



matt:e

Caring about your World

Are you installing EV charge points and looking for a compliant alternative to Earth electrodes??

Matt:e has the answer.....



Why do I need to install Earth electrodes?

PME (TNCS) is the most common form of earthing provided at new installations and utilises a single conductor for the neutral and earthing functions (PEN) with an earth terminal derived from the neutral cable

The danger arises if there is an open PEN conductor within the network.

This can lead to an electric shock if any metallic parts, including gas pipework and any bonded appliance were touched by a person in simultaneous contact with general mass of Earth

Unfortunately, MCB's and RCD's currently used do not detect this fault and do not offer any protection

In accordance with the IET Wiring Regulations (Eighteenth Edition) BS:7671, a PME earthing facility shall not be used as means of earthing for the protective conductor contact of a charging point located outdoors or that might reasonably be expected to be used to charge a vehicle located outdoors.

Unless one of the following methods is used

- The charge point forms part of a three phase installation where all of the demand including the charge point/s are balanced over all of the available phases

The Problem

- Proving that the three phase supplies have been and will remain balanced is near on impossible.

- The car charging installation includes an Earth electrode of sufficient resistance to ensure the rise of earth potential will be limited to a maximum of 70 volts during a broken neutral event

The Problem

- Placement of Earth electrodes to obtain the minimum separation distances and to provide the correct resistance values can be very difficult to achieve.

- Protection of electric shock is provided by a device which disconnects the charging point/s from the live conductors of the supply and the Protective earth within 5 seconds in the event of a broken neutral
- **Welcome to the O-PEN !**

The O-PEN device is able to detect load imbalances under all conditions including open PEN on three phase PME infrastructures and safely isolates the incoming supply or electrical loads.

This helps prevent the risk of electric shock if dangerous touch voltages occur above 70V in line with BS:7671

Utilising the O-PEN technology on your EV installations saves time and costs during installation but more importantly offers a safer alternative to Earth electrodes

Key Features

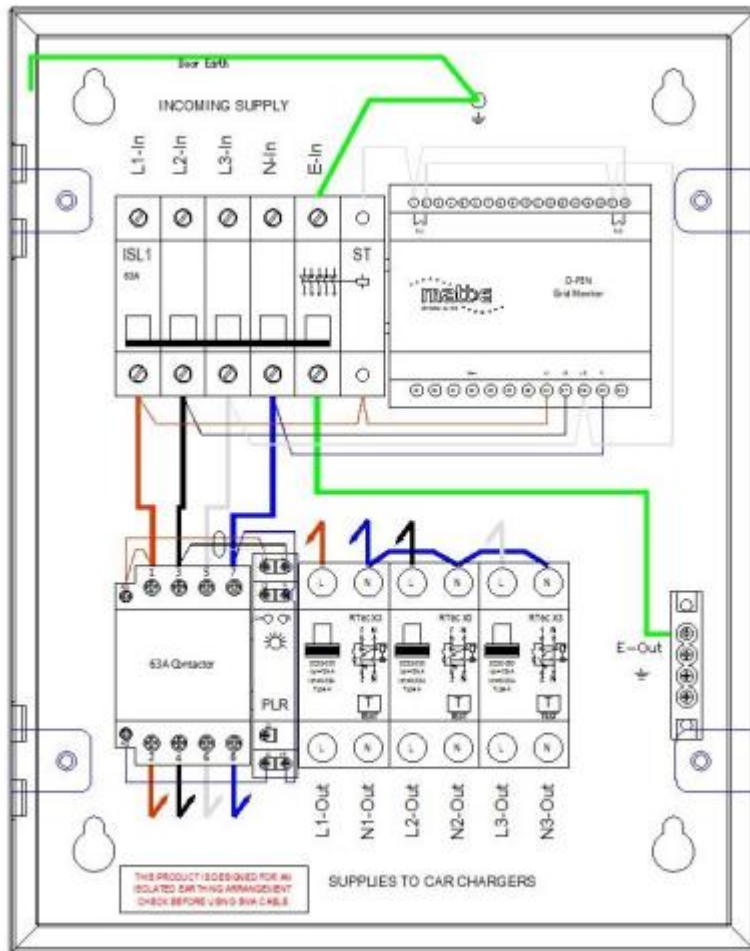
- Standardises installation
- No more scanning for buried services
- Minimises civil works
- Prevents danger posed by driving Earth electrodes into the ground
- Allows charge points to be mounted directly onto metal clad structures
- Safer earth connection as connected directly onto PME supply
- Guarantee that the earth resistances values are maintained all year round
- Designed and manufactured in Great Britain

Robust design. Built to last.

All matt:e connection centres are designed to cope with 100% of the load 100% of the time and come with a standard 2 years parts warranty



Single connection centres offer time saving simple installation



EV-3-32-R

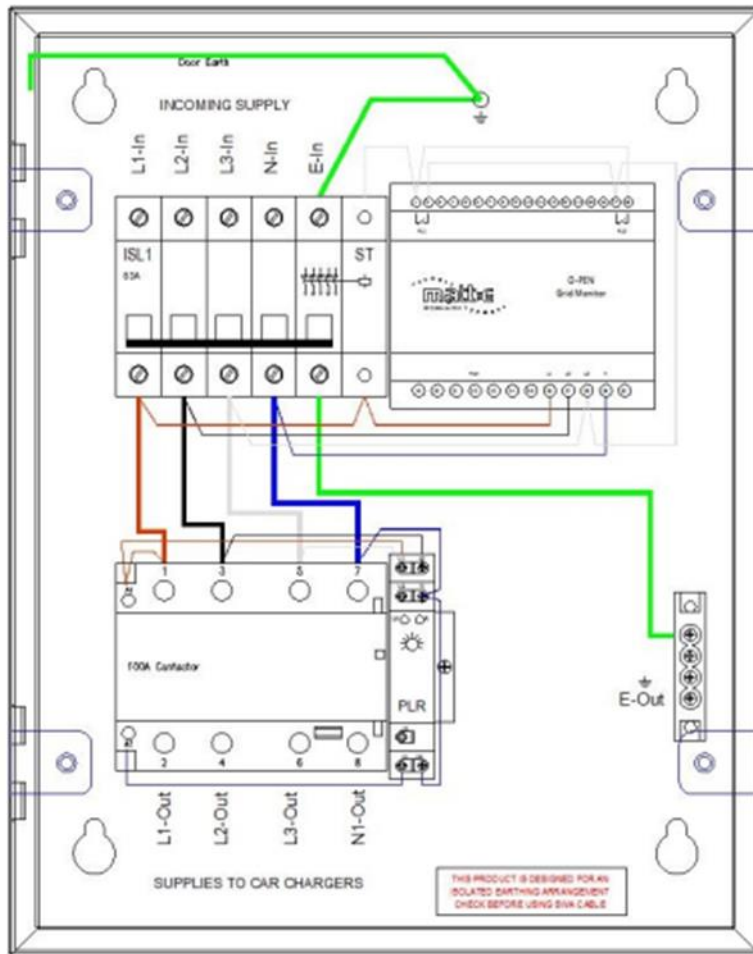
EV-3-32-R

Designed for use with up to 3 x 32amp single phase 7kW charge points.

Incorporates O-PEN technology and 3 x 32 amp Type A RCBO for simple wire in wire out connection

Unit also available with double pole MCB's.

Single connection centres offer time saving simple installation



EV-1-63

EV-1-63

Designed for use with loads up to 63amps per phase.

Incorporates O-PEN technology and 1 x 100 amp contactor for simple wire in wire out connection



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Simplifying EV connection



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