Solutions EV

Technical Submittal

ZAPTEC Pro

Use all available capacity
The available power is divided dynamically across all charging stations. ZAPTEC performs load and phase balancing, and the charging station switches dynamically between 1-phase and 3-phase charging for best possible utilisation.

Easy to expand the system using more charging stations
When you install ZAPTEC, the infrastructure is set up for all parking spaces. If there is increased demand for charging, you can quickly and easily scale the existing infrastructure with no additional effort or investment in the fuse box.

Better Internet connection, always online
ZAPTEC's 4G LTE-M, which is supplied by Telenor, provides good uptime and can help make the charging system cheaper with no extra infrastructure. The charging system is online 24/7 and ensures that regular software updates are implemented.

Maintains top safety standards
The charging station allows you to charge vehicles in complete safety using approved type 2 plugs, integrated fuses and built-in residual current device.

Distribute costs fairly
A built-in power meter indicates accurate consumption and allows shared garage or parking spaces to be assigned to and paid for by individual users. Use our administration system free of charge, or choose from a range of payment services for automatic payment, operation and support.

Intelligent and focusing on the future
The charging station supports ISO 15118, which makes it ready for Plug & Charge, State-of-Charge and other exciting options that will make it possible for us to improve the user experience. With its use of advanced technology, built-in software and a cloud solution for configuration and monitoring, this charging system is set up for the future.

ZAPTEC

Technical Specifications - ZAPTEC Pro

ZAPTEC Pro is an alternating current wall or column-mounted charging station in accordance with IEC 61851-1, EVSE mode 3.

Dimensions and weight
H: 392 mm W: 258 mm D: 112 mm
Weight: approx. 5 kg (including backplate)

Installation circuit
Max. 63A serial fuse on installation circuit for charging stations.

Backplate connection box
Cable cross section 2.5–10 mm^2
Cable diameter 10–20mm^2

Installation network, Voltages
TN, IT and TT
230VAC ±10%
400VAC ±10%

Max. current and charging output
7.36kW* at 32A/1-phase
22kW* at 32A/3-phase (applicable to TN networks only)
5W at standby

Fuses
Built-in 3 x 40A fuses type C

Charging point
EC 62196-2 Type 2 Female with integrated self-closing cover

Earth fault protection
Built-in type B RCD
Calibration and a self-test are carried out before the start of every charging cycle. RCD can be automatically reset by disconnecting from the charging connector.

Integrated Power Meter
MID tested and calibrated (EN.50470).

Theft protection
The front cover of the ZAPTEC Pro can only be opened using a special tool. The charging cable can be locked permanently to the charging station.

Load balancing
Together with other ZAPTEC Pro charging stations, available power in the installation will be distributed automatically between the devices and phases.

Phase balancing
The charging station will dynamically select any single phase or 3-phase in a system with other ZAPTEC Pro charging stations, depending on the available power.

Communications interface and cloud connection/network
4G LTE-M1 (subscription required)
Wi-Fi 2.4 GHz, IEEE 802.11 b/g/n (channels 1-11)
Powerline (PLC) – HomePlug Green PHY®, 10 Mbit/s

Identification and configuration
Bluetooth Low Energy (BLE 4.1)
RFID/NFC reader – Mifare Classic, Type A
PLC for vehicle interface for future services as defined by ISO 15118

Standards and approvals
CE compliance in accordance with the Radio Equipment Directive 2014/53/EU and ROHS Directive 2011/65/EU, and compliance with IEC 61851-1 (TUV SÜD) and IEC 61851-22

Temperature range
−30°C to +50°C

Degree of protection
IP54, indoor and outdoor use
IK10 impact protection
UL94 5VB flammability rating
UV resistant

Electrical protection
Protection class II (4kV AC and 6kV impulse, insulation)
Overvoltage category III (4kV)

Integration services
Third-party integration alternatives (API, Webhooks)
OCPP 1.6J
Message subscription

*32A is available but may be restricted by the condition of the vehicle's battery and temperature increases at the charging station.

See the charging consumption in the administration system or the app

4G LTE-M Internet connection

Simple identification with charging card

Lock the charging cable to the charging station

Self-closing cover

zaptec.com

EU Declaration of Conformity

Manufacturer name: **Zaptec Charger AS**

Manufacturer address: Prof. Olav Hanssensvei 7A
                                 N-4021 Stavanger
                                 NORWAY

declares that the product   EVSE (Electric Vehicle Supply Equipment)

Product identification   **ZapCharger Pro**

is issued under the sole responsibility of the manufacturer and the products are in conformity with the Community harmonization legislation as the essential requirements of the directive **Radio and Telecommunications Terminal Equipment (RTTE) 1999/5/EC** of the European Parliament and of the Council of 9 March 1999, relating to radio equipment and the mutual recognition of their conformity and the **ROHS directive 2011/65/EU** of the European Parliament and of the Council of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment, if used for its intended use. The following relevant harmonized standards have been applied:

1. Radio spectrum (article 3.2 of RTTE 1999/5/EC)
    applied standard
                     EN 300 328 V1.9.1
                     EN 301 489-1 V1.9.2
                     EN 301 489-17 V2.2.1
                     EN 300 330-2 V1.6.1

2. Electrical Safety (article 3.1a of RTTE 1999/5/EC)
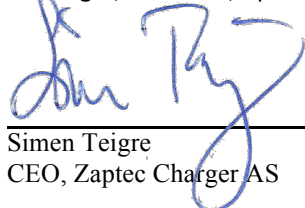   applied standards
                     EN 61851-1:2011
                     EN 61851-22:2002
                     EN 62311:2008

3. Electromagnetic compatibility (article 3.1b of RTTE 1999/5/EC)
    applied standards
                     EN 61000-6-2:2005
                     EN 61000-6-3:2007 + A1:2011
                     EN 61000-3-11:2000
                     EN 61000-3-12:2011
                     EN 50412-2-1:2005

4. Hazardous substances in electrical and electronic equipment (article 4 of ROHS 2011/65/EU)

Stavanger, NORWAY, April 10, 2017

Simen Teigre
CEO, Zaptec Charger AS

Declaration of Conformity

Manufacturer name:	**Zaptec Charger AS**
Manufacturer address:	Prof. Olav Hanssensvei 7A N-4021 Stavanger NORWAY
declares that the product	EVSE (Electric Vehicle Supply Equipment)
Product identification	**ZapCharger Pro**

has a built-in RCD type B as defined in IEC 61851-1.

The RCD is designed to comply with IEC 62423:2009 (RCD type B).

The RCD operates internal safety relays that disconnect all live conductors (including neutral) in case of trip condition.

The RCD protects the Type 2 socket-outlet.

The RCD has a self-test function that is used to verify trip levels and timing on both AC and DC leakage currents before every charge session with the ZapCharger Pro.

Trip levels and break times are tested to comply with IEC 62423:2009.
Typical trip/break performance (selected parameters):

Parameter	ZapCharger Pro	IEC 62423:2009
AC trip level	27 mA	15 mA < Itrip < 30 mA
DC trip level	25 mA	15 mA < Itrip < 60 mA
Trip time at 30 mA AC	258 ms	≤ 300 ms
Trip time at 60 mA DC	109 ms	≤ 300 ms
Trip time at 150 mA AC	25 ms	≤ 40 ms

An external safety review, design evaluation and performance test of the ZapCharger Pro including the RCD function has been performed by TÜV SÜD.

To reset a tripped RCD, the charging cable needs to be removed and inserted again.

With the RCD type B inside the ZapCharger Pro, no RCD type A (or B) is required on the installation circuit.

With the self-test function of the RCD type B carried out before the start of every charge session, there is no need for additional inspection or testing of the RCD type B during the lifetime of the device.

Stavanger, NORWAY, May 29, 2018

Stavanger 29/5 - 2018

< Place and date >

Kunt Brant, Product Development Manager.

<Name, position>

Technical Report No. 028-713097889-000

Rev. 01

Dated 2017-08-23

Client:	Zaptec Charger AS Prof. Olav Hanssenvei 7A NO-4021-Stavanger
Manufacturing place:	Zaptec Charger AS Prof. Olav Hanssenvei 7A NO-4021-Stavanger
Test subject:	Product: Electric Vehicle Supply Equipment (Mode 3 - Charger Station Wallbox) Type: ZapCharger Pro - Consists of ZapCharger Pro Wallbox and Backplate with connection box for cable termination
Test specification:	IEC 61851-1:2010 IEC 61851-22:2001
Purpose of examination:	Test according to the test specification
Test result:	The present test results show that the product is in compliance with specified requirements.

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

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Revision: 01
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Hendrik Elze
Date: 2017-08-23

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TÜV®

TÜV SÜD Product Service GmbH

Munich Branch
Ridlerstraße 65
80339 Munich
Germany

1 Description of the test subject

1.1 Function

Manufacturer's specification for intended use:
- According to user manual

1.2 Consideration of the foreseeable misuse

☐ Not applicable

☑ Covered through the applied standard

☐ Covered by the following comment

☐ Covered by attached risk analysis

1.3 Technical Data

Rated voltage	230/400 V
Rated frequency	50/60 Hz
Rated current	32 A
Phases	3
Protection class	II
Degree of protection	IP 54

2 Order

2.1 Date of Purchase Order

2016-12-02

2.2 Receipt of Test Sample

2017-01-26 (revision 0)
2017-07-18 (revision 1)

2.3 Date of Testing

2017-05-30 to 2017-06-21 (revision 0)
2017-07-18 to 2017-08-23 (revision 1)

2.4 Location of Testing

TÜV SÜD Product Service GmbH
Ridlerstr. 65, 80339 Munich, Germany

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2.5 Exceptions of the Test Procedure

Test clauses 11.8, 11.10 and 11.12 were not conducted.

2.6 Points of Non-compliance or Exceptions of the Test Procedure

None

3 Summary

The present test results show that the product is in compliance with the specified requirements.

TÜV SÜD Product Service GmbH

Technical Report checked

i.A. Ruozong Liu
Industrial Electronics

TÜV SÜD Product Service GmbH

Engineer

i.A. Hendrik Elze
Industrial Electronics

File: 028-713097889-000_TR_01_e.doc
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We thank you for having bought this Zaptec product and hope you will be happy with it. In the event that your Zaptec product needs guarantee service, please contact the Authorized Dealer from whom it was purchased. In order to avoid any unnecessary inconvenience on your part, we suggest reading the Directions for Use carefully before contacting Zaptec or our Authorized Dealer.

**YOUR
GUARANTEE**

By this guarantee, Zaptec Charger AS, Norwegian business registration number 912 494 470, Professor Olav Hanssens vei 7A, 4021 Stavanger, Norway, guarantees to the purchaser the product to be free from defects in materials and workmanship for a period of five (5) year from the date of its original purchase. If during this designated five (5) year period of guarantee the product proves defective due to improper materials or workmanship, Zaptec Charger AS, Authorized Service Centers or Authorized Dealers will replace the product upon the terms and conditions set out below. Zaptec Charger AS reserves the right (at its sole discretion) to choose between repairing defective products or replacing products with either new or refurbished products.

If the guarantee claim is accepted Zaptec Charger AS will arrange and cover the cost of transport necessary to repair or replace the product and return it to the customer.

This guarantee covers
the following products:

Zaptec Pro

Zapcharger Pro

Zaptec Home

Zapcharger Portable

Zaptec Go

Zaptec APM

CONDITIONS

- This guarantee will be granted only when the original invoice or sales receipt (indicating the date of purchase, product type and dealer's name) is presented together with the defective product.
- Zaptec Charger reserves the right to refuse free-of-charge guarantee service if the above documentation/information cannot be presented or if the information contained in it is incomplete or illegible.
- This guarantee will not reimburse nor cover the damage resulting from adaptations or adjustments which may be made to the product, without the prior written consent of Zaptec Charger, in order to conform to the national or local technical or safety standards in force in any country other than the ones for which the product was originally designed and manufactured.
- This guarantee will not apply if the type or serial number on the product has been altered, deleted, removed or made illegible.

**THIS GUARANTEE COVERS
NONE OF THE FOLLOWING**

- Periodic maintenance and repair or replacement of parts due to normal wear and tear
- Any adaptation or changes to upgrade the product from its normal purpose as described in the Direction for Use, without the prior written consent of Zaptec Charger
- Batteries, electrodes, fuses, normal wear and tear, staining, discoloration or other cosmetic irregularity which does not impede or degrade product performance
- Damage resulting from:

    1. Misuse, including but not limited to
        a. failure to use the product for its intended use or in accordance with Zaptec Charger`s instructions on the proper use and maintenance.
        b. installation or use of the product in a manner inconsistent with technical or safety standards in force in the country where it is used
    2. Repair done by non-authorized Service Stations or Dealers, or the customer himself.
    3. Accidents, lightning, water, fire, improper use, or any cause beyond the control of Zaptec Charger
    4. Defects of the system into which this product is incorporated

**HOW TO MAKE A
GUARANTEE CLAIM**

If you wish to make a guarantee claim you must follow the following procedure:

1. Contact your Zaptec dealer
2. If the product was bought directly from Zaptec, contact support on zaptec.com
3. If you are a Zaptec dealer, contact support as stated in your dealership contract, or via zaptec.com

The guarantee must be validated by Zaptec Support and by an authorized installer if the fault cannot be verified remotely. Uninstalling the product for replacement and installing a replacement must be performed by an authorized installer.

**RELATIONSHIP TO LAWS AND REGULATION ON CONSUMERS' RIGHTS
IN THE EVENT OF A LACK OF CONFORMITY OF GOODS**

This is a commercial guarantee. Regardless of whether the terms and conditions of this guarantee are met we wish to remind you that as a consumer, in the in the event of a lack of conformity of the goods you have purchased, you are entitled by law to remedies from the seller, free of charge.

We wish to make unequivocally clear that this guarantee does not in any way affect your right to the mentioned remedies. The rights offered to the consumer through this guarantee is strictly additional to the rights consumers have by law and are not in any way meant to constitute a replacement or restriction on your consumer rights.

ONEPOLE ✕ Zaptec

ONEPOLE 2.0
Single/Twin - CC160
ZB100273

Includes

ZB100243	ONEPOLE 2.0 1500 - with footplate CC160
ZB100248	ONEPOLE 2.0 Roof Cover Duo 350
ZB100261	ONEPOLE Connection kit 6P

ONEPOLE Zaptec

Complete EV charging infrastructure

Sustainable production

Future proof

Product Information
Zaptec and ONEPOLE is working together to bring forward the best in EV infrastructure. The collaboration brings forward eight readymade pedestals to meet your every EV charging needs. From one charging station up to four per pedestal. Including roof and options for area light.

The ONEPOLE pedestal is made from high quality seawater resistant aluminium. Ready for any environment.

Maintenance and cleaning
The ONEPOLE products must be cleaned with mild soap water and a damp cloth to avoid scratches.

NB: Do not use steel wool, a steel brush, chlorine or harsh cleaning agents in the cleaning process.

Maintenance interval
In highly polluted areas or close to the sea, the aluminum should be washed at least every 3-6 months.

Country of origin
Norway

Material
searesistant aluminum

Aluminium
Hydro

Measurement
1497x350x350mm

Weight
8,9kg

Surface treatment
Powdercoated
ISO 12944, Category C4

Protection class
Class I,
Must be connected to PE

Degree of protection
IK10

Color
RAL9005 (Standard)

Electrical Connection
Connection point is in the charging stations back plate.
Connection between pedestals: ONEPOLE Connection kit.

Connection
5 pcs. 6x25/50mm² Al/CU.

Tested according to EN 60998-1:2004 and EN 60998-2-1:2004
Approved cross-section AL cable: 10-50mm²
Approved cross-section CU cable: 1.5-35mm²

Made in Norway

Ships all around Europe

DATA SHEET

ONEPOLE PRO 1500 with footplate CC160
Q9MSL

Country of origin
Norway

Material
Powder-coated
searesistant aluminum

Color
RAL9005 (Standard)

Surface treatment
Powdercoated
ISO 12944, Category C4

Protection class
Class I, must be connected to PE

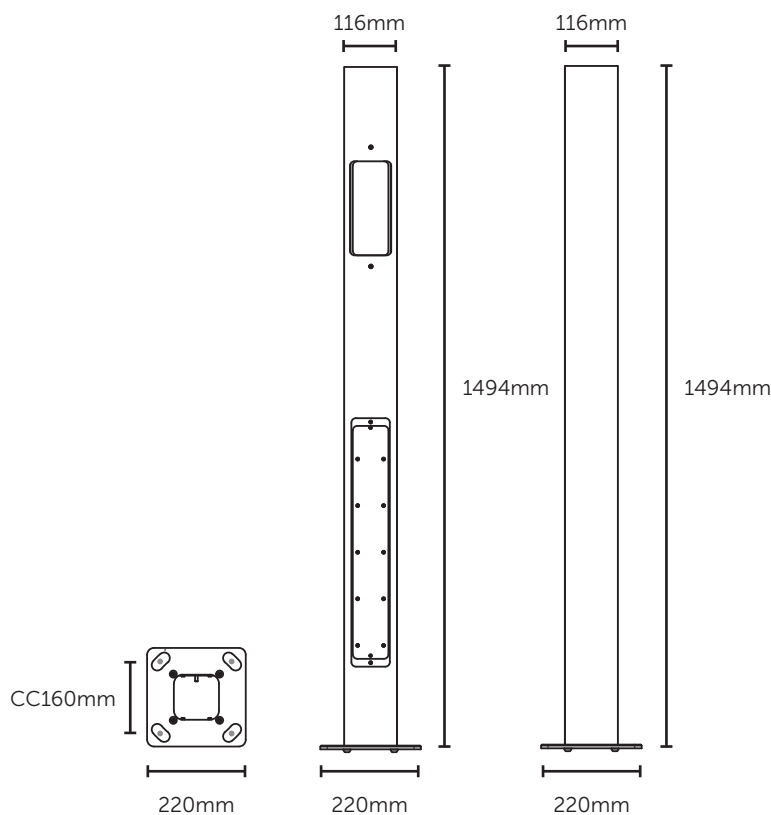**Degree of protection**
IK10

Gross Measurement
1515x225x225mm

Weight
7,3kg

Gross weight
7,75kg

Technical drawing

116mm 116mm

1494mm 1494mm

CC160mm

220mm 220mm 220mm

DATA SHEET

ONEPOLE Anchorframe 400 C/C 160 MM
Q13YB | GTIN: 7090037705132
HS-Code: 730830009

Country of origin
China

Material
Steel

Color
Gray

Surface treatment
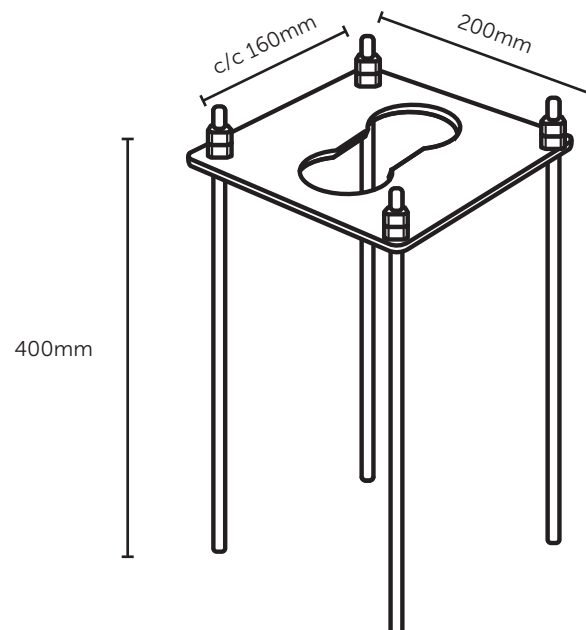Hot-dip galvanized, powdercoated

Gross Measurement
???x???x?mm

Weight
4,5kg

Gross weight
????

Technical drawing

c/c 160mm
200mm

400mm