



Wallcharger Duo

Manual

ecotap[®]
A brand of **legrand**[®]

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1. INTRODUCTION

Thank you very much for selecting the Ecotap® wall-mounted charging station. This manual describes the Wall Charging Station equipped with two type 2 sockets of 22kW each.

This manual contains important information for the proper and safe installation and use of this charging station.

The charging station is designed to supply power to vehicles equipped with a modus 3 charging system in accordance with DIN EN 50556, IEC 61851-1 (edition 2.0), VDE-AR-N 4102 appendix: 2012-04. 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 concerning harmonization of legislation concerning electric material within certain voltage limits (rearrangement of all previously published versions).

This manual provides insight into how the charging station can be safely installed and used. This manual has been compiled to ensure maximum functionality and lifespan of the charging station.

This manual has been drawn up with great care. However, if anything remains unclear, please contact your supplier before installing the charging station.

Proper functioning of the charging station can only be guaranteed if the installation is performed by an authorized or certified installer/technician. If the charging station is not installed by a certified installer, this may have consequences for the device's warranty.

Please read this manual carefully before installing and using the charging station.

Store this manual with the charging station to ensure the instructions and safety regulations are always available.

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This is an English translation of the original manual, which was written in Dutch.

2. GENERAL

2.1 Warranty

The Ecotap® B.V. General Delivery Conditions apply.

Ecotap® B.V. cannot be held responsible for injury or damages as a result of the charging station being changed, damaged, converted, or expanded with other components, or if it is not being used in accordance with the specified instructions and conditions.

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 Application

The Wallcharger DUO has been specially designed for wall-mounting.



3.2 Accessories

The following accessories are not included in the scope of delivery:

- Tools

3.3 Safety device

- Fuse holder
- 12 Volt control voltage
- Components at least IP2
- Strain relief
- 3,7 mm steel casing
- IP54 lowest waterproof category of the type 2 sockets

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.

	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 commissioning the recharging column. NEVER use the recharging column if one or more checks show that power supply or stability of the recharging column does not satisfactory. Check the insulation resistance between the phases according to NEN1010 provision 61.3.3.



Always perform the checks below before applying voltage to the Wall Charger Duo.

- ✓ All work described below is in compliance with NEN 3140.
- ✓ Check whether the wires have been connected to the terminals in the right order.
- ✓ Check whether the cores have been properly tightened, 3.5 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 cable thickness of the power cable matches the fused current rating.
- ✓ Check whether the charging station is tightly and properly secured.
- ✓ Check whether the station is sufficiently waterproof.
- ✓ Keep the immediate environment of the work area free from obstacles.

6. USER / INSTALLATION MANUAL

6.1 Required power cable

The power cable has to be connected to a separate power group.

When using a machine this should be C characteristic or equal, the height of the current rating depends on the length and the available power on site.



PLEASE NOTE: the charging station requires only 1 power cable. Please take into account the cables and groups will be under full load for several hours.

Cabling will have to be implemented in accordance with current standards, such as NEN1010.

Exceptions to the NEN1010 standard are:

- Cable thickness deviates
- Grounding spread resistor < 30 Ohm.
- Installation resistor < 1 Ohm.
- Voltage drop max. 2%.

6.2 Wall mounting

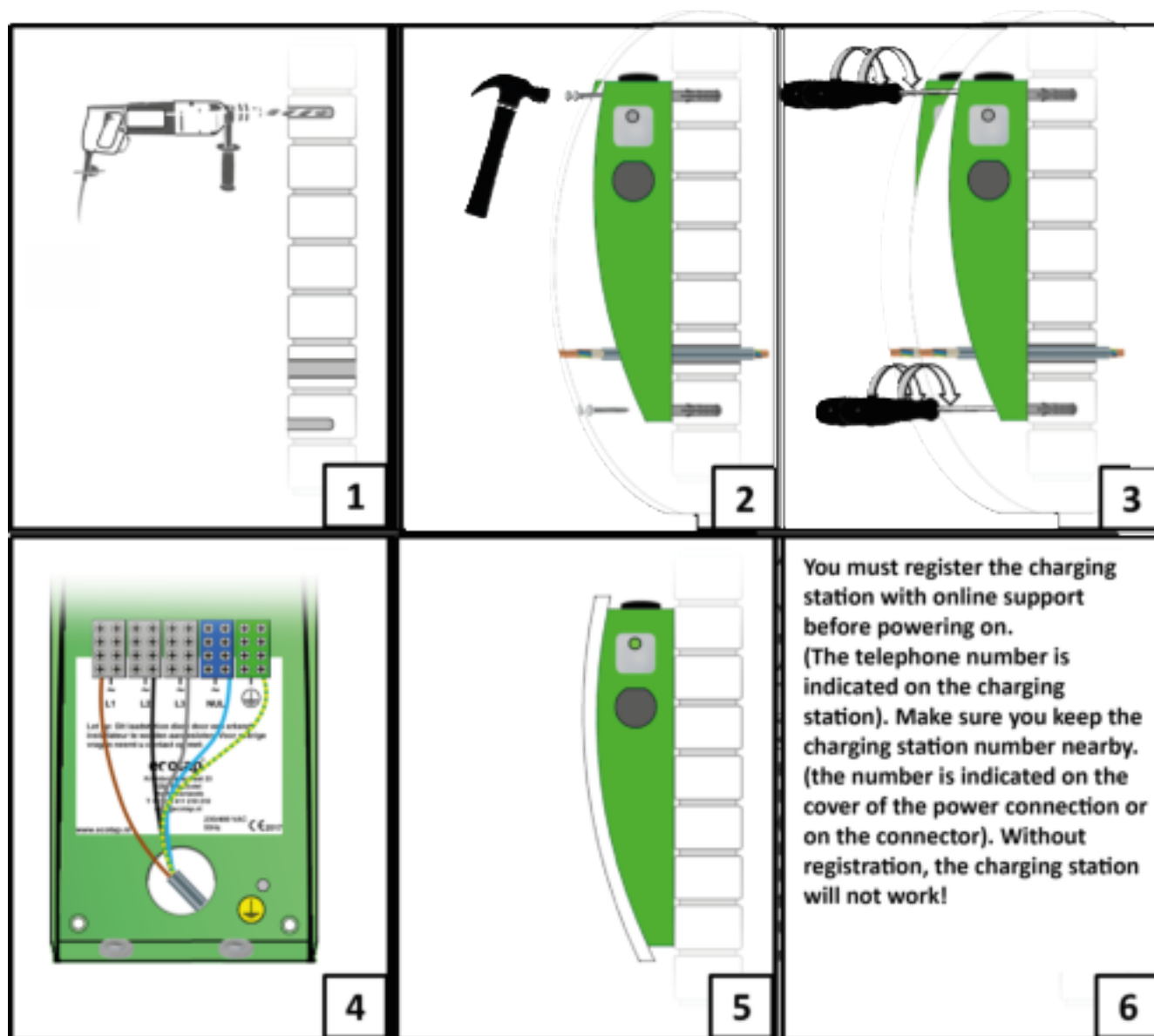


It is best to mount the charging station at a height of +/- 85 centimetres measured from the bottom of the charging station.

We recommend mounting the charging station to the wall at a height of +/- 85 centimetres, measured from the bottom of the charging station.

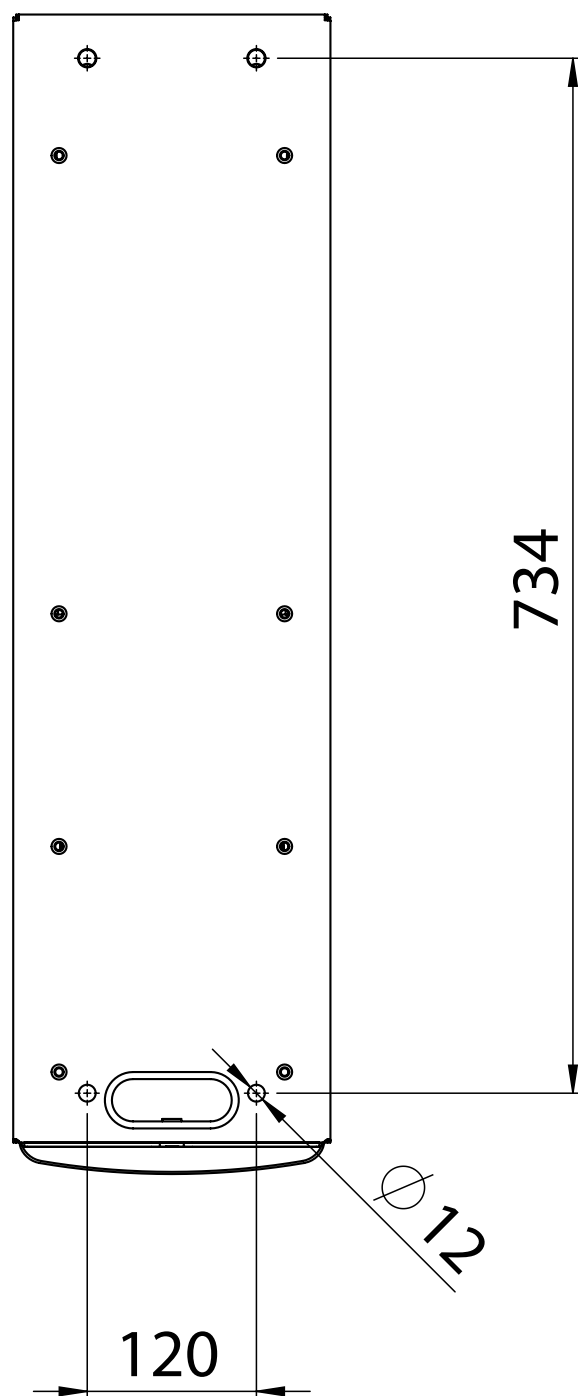
When mounting the charging station, you should take into account the strength of the wall. The wall should be completely closed, without any holes or openings. If these are present, they must first be filled.
Use the right fastening screws to firmly secure the charging station to the wall and use all four fastening holes. Mounting material is included.

First, remove the cover with a torx screw at the bottom. The charging station can now be mounted to the wall.
Insert the cable into the charging station and fasten it with a cable gland. (The cable can be inserted either through the back or through the existing cable gland entry at the bottom of the station. If you do not use the cable gland entry, please make sure it is properly sealed.)
Connect the cores to the relevant components as indicated.

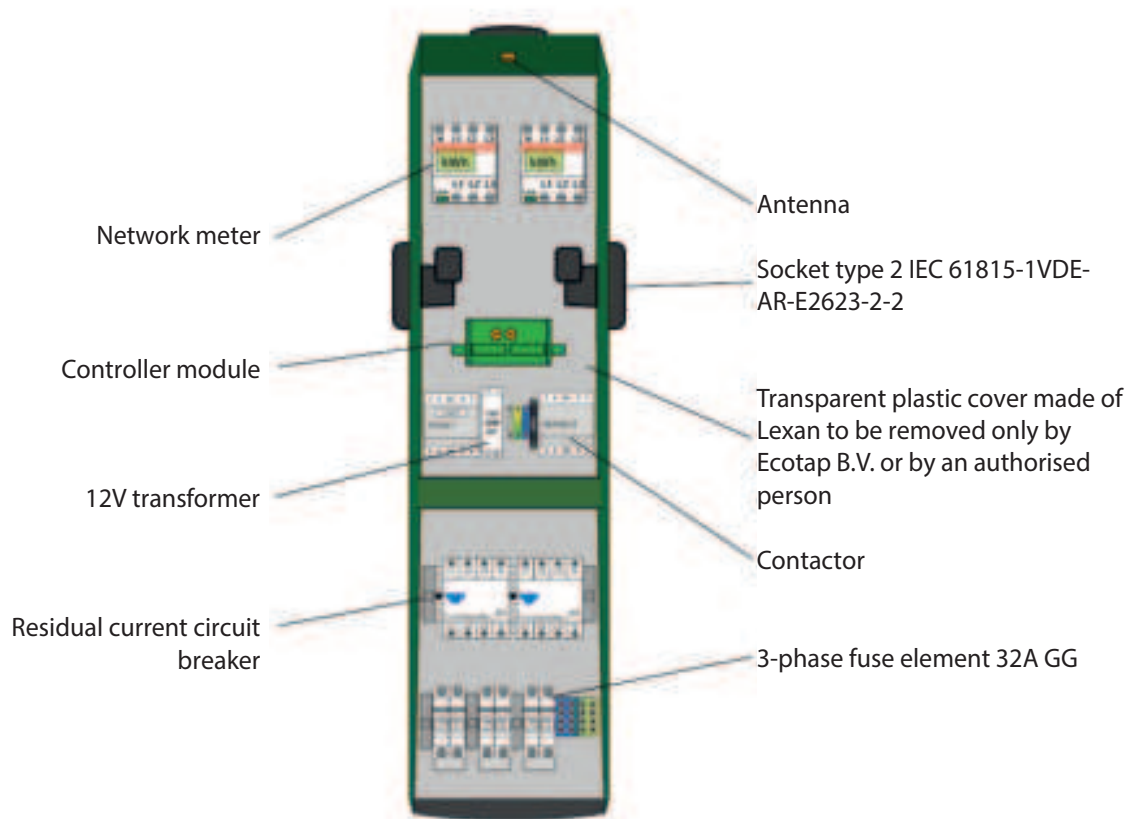


Connect the phase wires* to the indicated L1 / L2 / L3 connecting terminals.
Connect the Null wire to the indicated Null terminal.
Connect the shield/ground wire to the indicated Ground terminal.

When fastening the cores, use the correct screwdriver and tighten to 3.5Nm to 5Nm. Do not forget to attach the loose ground wire from the charging station to the cover.



6.3 Overview of the charging station



7. MAINTENANCE

	Always disconnect the charging station from the power supply and read the manual before performing maintenance or fixing a malfunction.
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Only products approved by the supplier can be used to repair or replace components. Repairs and replacements should always be carried out by a certified specialist.
Maintenance should always comply with and be carried out in accordance with NEN3140 and NEN50110 low voltage EU regulations.

Check the charging station for leaks.
Check the connection of the main power cable and ensure a tight connection of at least 3.5 to 5 Nm.

Treat any damage to the charging station with anti-corrosion paint.

8. TRANSPORTATION AND STORAGE

When transporting the wall charger, avoid damaging the paintwork. This could cause rusting. Store the wall charger preferably in a dry, non-damp room.

9. MALFUNCTION EXPLANATION

If the charging station is not functioning properly, please contact the back office provider or contact another certified mechanic with the right measuring and testing equipment with car simulation.

CAUTION ! All work and adjustments to the wall charger must comply with NEN10 as a minimum.

10. OPERATION AND FUNCTIONING OF THE CHARGING SYSTEM



This charge point can be operated with a charge card.

The wall-mounted charging station DUO version “Charging With Registration / LMR” still needs to be registered.

Once registration is complete, the charging station can be used with any electric transport charging card (EV charging card) or other suitable cards, mobile and key holders.

Operation:

Start/stop procedure by holding the charging card or charging key in front of the scan point. You will hear 1 sound signal and the lamp will flash green. For the type 2 socket, the plug inserted is locked in the charging socket. Then the charge point communicates with the vehicle and the BackOffice system. Once all safety and payment requirements have been checked, the maximum allowable charging current is transmitted. The charging procedure is now automatically switched on and the lamp lights blue. (Other options possible) When stopping the charging procedure, hold the pass in front of the scan point. You will hear 2 beeps. The lamp starts flashing green and the plug is unlocked. You can now remove it.

11. TECHNISCHE SPECIFICATIES

General characteristics

Reference number	55161800 / 55161100 / 55161600 / 55321800 / 55321100 / 55321600 / 55081800 / 55081100 / 55081600 / 55081602 / 55081102 / 55081801 / 55320014 / 55320013 / 55320012 / 55321604
Reference number (Eichrecht)	55451800 / 55451100 / 55451600
Reference number (FR)	55483702 / 55483703
Dimension H x W x D (mm)	800 x 220 x 200
Casing material	Steel 2,2 mm
Standard colour	Body: Ral 6018 / Cover: Ral 9016 for 55161800 / 55321800 / 55451800 / 55081800 / 55081801 / 55320014 / 55320013 / 55160012 Body: Ral 7011 / Cover: Ral 9016 for 55161100 / 55321100 / 55451100 / 55483702 / 55081100 / 55483703 / 55081102 Body: Ral 9016 / Cover: Ral 9016 for 55161600 / 55321600 / 55451600 / 55081600 / 55081602 / 55321604
Steel treatment	Anti-corrosion (KTL) and powder coating

Weight (kg)	21kg for 55451800 / 55451100 / 55451600 / 55483702 / 55081800 / 55081100 / 55081600 / 55483703 / 55081602 / 55081102 / 55081801 25kg for 55161800 / 55161100 / 55161600 / 55321800 / 55321100 / 55321600 / 55320014 / 55320013 / 55160012 / 55321604
Number of charging points	2
Socket	Type 2, Type 2 + type E/F for 55483702 / 55483703
Cable	Type 2
Electrical characteristics	
Power output per socket	0 to 22 kW for 55483702 / 55483703 / 55451800 / 55451100 / 55451600 / 55081800 / 55081801 / 55081100 / 55081101 / 55081600 / 55081601 / 55321800 / 55321801 / 55321100 / 55321101 / 55321600 / 55321601 / 55320013 / 55320014 0 to 11 kW for 55161800 / 55161801 / 55161100 / 55161101 / 55161600 / 55161601 / 55160011 / 55160012
Operating voltage (Ue) / Current rates (In A, In C)	Single-phase cabling, phase + N 230V~ from 0 to 32A (determined at 20°C) Three-phase cabling, 3 phases + N 400V~ from 0 to 32A (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	Fuse type gG 63A
Integrated protection system per charge point	MCB 40A curve C RCD 40A 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 25 mm², screw terminals H07 V R/U Earth, rigid cable, 2.5 to 25mm², 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 connector socket (55451800 / 55451100 / 55451600 / 55483702 / 55081800 / 55081100 / 55081600 / 55483703 / 55081602 / 55081102 / 55081801)	Type 2 3P+N (single-phase compatible) with pilots compliant with IEC 62191-1 and IEC 62196-2. Use only a manufacturer-approved plug with silver-plated contacts. Use of extension and adapter prohibited.
Vehicle connection Mode 2 connector socket (55483702 / 55483703)	Type E/F domestic 2P+E (16A-250V) depending on the local regulation Use of extension and adapter prohibited.

Vehicle connection Mode 3 attache cable connector (55161800 / 55161100 / 55161600 / 55321800 / 55321100 / 55321600 / 55320014 / 55320013 / 55160012 / 55321604)

Type 2 3P+N (single-phase compatible) with pilots compliant with IEC 62191-1 and IEC 62196-2.
Use of extension and adapter prohibited.
55161800 / 55161100 / 55161600: 4m curl 3x16A
55160012: 4m straight 3x16A
55321604: 4m straight 3x32A
55321800 / 55321100 / 55321600 / 55320014 / 55320013: 8m straight 3x32A

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 55451800 / 55451100 / 55451600 / 55483703 / 55081602 / 55081102 / 55081801 / 55320014 / 55160012

Environment

Operating temperature	-25°C / +50°C
Storage temperature	-25°C / + 80°C
Relative humidity	0 to 90% without condensation
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.
Electrical safety	Class 1 IEC 61140

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 the above technical data without prior notice due to ongoing, innovative developments of the charging station. Moreover, the technical data may vary 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. EU DECLARATION OF CONFORMITY CE 2020

Directive 2014/35 / EU, Annex II p. 96/369, EMC 2014/30 / EU
Ecotap® B.V. hereby declares.

Established:

Kruisbroeksestraat 23, 5281 RV Boxtel

The charging station mentioned below complies with the requirements of the guidelines and standards mentioned below.

Type: Ecotap® Wallcharger Duo **First release:** 2018

EU directives used:

- Low voltage directive 2014/35 / EU
- EMC Directive 2014/30 / EU

Standards used for reference:

- EN 61851-23:2014
- EN 61851-1:2012
- EN 61851-21-2: 2016
- EN 61000-3-11:2000
- IEC 61000-3-12:2011
- EN 61000-4-2:2009
- EN 61000-4-3:2006
- EN61000-4-4:2012
- EN_61000-4-5:2014
- EN 61000-4-6:2014
- 61000-4-8:2010
- EN 61000-4-11:2004
- NEN / EN / IEC 60529
- IEC 62262
- NEN / EN / IEC 61439-1
- IEC / TS 61439-7

Applied harmonized standards:

NL NEN-EN-IEC 61851-1 / NEN-EN-IEC 61851-22
FR NF-EN-IEC 61851-1 / NF-EN-IEC 61851-22
DE DIN-EN 61851-1 / DIN-EN 61851-22
GB BS-EN 61851-1: 2019 / BS-EN 61851-22
IT IEC-EN 61851-1 / CEI-EN 61851-22

Boxtel, October 2020



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