

Ohme Cable Product Manual



This manual covers the following product variants:

Product Number	Connector variants
OHME0201GB001	Type 2 to Type 1
OHME0202GB001	Type 2 to Type 2 (cover image)
OHME0301GB001	UK 3-pin to Type 1
OHME0302GB001	UK 3-pin to Type 2
OHME0401GB001	Commando 32A socket to Type 1
OHME0402GB001	Commando 32A socket to Type 2
OHME0701EU001	Schuko EU plug to Type 1
OHME0702EU001	Schuko EU plug to Type 2







Contents






Safety Precautions	4
Product Specification.....	6
Product Description	6
Installation.....	7
Instructions for Use	9
Grid-sympathetic Charging.....	10
Indicator Lights.....	10
Troubleshooting.....	11
Cleaning	11
Maintenance.....	11
Standards Compliance	12
Disposal.....	12
Contact Details.....	13
Manufacturer's Warranty	13
Limitation of Liability	14
Terms & Conditions	14

Safety Precautions

This document contains important safety information relating to your Ohme Cable. Please retain this document for future reference.

Please read the document fully before using the Ohme Cable. Not following the safety instructions can result in electric shock, fire, serious injury or death.

	Do not use the Ohme Cable with extension leads or multi-plug adaptors
	<p>Some household sockets are not suitable for the high continuous demands of electric vehicle charging. Sockets must be assessed by a competent and qualified electrician to ensure they are suitable</p> <p>For Schuko / EU variants note that the Ohme unit will operate at 16 Amps and household sockets may not be capable of delivering this amperage for long periods of time</p>
	The cable should be inspected periodically to check for damage to the cabling and the enclosure. Do not use if the product is defective or appears damaged. Contact the Ohme support centre for advice
	Do not attempt to open, repair, tamper or modify the Ohme Cable in any way. There are no user-serviceable parts
	We strongly recommend that a competent person (e.g. qualified electrician) installs and/or inspects the installation to check for safety and supply adequacy before use
	The overall installation should be in accordance with the IET Wiring Regulations and the IET Code of Practice for Electric Vehicle Charging Equipment

	Do not disconnect the Ohme Cable from the wall socket/power supply when charging. Always disconnect from the vehicle first
	Handle the Ohme Cable with care. Do not expose any part of the cable to severe forces, impact or sharp objects
	The Ohme cable is weatherproof – it can withstand heavy rain – however, do not submerge any part of the Ohme Cable in water. For example, check that the Ohme Cable will not rest in a puddle during inclement weather
	The Ohme Cable is only intended for vehicles that do not require ventilation during charging
	You may clean the Ohme Cable, when unplugged, with a soft damp cloth. Do not use solvents or abrasives

Product Specification

Voltage	220 – 250 V
Frequency	50 / 60 Hz
Power output	3-pin: 10 Amps Schuko: 16 Amps Commando: 32 Amps Type 2: 32 Amps
Operating Temperature	-25°C to 45°C
Storage Temperature	-40°C to 85°C
Cable length	5 metres
Residual current function	Type A 30mA DC 6mA
Overcurrent protection	Not fitted
Ingress protection	IP55 + partial immersion

Product Description

The Ohme Cable is an Electric Vehicle (EV) charging cable, comprising:

- Power input connector
- Charge controller, including residual current protection device
- Charging cable
- Vehicle connector

The Ohme Cable is supplied in various connection formats to make installation and use as easy as possible.

All Ohme Cables are to be used with single phase electrical supplies.

The cable is paired with the Ohme smartphone app, which allows users to view their charging history, control their charging to minimise cost, minimise carbon content of their energy use and help to maximise the battery life of their vehicle.

The product conforms to the latest safety standards including functions to disconnect the power supply if AC or DC current leakage occurs.

Installation

The Ohme Cable comes in four power input connector types:

- UK 3-pin plug (BS1363)
- Schuko / European plug
- 32A Commando plug (IEC 60309)
- Type 2 (IEC62196)

3-pin Plug

The Ohme Cable can be plugged into a standard UK socket to charge your vehicle. We recommend that your electrical system is inspected by a competent electrician to ensure the socket and circuit is safe for the continuous demands of EV charging.

Despite the notional rating of UK 3-pin plugs being 13A, most domestic sockets cannot safely deliver this amperage for long periods of time. Therefore, 3-pin Ohme units have been derated to 10A to avoid the potential for overheating.

For frequent charging, we recommend that an external dedicated socket is installed by a competent electrician to avoid any risks of overload to existing electrical systems.

It is not necessary to inform your local DNO (Distribution Network Operator) that a charge point has been installed.

Do not use multi-plug adaptors or extension leads with the Ohme Cable. Many of these are not suitable for the continuous, high loads drawn by electric vehicle charging, nor are they suitable for use outside.

Schuko / European Plug

The Schuko version of the Ohme cable can be plugged into a standard European socket. The unit is rated at 16A and therefore it is important that the supplying circuit and socket is safe to deliver this amperage for continuous/long periods.

Standard sockets that cannot safely deliver 16A for long periods of time must not be used. We recommend that your electrical system is inspected by a competent electrician to ensure the socket and circuit is safe for the continuous demands of EV charging.

It is recommended that a dedicated socket is installed externally, or close to the vehicle parking location, that is rated to deliver 16A continuously.

Type 2

The Type 2 Ohme Cable has been developed to “upgrade” an existing charge point to smart. This cable simply plugs into a Type 2 untethered charge point. There is no additional installation necessary.

The Ohme Cable will “talk to” your charge point and make sure that it does not charge above the rating of your unit. It is therefore safe to use a 32 Amp Ohme Cable, for instance, with a 16A charge point.

Commando Socket

Commando sockets are widely used in industry to power small industrial appliances, similar to the sockets you would see at a caravan park. They make great, simple, inexpensive connectors for your Ohme Cable. They are readily available rated at 32 Amps / 7.4 kW to fast charge your EV.

For use in a domestic environment, “interlocked” Commando sockets are recommended. These are fitted with a switch so the power can be isolated before the connector is removed. Your electrician will be familiar with these sockets.

Included with the Ohme Cable is a short “Guide for Electricians” document, which will make sure your electrician knows exactly what you need them to do.

Instructions for Use

Starting a charge session

Firstly, connect the Ohme Cable to the power supply socket or the charge point. The Ohme Cable will automatically initialise, check for faults and initialise and connect to the Ohme cloud service.

Secondly, connect to the vehicle. The vehicle will begin charging. Once the cable has connected to the Ohme service, a charging profile will be sent to the cable based on your requirements and preferences.

(Note: for the Type 2 input connection, the Ohme cable will not power up until the unit is connected to the vehicle)

Stopping a charge session

Disconnect the cable from the vehicle first in the normal way. If required, then remove from the power supply socket.

Getting the App

Download the smartphone app by searching for “Ohme” from the Android or Apple App Store.










Grid-sympathetic Charging

The Ohme platform is designed to help reduce power demand in times of stress to the local and regional electricity networks. As the adoption of EVs progresses, these features will become more important to avoid expensive and disruptive upgrades to electricity networks.

To facilitate this, charging demand may be limited in times of extreme stress to the electricity network to prevent power outages. This will always be done in a way to limit the effect on users of the platform. We understand that EV drivers are reliant on their vehicles. If you have any queries or concerns, please contact us for more information.

Indicator Lights

The Ohme Cable has an LCD display and LED charge indicator lights.

	Waiting, ready to connect to the car
	Connected to the car, not charging
	Connected, waiting for car to start charging
	Dumb charging
	Smart charging
	Electrical Fault
	EV Fault

Troubleshooting

Issue	Possible Cause
Ohme Cable does not power up	Check electrical supply to the Ohme Cable or separate chargepoint. Supply MCB or RCD may have tripped.
Ohme is powered up but vehicle does not charge	Check cable is fully inserted. Possible earth impedance issue as some vehicles do not charge if earth impedance is high. Try in a different location. Contact Ohme Support.
Cannot link the Ohme Cable to the app	The cable can be remotely linked to the app. Contact Ohme Support for assistance.

If there are any queries or issues regarding using the Ohme Cable, please contact Ohme Support via email: help@ohme-ev.com, telephone 0203 375 1586, or send a direct message on Twitter to @OhmeEV.

Cleaning

The Ohme cable can be cleaned with a soft damp cloth. Avoid the use of cleaning agents and solvents.

Maintenance

The Ohme Cable is maintenance free. If the cable is defective or damaged, please discontinue usage and contact the Ohme Support Centre for advice.

Standards Compliance

The Ohme Cable is classed as an IC-CPD (In-Cable Control and Protection Device) as described in IEC62752:2016.

The product complies with:

- IEC62752:2016 In-cable control and protection device for mode 2 charging of electric road vehicles (IC-CPD)
- EN61000-6-3 Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments
- EN61000-6-1 Electromagnetic compatibility (EMC). Generic standards. Immunity standard for residential, commercial and light-industrial environments
- IEC62196-1 Plugs, socket-outlets, vehicle connectors and vehicle inlets
- IEC60309-2 Plugs, sockets and couplers for industrial purposes
- BS 1363-1 13 A plugs, socket-outlets, adaptors and connection units. Specification for rewirable and non-rewirable 13 A fused plugs

Disposal



Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)

This symbol on the product and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product to designated collection points where it will be accepted free of charge.

Alternatively, in some countries you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For business users in the European Union:

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union:

This symbol is only valid in the European Union. If you wish to discard this product please contact your local authorities or dealer and ask for the correct method of disposal.

Further information on disposal and general recycling can be found at www.complydirect.com/the-recycling-room.

Contact Details

Ohme Support can be contacted at:

Address: Ohme Technologies Ltd.
Unit 74
Penrose Wharf
Penrose Quay
Cork
Ireland
T23 HF51

Email: help@ohme-ev.com

Telephone: +44 (0) 20 3375 1586

Manufacturer's Warranty

The Ohme Cable is protected by a manufacturer's warranty for 12 months from the date of purchase or delivery, whichever is later.

The warranty covers any defects in materials or workmanship under normal use. During the warranty period, Ohme will refund, repair or replace, at its discretion, at no charge, products or parts of the product which prove defective because of improper materials or workmanship under normal use and maintenance.

Ohme will either repair the product using new or refurbished replacement parts or replace the product with new.

A replacement product assumes the remaining warranty period of the original product or for 180 days from the date of the replacement or repair, whichever is longer.

The warranty does not cover any issues that are caused by conditions, malfunctions, or damage not resulting from defects in materials or workmanship. The warranty does not cover damage or malfunction directly or indirectly caused by normal wear and tear, abuse, misuse, negligence, accident, lack of or improper use, including but not limited to:

- Failure to follow the instructions and warnings provided in the product literature
- The environment or “Acts of God” such as fire, earthquake, flood
- General appearance of the product such as damage to paint, labels, scratches, dents and cracks
- Any repair, alteration or modification to the product other than those authorised by Ohme

You may have other legal rights under local laws in addition to the rights under this manufacturer’s warranty. Contact Ohme in the first instance to discuss your options.

To initiate a service from Ohme under the manufacturer’s warranty, it is necessary to contact Ohme first to assist in determining the most appropriate solution.

Limitation of Liability

No liability will be accepted for any loss, costs or damage as a consequence of using or misusing the product except, and only to the extent, where this is caused by our negligence.

Terms & Conditions

For Terms & Conditions of the product please visit our website at www.ohme-ev.com.

Ohme
The intelligent EV charger