Tester - Taparia/Stanley or equivalent



Hammer



Cutting Plier - Taparia/Stanley or equivalent



Screw Driver - Star Head/Minus - Taparia/Stanley or equivalent



Insulated Knife

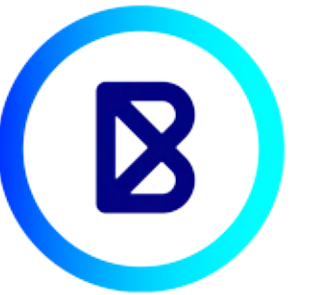
5.2 CONSUMABLES REQUIRED

1. Heat Shrink Sleeves:

Heat shrink sleeves are used as protective coverings to provide protection from abrasion, cutting, scuffing, and low-impact situations. They can be used with virtually any design of conductor. Additionally, heat shrink sleeves can create cable entry seals, offering protection from the surrounding environment.



Purpose: Over time, PVC tape tends to lose its adhesiveness. It is recommended to use heat shrink sleeves instead, as they can withstand excessive heating.



2. Hot Air Gun:

Hot-air guns are designed to produce flameless heat which makes them the ideal tool to apply a variety of heat shrink tubing, wire markers as well as molded shapes, heat shrink boots, transition shapes, end caps and cable repair sleeves.

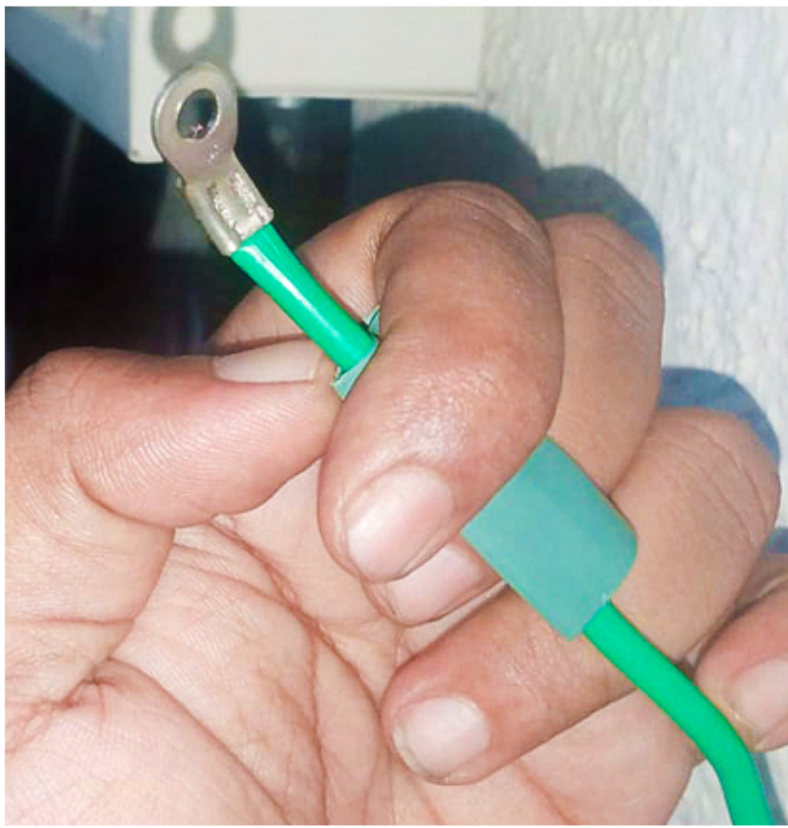
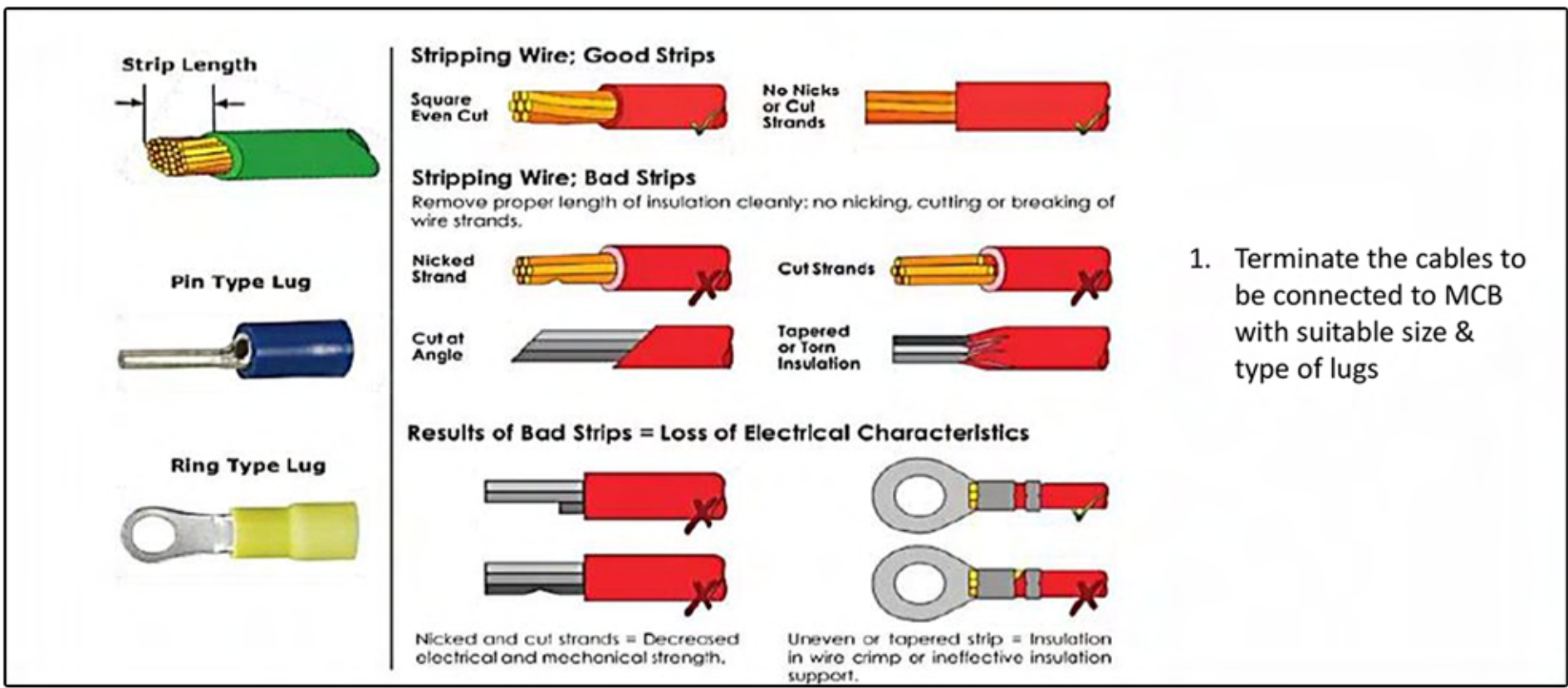


3. Pin Type & Ring Type Copper Lugs (As per Cable Size):

Copper Lugs are commonly used for connecting wires to electrical devices in power cable systems and electronic equipment.

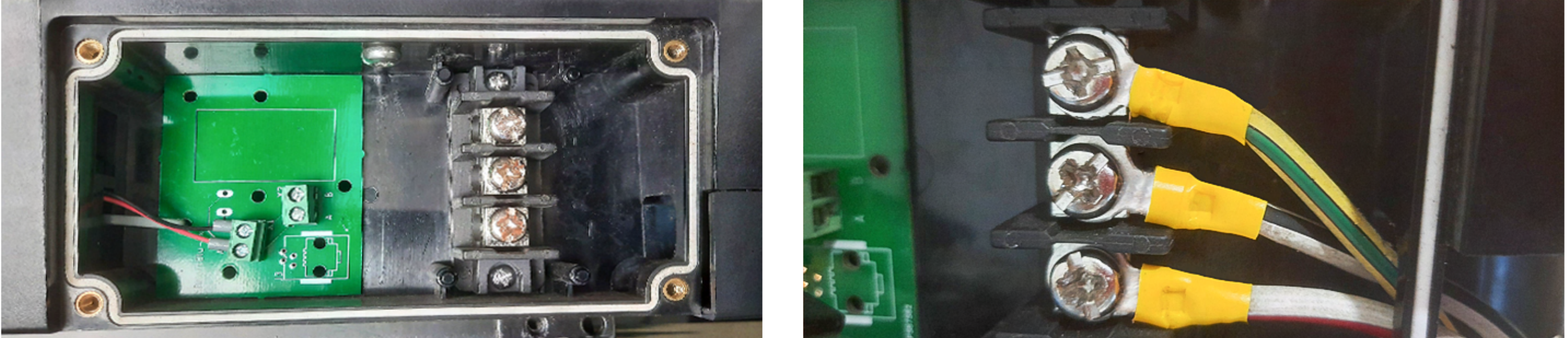


Note: Pin Type & Ring Type Copper Lug is used in input and output connections terminal of MCB/RCBO and input terminal block of the Charger.





Note: For 1-phase chargers at input terminal block, the outer diameter of Bolt is 4.87 mm. use Ring Type Lug who's inner ring diameter should be between 6 mm to 6.5 mm.



Note: A crimping tool is a handy device that allows you to create secure connections between wires and connectors. It works by deforming the connector onto the wire, ensuring a strong bond. With a crimping tool, you can easily join electrical wires, network cables, coaxial cables, and more. **Avoid using Pliers, it wont give proper crimping on the Lugs.**

4. Hole Saw Cutter:

A hole saw is a small cylindrical blade that can be mounted onto a drill, allowing holes to be cut accurately into a varied range of materials. Hole saws are generally mounted onto a drill via an arbor, which is designed to connect a hole saw to a drill chuck.



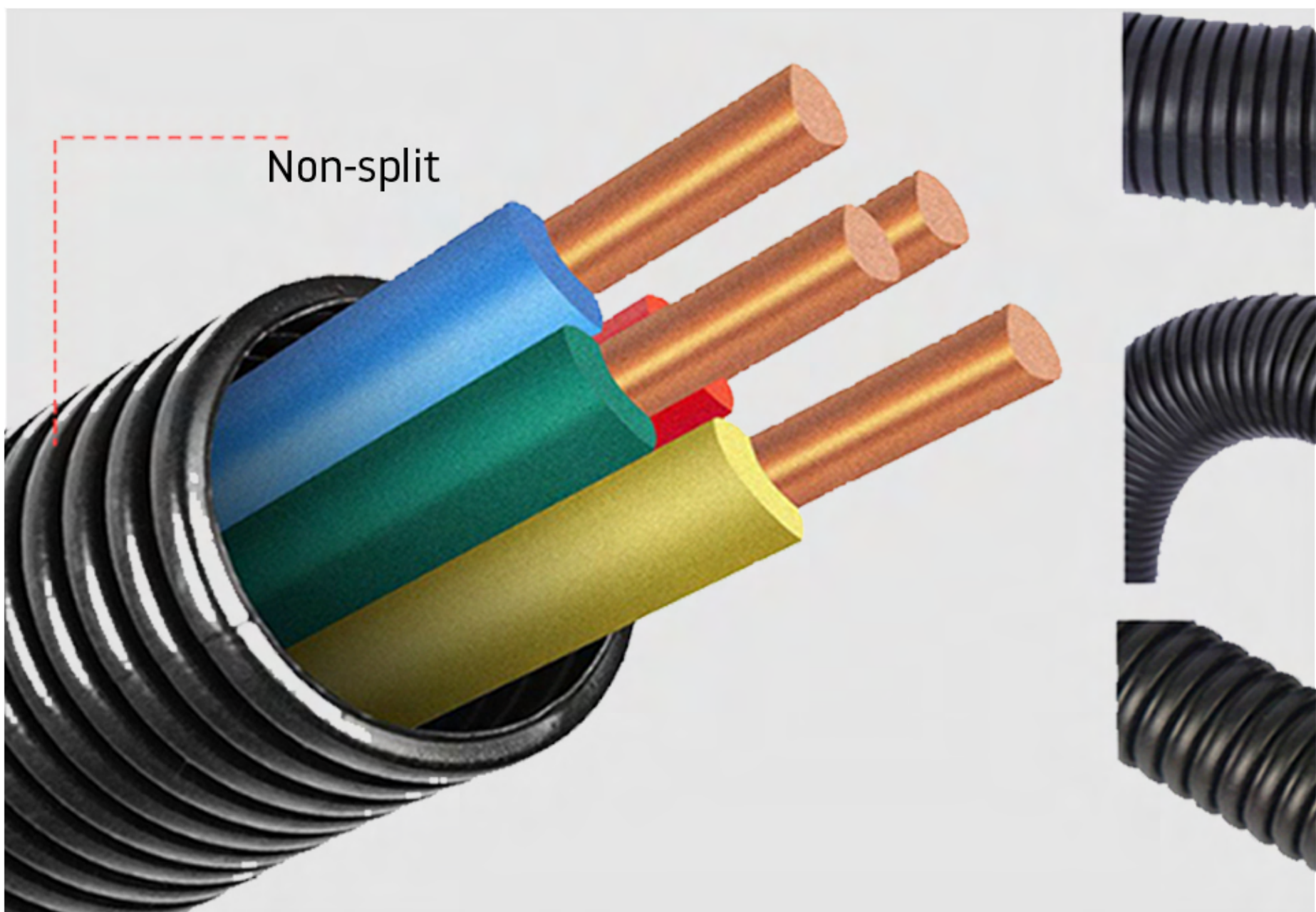
5. Glands:

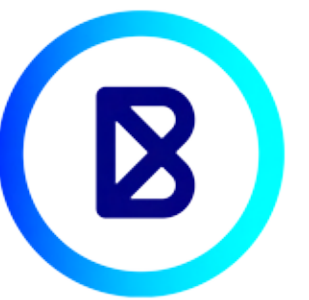
Cable Gland are to act as a sealing and terminating device to ensure the protection of electrical equipment and enclosures, including the provision of: Environmental protection – by sealing on the outer cable sheath, excluding dust and moisture from the electrical or instrument enclosure.



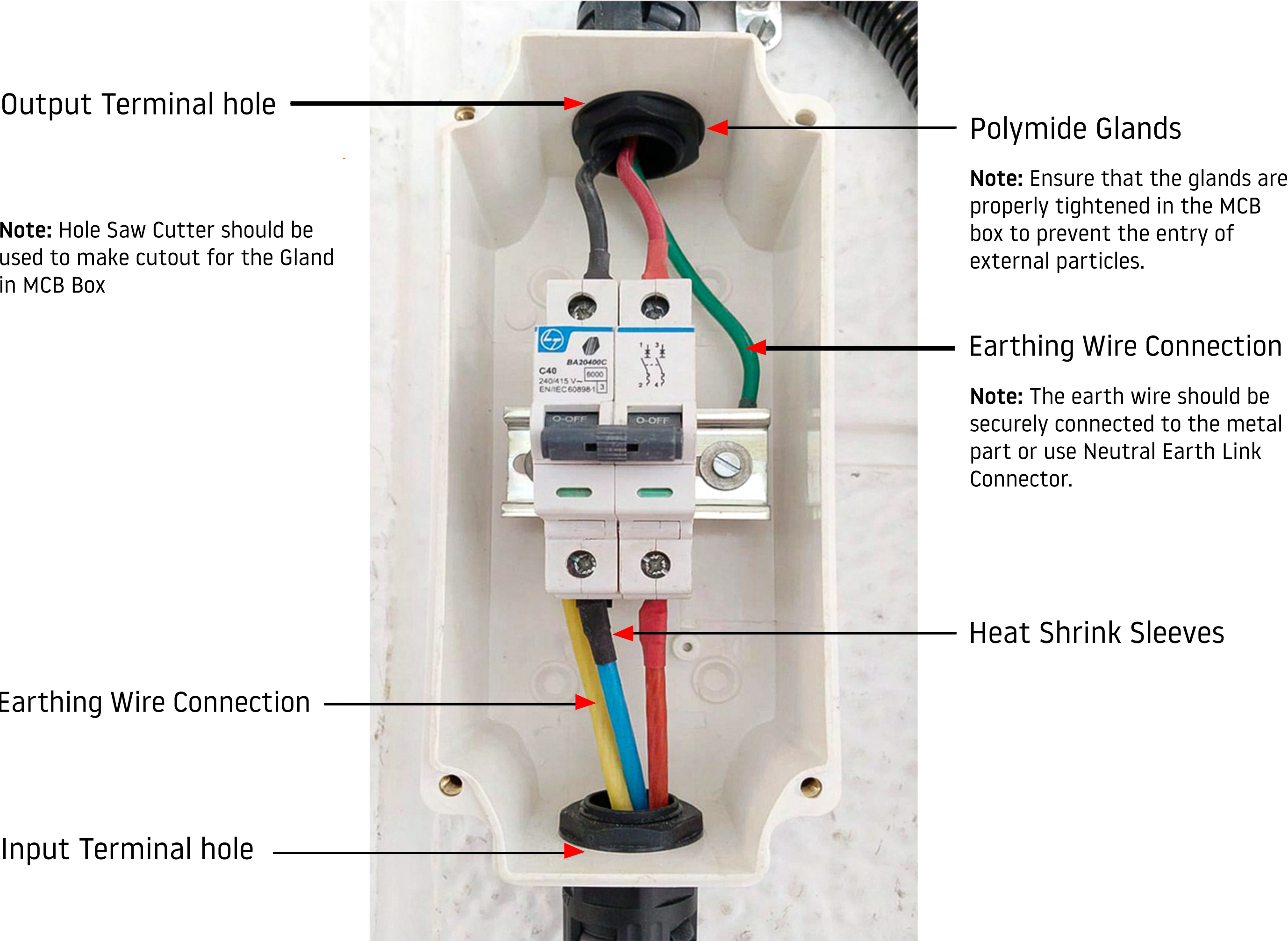
6. Flexible Conduit or Rigid Pipe:

Recommended to use Flexible Polyamide Conduit or Rigid pipe for Flexible Power Supply Cable.





Complete installation of MCB with MCB box using recommended materials.



Note: Recommended MCB box with IP55 rating or above.



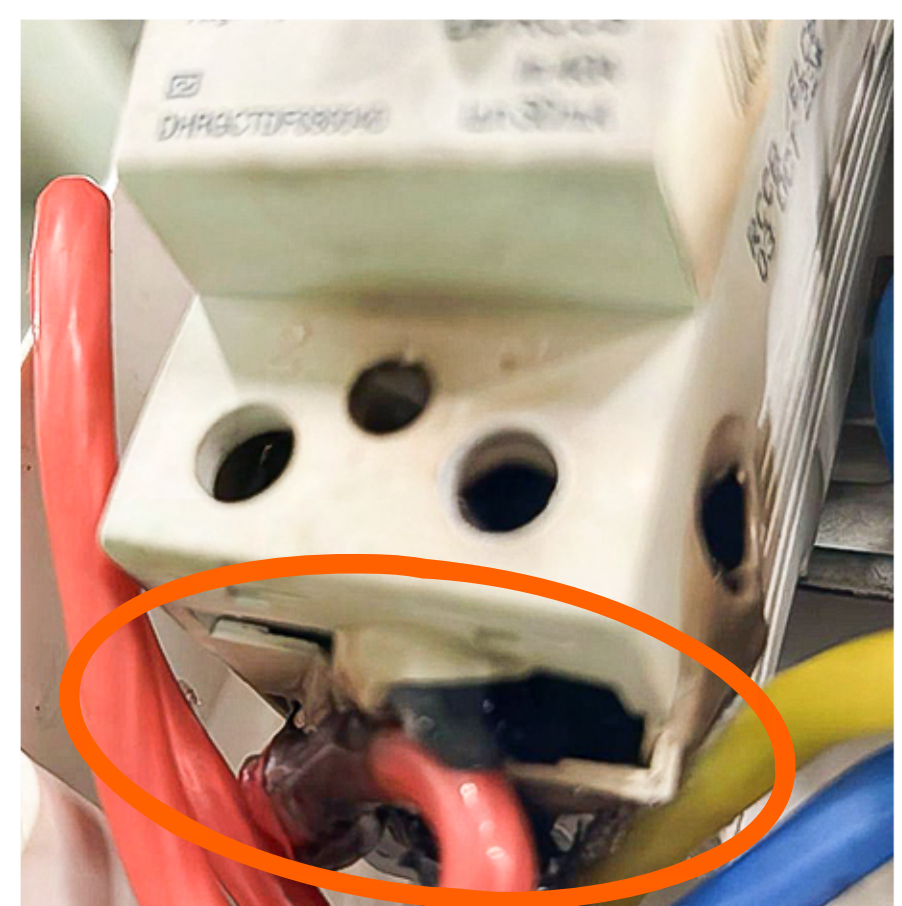
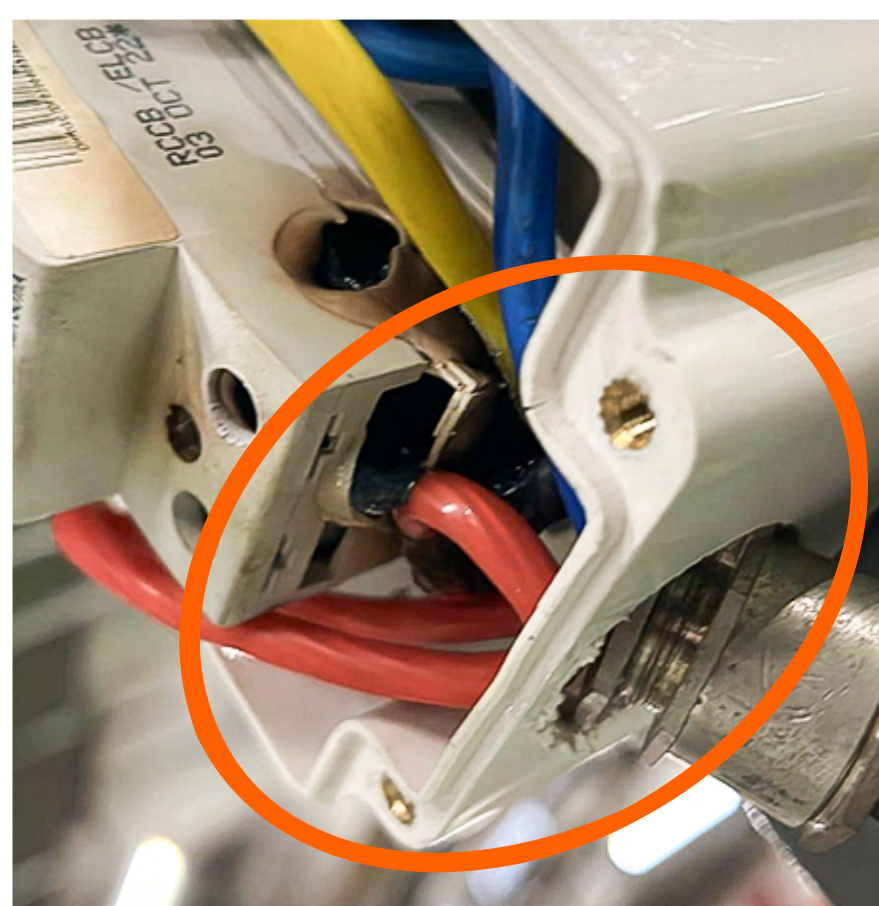
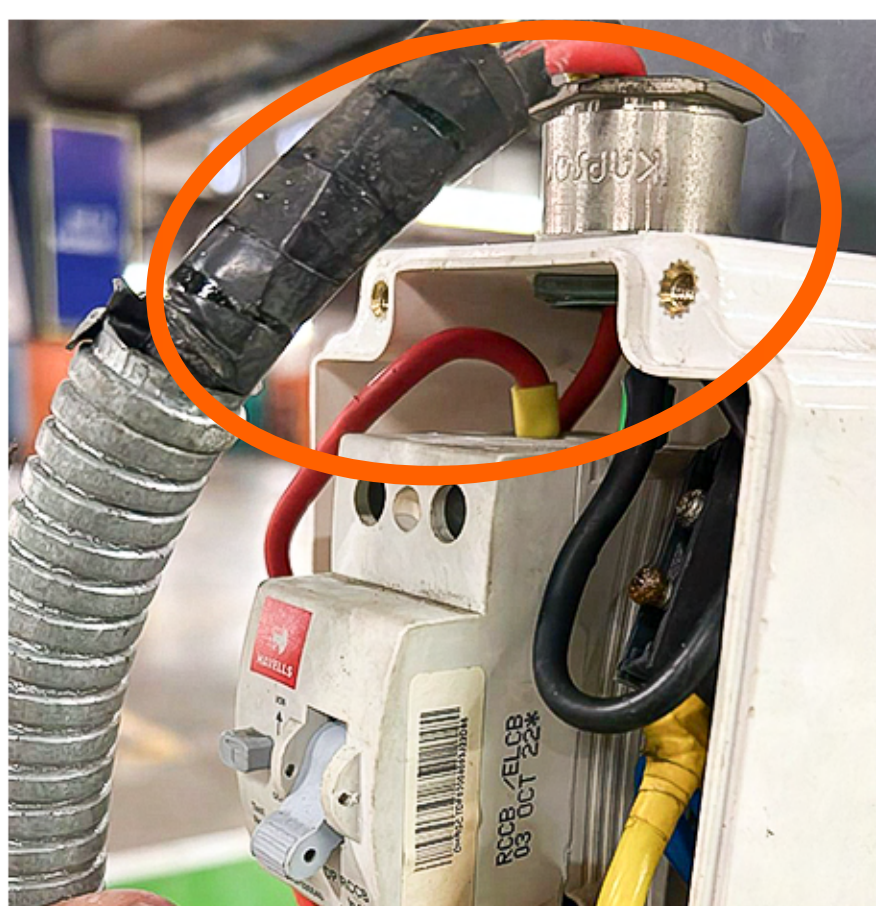
6 SAFETY FIRST

This safety procedure outlines guidelines for safely working around electrical hazards. It includes provisions for training, lockout requirements, specific work practices, and the necessary precautionary measures when using portable electrical equipment.

6.1 DANGERS OF A LOOSE CONNECTION

Wires should be securely connected to outlets using screw terminals or other appropriate devices. Tight connections ensure good electrical contact, allowing electricity to pass through without issues. However, if the terminal is not tight and the wire is not firmly compressed against the terminal's metal contact, resistance increases. This resistance generates heat, and the looser the connection, the greater the heat produced. A loose neutral wire can cause abnormal arcing at the connection point, often leading to the wire becoming excessively hot, burning off its insulation, and potentially causing damage to the surrounding area. Loose neutral wires are a major cause of electrical fires.

Loose connections or faulty wiring can cause arcing and sparking, which may lead to small fires that char or discolor outlets. Coiled wires, such as those in extension leads, increase the magnetic electrical field current, generating heat. As the wire heats up, it can soften the outer plastic coating, which further intensifies the electrical field and eventually damages the coating.

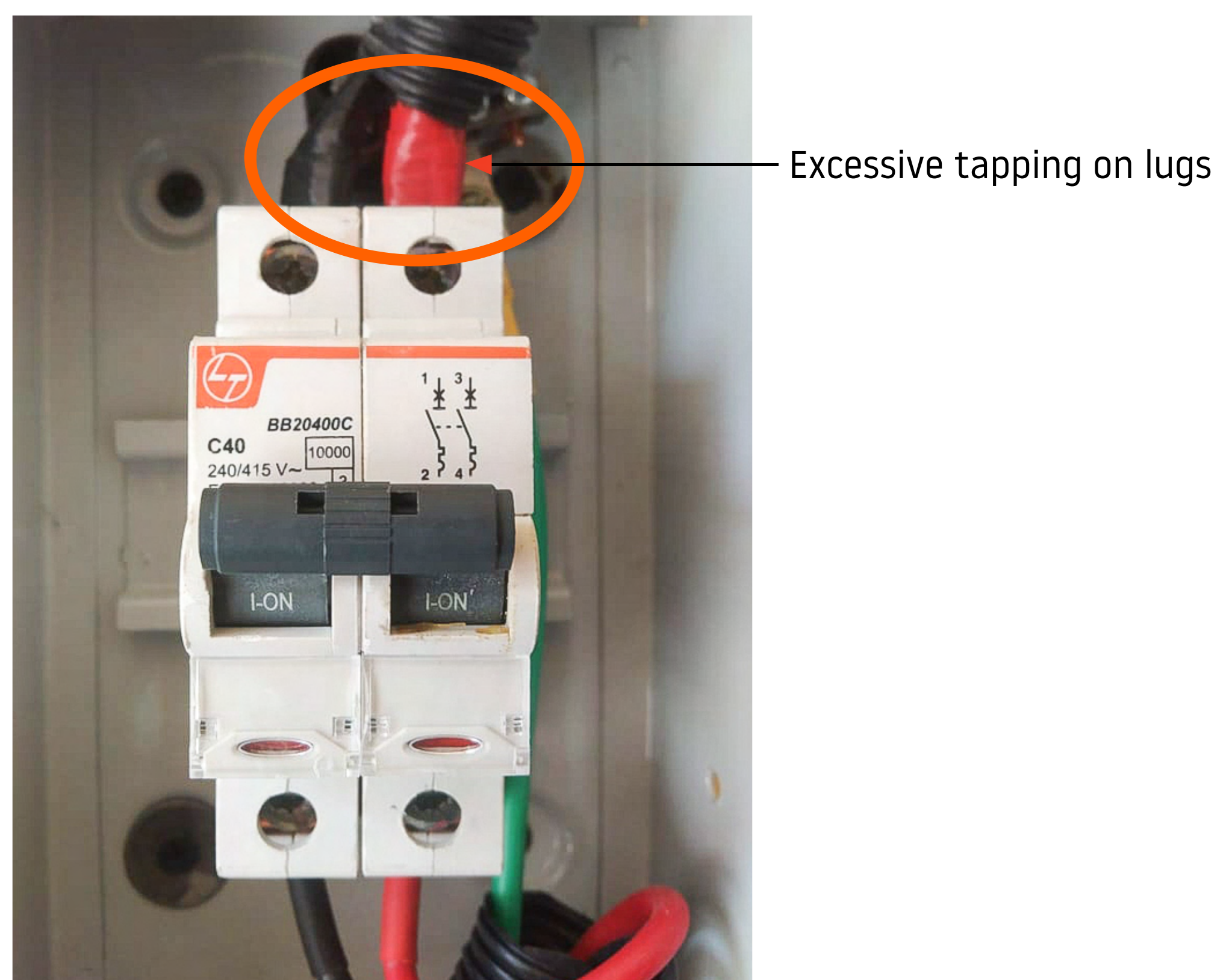


*Actual site photo



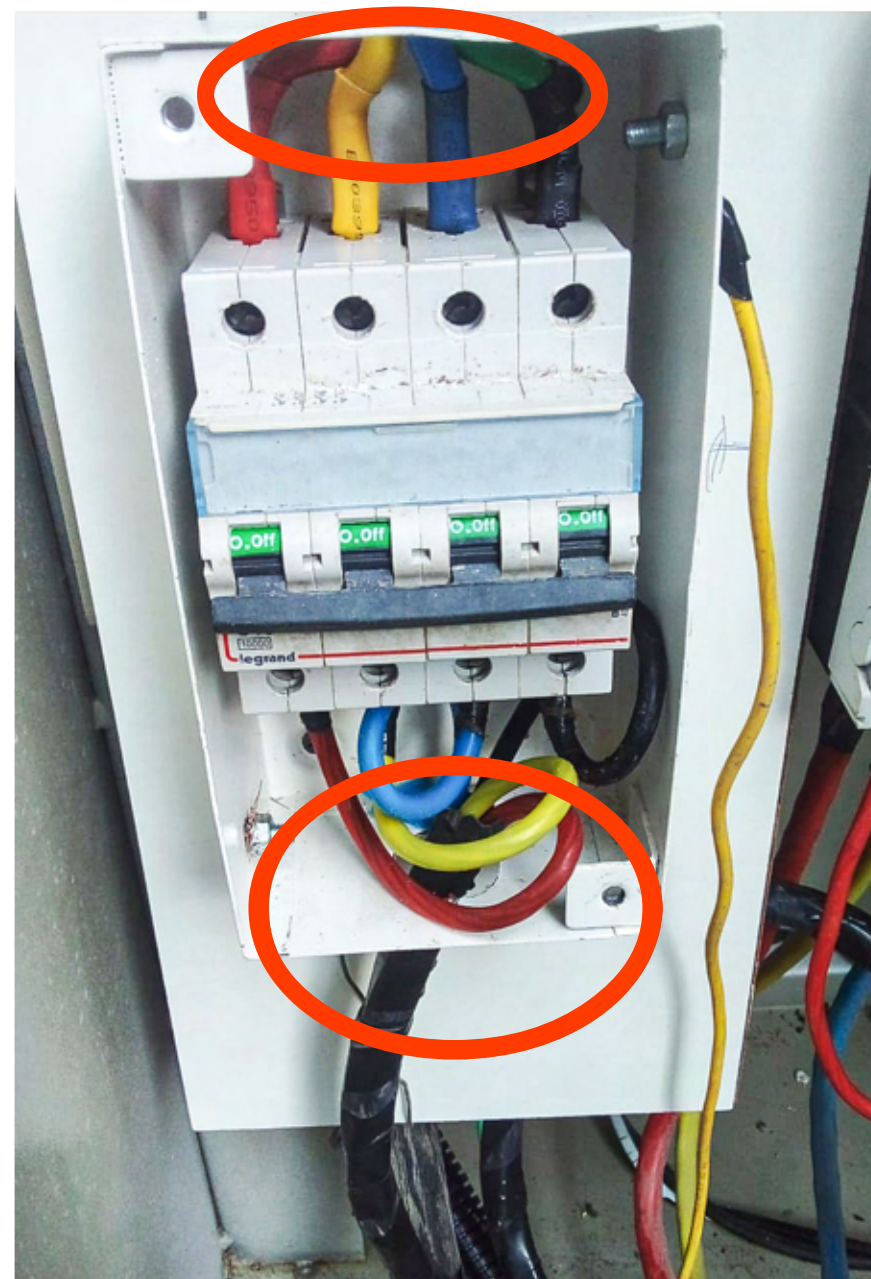
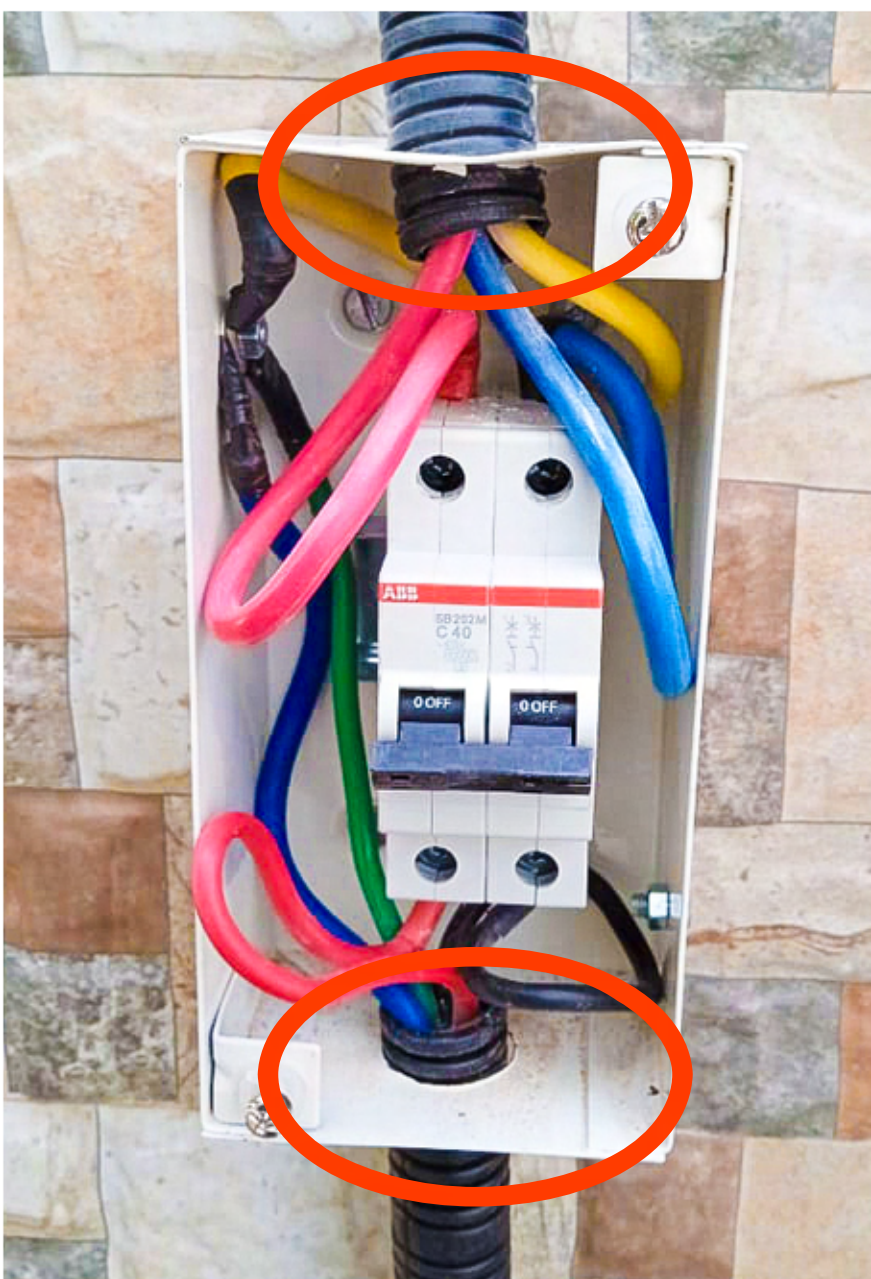
6.2 DANGERS OF EXCESSIVE TAPING ON LUGS AND WIRES

Excessive tapping connections or faulty wiring can cause arcing and sparking, which may lead to a fire in the MCB. Coiled wires, such as those in extension leads, increase the magnetic electrical field current, generating heat. As the wire heats up, it can soften the outer plastic coating, eventually causing it to melt. Taping should only be applied to exposed wires, not to connectors (“lugs”).



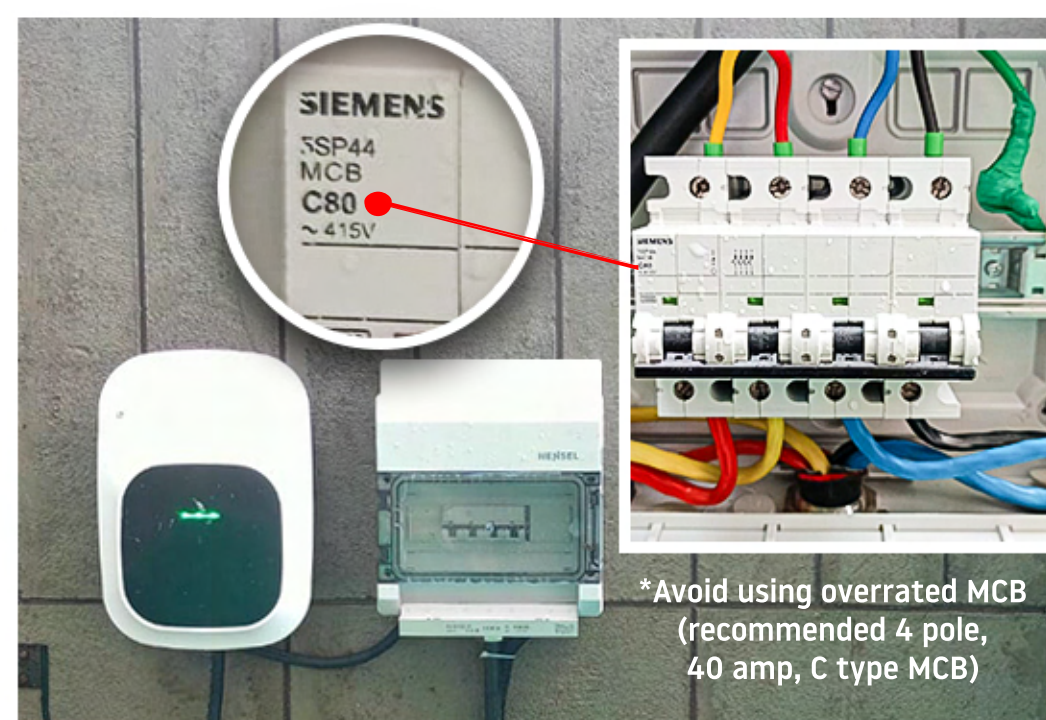
6.3 USE GLANDS TO PROTECT FROM EXTERNAL PARTICLES

In some situations, the charger is installed in an open area. In such cases, there is a risk that water and external particles may seep into the MCB box. To prevent this, the best approach is to use a properly sized gland and install it correctly. M-Seal is not recommended as it can dry up and come off over time.



6.4 USE RECOMMENDED RATED MCB/RCBO

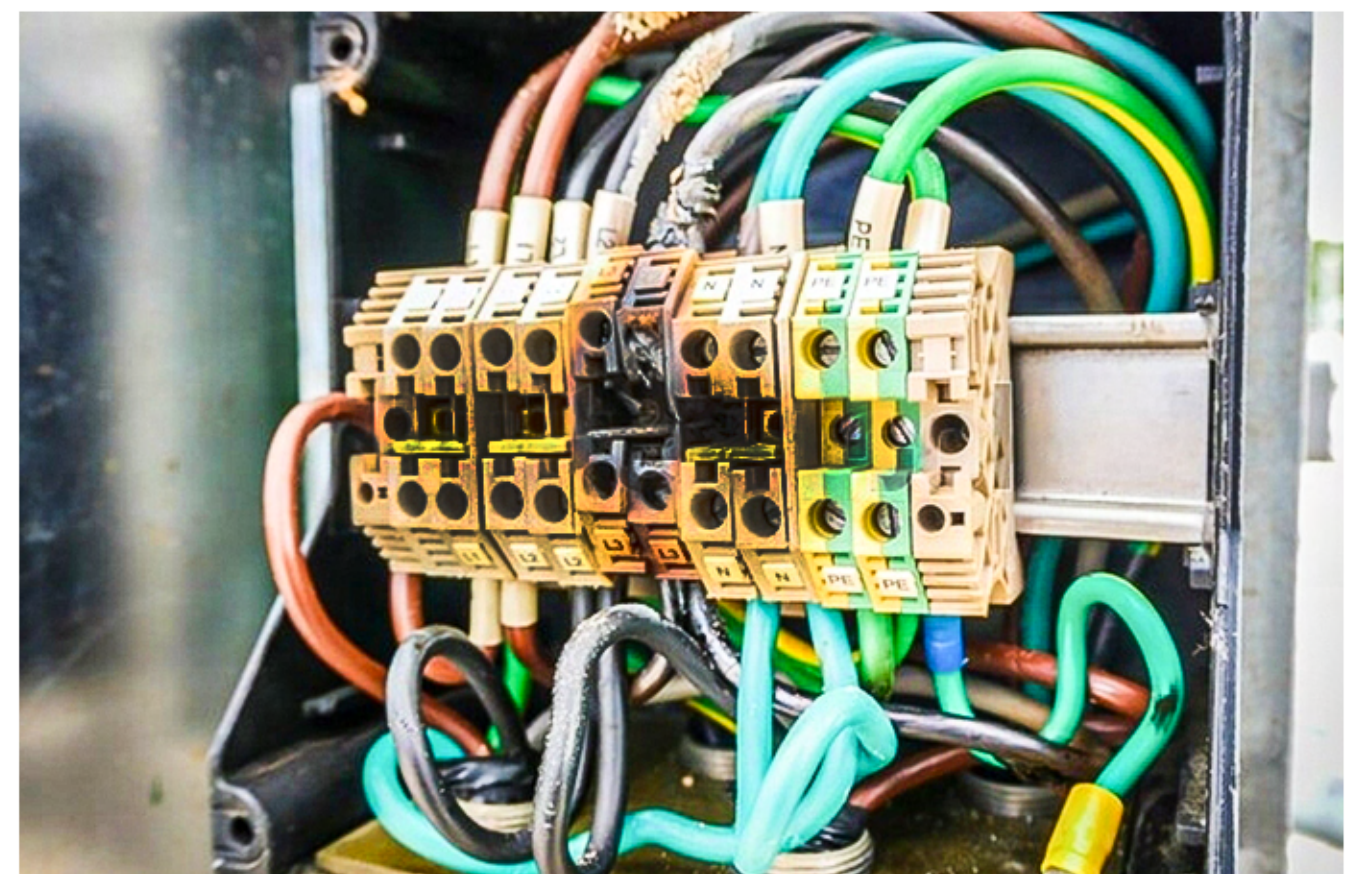
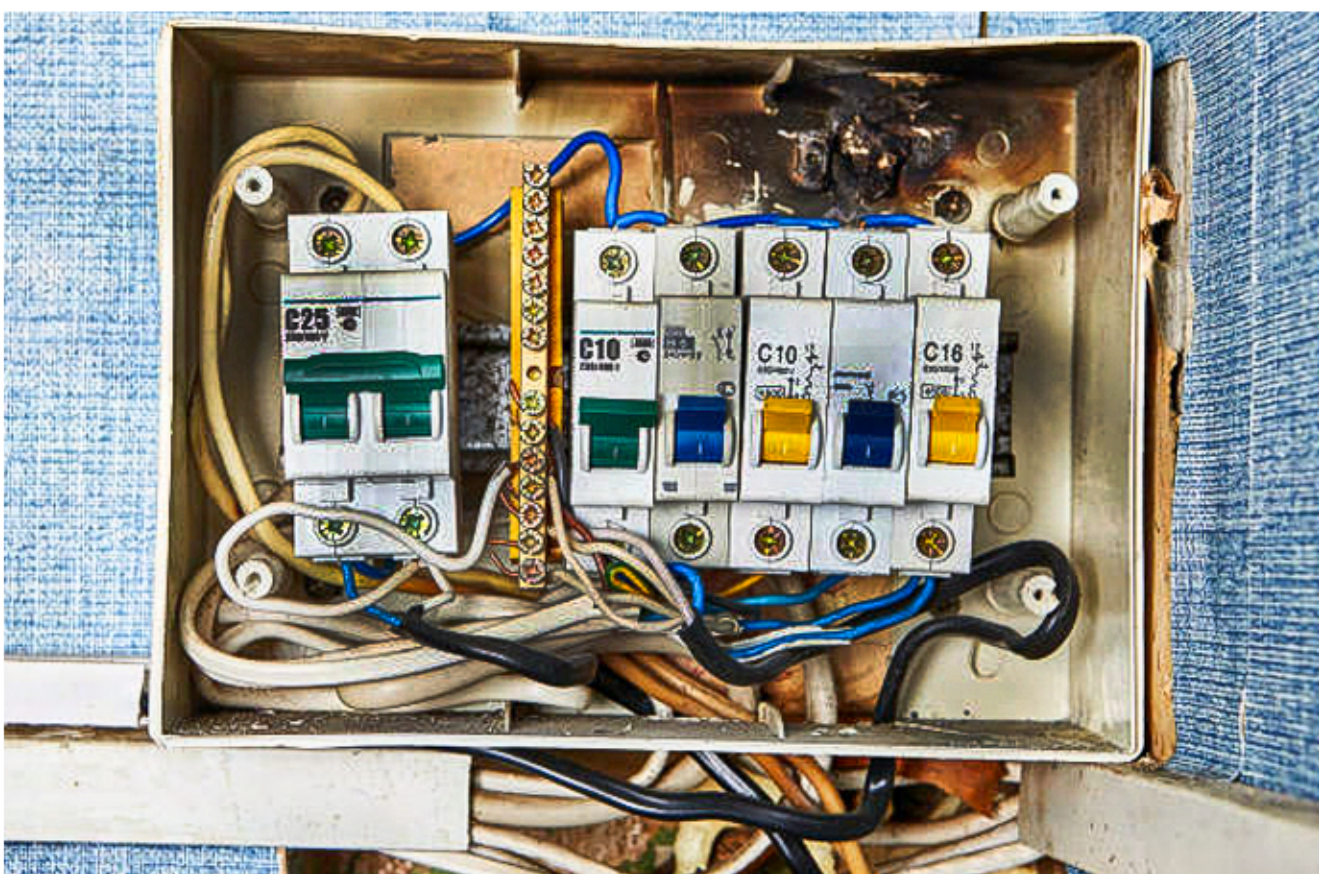
Circuit breakers are an essential part of the electrical circuit. It is a device that is used as a protective switch for passing electrical current with tripping conditions checked. When it detects a trip condition, the breaker opens its contact and isolates the input and output voltage from contacting each other.



* Actual site photo

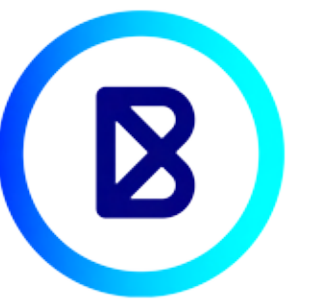
6.5 WHY BURNING OF CABLES HAPPEN

Loose electrical connections are a primary cause of burned wires. At the back of all receptacles, there are terminals where wires should be securely anchored to keep them in place. However, installers often insert the wires through the terminals without wrapping them around properly, a practice known as backstabbing. Backstabbed wires tend to become loose, which can cause the wire to burn. Burned wires can eventually start a fire.



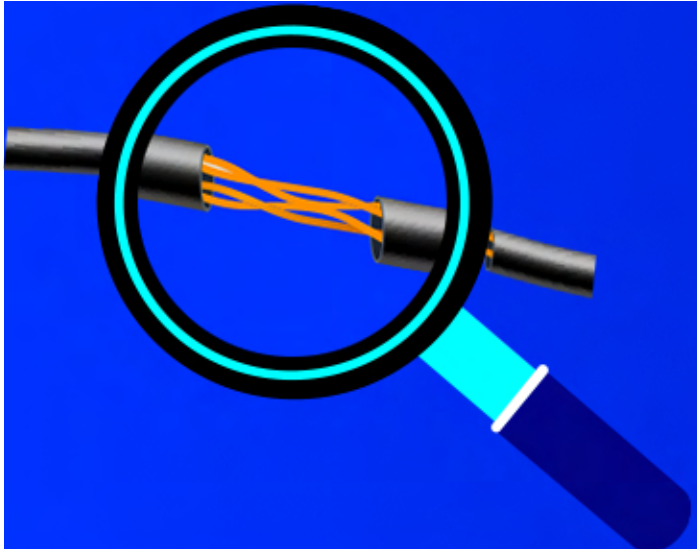
6.6 PRECAUTIONS TO KEEP IN MIND

1. Electrical work should be performed by a qualified electrician.
2. Inspect electrical cords for cracks or damage; replace them if necessary.
3. Ensure cable connections, tapping, and joints are properly tightened.
4. Never use extension cords with appliances; plug them directly into wall outlets.
5. Avoid joining cables between two devices without using properly rated switchgear.
6. Always use high-quality cables and switchgear.



6.7 ELECTRIC VEHICLE CHARGING SAFETY

Stay **safe** while charging your EV



Visually inspect the charging cable before use. **Never use a damaged charger**



Follow the **manufacturer's instruction** on how to charge



Never use an **extension cord** or **multiplug adapter** when charging electric vehicles



Only use **manufacturer provided** or **approved** charging cables. **Never use an adapter** to change charging types



Never **alter** or **modify** your electric vehicle or it's battery



Properly store chargers when not in use, to prevent damage



Cover chargers to manufacturer's specifications to avoid water damage



Ensure you have proper **GFCI protection** to protect against electric shocks



Be aware of your surroundings. **Do not accidentally come in contact** with cagers when driving or parking



All electric vehicle chargers should be installed by a **qualified electrician**

TAKE CHARGE OF POWER

**DESIGNED IN INDIA,
POWERING THE WORLD.**

EASY TO INSTALL | EASY TO USE | EASY TO MAINTAIN



READY TO CHANGE THE WAY YOU CHARGE?

To know more about **BRIGHTBLU's** charging solutions, write to charge@brightblu.com. Or scan this QR code and leave us your details and enquiries. We'll get in touch.

Address: Plot no 33 2/59, Pan Card Club Rd, Samarth Colony, Baner, Pune, Maharashtra 411045

