

Electric Vehicle Charger Specification

Alp Easy Charge DUO Business



Revision History:

V1	Initial Specification (20.03.2019)
V2	Update Date : 08.05.2019
V3	Update Date : 14.06.2019
V4	Update Date : 24.07.2019
V5	Update Date : 14.01.2020
V6	Update Date : 17.04.2020
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V8	Update Date : 31.05.2020
V9	Update Date : 12.08.2020
V10	Update Date: 04.01.2020
V11	Update Date: 22.01.2020

1. GENERAL SPECIFICATION

<p>Model Name</p>	<p><u>MODEL DESCRIPTION : Alp Easy Charge DUO Business*-*-*-*-*</u></p> <p>Alp Easy Charge : Electric Vehicle AC Charger (Mechanical Cabinet 05) DUO Business</p> <p>1st Asterisk (*) can include Outlet Quantity and Rated Power</p> <p>44 : 22 kW with dual outlet (3Phase Supply Equipment) 22 : 11kW with dual outlet (3Phase Supply Equipment)</p> <p>2nd Asterisk (*) can include combinations of the communication module options:</p> <p>Blank : Only Ethernet and RFID W : WiFi & Bluetooth module L : LTE / 3G / 2G module P : ISO 15118 PLC module</p> <p>3rd Asterisk (*) can be mentioned for display option.</p> <p>Blank : No Display D : 10.4" Display with touchscreen</p> <p>4th Asterisk (*) can be mentioned for MID option.</p> <p>Blank : No MID M : Charging unit with MID meter.</p> <p>5th Asterisk (*) can be mentioned for RCCB Reclosure Unit option.</p> <p>Blank : No RCCB Reclosure Unit R : Charging unit with RCCB Reclosure Unit</p> <p>6th Asterisk (*) can be mentioned for Schuko option.</p> <p>Blank : No Schuko Outlet S : Charging unit with Schuko Outlet</p> <p>7th Asterisk (*) can be one of the following:</p> <p>Blank : Case-B Connection with normal socket T2S : Case-B Connection with shuttered socket T2L : Case-B Connection with LID socket T2P : Case C Connection with Type-2 plug</p>
<p>Cabinet</p>	<p>Alp Easy Charge DUO Business</p>

<u>ELECTRICAL SPECIFICATION</u>	
<u>IEC Protection Class</u>	Class I
<u>Socket Outlet (Vehicle Interface)</u>	IEC 62196 AC Type-2 IEC 62196 Shuttered Socket (optional) IEC 62196 Locked Cover Socket (optional)
<u>Schuko Socket with Lock Mechanism (Optional)</u>	Type E Type F
<u>Cable Outlet (Vehicle Interface) (Optional)</u>	Cable with TYPE 2 (IEC 62196) Female Plug
<u>Voltage & Current Rating</u>	400 VAC 50/60 Hz - 3-Phase 32A 230VAC 50/60 Hz – 1-Phase 16A (For Schuko)
<u>AC Maximum Charging Output</u>	2 x 22kW for AC Socket outlet 2 x 3,7KW for Schuko outlet Total 51,4KW
<u>Serial Interface</u>	Modbus / M-Bus over RS485
<u>Power Level Control</u>	WebConfig UI
<u>Built-in DC residual current sensor</u>	DC 6 mA
<u>Display</u>	Color 10.4” TFT LCD with resistive touchscreen user interface
<u>Built-in MID meter</u>	Class B MID meter Eichrecht conformity (optional)
<u>Built-in RCCB</u>	Type-A High Immunity (with optional Shunt Trip)
<u>RCCB Reclosing Unit</u>	Optional
<u>Built-in MCB</u>	40A Type C for AC outlets, 20A Type C for Schuko outlets
<u>EV Ready, ZE Ready</u>	Optional
<u>Surge Protection Device</u>	Yes
<u>Built-in Electrical Protection</u>	Over Current, Over Voltage, Under Voltage, DC/AC Residual Current, Over Temperature, Short Circuit, Socket Interlock, Surge/Lightning, Earth Fault, Phase- Neutral Reverse Detection

<u>CONNECTIVITY</u>	
<u>Ethernet</u>	100 Mbps Ethernet (Standard with M / W / L / P options) Daisy Chain
<u>Wi-Fi</u>	802.11 a/b/g/n
<u>Bluetooth</u>	BT 5.0 ; BT 4.2 low energy
<u>Mobile Connectivity (Optional)</u>	LTE / 3G / 2G
<u>PLC HLC (Optional)</u>	ISO 15118
<u>RFID Reader</u>	ISO 14443A/B and ISO 15693 w/SAM Module

<u>OTHER FEATURES (Connected Models)</u>	
<u>Remote Diagnostics</u>	Remote Diagnostics over OCPP
<u>OCPP</u>	OCPP 1.6
<u>Load Management</u>	Ethernet / Wi-Fi / RS485 OCPP Smart Charging MultiCP Local Load Balancing
<u>Software Update</u>	Remote software update over OCPP Local software update via USB port
<u>USB port (internal)</u>	USB 2.0

<u>MECHANICAL SPECIFICATION</u>		
Material	Metal	
Protection Degree	Ingress Protection	IP54
	Impact Protection	IK10 (In screen and sockets IK08)
Dimensions	1530.0 mm (Height) x 575.0 mm (Width) x 205.0 mm (Depth)	
Dimensions (with packing)	1575.0 mm (Height) x 800.0 mm (Width) x 390.0 mm (Depth)	
AC Mains Cable Dimension & Cable Gland Diameters	For 16mm ² -35mm ² AC Mains, suitable cable gland diameter interval is 24mm-31mm	
Weight	80 kg	
Weight (with packing)	90 kg	
<u>Sensors</u>	ALS, Proximity, G-Sensor/Gyro Sensor	

<u>ENVIRONMENTAL SPECIFICATIONS</u>		
Operating Condition	Temperature	-25 °C to + 50 °C
	Humidity	5 % - 95 % (Relative humidity, non-condensing)
	Altitude	0 - 3.000m

Note: Any different idea about this specification or the result of measurement shall be discussed together before making certain decision

2. TEST STANDARDS

a. Safety

IEC 61851-1 Ed.3	Electric Vehicle Conductive Charging System (AC)
IEC 60950-1	Information technology equipment
IEC 60950-22	I.T. Equipment Safety (Outdoor use)
IEC TS-62763	Pilot function through a control pilot circuit using PWM (pulse width modulation) and a control pilot wire

b. EMC

IEC 61851-21-2	Electric vehicle conductive charging system – Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply – EMC requirements for off-board electric vehicle charging systems
EN 61000-6-1	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
EN 61000-6-2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61000-6-3	Electromagnetic compatibility (EMC) – Part 6-3: Generic standards; Emission standard for residential, commercial and light-industrial environments
EN 61000-6-4	Part 6-4: Generic standards – Emission standard for industrial environments
EN 301 489-1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility
EN 301 489-17	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility
EN 301 489-52	Electromagnetic Compatibility (EMC) standard for radio equipment and services;

	Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
EN 301 489-3	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
EN 300 328	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum
EN 301 893	5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
EN 301 511	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
EN 301 908-1	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements
EN 300 330	Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

c. Reliability

EN 60068-2-1	Low Temperature Test
EN 60068-2-14	Temperature Cycle Test
EN 60068-2-2	Dry Heat Test
EN 60068-2-3	High Humidity Test
IEC 61000-4-5	Surge Test

IEC 61000-4-11	Voltage Dips, Short Interruption, and Variation Test
IEC 61000-4-2	ESD Test
VES 30 431	Lightning Surge Test
VES 30 404	Voltage/Current Stress Test
VES 30 422	Momentary Power Out Test
VES 30 407	Heat Run Test
VES 30 439	AC Mains Over Voltage Test
EN 60068-2-6	Vibration Test
VES 34 003	Drop Test

3. DIMENSIONAL DRAWINGS



