



Duo Wide AC44

Manual

ecotap[®]
A brand of **legrand**

TABLE OF CONTENTS

1	Introduction	3
2	General	3
2.1	Warranty	3
2.2	Symbols used in this manual and on the system	3
3	Device description	4
3.1	Use	4
3.2	Accessories	4
3.3	Safety features	4
4	Safety	4
4.1	Safety regulations	4
5	Mandatory checks before initial use	5
6	User / installation manual	5
6.1	Mounting the casing on the foundation	5
6.2	Opening and closing the charging station	9
6.3	Mounting casing pipe	9
6.4	Cable entry and securing with strain relief	9
6.5	Connecting power cable to terminals	9
6.6	Connecting the grounding electrode/conductor	10
6.7	LED indication	10
6.8	Fuses per connection value	10
7	Maintenance	10
8	Transportation and storage	10
9	In case of malfunctions	10
10	Operation and control of charging station	11
11	Technical specifications	11
12	Contact details supplier	13
13	EG conformity statement	13

1. INTRODUCTION

Thank you for choosing for an Ecotap® charging station. This manual is regarding the charge point Duo Wide AC44. This manual contains important information for properly and safely installing and using the charging station. This charging station is designed for vehicles that are equipped with a mode 3 charging system that complies with IEC 61815-1 (version 2.0) and a plug system that complies with VDE-AR-E 2623-2-2. Together with the vehicle and system, the charging station will select the best option for charging the vehicle quickly and safely. The entire charging station complies with the 2014/35/EU directive dealing with the harmonisation of regulations regarding electric materials within certain voltage limits (a recast of all previously published versions). This manual explains how to safely install and use the charging station. This manual was drawn up in such a way as to ensure the charging station's maximum functioning and lifespan. This manual was drawn up with great care. However, should anything remain unclear after reading it, please contact your supplier before you install the charging station. We cannot guarantee that this charging station will function properly unless it is installed by an authorised or certified installer / mechanic. Read this manual carefully before you install or use the charging station. Save this manual and store it near the station so that the instructions and safety regulations will always be readily available.

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This is an English translation of the original Dutch manual.

2. GENERAL

2.1 Warranty

The Ecotap® B.V. General terms and conditions for delivery apply here. Ecotap® B.V. cannot be held accountable for any injury or damage to goods should the charging station be altered, damaged, refitted or expanded upon with other components, or not used in accordance with the instructions and conditions set out here.

2.2 Symbols used in this manual and on the charging system

Symbol	Meaning
	Pay attention! Important instruction
	Electrical hazard
	For maintenance: first disconnect the installation from its power supply and test it to make sure there is no voltage left, before engaging in any maintenance activities
	Wear special gloves.
	Disconnect the electrical installation from its power supply



Reading this manual is mandatory

3. DEVICE DESCRIPTION

3.1 Use

This charging station is especially designed for public areas.
The station can be installed in various environments: in paved areas, in open soil/sand, or in asphalt surfaces.



The following environments, however, are not suitable:

- All grounds that can flood
- Loading quays
- Slope at an angle of more than 4%

3.2 Accessories

The following accessories will not be provided: tools, foundation.

3.3 Safety provisions

- 2 half euro profile cylinders
- Extra caps behind front cap
- 12 Volt control voltage
- Components comply with IP2 at least
- Strain reliefs
- 4 mm steel casing
- IP54 (lowest waterproof class for Mennekes outlets).

4. SAFETY

Read the following safety regulations carefully before you install and use the charging station.



4.1 Safety regulations

Before you install the charging station, you must make sure the location is safe for all bystanders. NEVER allow children onto this worksite. Never allow ANYONE who has nothing to do with the work onto the worksite.

- Never be distracted while you are performing the work.
- Make sure you maintain a healthy posture at all times while doing the work.
- Do not leave any tools or charging station components unattended.
- Make sure any tools you are using are clean and dry.
- Make sure that the charging station, tools and components will stay dry when it is raining.
- After maintenance, make sure that all doors and/or panels are closed and locked before putting the charger back into operation!



Make sure that there is no danger of anyone tripping over objects or paving while you are digging the hole for the foundation.



Make sure to wear good, suitable gloves for any special actions throughout the entire installation and connection process.



Always check any measuring instruments you will be using to disconnect the installation from its power supply before you use them, checking them several times to make sure they are working properly.

5. MANDATORY CHECKS BEFORE INITIAL USE



The following checks are mandatory before the charging station goes live. **NEVER** use the charging station if one or more of the checks indicate that the power supply or stability of the charging station does not suffice. Check the insulation resistance of the various conductors in accordance with NEN1010 provision 61.3.3.



Always perform the checks below before voltage is applied to the DUO charging station.

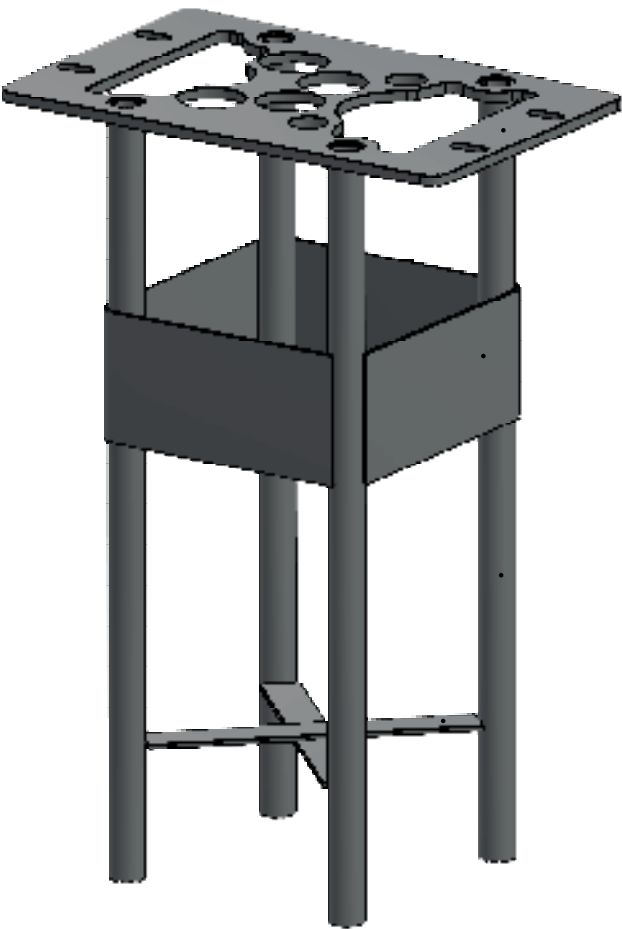
- ✓ All of the activities listed below must be performed in accordance with NEN 3140.
- ✓ Check whether the wires have been connected to the terminals in the right order.
- ✓ Check whether the conductors on the terminals have been screwed on properly (4 to 5 NM).
- ✓ Check whether the grounding connector has been connected to the coded terminal and whether it has been connected to the grounding electrode or the supplied grounding device. The entire grounding system must comply with the NEN1010/EU/35.
- ✓ Check whether the charging station is stable.
- ✓ Check whether the seals on the charging station's caps have been installed properly during installation (IP54).
- ✓ Check whether any actions still need to be performed, so that they may be performed safely.
- ✓ Make sure there are no obstacles surrounding the worksite.
- ✓ **Before any voltage is applied to the charging station, make sure to contact Ecotap® B.V. by calling 0031 (0) 411-210210 so that we can activate that particular station's software; we will need the station's unique code to do so.**

6. USER / INSTALLATION MANUAL

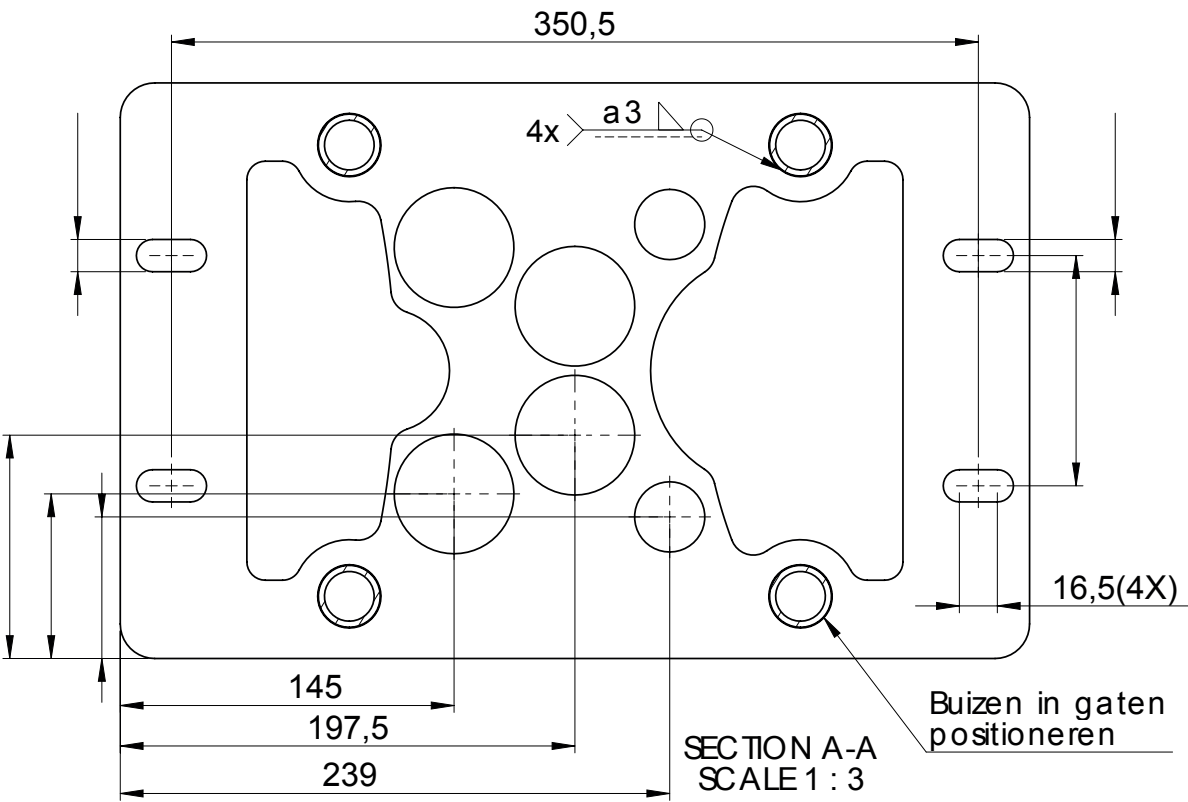
6.1 Mounting the casing on the foundation

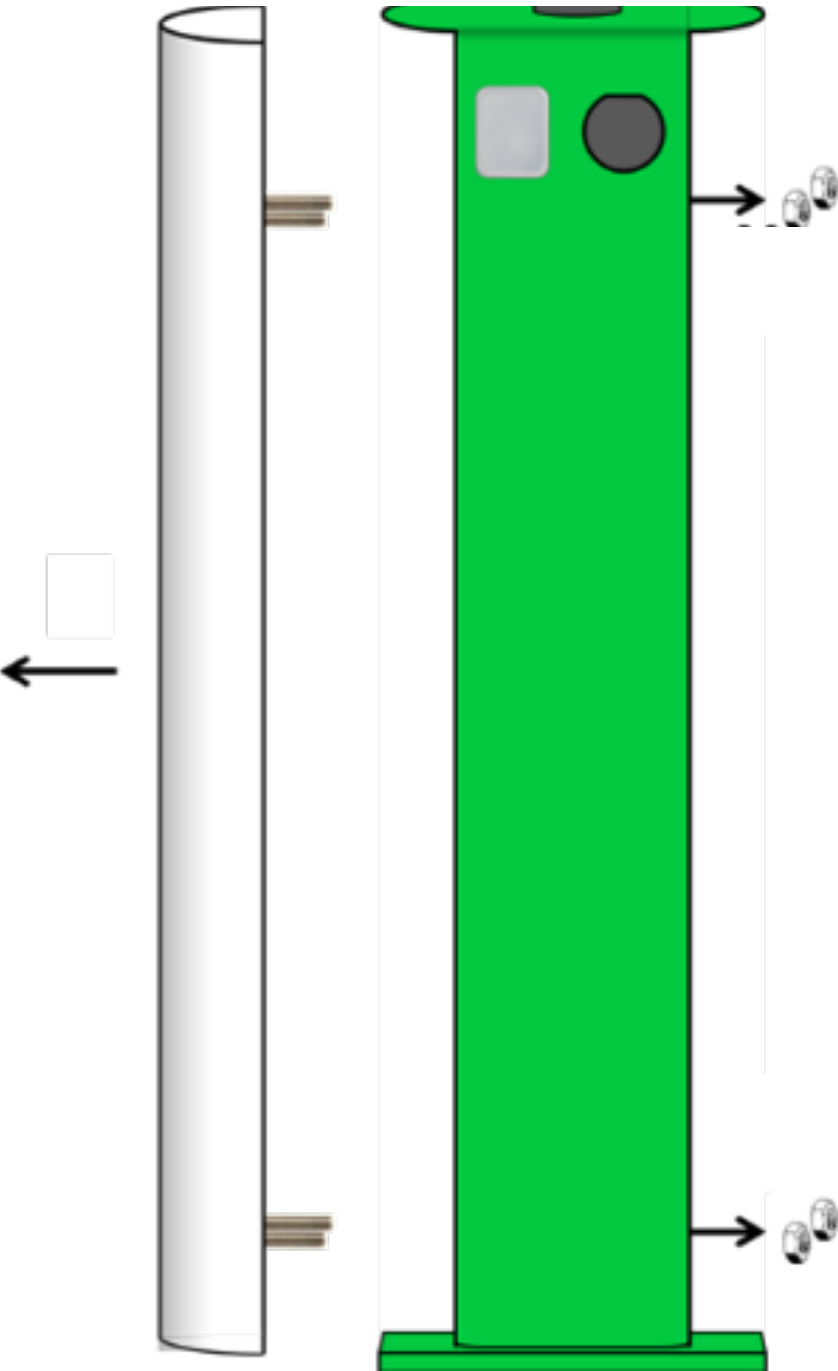
- The foundation must be installed in a hole of 50x50 cm in size and 80 cm deep.
- The bottom of the hole must be stable and flattened out properly. Place the foundation in the hole and check whether it level using a spirit level. You can correct any small deviations while you are closing the hole.
- Place the charging station on the foundation without its 2 bent steel cap sections and mount it using the bolts and nuts supplied (the nuts go on the top).
- Leave the transparent lids on the front of the charging station in place for now. Make sure the station faces the right way (i.e. the connecting side is at the front).
- Close the hole using around 20 cm of soil/sand.
- Install the cap in the back using the nuts that have been supplied.
- Keep in mind that there is sufficient space for the operation of the charging station. For this we advise to keep at least 1 meter of free space around the charging station.

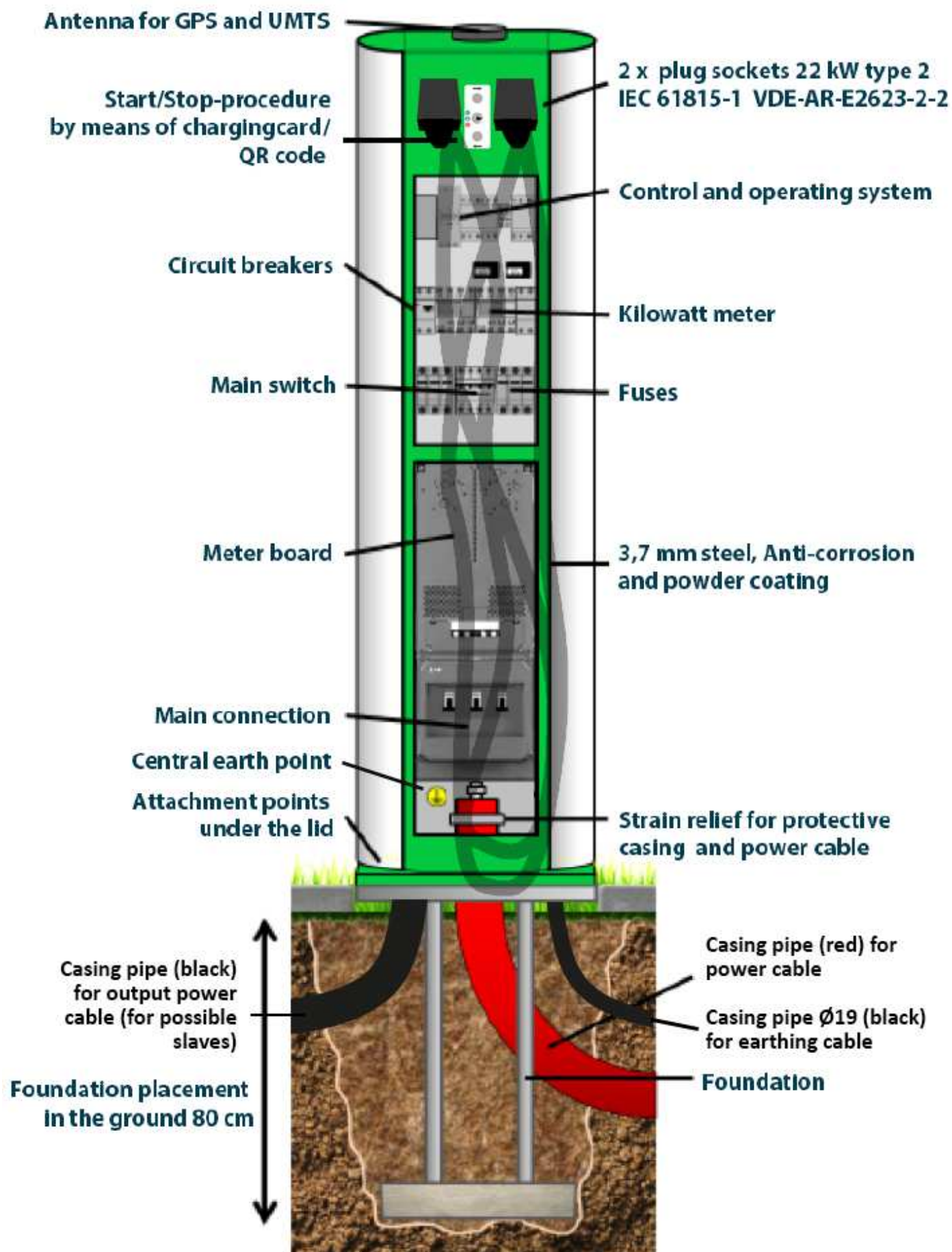
T1.0



T1.1







6.2 Opening and closing the charging station



Always de-energise the charging column and read the operating instructions before handling maintenance or malfunctions.

The lock that locks the entire Duo Wide charging column is situated at the back of the charging point, at the bottom of the door. (See Picture T 1.4)

There is a cover in front of the lock that stops sand and dirt.

- Remove the cover plate with Allen 2.5.
- Open the charging point with the supplied key.
- Put your key in the right lock.
- Turn the key all the way to the right.
- Turn the entire cylinder (incl. 2 locks) completely anti-clockwise.
For this purpose use a flat screwdriver which you can place in the slot.
- After unlocking the lock, the door can be disconnected from the charging point:
 - Grab the door.
 - Slide the door up ($\pm 1\text{cm}$).
 - move the bottom of the door away from the charging point and then down.

T 1.4



6.3 Installing the protective casing

The casing pipe is delivered in the box.

After the charging station is mounted on the foundation, the transparent plastic protective plate can be removed from the bottom of the charging station.

Fit the casing as shown in drawing 1.3 and secure with the size of strain relief provided..

6.4 Insert cable and secure with supplied strain relief

Feed the power cable through the casing pipe.

Avoid making it too long.

Fit the cable clamp to the cable and secure it (max. 3 Nm).

6.5 Connecting the power cable

The meter board setup must be mounted fully as per the specifications, as required by the network manager in the region concerned.

In addition, the network-operators-materials (connection box, cable and meter) must be connected in accordance with the installation instructions, guidelines and BEI safety instructions (provided by the network operator) by a contractor appointed by the network operator.

6.6 Connecting the grounding electrode/grounding conductor

Connect the earth wire of the connection cable to the main earth bar (HAR).
Also connect the earth wire, which is connected to the earth connector, to the main earth bar (HAR) terminal, positioned as in Drawing 1.3.
Fit the earthing fully in compliance with the applicable NEN1010 /EU/35 regulations.

6.7 LED indication

Charger not powered:	No led indication	
Charger powered and not used:	1 green blink per 10 seconds	
Charger powered and used not in charge:	Continuous green	
Charger powered and used in charge:	Continuous blue	

For the error state see this [table](#).

6.8 Fuses per connection value

Below you will find a table with an explanation of which fuses must be used per socket per phase based on the network operator’s network connections used. With the right settings, the right software selectivity per socket can be applied by means of the back office.

Net connection value	Fuses to be placed per socket
3x25 A	20 A Gg fuses per socket per phase
3x35 A	25 A Gg fuses per socket per phase
3x50 A	32 A Gg fuses per socket per phase
3x63 A	32 A Gg fuses per socket per phase
3x80 A	32 A Gg fuses per socket per phase

SAFETY NOTICE – This charger is equipped with NOARK fuseholders. When configured to charge at a maximum of 32A, only use fuses of EATON, MERSEN or SIBA type gG 400Vac, 100kA, 10x38mm, 32A

7. MAINTENANCE

	Always disconnect the charging station from its power supply completely and read the manual before performing any maintenance or fixing any malfunctions. Repairs or replacements of components may only be done if using products that are approved by the supplier. When in doubt, please contact Ecotap® first.
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Repairs and replacements must always be performed by an authorised person / specialist. The maintenance must always comply with and be performed in compliance with NEN3140 and NEN50110 low voltage European standards.
Check the charging station for any leaks.
Test the heating element and the thermostat together to make sure they are working correctly. The thermostat must be set to five degrees or to frost protection mode. Check the connections on the power supply cable and ensure a fixed connection of between 4 and 5 Nm.
Treat any minor damage to the charging station with corrosion-resistant paint in the right shades (Ecotap® green ral.6018 & white ral.9016).
Treat the cylinder locks with graphite powder or a suitable oil product if they require any maintenance.

8. TRANSPORTATION AND STORAGE

Transport the charging station (the core housing all of the technology) upright and prevent the coating from being damaged; any such damage might result in corrosion. Provided that they are properly protected to prevent them being damaged, the caps can be transported in a variety of positions. The charging station should be stored in a dry, damp-free area.

9. IN CASE OF MALFUNCTIONS

In case the DUO Wide charging station is not functioning (properly), please contact the Ecotap® 24/7 helpdesk immediately

(phone number: 0031 (0) 411-745020) or a licensed mechanic in possession of measuring and testing equipment with auto simulation.

WARNING!

All work performed on and modifications made to the charging station must comply with NEN1010 at the very least.

10. OPERATION AND CONTROL OF CHARGING COLUMN



The charging column can be operated with a charging card.

This charging station is operated via a charging pass.

The charging pass first needs to be registered in the Open Charge Point Protocol (OCPP).

This necessary registration can be completed by phone by calling Ecotap® B.V. at 0031 (0) 411-210210 during office hours.

Once registration is complete, the charging column can be used with any Electric Transport Charging Card (EV Charging Card) or other suitable cards, mobile and key holders. When unused, the charging column will give an illuminated green signal with some regularity.

Operation: Starting or stopping charging is done by holding the charging card in front of the scan point, you hear 1 sound signal and the lamp starts flashing green. First, the plug is locked in the Mennekes charging socket. Then the charging column communicates with the vehicle and the BackOffice system. Once all safety and payment requirements have been checked, the maximum permissible charging current is transmitted. The charging procedure is now automatically switched on and the lamp lights blue. When stopping the charging process, hold the pass in front of the scan point again. You will hear 2 beeps and the lamp will flash green and go out as soon as the plug is unlocked. You can now safely remove the plug.

11. TECHNICAL SPECIFICATIONS

General characteristics

Reference number	65345106 / 65004410 / 65020015 / 65020020
Dimension H x W x D (mm)	1400 x 360 x 240
Casing material	Steel 2,2 mm
Standard colour	Body: Ral 6018 / Cover: Ral 9016 for 65345106 / 65004410 Body: Ral 6018 / Cover: Ral 9016 for 65020015 / 65020020
Steel treatment	Anti-corrosion (KTL) and powder coating
Weight (kg)	76 kg
Number of charging points	2
Socket	Type 2
Cable	Type 2

Electrical characteristics

Power output per socket	0 to 44kW
Operating voltage (Ue) / Rates current (In A) for the charger	Single-phase cabling, phase + N 230V~ from 0 to 125A (determined at 20°C) Three-phase cabling, 3 phases + N 400V~ from 0 to 125A (determined at 20°C)
Operating voltage (Ue) / Rates current (In A) per charge point	Single-phase cabling, phase + N 230V~ from 0 to 63A (determined at 20°C) Three-phase cabling, 3 phases + N 400V~ from 0 to 63A (determined at 20°C)

Impulse voltage (Uimp)	4kV
Insulation voltage (Ui)	230V single-phase 500V three-phase
Frequency (fn)	50Hz/60Hz
Rated voltage	1 phase + N: 230V - 3 phases + N: 400V
Voltage tolerance (V) regardless of vehicle requirements	195V - 265V
Integrated protection system on charging station	Main switch 125A
Integrated protection system per charge point	MCB 80A curve C RCD 63A 30mA Type B
Conditional short-circuit	6000A IEC/EN 60898-1 10kA IEC/EN 60947-2
Allowable thermal stress in Short Circuit	16 000 A²s
Connection to the mains	Phase/Neutral, rigid cable, 2.5 to 50 mm², screw terminals H07 V R/U Earth, rigid cable, 2.5 to 50mm², screw terminals H07 V R/U
Type of load	Mode 3 charging terminal equipped with a locking system for Mode 3
Vehicle connection Mode 3 attache cable connector	Type 2 3P+N (single-phase compatible) with pilots compliant with IEC 62191-1 and IEC 62196-2. Use of extension and adapter prohibited. 10m straight 3x63A
Phase rotation on channel 2 (Rightside).	In the case of monophasic cabling (Ph+N) on the power source. Channel 2 will not be able to start charging sessions, until the phase rotation between contactor and socket are manually undone.
AC meters	MID certified, Class B according to EN 50470-1, -3
Back office protocol	OCPP 1.6 Json
Positioning	GPS
Connectivity Ethernet	RJ45 connector for 65345106 / 65020020

Environment

Operating temperature	-25°C / +50°C
Storage temperature	-25°C / + 80°C
Relative humidity	0 to 90% without condensation
Corrosivity class	C4 according to the IEC 9223 and IEC 12944 3C3/4C3 according to the IEC 60721-3
Protection rating	IP 54 (IEC 60529), IK 10 (EN 62262) Plugged in or not
Noise level	< 40 dBA at 1m
Product	IEC 61851-1, IEC TS 61439-7 (AEVCS)
Installation	Interior or exterior, limited access zone, intended for use by ordinary persons (DBO), assembly in cabinet (wall mounted), Pollution Degree 3, TNS, TT, compatible earthing system. In the event of an IT earthing system, this can be changed locally by adding an isolation transformer.

Electromagnetic compatibility

European standards	Low Voltage Directive 2014 / 35EU / EMC Directive: 2014 / 30 / EU
Radio technology type	GSM 2G/3G/4G, GPRS, RFID
Suitable charging cards	Mifare, Ntag and iCODE SLI cards (more info)

Ecotap® B.V. reserves the right to change any of the above technical specifications without prior notice as the result of the ongoing innovative development of the machine. Moreover, the technical specifications may differ from country to country.

12. CONTACT DETAILS SUPPLIER

Ecotap® B.V.
Kruisbroeksestraat 23
5281RV Boxtel – The Netherlands
Tel.: 0031 (0) 411-210210
E-mail: info@ecotap.nl

13. EC DECLARATION OF CONFORMITY

EC Declaration of Conformity for machines
(Directive 2014/35/EU, Annex II page 96/369)

Ecotap® B.V. Industrieweg 4 5281RW Boxtel, The Netherlands, hereby declares that the charging stations stated below comply with the Machinery Directive and other regulations and standards mentioned.

Name: Ecotap® Charging station Duo Wide AC44

Designed in: 2021

EC directives applied:

- Machinery Directive 2014/35/EU
- EMC Directive 2014/30/EU

Standards used as reference:

- EN/IEC 60950-22:2017
- EN/IEC61851-1:2017
- EN/IEC61851-22:2002
- EN/IEC 62196-2:2017
- EN/IEC 61000-6-2:2016
- EN/IEC 61000-6-3/2007 + A1:2011
- EN/IEC 60335-1/2012 + A13:2017
- EN/IEC 60364-4-41:2017
- NEN/EN/IEC 60529
- IEC 62262
- NEN/EN/IEC 61439-1
- IEC/TS 61439-7

Boxtel, March 2021



Ir. P.F.A. van der Putten (Technical Director)



Ecotap B.V.

Kruisbroeksestraat 23

5281 RV Boxtel

The Netherlands

+31(0) 411 210 210

info@ecotap.nl

www.ecotap.nl