**ROLEC*EV***

# TAP & CHARGE

Remote contactless payment terminal

**Manufactured in the UK**

# Amendments

| Amendment | Details | Date |
|---|---|---|
| Ver 1, Rev 0 | New Document. | Nov 2024 |
| Ver 1, Rev 1 | Added detail about AC overload & fault current protection | Nov 2024 |
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|---|---|---|
| **Product:** | **Tap & Charge Remote Contactless Payment Terminal** | |
| **Applicable Models:** | ROLEC5000 | C€ |
| **Document Type:** | Installation Manual | |
| **Document Code:** | EVTCM-V01-R1 | |
| **Language:** | UK English (Original) | |
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# Product Support

- Updates to this manual will be made available on the Rolec website at https://www.rolecserv.com/downloads-ev-charging

- Check the document date, and the **V**ersion and **R**evision number shown at the end of the Document Code (V01-R0, V01-R2, V02-R0, etc).

- For installation assistance and advice, contact your preferred electrical installer.

> **IMPORTANT:** This product is designed to be used with a charge point management system (CPMS) sometimes referred to as a 'Back Office'.
>
> Administration tasks to set this up with the CPMS can sometimes take several days to be processed and ideally this should be done before the charge point is installed.
>
> If this has not been done, please refer to the Payment Device Setup Guide included with the product or available from the Rolec downloads page: https://www.rolecserv.com/downloads-ev-charging.

# Contents

# Safety

This manual is specifically applicable to Tap & Charge Remote Contactless Payment Terminals supplied by Rolec.

> **NOTE:** Damage to the equipment, connected systems or to property caused by improper installation, configuration or use are the responsibility of the installer.

- The information provided in this manual must ONLY be used with the model(s) listed on **page 1** of this manual.
- The information provided in this manual must NOT be used with any other products.
- The content of this manual may be updated by the manufacturer as required.
- Do NOT use the equipment for anything other than its intended purpose.
- Do NOT modify the equipment unless specifically instructed to do so by the manufacturer.
- Do NOT attempt to repair the equipment unless specifically instructed to do so by the manufacturer.
- Make sure the equipment is electrically safe before doing any work, particularly if needing to open the enclosure or work on electrical supply cables.
- Damage to the product may render it unsafe. The product must be electrically isolated and NOT used until appropriate remedial action has been performed.

## Safety Advice within this Manual

Rolec manuals use a system of warnings, cautions and notes.

**WARNINGS** concern the safety of installers/end user and will be given before the detail/instructions in the manual.

**CAUTIONS** concern the potential for damage to the equipment and will be given before the detail/instructions in the manual.

**NOTES** are given to provide additional information and/or to highlight information of importance. They will be given either before or after the detail/instructions as appropriate and may use different wording (such as IMPORTANT) where emphasis is required.

Warnings, Cautions and Notes may be repeated several times as appropriate and may be preceded by a hazard symbol where appropriate.

# About this Manual

This manual describes the installation of the Tap & Charge Remote Contactless Payment Terminal. This terminal can be paired with multiple Rolec charge points to allow the purchase of charging services.

The same model of terminal device may also be seen, embedded in Rolec charge points and is setup and configured in the same way. Setup and configuration of the terminal is described in an accompanying manual.

This manual does NOT describe the installation of charge points.

# Tap & Charge Overview

**Tap & Charge** is a contactless payment terminal designed to take payments for EV Charging for up to 99 individual sockets or tethered cables.

- 99 connections are the absolute maximum from one terminal but for practicality and customer ease of use, a much lower number is advised.

Using a Charge Point Management System to connect 'virtually' to the charge points, a physical connection between Tap & Charge and the charge point is not required. This allows the terminal to be placed almost anywhere there is electrical power and either a GSM phone signal or ethernet cable.

> **NOTE:** GSM or Ethernet are the preferred connection options for the Payment terminal. Ethernet is prioritised if connected.

> **NOTE:** The functionality and configuration of the Tap and Charge payment terminal is the same as that of payment terminal devices embedded into a charge point.

## Product Features

- NFC contactless payment solution for multiple EV chargers
- Compatible with all ROLEC EV chargepoints*
- 3.5" LCD backlit touch screen display.
- Market-leading Payter contactless terminal.
- Supports pin entry for unattended environments
- Integrates with chargepoint management back-office
- Real-time transactions & data reporting
- Customisable advertising screen (great for promotions or branding)
- Over-the-air firmware / software updates
- Built-in surge protection
- 4G / Wi-Fi / Ethernet connectivity
- IK09 / IP65 vandal-proof & waterproof terminal
- IK10 / IP66 impact resistant enclosure
- Wall, post or pedestal mounted
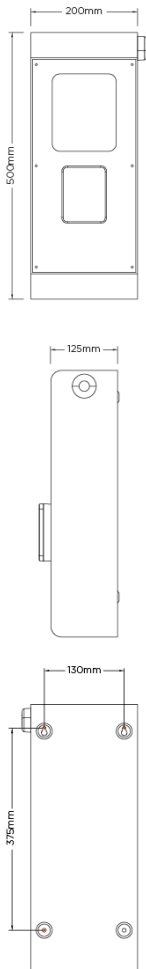- Designed & manufactured in the UK.

ROLEC
*EV Charging*

# Specification

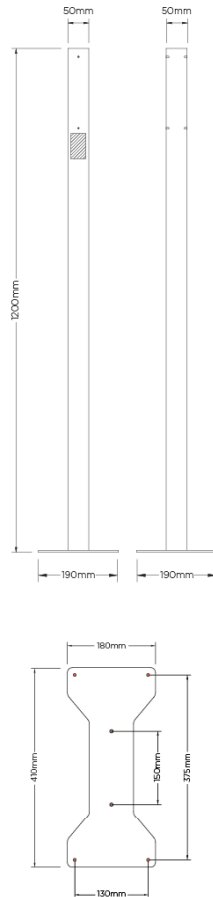| | |
|---|---|
| **User Interface** | • EMVCo. L1 v2.5 Certified<br>• ISO14443 Type A & B (T=CL)<br>• Mifare Classic protocol<br>• DESFire protocol<br>• ISO18092: Support NFC Protocol |
| **Built-in Protection** | • Built-in AC overload & fault current protection (RCBO)<br>• Surge protection |
| **Power Supply** | • Unit 230V AC (±10 %) 50/60Hz<br>• MDB port 12–24VDC |
| **Cable Terminals** | Single Phase – 3x 50mm 1P + N + E |
| **Communications** | • Ethernet RJ45 (100BASE-TX, 10base-10) network connection<br>• Wi-Fi IEEE802.11 b/g/n W-LAN<br>• 4G GSM/GPRS/LTE CAT 1 Modem (built-in SIM, subscription required)<br>• GNSS, (GPS) support with modem<br>• NFC<br>• Bluetooth<br>• Cyber security – Data encryption level TLS 1.2 |
| **Card Reading Distance** | Depending on the device/card/fob, up to 10cm from reader |
| **Dimensions** | 200mm x 500mm x 155mm (W x H x D) |
| **Weight** | < 13kg (model dependant) |
| **Environmental** | • Ingress protection – Enclosure IP54 / Terminal IP65<br>• Impact protection – Enclosure IK10 / Terminal IK09<br>• Operating temperature – -20°C to 55°C<br>• Storage Temperature – -20°C to 70°C<br>• Humidity – 10% to 90% RH Non-condensing |
| **Materials** | • Body - Heavy duty 1.5mm Steel applied with 45–55 microns of Zinc primer<br>• Finish - Corrosion resistant, textured Polyester powder coating |
| **Unit Colour** | • Black<br>• Other colours are available upon request |
| **Certifications & Compliances** | • Wiring Regulations – BS 7671:2018+A2:2022<br>• Radio Equipment Directive (RED) 2014/53/EU<br>• Low Voltage Directive 2014/35/EU, covering requirements of RED art. 3.1(a) EN 62368-1:2014/AC:2015, EN 60950-22:2006/AC:2008, EN 62311:2008<br>• EMC Directive 2014/30/EU, covering requirements of RED art. 3.1(b) EN 301 489-1 V1.9.2, EN 301 489-3 V2.1.1, EN 301 489-17 V1.3.1, EN 301 489-19 V2.1.1, EN 301 489-52 v1.1.0<br>• Radio Spectrum Matters, covering requirements of RED art.3.2 EN 300 330 V2.1.1, EN 300 328 V2.2.2, EN 301 511 V12.5.1, EN 301 908-1 V13.1.1, EN 301 908-2 V13.1.1, EN 301 908-13 V13.1.1, EN 303 413 V1.1.1,<br>• Environmental Protection – BS EN 60529:1992+A2:2013<br>• Impact Rating – BS EN 62262:2002+A1:2021<br>• RoHS – 2011/65/EU, SI 2012/3032<br>• REACH – 1907/2006, REACH etc. (Amendment) Regulations 2021<br>• Payter Payment Device – CE, FCC, RoHS, WEEE , REACH, EMVCo, PCI-PTS 6.x, TQM,<br>• MasterCard, VISA, American Express, Discover, Diners<br>• Certification Markings – CE & UKCA |
| **Warranty** | 3 years |

UK CA  CE  ⌧

Rolec Services Ltd are a registered manufacturer (**WEE/AG3499TY**) within the WEEE Recycling Scheme, allowing its products at the end of their life, to be processed by an appropriate local service provider.

ROLEC
**EV Charging**

Tap & Charge unit:

Mounting post:

Premium mounting pedestal stand:

200mm

500mm

125mm

130mm

375mm

50mm

50mm

1200mm

190mm

190mm

180mm

410mm

150mm

375mm

130mm

200mm
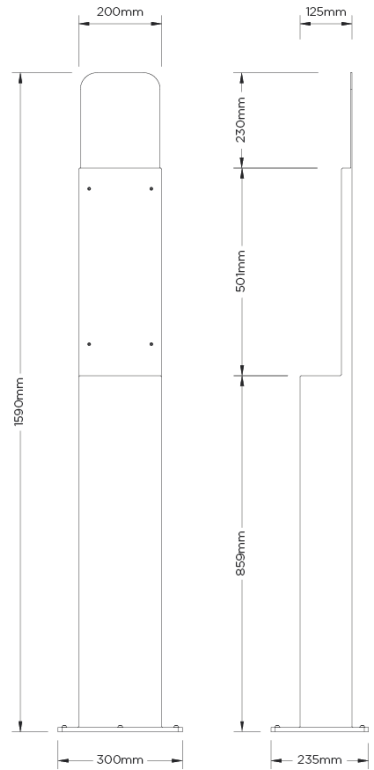
125mm

230mm

1590mm

501mm

859mm

300mm

235mm

**Figure 1 Unit and Mounting - General Dimensions**

# Unpacking

**IMPORTANT:** Make sure all packaging is disposed of responsibly and in accordance with the current regulations in your region. Packaging is 100% recyclable where appropriate facilities exist.

## Standard Contents

| Tap & Charge Unit with integrated Payter contactless payment device. |
| --- |
| Wall mounting/fixing kit. |

1. Examine the package and make sure the contents have not been damaged in transit.

2. Make sure the model and any accessories match the order.

3. Do NOT dispose of packaging until the equipment has been installed and is working correctly.

   Dispose of packaging responsibly.

**NOTE:** Items damaged in transit must first be reported to the courier and then to the supplier. Where possible, photographic evidence of package and/or unit damage should be supplied.

**NOTE:** Incorrect or damaged units must NOT be installed. Contact your supplier to discuss rectification.

## Options and Accessories

| Product Code | Item Description |
| --- | --- |
| EVFP0100 | Mounting post |
| EVFP0110 | Premium mounting pedestal |
| EVCB0020 | Root mount protection barrier – 48mm |
| EVCB0040 | Surface mount protection barrier – 48mm |

# Installation

| | **IMPORTANT:** Installers and End Users must read and understand the content of this manual before installation and/or use of the product. |
|---|---|

- Installation must **only** be performed by someone who is properly qualified and competent to do so in accordance with the current legislation in force in the geographical location of the installation.
- Advice provided in this manual does NOT override any legislation.
- Rolec Services Ltd cannot accept any responsibility for improper installation or any problems arising from improper installation.

**NOTE:** Damage to the equipment, connected systems or to property caused by improper installation are the responsibility of the installer.

## BEFORE Installation

1. Establish a suitable site location for the unit that is both secure and environmentally safe.
2. Make sure the site meets current legislation (if applicable).

    Installers and site owners may need to consider accessibility issues.

3. If wall mounting will not be used, prepare the site by installing a mounting post or pedestal.
4. Make sure electrical power is available at the installation location.
5. Make sure a suitable means of data connection with sufficient signal strength is available at the installation location. There are three options:

    Ethernet

    Wi-Fi

    GPRS (Mobile/SIM) within the Payter device.

6. Determine where power and any other cables will enter the enclosure.
7. Discuss cable routing and cable entry with the end user. Plan the installation accordingly.
8. Cable entry through the sides or top of the enclosure is NOT recommended.
9. Make sure an appropriate remote consumer unit has been installed (or appropriate switchgear is available) in an appropriate location to supply power to the equipment.
10. Familiarise yourself with the location within the enclosure of the incoming power terminals.
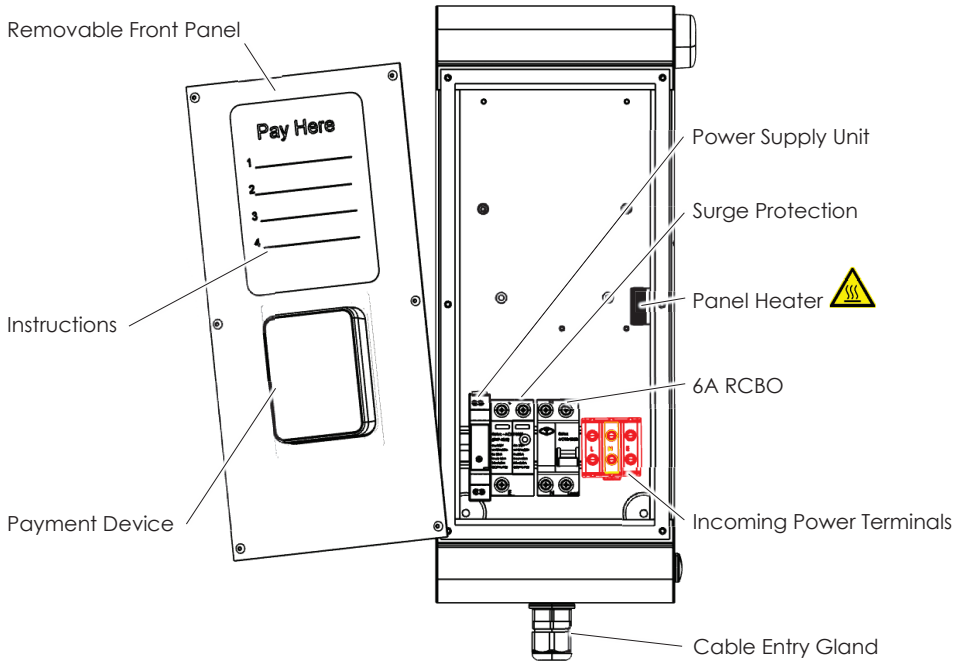
**Figure 2 Main Components**

Removable Front Panel

Instructions

Payment Device

Power Supply Unit

Surge Protection

Panel Heater

6A RCBO

Incoming Power Terminals

Cable Entry Gland

**NOTE:** When removing the front panel, the payment device is connected to the power supply unit by a cable.

## If a Mounting Post or Pedestal will be Used

1. Prepare the ground and place the mounting post in the desired location.

2. Make sure the power supply cable and the ethernet cable (if required), are fed upward through the post or pedestal and exit through one of the apertures. Seal other apertures with the provided blanking panels.

3. Secure the post into place with fixings that are appropriate for the mounting surface.

## Install the Tap & Charge Payment Terminal

> **IMPORTANT:** All electrical work must be performed in accordance with the current legislation applicable in the geographical region of the installation.

> **CAUTION: Equipment Damage – Sensitive Equipment**
>
> If you will be performing insulation resistance tests on the power supply cables, it is advised to be done BEFORE connecting the power cable to the chargepoint. The high voltages applied during the test may damage sensitive components if tested after the cable is connected.

> **CAUTION: Equipment Damage**
>
> Do NOT use power tools to remove/install panel fixings.
>
> Power tools can damage the fixings, making the panel difficult to remove.
>
> Use hand tools ONLY and do not overtighten fasteners.

1. Remove and retain the fixings that secure the front panel of the unit to the rear enclosure.

> **CAUTION: Equipment Damage**
>
> The Fascia panel is connected to the main assembly by an electrical cable going into the back of the payment device. This can be disconnected during installation. Take care not to damage or strain the cable.
>
> Make sure all connections are secure before finally refitting the panel.

2. Carefully remove the front panel from the enclosure.

   If the existing cable entry point will NOT be used, a new hold must be created.
   If creating a new entry point…

   Take care not to damage any internal components when cutting holes.

   Make sure to remove all debris that could interfere with components inside the enclosure.

3. If the unit will be **wall mounted**, position the enclosure in the mounting location and use the mounting holes in the back of the unit as a guide to **mark** the drilling points.

   Make sure the enclosure is level before marking the holes.

   Do NOT drill with the unit in position. Drilling debris and brick dust may damage electrical components and will invalidate the warranty.

4. Drill the mounting location at the marked points to suit the fixings that will be used.

5. Secure the enclosure to the wall using the fixings.

6. Tighten the fixings gradually, making sure the chargepoint remains level and does not twist or warp.

> **NOTE:** The fixings supplied with the come with domed rubber faced washers to maintain a good seal against water entry. If these cannot be used for some reason, apply a silicon sealant to seal the fixing locations.

7. If a **mounting post** or **pedestal** is being used, secure the terminal to the post using the screws provided.

8. Lift the chargepoint up to the mounting point and insert the fixings.

9. Tighten the fixings gradually, making sure the chargepoint remains level and does not twist or warp.

10. If required, apply sealant to the fixings or any unused holes inside the unit to maintain the IP rating of the enclosure.

11. Route the incoming cables through the enclosure, ready to connect to the appropriate terminals within the enclosure.

12. Terminate the power supply cable in the appropriate manner and connect it to the power terminals.

13. Make sure no debris is present on any of the components and that ALL debris is removed from the enclosure.

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**NOTE:** Debris and similar pollutants can adversely affect the performance and working life of components and will invalidate the product/component warranty.

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**IMPORTANT:** It is the responsibility of the installing engineer to satisfy themselves, that all accessible cable terminations throughout this product are secure and have not become loose, strained, or disconnected during transit and/or installation.

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14. Re-connect all previously removed cables to the payment device and connect the ethernet cable if it will be used.

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**CAUTION: Equipment Damage**

Do NOT use power tools to remove/install panel fixings.

Power tools can damage the fixings, making the panel difficult to remove.

Use hand tools ONLY and do not overtighten fasteners.

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15. Re-fit the front fascia of the enclosure securely to maintain the IP rating.

16. Switch ON the power to the unit and test as appropriate.

17. Make sure you are satisfied that the electrical installation is complete.

# About Payment Terminals

Payment terminals are a standard option in the following Rolec charge points.

- Quantum
- AutoCharge.

And by special request…

- BasicCharge
- SecuriCharge.

A standalone **Tap & Charge Payment Terminal** may be used with all Rolec AC charge points but is the only option when working with:

- QUBEV
- WallPod
- Zura.

**NOTE:** A payment terminal embedded into a charge point pedestal may be used to control additional charger points in the vicinity – not only the charge point into which it is embedded.

A payment terminal may be paired with a variety of charge point models as the pairing is with the unique ID of each socket or cable and not specifically with the charge point.

Pairing is enabled by the 'Monta' app in conjunction with the payment terminal provider 'Payter'. Pairing may also be performed with other back office systems.

**NOTE:** Rolec makes no claims of compatibility with non-Rolec charge points. However, it may be possible to pair with other makes and model of charge point that have a Monta socket or cable ID.

Use of the payment terminal with non-Rolec charge points is at the operators own risk.

**IMPORTANT:** This product is designed to be used with a charge point management system (CPMS) sometimes referred to as a 'Back Office'.

Administration tasks to set this up with the CPMS can sometimes take several days to be processed and ideally this should be done before the charge point is installed.

If this has not been done, please refer to the Payment Device Setup Guide included with the product or available from the Rolec downloads page: https://www.rolecserv.com/downloads-ev-charging.

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