INSTALLATION & OPERATION MANUAL

ROLEC

SECURICHARGE

Intelligent EV charging unit

Designed & Manufactured in the UK

Amendments

Amendment Number	Details	Date
Ver 2, Rev 0	Update to Monta download QR code.	Aug 2024
Ver 2 Rev 1	Addition of wall mounting bracket for some models	Dec 2024
Ver 2, Rev 2	Correction of Live/Line terminology.	Jan 2025
Ver 3, Rev 0	Addition of charge points with door. Review and update of content to include new app.	June 2025

Product:	**SecuriCharge Intelligent EV Charging Unit**			
Applicable Models:	**Single Phase**		**Three Phase**	
	ROLEC0311B	ROLEC2111B	ROLEC0313B	ROLEC2113B
	ROLEC0321B	ROLEC2121B	ROLEC0323B	ROLEC2123B
	ROLEC1111B	ROLEC3111B	ROLEC1113B	ROLEC3113B
	ROLEC1121B	ROLEC3121B	ROLEC1123B	ROLEC3123B
Document Type:	Installation and Operation Manual			
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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.

Contents

Safety Information

This manual applies specifically to the SecuriCharge Intelligent EV Charging Unit and is provided as a guide to its installation and operation.

IMPORTANT: Installers and End Users must read and understand this manual before installing or using the product.

Installation must be carried out only by qualified and competent professionals in accordance with current regulations applicable to the location of the installation.

- Rolec Services Ltd accepts no responsibility for issues resulting from improper installation.

NOTE: Any damage to the unit, connected systems, or surrounding property due to incorrect installation is the sole responsibility of the installer.

- This manual applies only to the product models listed on **page 1** and It must not be used for any other models or products.
- The content of this manual may be updated by the manufacturer as necessary.
- The equipment must be used only for its intended purpose.
- Do NOT modify or repair the product unless specifically instructed by the manufacturer.
- Ensure all access covers are properly secured using the supplied fasteners. The enclosure seal must be intact to maintain the correct IP rating and electrical safety.
- Fasteners used to mount the product in its working location must be sufficient for the task and the specific mounting point.
- If the product is damaged, it may be unsafe to use. In such cases, it must be electrically isolated immediately and not used until a qualified professional has completed all necessary repairs.

Safety Guidance in This Manual

- **WARNING** – Indicates a potential safety hazard that could result in injury or death. Warnings appear before relevant instructions and must be followed carefully.
- **CAUTION** – Highlights the risk of damage to the equipment or system. Cautions are also provided before the relevant guidance.
- **NOTES** – Offers additional or helpful information or emphasises important points. Notes may appear before or after instructions and may use alternative labels such as IMPORTANT for added emphasis.
- These notices may appear multiple times throughout the manual and are sometimes accompanied by appropriate hazard symbols to draw attention to critical information.

Product Overview

The SECURICHARGE is a heavy-duty and vandal-resistant EV charging unit. An ideal wall-mounted solution for car parks in exposed locations. Effortless integration with any OCPP chargepoint management system offers an ideal plug-and charge or pay-to-charge solution.

Seamless charging experience for EV drivers via an app, RFID card/fob, or optional contactless payment. Additionally, an optional 5" LCD screen displays real-time charging status.

Feature-rich, this EV charger supports dynamic load balancing and is equipped with PME fault detection to reduce installation costs. Available in 1way or 2way versions, providing up to 22kW superfast charging.

Model	Specification
ROLEC0311B	SecuriCharge Smart EV Charger - 1x up to 7.4kW Type 2 Socket - **Black**
ROLEC0321B	SecuriCharge Smart EV Charger - 2x up to 7.4kW Type 2 Sockets - **Black**
ROLEC0313B	SecuriCharge Smart EV Charger - 1x up to 22kW 3PH Type 2 Socket - **Black**
ROLEC0323B	SecuriCharge Smart EV Charger - 2x up to 22kW 3PH Type 2 Sockets - **Black**
ROLEC1111B	SecuriCharge Intelligent EV Charger + contactless payment terminal - 1x up to 7.4kW Type 2 Socket - **Black**
ROLEC1113B	SecuriCharge Intelligent EV Charger + contactless payment terminal - 1x up to 22kW 3PH Type 2 Socket - **Black**
ROLEC1121B	SecuriCharge Intelligent EV Charger + contactless payment terminal - 2x up to 7.4kW Type 2 Socket - **Black**
ROLEC1123B	SecuriCharge Intelligent EV Charger + contactless payment terminal - 2x up to 22kW 3PH Type 2 Socket - **Black**
ROLEC2111B	SecuriCharge Intelligent EV Charger + LCD screen - 1x up to 7.4kW Type 2 Socket - **Black**
ROLEC2113B	SecuriCharge Intelligent EV Charger + LCD screen - 1x up to 22kW 3PH Type 2 Sockett - **Black**
ROLEC2121B	SecuriCharge Intelligent EV Charger + LCD screen - 2x up to 7.4kW Type 2 Socket - **Black**
ROLEC2123B	SecuriCharge Intelligent EV Charger + LCD screen - 2x up to 22kW 3PH Type 2 Socket - **Black**
ROLEC3111B	SecuriCharge Intelligent EV Charger + LCD screen & contactless payment terminal - 1x up to 7.4kW Type 2 Socket - **Black**
ROLEC3113B	SecuriCharge Intelligent EV Charger + LCD screen & contactless payment terminal - 1x up to 22kW 3PH Type 2 Sockett - **Black**
ROLEC3121B	SecuriCharge Intelligent EV Charger + LCD screen & contactless payment terminal - 2x up to 7.4kW Type 2 Socket - **Black**
ROLEC3123B	SecuriCharge Intelligent EV Charger + LCD screen & contactless payment terminal - 2x up to 22kW Type 2 Socket - **Black**

Third-Party Services

Depending on the model and required features, this Chargepoint may integrate with various third-party services. Please note that terms, configuration, and support for these services are typically managed by the service providers themselves and are not controlled by Rolec.

- For models equipped with contactless payment functionality, configuration with the Payter service is required. To avoid delays, this should ideally be completed prior to Chargepoint installation. Please allow up to 10 working days for Payter and associated banking providers to process the necessary administrative tasks.

Product Features

- Plug & go, app, contactless payment (model dependant), or RFID controlled charging
- Choose from 1x or 2x universal charging socket(s)
- Up to 7.4kW or 22kW charging output(s)
- PME fault detection (no earth rod required)
- Supports dynamic load balancing & static load management
- OCPP 1.6 compliant (integrates with any chargepoint management system)
- Over-the-air firmware / software updates
- Built-in AC overload & fault current protection (RCBO)
- Built-in 6mA DC leakage protection
- Dual tamper and breach security notifications
- Lockable front access door
- 5" LCD Screen*
- Cable lock security feature (can be permanently locked by owner)
- MID-approved energy metering
- 4G / Wi-Fi / Ethernet connectivity
- Conforms with PAS 1899 accessible charging standard*
- Strong and durable IP54 / IK10 rated
- Independent back plate for easy wall or post mounting
- OZEV grant fundable (UK only)
- Designed & manufactured in the UK

*Model dependent

NOTES:

- For Chargepoints using mobile communications, a minimum signal strength of 14 CSQ is required at the installation location to ensure reliable operation.
- If using Wi-Fi, the Chargepoint must be within range of a strong and stable wireless signal. In remote areas, users may need to consider installing an external antenna or a Wi-Fi booster to maintain connectivity.
- For commercial installations, Rolec's preferred partner is Monta. However, other supported platforms include Fuuse, Clenergy EV, Virta, and Ampeco.
- For domestic installations, Monta is again the preferred partner, providing free app connectivity and support.

NOTE: This manual assumes the installation of a single Chargepoint when discussing Load Balancing and Load Management. For installations involving multiple Chargepoints, installers should consider using a third-party, OCPP-compliant energy management system for effective connection and monitoring.

If integrating with third-party equipment, it is essential that installers follow the manufacturer's instructions closely to ensure correct installation and compatibility with the charging pedestal.

Dynamic Load Balancing (DLB)

This Chargepoint includes a Dynamic Load Balancing feature designed to prevent overloading the property's electrical supply during vehicle charging. When correctly installed and configured, the system continuously monitors the property's power usage and dynamically adjusts the charging output — increasing or decreasing power to the vehicle based on overall demand.

Rolec Chargepoints are pre-configured with a 13A buffer. This means Load Balancing activates 13 amps below the property's main fuse limit, helping to maintain system stability and prevent nuisance tripping.

NOTES:

1. Load balancing ONLY controls power made available to the VEHICLE. It does not control power to other equipment.
2. If the available power is below 6 Amps, the vehicle may stop charging.
3. Only 1 Chargepoint is to be installed per phase.

Load Management

This Chargepoint supports Load Management, which allows for smarter distribution of power across multiple Chargepoints.

Load Management is typically:

- Controlled via software, either built into the Chargepoint, managed remotely through an online platform, or handled by a third-party system.
- Most commonly used in multi-Chargepoint installations, where it manages how power is distributed—ensuring that available energy is shared efficiently, and that priority can be given to specific Chargepoints when needed.

Demand Side Response (DSR)

This Chargepoint is compatible with Demand Side Response functionality, allowing it to participate in energy grid optimisation.

With DSR enabled, the electricity provider can dynamically adjust the power available to the Chargepoint in response to real-time demand across the local network. This helps support grid stability during peak times and improves overall energy efficiency in the area.

PME (PEN) Protection

This Chargepoint includes an integrated Protective Multiple Earthing (PME) device, eliminating the need for a separate earth rod during installation.

If the supply voltage moves outside the safe operating range—specifically below 207V or above 253V—for a continuous period of 5 seconds, the PME device detects a potential PEN fault within the property and will isolate Line, Neutral, and Earth connections to the vehicle to ensure safety.

- **Undervoltage Protection** – In the event of an undervoltage condition, the PME device will trip to isolate the Chargepoint. If the voltage returns to within the acceptable range and remains stable for 5 continuous seconds, the system will automatically reset, restoring Line, Neutral, and Earth connections and allowing charging to resume.
- **Overvoltage Protection** – In an overvoltage condition, which may pose a risk of damage to the vehicle, the PME device will also trip. However, for safety reasons, automatic recovery is not permitted. Charging will not resume until a manual reset is performed (powering the Chargepoint OFF and then ON again).

Following an overvoltage event, owners or operators should investigate the cause of the condition as thoroughly as possible before resuming use.

Security – Tamper Protection

4. Chargepoints are equipped with a protective boundary to safeguard electrical components and ensure the safety of engineers.
5. In the event of a breach or attempted breach, the Chargepoint will log the incident and trigger an alert.

Product Specification

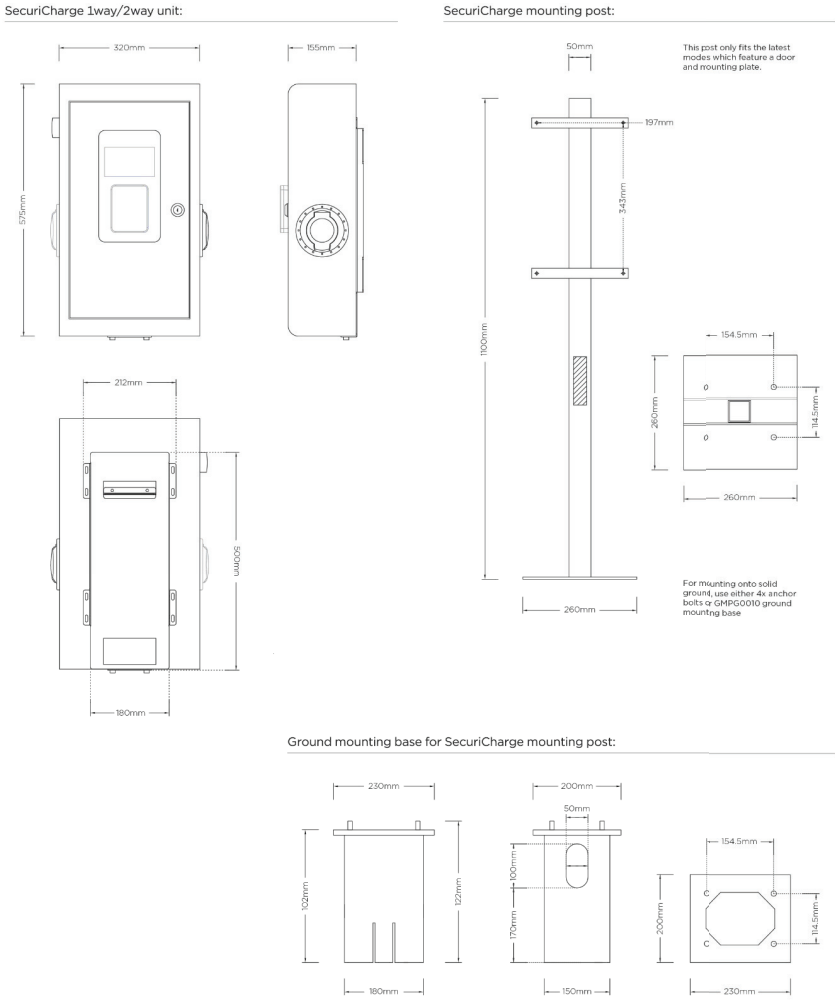

Figure 1 General Arrangement and Dimensions

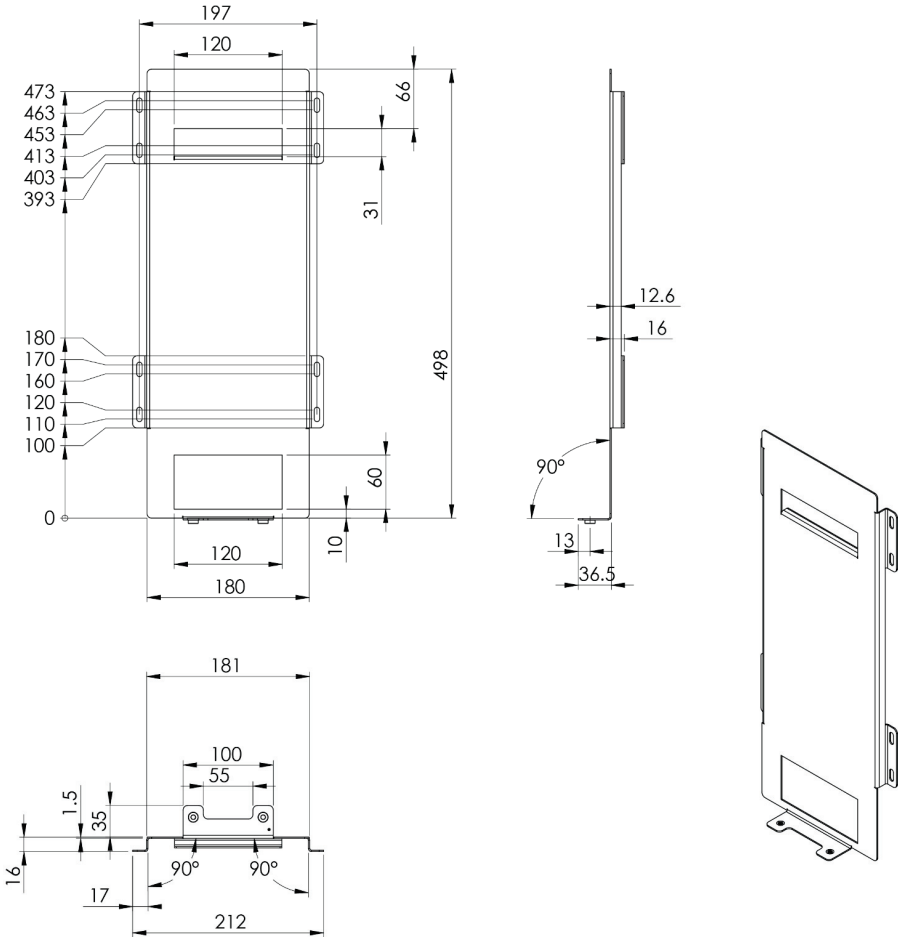

Figure 2 Separate Wall Mounting Bracket

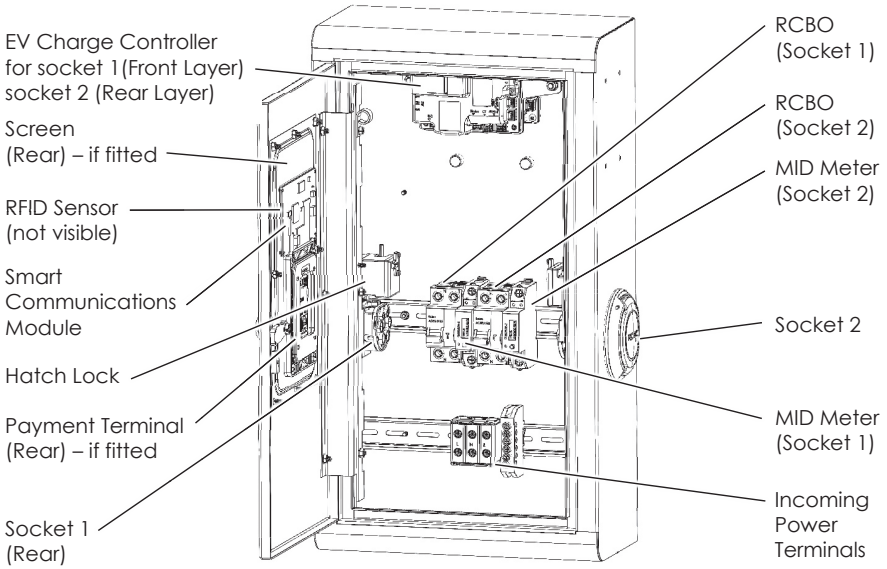

Figure 3 Internal Components – Single-Phase - Typical Locations

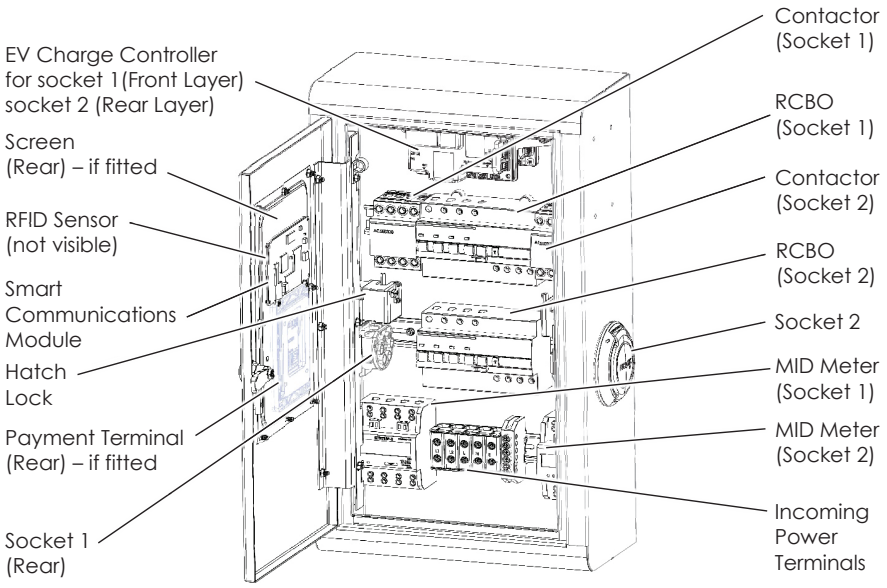

Figure 4 Internal Components – Three-Phase - Typical Locations

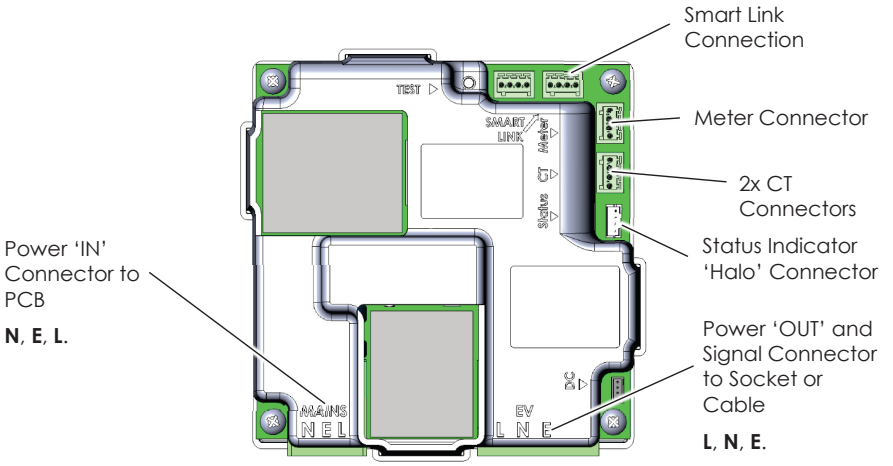

Figure 5 EV Charge Controller

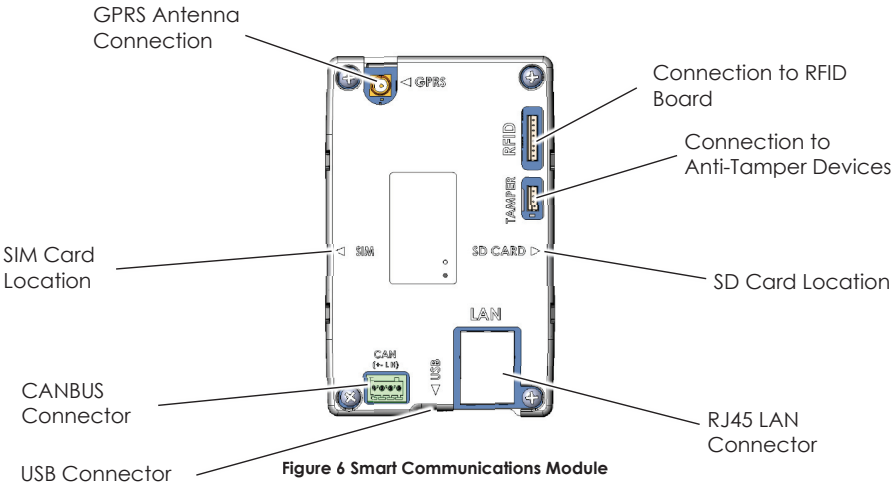

Figure 6 Smart Communications Module

	Connection Type	Charging Output	Input Supply	Unit Colour	Additional Features	Product Code
Single Phase Units	1x Type 2 (IEC 62196) charging socket	Up to 7.4kW (32A) per socket	1x 32A Single Phase 230V AC (±10 %) 50/60Hz	Black	None	ROLEC0311B
				Black	Contactless payment terminal	ROLEC1111B
				Black	LCD screen	ROLEC2111B
				Black	LCD screen & contactless payment terminal	ROLEC3111B
	2x Type 2 (IEC 62196) charging sockets	Up to 7.4kW (32A) per socket	1x 63A Single Phase 230V AC (±10 %) 50/60Hz	Black	None	ROLEC0321B
				Black	Contactless payment terminal	ROLEC1121B
				Black	LCD screen	ROLEC2121B
				Black	LCD screen & contactless payment terminal	ROLEC3121B
Three Phase Units	1x Type 2 (IEC 62196) charging socket	Up to 22kW (32A) per socket	1x 32A Three Phase 400V AC (±10 %) 50/60Hz	Black	None	ROLEC0313B
				Black	Contactless payment terminal	ROLEC1113B
				Black	LCD screen	ROLEC2113B
				Black	LCD screen & contactless payment terminal	ROLEC3113B
	2x Type 2 (IEC 62196) charging sockets	Up to 22kW (32A) per socket	1x 63A Three Phase 400V AC (±10 %) 50/60Hz	Black	None	ROLEC0323B
				Black	Contactless payment terminal	ROLEC1123B
				Black	LCD screen	ROLEC2123B
				Black	LCD screen & contactless payment terminal	ROLEC3123B

Options and Accessories

Product Code	Item Description
RFID0010	RFID card
RFID0020	RFID fob
EVFP0065	SecuriCharge mounting post (fits 1 charger)
EVFP0075	SecuriCharge mounting post (fits up to 2 chargers)
GMHP0010	Ground mounting base for SecuriCharge mounting post
EVCB0020	Root mount protection barrier – 48mm
EVCB0040	Surface mount protection barrier – 48mm
EVPS0010	EV parking sign – A4 landscape
	(Other sizes are available)
ROLEC5000	TAP & CHARGE remote payment terminal
EVPP0100	5m 32A Type 2 to Type 2 charging cable
EVPP0107	10m 32A Type 2 to Type 2 charging cable
EVPP0105	5m 32A Three phase Type 2 to Type 2 charging cable
EVPP0108	10m 32A Three phase Type 2 to Type 2 charging cable
	(Other cables are available, including Type 1 options)
EVRS0030	Remote wall mount for Type 2 charge plug holster
ACSR0525	Perific Max Fuse Protection Device with 3x 900A up to 36mm² Current Sensors
ACSR0535	Perific Max Fuse Protection Device with 3x 900A up to 100mm² Current Sensors
ACSR0545	Perific Max LAN Accessory Input Kit
ACSR0125-F	100A up to 35mm² screened CT clamp with 10m cable

User Interface	• Mobile app
	• Contactless card payment terminal (EMVCo. L1 v3.0 Certified) (model dependant)
	  o RFID reader (ISO14443 A & B (T=CL), Desfire EV2/3 & Mifare Classic protocols)
	  o NFC (ISO18092)
	• 5" LCD display screen (model dependant)
	• RFID reader(s) (MIFARE ISO/IEC 14443 A) (model dependant)
	• Plug & go
	• RGB LED status indicator halo(s) – configurable

Charge Protocol	Mode 3 (IEC 61851-1)
Protection	• AC overload & fault current protection – 40A 30mA Type A RCBO (per socket) • DC fault protection – 6mA • Lightning surge, over temperature protection • PME fault detection – No earth electrode/rod required • Supports automatic dynamic load balancing (may require additional hardware) • Supports static load management (software configurable)
Required External Protection	• Over current protection – A suitably rated MCB or Type-A 30mA device is to be installed at source (dependent on cable type and/or route) • Surge Protection – May be required depending on the installation
Cable Terminals	• Single Phase – 3x 50mm 1P + N + E • Three Phase – 5x 50mm 3P + N + E

Communications	• 4G LTE Cat-1 (built-in nano SIM, subscription required)
	  o LTE FDD: B1/B3/B5/B7/B8/B20/B28
	  o GSM: B2/B3/B5/B8
	• Wi-Fi 802.11 b/g/n 2.4 GHz (2412-2472 MHz / 2422-2462 MHz)
	• NFC 13.56 MHz
	• RJ45 Ethernet connection
	• Bluetooth Low Energy (BLE 4.1) 2402-2480 MHz (for installer configuration purposes)
	• OCPP 1.6J
	• Cyber security – Data encryption level TLS 1.2

Energy Metering	Integrated Class 1 MID compliant metering
Standby Power Consumption	• Charging circuits – < 7.5W (per socket) • Panel heater – 8W • LCD display screen – < 3W (where fitted) • Contactless card payment terminal – 18W (where fitted)
Dimensions	320mm x 575mm x 155mm (W x H x D)
Weight	< 15.5kg (model dependant)
Environmental	• Ingress protection – Enclosure IP54, Socket IP54 • Impact protection – IK10 • Security – Dual tamper & breach notifications (optional in some units) • Operating temperature – -30°C to +50°C • Operating humidity – 5% to 95%
Materials	• Body – Heavy duty 1.5mm Steel applied with 45–55 microns of Zinc primer • Finish – Corrosive resistant, textured Polyester powder coating • Fascia – Tempered glass (where fitted)
Unit Colour	Black, (Grey or White are model dependent - Other colours available upon request)
Certifications & Compliances	• EV Charging Compliance – EN 61851-1:2019, EN 61851-22:2002 • Smart Chargepoints – (SI 2021/1467) • Wiring Regulations – BS 7671:2018+A2:2022 • EMC Compliance – EN 61000-6-3:2007+A1:2011, EN 61000-6-2:2005, 2014/30 /EU, SI 2016/1091, (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) P • Safety Compliance (LVD) – EN 62368-1:2014, 2014/35/EU, SI 2016/1101, EN 60950-22:2006 P • Communications / RED – EN 62311:2008, 2014/53/EU, SI 2017/1206, EN 300 330 V2.1.1 (2017-02), EN 301 908-1 V15.1.1 (2021-09), EN 301 908-13 V13.2.1 (2022-02), EN 301 511 V12.5.1 (2017-03), EN 300 328 V2.2.2 (2019-07), EN 300 440 V2.2.1 (2018-07), (EN 301 908-2 V13.1.1, EN 303 413 V1.1.1) P • Environmental Protection – BS EN 60529:1992+A2:2013 • Impact Rating – BS EN 62262:2002+A1:2021 • Metering – 2014/32/EU, SI 2016/1153 • RoHS – 2011/65/EU, SI 2012/3032 • REACH – 1907/2006, REACH etc. (Amendment) Regulations 2021 • Payter Payment Device - CE, FCC, RoHS, WEEE , REACH, EMVCo, PCI-PTS 6.x, TQM, MasterCard, VISA, American Express, Discover, Diners P • Certifications – CE & UKCA
Warranty	3 years

Rolec Services Ltd are a registered manufacturer (**WEE/AG3499TY**) within the WEEE Recycling Scheme.

- When supplied as B2B EEE the producer invokes regulation 12.2 and passes all WEEE obligations to the B2B end user.

Unpacking

IMPORTANT: This packaging is 100% recyclable. Please ensure all packaging is disposed of responsibly and in compliance with the current regulations in your region

Standard Contents

- EV charge point
- Charge point fixings kit
- Wall bracket (not included with all models)
- Rolec 'EV Connect' Configuration Tag
- Monta QR Code Socket ID Label
- Installation and Operation Manual

1. Inspect the package to ensure the contents are not damaged during transit.
2. Verify that the Chargepoint model and accessories match your order.
3. Do NOT dispose of the packaging until the Chargepoint has been installed and is functioning correctly.

NOTE: Report any damage during transit to the courier first, then to the supplier. Provide photographic evidence of the damage, if possible.

NOTE: Do NOT install incorrect or damaged units. Contact your supplier for resolution.

Installation

IMPORTANT: Installers and End Users must read and understand this manual before installing or using the product.

Installation must be carried out only by qualified and competent professionals in accordance with current regulations applicable to the location of the installation.

- Rolec Services Ltd accepts no responsibility for issues resulting from improper installation.

NOTE: Any damage to the unit, connected systems, or surrounding property due to incorrect installation is the sole responsibility of the installer.

BEFORE Installation

Units that use mobile networks to communicate with a cloud-based back office are equipped with a roaming SIM card that connects to the strongest available signal. It is the responsibility of the end user or installer to verify that a suitable mobile network signal is available before installation.

- Units using mobile networks require a signal strength of 14 CSQ or better.
- Units using Wi-Fi require a strong, stable connection.
- Rolec cannot be held responsible if a unit using mobile networks or Wi-Fi is installed in an area with inadequate signal strength

CAUTION: Equipment Damage – Sensitive Equipment

If performing insulation resistance tests on the power supply cables, it is recommended to conduct the test before connecting the power cable to the Chargepoint. High voltages applied during the test may damage sensitive components if tested after the cable is connected.

1. If possible, complete administrative tasks for third-party services before the installation day. Any outstanding tasks may delay the Chargepoint's activation.
2. Choose a suitable, secure, and environmentally safe location for the unit.
    - Ensure the mounting location complies with current legislation (if applicable).
3. Verify that the available electrical power at the site meets the Chargepoint's required power output.
    - The Chargepoint's output power is automatically managed based on the site details entered into the Configuration Application after installation.
    - Maximum outputs per socket:
        - Single-phase units: 230V/50Hz, 7.4kW (32A)
        - Three-phase units: 400V/50Hz, 22kW (32A)
4. Verify that the Chargepoint model is correct and matches your order.
5. Inspect the Chargepoint and any accessories to ensure they have not been damaged during transit.

NOTE: Report any damage during transit to the courier first, then to the supplier. Provide photographic evidence of the damage, if possible.

- - Do NOT install incorrect or damaged units. Contact your supplier for resolution.

6. Prepare the site as needed by installing a ground mounting base or assessing the surface condition to ensure the Chargepoint can be securely wall mounted.
    - If protective bollards or barriers are required, consider installing them during site preparation.
    - Ensure cables that need to enter the Chargepoint enclosure are positioned to enter from under the pedestal.
7. Familiarise yourself with the location of the incoming power terminals within the Chargepoint.

If a Ground Mounting Base/Post Will be Used:

1. Prepare the ground and position the ground mounting base in the desired location.
    - Ensure the power supply cable, Ethernet cable (if required), and Load Balancing CT cable (if required) are fed upward through the centre of the base.
2. Concrete the base into place and allow it to set.
    - The lip of the base should be 2–3 mm above the surrounding ground level.

If a Wall Mounting Bracket Will be Used:

1. Make sure the mounting location is suitable to accept the Chargepoint and that mains power (and Ethernet and/or CT cable if required) is available.
2. Position the mounting bracket in the desired location.
    - Make sure it is aligned so that the Chargepoint will sit correctly when installed.
    - If needing to install the charge point for accessibility (PAS 1899), make sure the Chargepoint sockets will sit between 800 – 950mm above the ground.
3. Use the mounting bracket as a template and mark the securing hole positions.
    - Do not drill through the bracket.
4. Remove the bracket and drill the securing holes to accept the supplied fixings.
    - If the supplied fixings are not suitable for the location, locally supplied fixings will need to be sourced.
5. Fix the mounting bracket securely to the wall.
    - Make sure it is not twisted or warped in any way when secured.

Install the Chargepoint

IMPORTANT: Installation must be carried out only by qualified and competent professionals in accordance with current regulations applicable to the location of the installation.

CAUTION: Equipment Damage – Sensitive Equipment

If performing insulation resistance tests on the power supply cables, it is recommended to conduct the test before connecting the power cable to the Chargepoint. High voltages applied during the test may damage sensitive components if tested after the cable is connected.

IMPORTANT: Load Balancing

If Load Balancing is required, it must be installed before completing the standard installation.

- Refer to **page 18** for instructions on installing Load Balancing.
- If using a third-party Load Balancing or Load Management system, follow the manufacturer's guidelines.

1. Use the supplied key to unlock and open the enclosure door.
2. If cable entry needs to be in a different location to the pre-made entry points, a suitable hole cutting tool must be used.
   - 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. Carefully lift the charge point and hang it on the hooked top of the mounting bracket.
4. Secure the charge point to the bracket with 2x 'thumb-screws' inserted through the inside of bottom the enclosure.

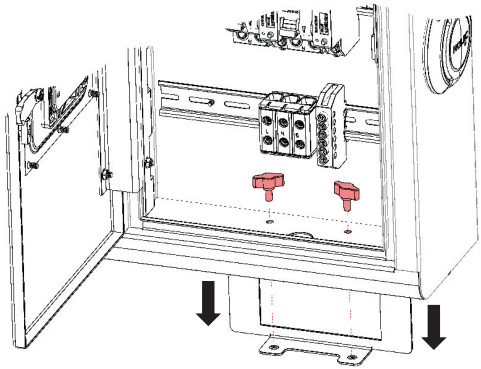

Figure 7 Securing 'Thumb-Screws'

IMPORTANT: If load balancing is required, install it alongside the next steps, before completing the standard installation.

5. If required, install the optional Load Balancing system. Refer to **page 18** shown immediately after these 'standard' installation instructions.
6. When Load Balancing has been installed, return to this point.
7. Route the incoming cables through the enclosure, ready to connect to the appropriate terminals within the enclosure.

8. Terminate the supply cable in the appropriate manner and connect it to the charge point.
9. If required, connect the Ethernet cable to the Smart Communications Module.
10. Make sure ALL debris is removed from the enclosure and that no debris is present on any of the components.

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

11. Make sure cable glands are firmly secured to the Chargepoint and around the cables to prevent the ingress of water or other contaminants.
12. Switch ON the power to the Chargepoint and test the charge point in accordance with the current legislation applicable in the geographical region of the installation.
13. Make sure you are satisfied that the electrical installation is complete then, if required, temporarily close the Chargepoint enclosure for safety and security. Access to the components may be required during the configuration process.

Install Load Balancing

NOTE: This manual assumes the installation of a single Chargepoint when discussing Load Balancing and Load Management. For installations involving multiple Chargepoints, installers should consider using a third-party, OCPP-compliant energy management system for effective connection and monitoring. If integrating with third-party equipment, it is essential that installers follow the manufacturer's instructions closely to ensure correct installation and compatibility with the charging pedestal.

If load balancing is to be enabled on this Chargepoint, it should ideally be installed during the standard installation process. If added at a later date, additional work may be required to allow the CT cable to enter the enclosure.

Connect a CT to the Property

1. **Identify the correct cable**: Position the CT clamp around the Line Conductor cable located between the electricity meter and the consumer unit.
2. **Ensure correct orientation of the CT clamp**: The arrow on the CT clamp must point in the direction of electrical flow toward the consumer unit.
    - Alternatively, if placing the CT on the neutral/negative cable leaving the consumer unit, the arrow must point away from the consumer unit.
3. **Open the CT clamp**: Release the clip to open the clamp.
4. **Install the CT clamp**: Place the clamp around the identified cable.
    - Ensure the arrow is pointing in the correct direction.

Important: Only one cable should pass through the CT clamp—no additional cables.

5. **Secure the CT clamp**: Close the clamp and fasten it securely with the clip.

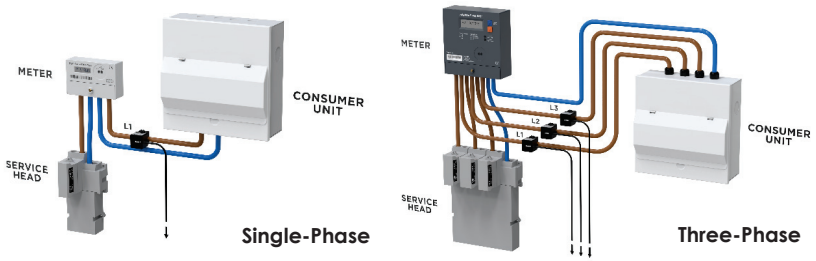

Figure 8 CT Clamp Positioning

Extend the CT Cable

1. Maximum Extension Length: If necessary, the CT cable can be extended up to a maximum of 100 meters.
2. Minimise Signal Loss: To minimise interference and signal degradation, keep extension cables as short as possible.
   - - Extensions of 20 meters or less are recommended for optimal performance.
3. Cable Type Requirements:
   - Extension cables must be a screened 'Twisted Pair'.
   - A CAT6 network cable with a screened twisted pair can be used.

NOTE: Twisted pairs within a CAT6 cable are color-coded.
- - Do NOT use conductors with mismatched colours.

Connect the CT Cable to the Chargepoint

IMPORTANT: Ensure that a suitable cable gland is installed in the Chargepoint enclosure to properly secure the CT cable and seal the enclosure

1. **Locate the EV Charge Controller Enclosure**: Find the CT connector on the circuit board.
2. **Connect the CT Wires**: Attach one CT clamp wire to the H+ terminal on the circuit board connector.

   Attach the other CT clamp wire to the H- terminal on the circuit board connector.

   - The CT wires do not have a polarity, so can be connected in either direction.

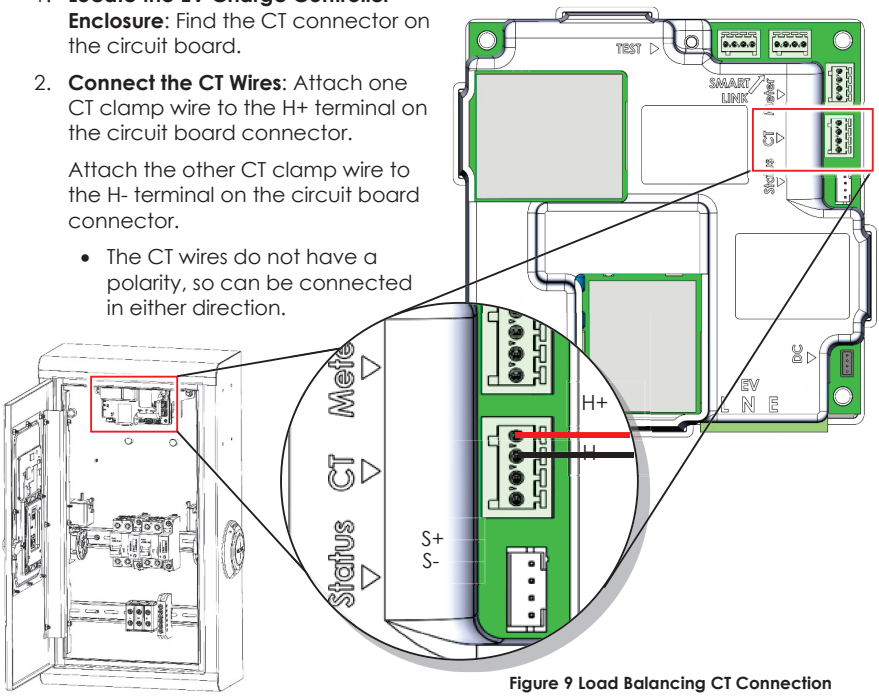

Figure 9 Load Balancing CT Connection

NOTE: The EV Charge Controller may in a different position/orientation to that shown above.

NOTES:

1. If extending the CT cable or adding a solar monitoring CT, use the cable colours of your choice.
2. The lower two terminals on the CT connector can be used to attach a CT for a solar system.

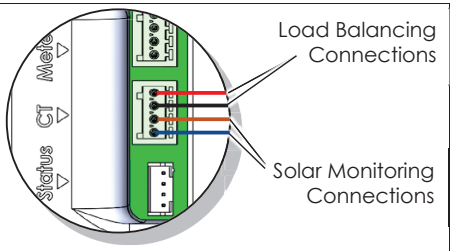

Figure 10 CT Connections for Load Balancing and Solar Monitoring

Configure Load Balancing

Load balancing is configured using the Smart Application during the online configuration process.

1. **Labelling the Main Fuse or Circuit Breaker**:
   - The main fuse or circuit breaker in the property's consumer unit should be labelled with the maximum load.
   - The load balancing system must be set to this same value (or lower).

   IMPORTANT: Do NOT set the load balancing value higher than the maximum rating. If the maximum value is reached, load balancing will not initiate, and power to the property will be lost.

2. **Load Balancing Settings**:
   - For domestic systems, load balancing can be set for properties with 60 Amps to 100 Amps.
   - For commercial systems, load balancing can be set for properties with 60 Amps to 255 Amps.

Configuration

Overview

Rolec Chargepoints are compatible with charging applications that comply with Open Chargepoint Protocol (OCPP) 1.6J. If you are not using the Monta service, there are several other service providers available within the configuration application. While these providers have been tested and are known to work with the Chargepoint, you may require assistance from the selected provider to establish a working connection to their network.

NOTE: OCPP compliance does not guarantee compatibility 'straight out of the box'. There are many variables within the specification that can affect the features available.

There is the option to use non-listed service providers. Assistance from the provider may be required to complete the configuration, and Rolec cannot guarantee that all features will be available.

IMPORTANT: Chargepoint management and operation applications, such as those provided by Monta or any other service provider, are not part of the Rolec product. Any agreements, contracts, or fees related to these services are between you and your chosen provider.

For additional guidance, an online video configuration guide is available via the QR code provided here.

Chargepoint Onboarding

Onboarding is the process of adding Chargepoints to a network. It must be done for each site and again if new Chargepoints are added later. Onboarding may be done before installation so the system is ready when the Chargepoints are commissioned. To do this, you will need the serial numbers which are on the packaging, product label, socket tag, or in the Statement of Compliance email sent to the purchase order address.

If installing many Chargepoints at once, Rolec may be able to help using serial numbers linked to your order – Contact the onboarding team (using the number shown on page 1). For smaller installs, it is quicker to register them yourself on the online onboarding site.

1. Scan the QR code shown here to access the onboarding site. Alternatively, enter https://onboarding.rolecserv.co.uk/ into a browser.
2. If you are using Monta as your back-office service provider, click the GET STARTED button.
    - If you are not using Monta, select the Alternative back-office option below the button, then enter your contact details and the Chargepoint serial number(s).

Onboarding to Monta

NOTE: The process is slightly different if choosing a commercial installation, but they are both very similar and you will be guided by the screens that are shown.

3. **Choose Installation Type**: Within the onboarding site, select whether the installation will be for a domestic or commercial installation.
4. **Enter Contact Details and Serial Numbers**: Enter your contact details and the serial number of the Chargepoint(s) to be added. If more Chargepoints are required, they can be added after the first one has been entered.
5. **Validate Serial Numbers**: The system will check the serial numbers to ensure they are valid. Any problems will be flagged, and if Chargepoints cannot be added, please contact the Rolec onboarding team.
6. **Complete the Process**: Follow the instructions on the screens to enter the required information and complete the onboarding process. For more information or assistance about Monta or onboarding, contact the onboarding team.

Chargepoint Commissioning

Preparation:

- **OCPP 1.6J** is supported for Chargepoint management.
- Additional setup may be needed for **Backoffice** providers.
- Service agreements are between the user and the provider, not Rolec.

Required items:

- **Smartphone** with camera, QR code reader, Bluetooth, and internet access.
- **Rolec Connect App.** Download via the QR Code shown here.
- **Rolec Chargepoint ID label.**

Download on the App Store

GET IT ON Google Play

Configuration

1. **Power on the Chargepoint**
   Make sure the Chargepoint is connected to the power supply and switched on before beginning the configuration process.
2. **Download and Sign in to the App**
   Download the Rolec Connect App from either the Apple App Store or Google Play Store, depending on your device. Sign up by entering your email address and full name (Image 1). You'll receive a magic link to log in and access the app.
3. **Add the Chargepoint**
   From the main menu, tap "**Add**" Chargepoint to begin the setup process. Choose the correct Chargepoint model (Image 2) from the list to ensure you're configuring the right unit.
4. **Scan and Connect to the Chargepoint**
   Scan the QR code label located on the Chargepoint socket or inside the unit (Image 3). Alternatively, you can search for the Chargepoint via Bluetooth. Once detected, connect to the unit and enter the password (Image 4) shown on the QR code label.

1

2

3

4

5. **Apply Settings for Your Installation**
   Apply the relevant settings based on the Chargepoint model and your site's electrical setup. Configuration is divided into the following sections:

- Specification - (Image 5) Set power output, voltage, and current limits.
- Back Office - (Image 6) Connect to the Chargepoint management platform if required.
- Network- (Image 7) Configure Wi-Fi, mobile, or Ethernet settings.
- Controls - (Image 8) Set access permissions and operational controls.

Ensure each section is accurately configured for your specific installation. Depending on the model and firmware being used configuration options/screens may vary slightly to those shown here.

5

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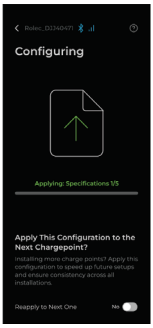
6. **Save and Test the Configuration**
   Once all settings are applied, push the configuration to the Chargepoint (Images 9,10). Then test the connector(s) to confirm the Chargepoint is functioning correctly (Images 11,12).

9



10

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12

Chargepoint Installation Completion

1. Make sure:
    - The Chargepoint is securely mounted at the designated location.
    - The Chargepoint enclosure is free of debris.
    - The cables entering the Chargepoint are secure.
2. Verify the electrical installation is complete:
    - Incoming cables are properly connected to the relevant devices within the enclosure.
    - All electrical connection points are secure.
    - All required tests have been performed in accordance with the current legislation applicable in the geographical region of the installation.
    - The Chargepoint has been installed in compliance with the current Electrical Wiring Regulations, including recommended earthing arrangements, applicable in the geographical region of the installation.
3. Close and secure the front door of the enclosure.
4. If necessary, remove any handling marks from the enclosure using a soft, damp cloth.
5. Ensure this manual is given to the Owner/Host before leaving the site.

Operation

As a "Smart" product, this Chargepoint can be operated and/or monitored by a variety of web-enabled devices. Alternatively, it can be operated manually using an RFID card/fob.

1. The LED status indicator shows whether the Chargepoint is available for use.

Status Indicator Guide	
Flashing blue light	Ready for charge – cable not connected to vehicle.
Flashing green light	Ready for Standard Charging.
Fixed blue light	Cable plugged in but not charging.
Fixed green light	Charge in progress.
Fixed red light	Potential earth leak fault detected by the 6mA DC device.
Flashing red light	Potential Communications Fault.
Flashing alternate red and green lights	PEN fault detected by the TruePEN device and charging has been stopped. Indication is cancelled when the TruePEN device is reset, and normal operation is restored.
Fixed amber/yellow light	Firmware update is in progress. Do not interact with the Chargepoint until the LED returns to Flashing blue.
Flashing magenta light	Firmware update has failed. Following reset of Chargepoint, flashes for 20 seconds before attempting update again.
Flashing alternate red and yellow lights	Over temperature fault.
No light	No power to the unit or the breaker within the unit has tripped and needs to be reset.

Faults are reported using the standard OCPP codes indicated in the status message,

- Under and Over Voltage (PEN),
- Power Meter Failure (not being able to read meter),
- EV Communications Fault

2. Make sure the status indicator shows that the unit is ready to charge.
3. Connect the charging cable to the Chargepoint (socket Chargepoints only).
4. Connect the other end of the cable to the vehicle.
5. Use the mobile application to start the charge session.
6. Alternatively use an RFID card/fob to start the charge session.
    - The Chargepoint will issue a 'beep' sound to indicate the card has been recognised and accepted.
7. If you are present when power for charging is made available, you will see the status indicator change to a fixed green light.

NOTE: Default Hours and Randomised Delay

Following the initiation of the charge session, UK regulations require Chargepoints of this type to apply power for charging during 'default' (off-peak) hours, regardless of when the charge session was initially started.

- When the off-peak period is reached, power for charging will be applied after a randomised delay of up to 10 minutes. This is to protect the power network from spikes in demand that would occur if thousands of Chargepoints are activated at the same time.
- If required, charging status may be checked via the smart application.
- There is the option to override the default setting and charge during the Peak period, but this may result in higher electricity costs or other conditions applied by the electricity provider.
- Public Chargepoints are not subject to delayed start regulations but may still be applied by the app operator.

NOTE: Peak and Off-Peak Charging Hours – As set by the UK Government:

- **Peak Hours**: 8am – 11am and 4pm – 10pm on weekdays.
- **Off-Peak**: All hours outside of the above peak hours.

These settings help reduce the strain on the electricity grid and potentially save on electricity costs during off-peak times.

End a Charging Session

1. A charging session can be ended by any of the following methods:
   - Use the mobile phone application.
   - Place the RFID card/fob (associated with the account) onto the card sensor.
   - Remove the cable from the vehicle.
2. Once the cable has been removed from the vehicle:
   - Remove the cable from the Chargepoint.
   - Make sure the socket flap is closed when not in use.
   - Store the cable safely and in accordance with the manufacturer's instructions.

NOTE: If the Chargepoint has a cable lock facility that permanently secures the plug into the socket, step 2 can be ignored, and the cable can remain connected to the Chargepoint.

- Cables should be loosely coiled and hung on a cable hanger with the plug securely inserted into the holster to prevent water ingress.
- Some makes of cable may not be as robust as others. The term 'permanent' means that the cable does not need to be removed after every charge session. However, cables must be unlocked and removed from the socket on a regular basis to check for contamination of the contacts. Unplugging and reconnecting the plug and socket also helps ensure a good electrical connection and relieves any strain on the components.

About Charging Cables

The points below apply to Rolec cables and will be similar for cables supplied by other manufacturers. Always follow the manufacturer's advice.

1. Charging cables should be fully uncoiled when in use.
2. Charging cables should not be stretched or placed under strain on the Chargepoint or vehicle connections.
3. Charging cables should be routed between the Chargepoint and the vehicle so as to avoid obstruction or creating a trip hazard.
4. Charging cables must NOT be left connected to the Chargepoint when not in use unless permanently locked into the socket.
5. After use, charging cables should be removed from the vehicle first, and then removed from the Chargepoint.

IMPORTANT: Some Chargepoints feature a 'semi-permanent' anti-theft cable locking device allowing the cable to be left connected at the end of a charge session. However, some makes of cable are less robust than others, and to prevent damage and ensure a good connection, the cable must be unplugged on a regular basis, allowing the connectors to be checked for damage or contamination.

CAUTION: Equipment Damage

Socket Chargepoints include a cable locking device (Hatch Lock) to reduce the opportunity of cable theft. The lock is engaged when the charging session is started and disengaged when the session ends. Attempting to remove the cable from the Chargepoint before the session is ended or before disconnecting the cable from the vehicle may cause the lock to become permanently engaged and prevent removal of the cable.

6. Charging cables should be stored in a dry, undercover location where the cable and plug cannot be damaged or contaminated.
    - If the plugs are dry, make sure the rubber caps are fitted to prevent the entry of debris.
    - If the plugs are wet, allow them to dry before fitting the rubber caps.

IMPORTANT: Rubber plug caps will not fully protect against the ingress of water, but may prevent water from escaping, which over time may overcome the IP rating of the plug assembly.

7. Charging socket covers (flaps) should be closed after the plug is removed.
8. Damage to charging sockets should be inspected by an appropriately qualified engineer, and the charging pedestal should be electrically isolated if damage affects safety.

Maintenance

Charge point Maintenance

IMPORTANT: National/regional legislation may override any maintenance advice provided below. Always comply with the legislation.

NOTE: In the event of a hardware issue, always contact your installer first.

- If damage has been sustained to communications devices and/or other 'Smart' components, it is recommended that an approved Rolec installer is called to perform the repair.
- Damage caused to the equipment by misuse, lack of maintenance, inappropriate maintenance or modification is not covered by the manufacturer warranty.

IMPORTANT It is the owner's responsibility to make sure the charge point is maintained in a safe and useable condition. Failure to maintain the equipment may invalidate the warranty. If required, consult/contract an appropriately qualified electrical engineer.

1. Regularly clean the external surfaces of the equipment with a damp cloth.

   Depending on the working environment, external cleaning and inspection may be required more regularly than other maintenance tasks.

CAUTION: Equipment Damage

To avoid damage to the surface finish, and/or internal components do NOT use:

Abrasive materials, Mineral or petroleum solvents / degreasers, Hose pipes, Jet washers or Steam cleaners.

2. Regularly inspect the exterior of the equipment for visual damage.
   - If damage affects safety, isolate the equipment and prevent its use until appropriate repairs have been completed.
3. If required, remove debris from around the charging socket/plug(s). Do **NOT** push tools into the contacts.
4. Perform a functional test of the switchgear every six months by pressing the test button on the switchgear and making sure that it operates to remove power.
   - If the switchgear fails the test, isolate the equipment and prevent its use until appropriate repairs have been completed.
5. Once a year (as a minimum), the charge point and switchgear should be electrically inspected/tested by an appropriately qualified electrician in accordance with the current legislation for the installation location.
   - If the equipment fails the inspection, isolate the equipment and prevent its use until appropriate repairs/maintenance have been completed.
   - A record of the tests, results and any maintenance must be kept and may be required to support warranty claims.
6. Clean the contacts of the SIM card in the Communications Device if mobile connectivity is poor or intermittent.

7. Do NOT allow charging cables to become contaminated with water (or other substances).
    - Always store cables in accordance with the manufacturer's instructions.

NOTE: Rubber 'dust' caps that may be attached to cables are only suitable for short term protection, or protection whilst stored in an indoor environment.

They are not designed to fully protect against water ingress.

Commercial businesses with EV charge point s should have a Site Maintenance Plan that considers the type, frequency and intensity of use of the equipment on site, and which schedules maintenance as appropriate to keep the equipment in good working order.

EV charging equipment should be included in the electrical element of the site maintenance plan and must be performed by an appropriately qualified engineer in accordance with applicable regulations for the region of use.

A typical maintenance (inspection and testing) schedule is provided on the next page. This schedule alternates on a quarterly basis between a shorter and longer series of steps but the frequency of which this work is performed must be determined in line with the operator's Site Maintenance Plan.

NOTE: Failure to properly maintain the charge point will invalidate the warranty.

About Software Updates

If/when software updates for the charge point are released, you will be offered the update via the management application. If you accept the update, the new software will be downloaded in the background and will not normally affect charging activity.

When the software has fully downloaded to the charge point it will be installed to the systems that need it.

1. The LED Status Indicator will illuminate RED to indicate that the charger cannot be used.
2. The charge point will shut down then restart and the software will begin the update. While the update is in progress the charge point cannot be used.
3. The LED Status Indicator will illuminate AMBER/YELLOW for up to 5 minutes or so, (depending on the size of the update) until the update is complete.
4. If the charge point has more than one charging socket or cable, the last step will be repeated for each of the remaining sockets/cables.
5. When the LED status indicator for all sockets/cables flashes BLUE, the charge point is ready for use again.

NOTE: As with a phone or computer, updates of the charge point software need a strong stable connection.

Suggested Inspection and Testing

A record of inspection, testing and maintenance must be kept and may be required to support warranty claims.

1st and 3rd Quarter

External Visual Inspection:

- Check for physical damage.
- All warning labels present and legible.
- Status Indicators operating and displaying correct status.
- If installed, check the condition of the charging socket, contacts and socket flap.
- If installed, make sure the access/cable lock is operational.

Internal Visual Inspection:

- Check for physical damage.
- Visual inspection for any heat degradation.
- No foreign bodies or other contamination present.

Clean the enclosure.

2nd and 4th Quarter

External Visual Inspection:

- Check for physical damage.
- All warning labels present and legible.
- Status Indicators operating and displaying correct status.
- If installed, check the condition of the charging socket, contacts and socket flap.
- If installed, make sure the access/cable lock is operational.

Internal Visual Inspection:

- Check for physical damage.
- Visual inspection for any heat degradation.
- No foreign bodies or other contamination present.

Electrical:

- Make sure wires/terminals are secure.
- Check Voltage and Polarity.
- Check operation of switchgear.
- Test earth fault loop impedance.
- Test power outlets using a load simulator.
- Clean SIM contacts if required.

Clean the enclosure.

Advice provided above does not override any regulations that may apply in the region of use. Quarterly Inspection and testing (maintenance) is recommended where charge point use is frequent and/or intensive. Operators may consider increasing or reducing elements of the maintenance frequency to a level that matches the pattern of charge point use but should, as a minimum, meet the requirements of the current regulations.

INSTALLER
Please attach
charge point ID
label here

CUSTOMER, please
find your charge point
ID label here

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The latest version of this publication can be downloaded at https://www.rolecserv.com/downloads-ev-charging

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EVSM-V03-R0SecuriChargeIntelligentEVChargingUnit-InstallationandOperationManual

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