

Electric Vehicle Charger Protection Units

SP-EVCP-T SP-EVCP-R SP-EVCP-M

Installation Manual

V1.3 Dec 2019



Contents

| | |
|--------------------------------|----|
| Product Description | 3 |
| Warning Notice | 3 |
| Safety Advice | 3 |
| Introduction | 4 |
| Dimensions & Mounting the unit | 5 |
| Electrical Connections | 6 |
| Operating Instructions | 8 |
| Specifications | 9 |
| Warranty | 9 |
| Declaration of Conformity | 10 |

PRODUCT ADVISORY NOTICE

This product must be installed by a competent person in accordance with the IEE Wiring Regulations, BS7671 (18th Edition or later) and current Building Regulations.

Ensure the electrical supply is disconnected before installation or removing the cover of the unit.

Product Description

The **matt:e** Single Phase Electric Vehicle Charger Protection units (SP-EVCP-T&R) are designed for use in domestic dwelling applications where single phase PME supplies are feeding Electric Vehicle Chargers. They should NOT be used on premises with 3 phase supplies

This manual covers the SP-EVCP-T & SP-EVCP-R

The units are not intended for any purpose other than that defined within this document.

WARNINGS

Please read and observe the following notices carefully. These warnings must be observed when installing and operating the Electric Vehicle Charger Protection units.

All relevant supplies must be isolated or disconnected before commencing any work. This product must be installed by a competent person in accordance with the IEE Wiring Regulations, BS7671 (18th Edition or later) and any relevant Building Regulations and/or Installation Regulations.



**Electrical
hazard**

Once installed, the unit has a Live Mains Supply (230v or higher) within the enclosure. The cover must not be removed until the supply to the unit has been isolated or disconnected.

Safety Advice

The unit must be installed in a dry ventilated location; it must never be covered or have restricted ventilation.

The SP-EVCP-R and SP-EVCP-T units are rated for a maximum 32A.

For any information not contained within this document, please contact our technical support team on 01543 227290 or info@matt-e.co.uk.

Introduction

The **matt:e** range of Single Phase Electric Vehicle Charger Protection units are designed to protect Electric Vehicle Charging equipment when installed onto single phase PME infrastructures .

All units incorporate an electronic detection circuit and 3 pole contactor. The R version has a 2 pole Type A RCBO on the incoming side of the unit. The M version has a 2 pole MCB on the incoming side of the unit.

On detection of fault conditions the electronic circuit disconnects the EV charger from the incoming supply including CPC. The isolation contactor is certified to BSEN 60947 and complies with the requirements of BS: 7671 18th Edition.

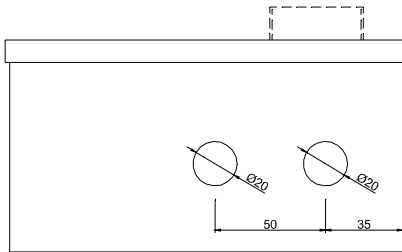
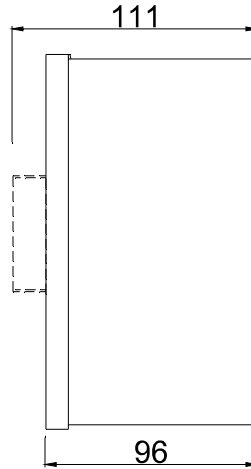
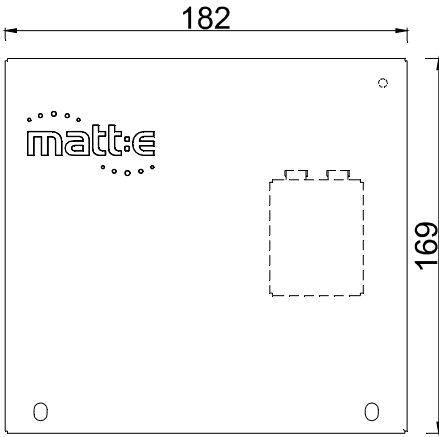
The **matt:e** SP-EVCP technology does not require earth rods or measuring electrodes to function correctly.

The unit is designed to be installed between the distribution board and the Electric Vehicle Charger.

The installation location should be clean, dry and well ventilated.

matt:e no longer use plastic bags as part of our product packaging. Wherever possible we utilise reusable biodegradable packaging for transportation. We ask that you support our efforts to reduce un-necessary waste and recycle all packaging appropriately. Thank you.

Please refer to the diagrams below for the dimensions and mounting arrangements of the unit.

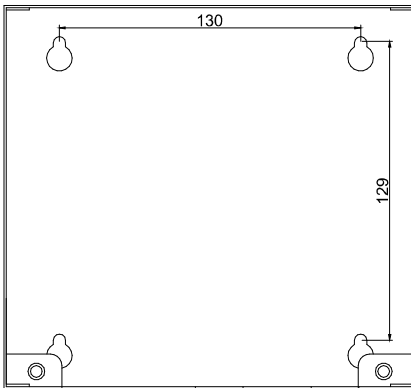


SP-EVCP-T

SP-EVCP-M

SP-EVCP-R

(with cover)



SP-EVCP-T

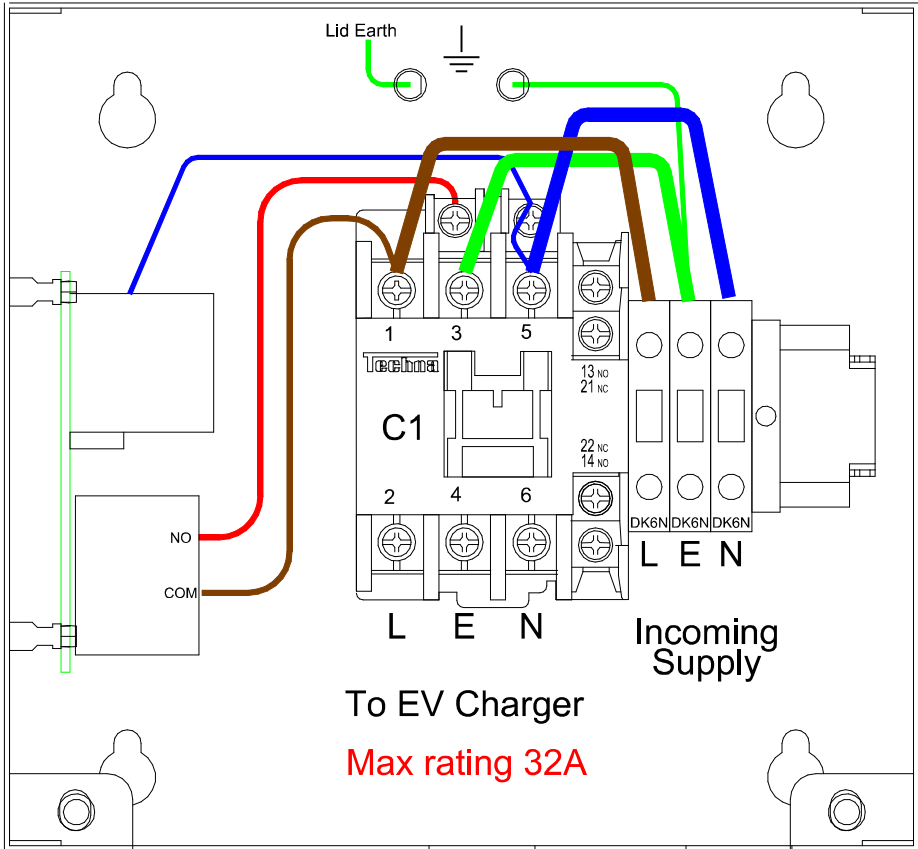
SP-EVCP-M

SP-EVCP-R

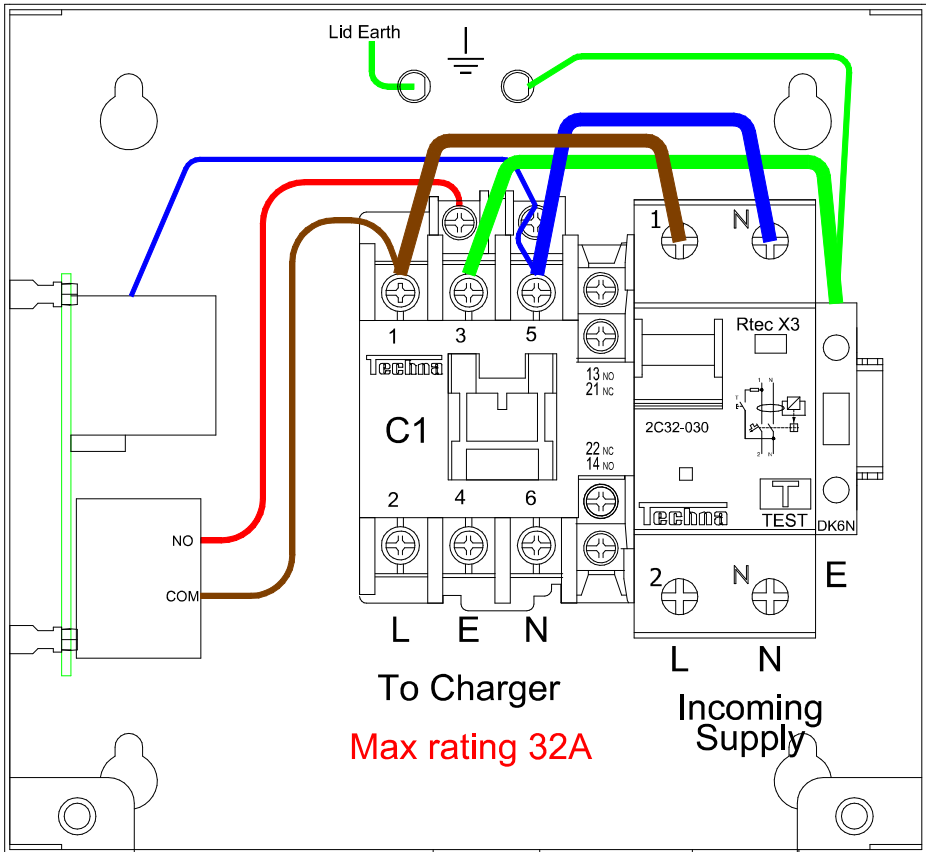
Electrical Connections

The user wiring connections are indicated in the diagrams below.

SP-EVCP-T



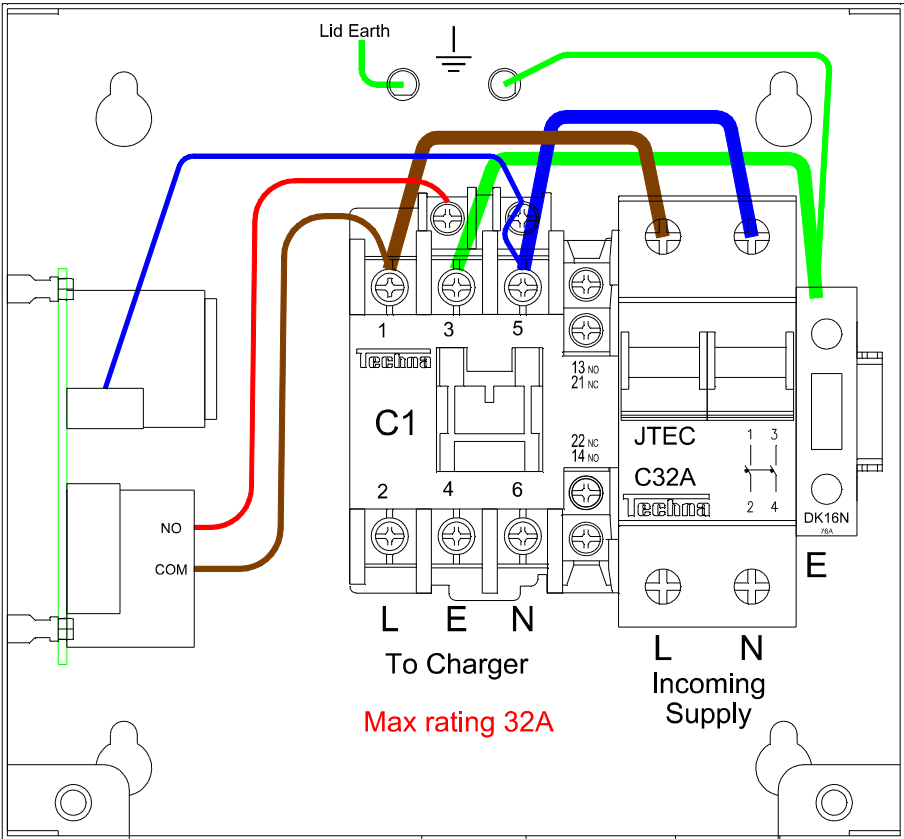
SP-EVCP-R



Connect the incoming cable from the distribution board directly to either the terminals (-T version) or the RCBO (-R version).

Connect the outgoing cable to the contactor C1.

SP-EVCP-M



Electrical hazard

THIS PRODUCT IS DESIGNED FOR AN ISOLATED EARTHING ARRANGEMENT. CHECK BEFORE USING SWA CABLE

On completion of installation the tightness of all electrical connections should be checked before energising the unit. See specifications for tightening torques.

Operating Instructions

With the supply switched on the unit will monitor the incoming supply voltage. If the incoming supply is within limits approximately 5 seconds after switching on the contactor will energise and connect the load to the incoming supply. This delay is to establish the incoming supply is stable before applying power to the load.

In the event the SP-EVCP unit detects a fault condition on the monitored supply for a period of 4 seconds the contactor coil will be de-energised which will open the contactor disconnecting phase, neutral and CPC from the load.

Specifications

| | |
|---------------------------|---|
| Description | Electric Vehicle Charger Protection Unit |
| Input (Volts) | Nominal input voltage 230v, 50Hz |
| Max Load | 32A - All units |
| Dimensions | 182mm x 169mm x 96 (111)mm |
| Weight | Approximately 2.5 kg |
| Operating Temp | -5°C to +40°C |
| Enclosure | Mild Steel Zintec Powder Coated |
| Power Consumption | 13VA |
| Ingress Protection | IP4X |
| Document Revision | V1.3 Dec 2019 |

| Terminal Capacities | <u>Min</u> | <u>Max</u> | <u>Torque</u> |
|---|---------------------|---------------------|---------------|
| Incoming Terminals cable size & tightening torque | 0.5 mm ² | 6.0mm ² | 1.3Nm |
| Incoming RCBO cable size & tightening torque | 2.5 mm ² | 25.0mm ² | 2Nm |
| Outgoing Contactor cable size & tightening torque | 2.5 mm ² | 10,0mm ² | 2.3Nm |

Warranty

The SP-EVCP units are guaranteed for a period of 3 years from the date of manufacture.

This warranty is limited to the replacement of faulty components only.

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matt:e Ltd, Unit 5, Common Barn Farm, Tamworth Road, Lichfield WS14 9PX

EU Declaration of Conformity (DoC)

Ref : SP-EVCP-10-2019

We

Company name: matt:e Ltd
Postal address: Unit 5 Common Barn Farm Tamworth Road
City: Lichfield
Postcode: WS14 9PX
Telephone number: 01543-227290
E-Mail address: info@matt-e.co.uk

Declare that this DoC is issued under the sole responsibility of the manufacturer.

Apparatus model/Product: SP-EVCP-R SP-EVCP-T
Type: SP-EVCP

Object of the declaration

| | |
|--|---------------------|
| Electric Vehicle Charger Protection units | SP-EVCP-T SP-EVCP-R |
|--|---------------------|

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Low Voltage Directive (2014/35/EU)

The following harmonised standards and technical specifications have been applied:

EN61439-2 : Low-voltage switchgear and controlgear assemblies.
EN60947-4-1 Low-voltage switchgear and controlgear
EN61009-1 Residual current operated circuit-breakers with integral overcurrent

Signed for and on behalf of: matt:e Ltd

Place of issue
Lichfield, England

Date
3 Oct 2019

J Charlton, Director

