



# Technical specifications

## INPUT

---

Voltage: 400 VAC 50Hz TN-S

---

Nominal input current: 85 A

---

Max. grid short circuit current: 36 kA

---

Recommended min. fuse: 100 A (C-car)

---

Grounding: Recommended to use reinforced grounding to fulfil EMC standards.

---

Power factor: >0,98

---

Harmonics: EN61000-3-122

---

Efficiency: >94%

---

MID-CERTIFIED Energy meter on AC supply side

---

## OUTPUT

---

Voltage: 200-500 VDC

---

Current: max 125A

---

Max. Power: 50 kW

---

Efficiency: >94%

---

## INSULATION

---

Input/output: 3 kVAC

---

Output/PE: 2,2 kVDC

---

Output grounding system: DC Ungrounded

---

Caution: Insulation test requires special actions.

---

## OPERATING TEMPERATURE

---

External temperature: -30°C to +40°C

---

Derated output power at higher temperatures.

---

Recommendation to avoid direct sunlight

---

Lower temperatures will mainly affect LCD display

---

## HARDWARE PROTECTIONS

---

Overvoltage/ Surge protectors

---

Moulded Case Circuit Breaker with thermomagnetic trigger

---

MCCB serves as Lock out/tag out disconnection point

---

RCBO (type A) 30mA to all support systems

---

Fuses on each module

---

Fast acting fuses on output DC

---

## ELECTRONIC PROTECTIONS

---

Insulation monitoring device on DC output

---

Overload and shortcircuit protection

---

Overtemperature and temperature regulation

---

Output overvoltage protection

---

Reverse polarity protection

---

Charging plug defects/communication failure

---

## CONNECTION PROTOCOL

---

CCS / COMBO (type 2)

---

CHAdcMO

---

Cable length: 4,5m (standard) OR 6,5m (Option)

---

## MECHANICAL FEATURES

---

Dimensions: H=1955mm, B=600mm, D= 540mm

---

Weight: 280kg

---

Shipping pallet dimensions: 1200x1000x2200, 305kg

---

IP 54, IK10

---

## COMMUNICATION

---

OCPP 1.6 J-SON

---

2x4G modems, one for service and one for OCPP

---

Option: LAN/TCP-IP Ethernet (RJ45 connector)

---

Vehicle: CAN (CHAdcMO) or PLC (CCS/COMBO)

---

Access: RFID reader

---

## LIST OF STANDARD COMPLIANCE

---

EN 61851-1:2017 ed. 3.0

---

IEC 61851-21-2 ed.10. (part21-2), -23:2014 ed 1.0,  
-24:2014 ed 1.0

---

IEC 61439-1:2011 ed 2.0, -7:2018 ed 1.0

---

IEC 60529:2013 + A1:1999 + A2:2013

---

EN61000-3-122, -6-2:2005, 61000-6-3:2006 + A1:2010

---

IEC 62311:2007

---

CE-Marked (LVD, EMC, RED, ROHS)

---

## CONFIGURATIONS & OPTIONS

---

Delivery with preset OCPP settings to fit CPO

---

Extra long cables (6,5m)

---

LAN/Ethernet connectivity

---



Dokument/document		Utgåva datum/edition date
Försäkran om överensstämmelse/ Declaration of conformity		2015-05-04
Avdelning/department		
Kvalitet/Quality		
Ansvarig/prepared	Version	Sida/page
Kent Andersson	4	1 av/of 1

**Manufacturer/Tillverkare:** GARO AB  
Box 203  
S-335 25 GNOSJÖ  
Sweden

Telephone: +46 (0)370 33 28 00  
Telefax: +46 (0)370 33 28 50

Agent established within EC/Ombud etablerad inom EG

Agent of equipment/Materielslag: Electric Charging Station for EV/Laddstation för elbil

Trade Mark/Varumärke: GARO

Type Designation/Typbeteckning:

GARO Charger ATLE, ALTHEA \_Product code: ATLE 24KW , ATLE24KWCCS CHAD

Product code:ALTHEA 50KW

We hereby declare that our product fulfils the requirements of following EC directives/  
Vi intygar härmed att vår produkt uppfyller krav enligt följande EU direktiv:

- The Low Voltage Directive (LVD) 2014/35/EU / Lågspänningsdirektivet (LVD) 2014/35/EU.
- Electromagnetic compatibility (EMC) 2014/30/EU / Elektromagnetisk kompatibilitet (EMC) 2014/30/EU.
- RoHS Directive (RoHS) 2011/65/EU / RoHS direktivet (RoHS) 2011/65/EU.
- No electromagnetic compatibility (EMC 2014/30/EU) immunity or emission tests are required on the assembly / Produkten innehåller inte elektroniska apparater som påverkas enligt förbehållen enligt direktivet (EMC) 2014/30/EU.

The following harmonised standards (latest edition) or technical specifications which comply with good engineering practice in safety matters in force within the EC have been used in the design:/

Följande harmoniserade standarder (senaste utgåva) eller tekniska specifikationer som uppfyller god säkerhetsteknik praxis inom EG har använts i konstruktionen: IEC 61851-1 och IEC TS 61439-7

- The equipment confirms completely with the above stated harmonised standards or technical specifications./  
Materielen överensstämmer helt med ovan angivna harmoniserade standarder eller tekniska specifikationer.

Or/eller

The equipment confirms only partially with the above stated harmonised standards or technical specifications but complies with good practice in safety matters in force within the EC./

Materielen överensstämmer endast delvis med ovan angivna harmoniserade standarder eller tekniska specifikationer, men uppfyller god säkerhetsteknisk praxis inom EG.

We have product surveillance according to CENELEC's harmonised requirements, documents CCA-201.

GARO AB  
Company/Företag

2016-05-12  
Date/Datum

  
Sign/Underskrift

Responsible for Technology and standardization/Teknik och standardiseringsansvarig  
Position/Befattning

Kent Andersson  
Sign in printed letters/Namnförtydligande