ALPEV

Taking charge of e-mobility

ALP EASY CHARGE DUO

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1. GENERAL SPECIFICATION

Model Name	**<u>MODEL DESCRIPTION : ALP Easy Duo-AC</u>****-*** ALP Easy Duo : Electric Vehicle AC Charger (Mechanical Cabinet 10) **1st Asterisk (*) : Rated Power** 7 : 2x3.7kW (1Phase Supply Equipment) 14 : 2x7.4 kW (1Phase Supply Equipment) 22 : 2x11 kW (3Phase Supply Equipment) 44 : 2x22 kW (3Phase Supply Equipment) **2nd Asterisk (*) can include combinations of the following communication module options.** RFID reader is standard equipment for all of the model variants. "S" option must be included for selecting combinations of W, L and P: Blank : No connectivity module except RFID reader S : Smart Board with Ethernet Port W : Wi-Fi module or WiFi & Bluetooth module L : LTE / 3G / 2G module P : ISO 15118 PLC module **3rd Asterisk (*) can be one of the following:** Blank : No Display D : 7" TFT color display **4th Asterisk (*) can include combinations of the following:** Blank : No RCCB or MID meter A : Charging unit with Type-A RCCB MID : Charging unit with MID meter. **5th Asterisk (*) can be one of the following:** Blank : Case-B Connection with normal socket T2S : Case-B Connection with shuttered socket T2P : Case C Connection with Type-2 plug T1P : Case C Connection with Type-1 plug
Cabinet	ALP Easy Duo

ELECTRICAL SPECIFICATION	
IEC Protection Class	Class I
Socket Outlet (Vehicle Interface)	2 x Socket Outlet IEC 62196 Type-2 2 x Shutter Socket (optional)
Input Voltage & Current Rating	***For double AC Mains input cable construction;*** 400VAC 50/60 Hz - 3-Phase 32A (for each outlet) 230 VAC 50/60 Hz - 1-Phase 32A (for each outlet) ***For single AC Mains input cable construction;*** 400VAC 50/60 Hz - 3-Phase 32A (dynamic between outlets) 400VAC 50/60 Hz - 3-Phase 16A (dynamic between outlets) 230 VAC 50/60 Hz - 1-Phase 32A (dynamic between outlets)
AC Maximum Charging Output	22kW for each outlet (AC44 Series) 11kW for each outlet (AC22 Series, for double AC Mains input) 22kW for each outlet (AC22 Series, for single AC Mains input) 7.4kW for each outlet (AC14 Series, for double AC Mains input) 7.4kW for each outlet (AC7 Series, for single AC Mains input)
Serial Interface	Modbus over RS485 P1 Slimmemeter Port TIC Interface for Linky Smartmeter
Power Level Control	Current level control via rotary switch (3-P models are down gradable to 1-P via rotary switch) 10-13-16-20-25-30-32A (AC14 and AC44 series), 10-13-16A (AC22 series) For Smart variants, power level control is also possible from Web Configuration Interface
Built-in DC residual current sense	2x DC 6 mA
Display	Color 7” TFT LCD (Optional)
Built-in MID meter	2x Accuracy Class B (% 1) with Crypto Engine (Optional)
Built-in MID meter complying w/ Eichrecht	2x Accuracy Class B (% 1) with Crypto Engine (Optional)
Built-in RCCB	2x Type-A High Immunity (Optional for double AC Mains input) ***For single AC Mains input cable construction****, 2 separate RCCBs must be placed inside the charging unit.* 2x 4P-40A - 30mA RCCB Type- A for (AC22 Series) 2x 2P-40A - 30mA RCCB Type- A for (AC7 Series)
Required RCCB on AC Mains (without built-in RCCB models)	***For double AC Mains input cable construction****, RCCB is optional inside the charging unit.* 2x 4P-40A - 30mA RCCB Type- A for (AC44Series) 2x 2P-40A - 30mA RCCB Type- A for (AC14 Series)

Required Circuit Breaker on AC Mains (Max Current)	***For double AC Mains input cable construction;*** 2x 4P-40A MCB Type-C for (AC44 Series) 2x 2P-40A MCB Type-C for (AC14 Series) ***For single AC Mains input cable construction;*** 4P-40A MCB Type-C for (AC22 Series) 2P-40A MCB Type-C for (AC7 Series)
Built-in Electrical Protection	Over Current, Over Voltage, Under Voltage, DC/AC Residual Current, Over Temperature, Short Circuit, Socket Interlock, Surge/Lightning, Earth Fault, Phase- Neutral Reverse Detection

CONNECTIVITY	
Ethernet	100 Mbps Ethernet (Standard with smart options) Daisy Chain
Wi-Fi	Wi-Fi 802.11 a/b/g/n/ac (Optional)
Bluetooth	BT 5.0 ; BT 4.2 low energy (Optional)
Mobile Connectivity	LTE / 3G / 2G (Optional)
PLC HLC	ISO 15118 (Optional)
RFID Reader	ISO 14443A/B and ISO 15693

OTHER FEATURES	
Potential Free Enable Input	Signal input for controlling the charging station externally
Welded Contactor Indication	Signal output for monitoring welded contactor state
Load Shedding (with Optional Accessories)	Standalone power optimization by measuring total usage under main switch of the building

OTHER FEATURES (Smart Models only)	
Remote Control / Monitoring	Android / IOS Remote Monitoring & Control
Remote Diagnostics	Remote Diagnostics over OCPP
Load Management	Ethernet / Wi-Fi / RS485 / OCPP 1.6 Smart Charging
Software Update	OCPP / USB port

MECHANICAL SPECIFICATION	
Material	Plastic
Mounting	Wall or Optional Mounting Pole

3-phase Dimensions Dimensions (with packing) Weight AC Mains Cable Dimension **1-phase** Dimensions Dimensions (with packing) Weight AC Mains Cable Dimension Cable inlets	 580 mm (Height) x 400 mm (Width) x 235 mm (Depth) TBD TBD 18-25 mm 580 mm (Height) x 400 mm (Width) x 235 mm (Depth) TBD TBD 13-18 mm AC mains / Ethernet / RS485

ENVIRONMENTAL SPECIFICATIONS		
Protection Degree	Ingress Protection Impact Protection	IP54 IK10 (Display has IK08 protection)
Operating Condition	Temperature Humidity Altitude	-35 °C to +55 ° -25 °C to +55 ° (RCCB Equipped models) 5 % - 95 % (Relative humidity, non-condensing) 0 - 4.000m

2. FUNCTIONAL SPECIFICATION

a. User Interface

LED Color Indications

Standby: No LED indication

Preparing: Blinking Blue

Charging: Blue Glowing

Charging Finished: Constant Blue

Fault: Constant Red

Ventilation Required: Blinking Red

Charging current limited to 16A: Blinking Purple

Charging not possible due to over temperature: Constant Purple

RFID Configuration mode: Blinking Red

3. 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