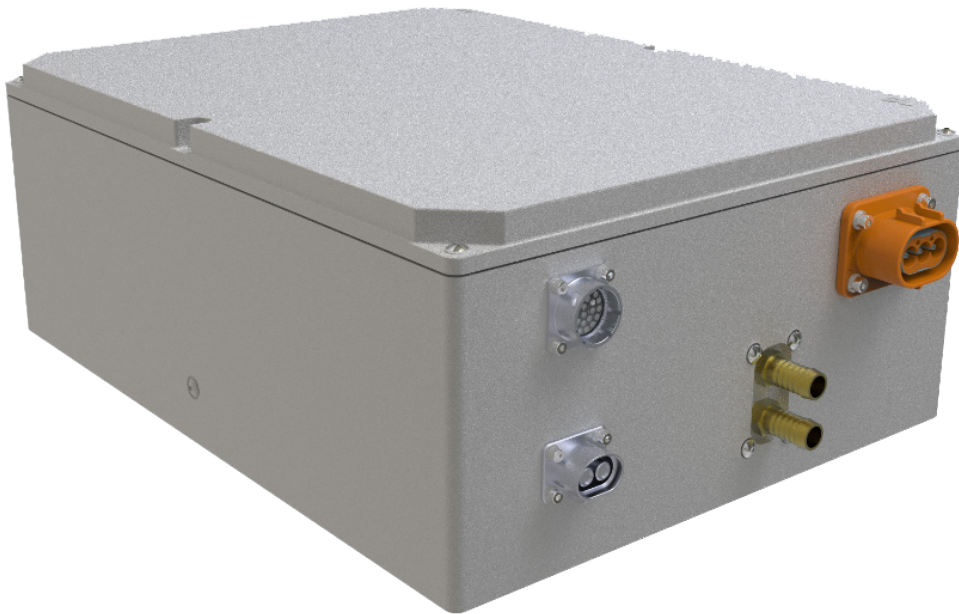


ON-BOARD CHARGER

FOR ELECTRICAL AND HYBRID VEHICLE
APPLICATIONS



Product Description

The On-Board Charger has been designed by ASELSAN for middle and heavy-duty vehicles like electrical/hybrid bus and truck or new generation passenger cars, which have increased battery voltages. The On-Board Charger can properly charge different battery packages independent from the chemical structure such as LFP, NMC, LMC or LTO.

New generation "Silicon-Carbide" switches are used in the power conversion circuits, which makes possible to increase the efficiency and power density of the unit.

Typical Applications

- Middle or Heavy Duty Electrical and Hybrid Vehicles
- New Generation Passenger Cars with Increased Battery Voltage

Product Features

- Communication between the charging station according to IEC 61851 standard
- Possible to work from both one or three phase AC input
- Internal pre-charging circuit on the AC input lines
- Galvanic isolation between AC input and DC output
- Internal fuse protection on DC output
- Protection of under-voltage, over-voltage, over-current and over-temperature
- Low power sleep mode
- High Voltage Interlock Circuit (HVIL)
- Able to lock the charging socket
- Monitoring of the temperature of charging socket
- Able to control the contactors between the battery and DC output of the unit (if any)

ON-BOARD CHARGER

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Specifications*

Electrical Properties

AC Input Voltage Range (1 phase)	: 200-250 VAC (Phase-Neutral)
AC Input Voltage Range (3 phase)	: 360-440 VAC (Phase-Phase)
Input Power Ratings	: 7 kW (1 phase) / 22 kW (3 phase)
DC Output Voltage	: 250-750 VDC
Maximum Charging Current	: 48 A
Power Factor (@Full Load)	: >0.99
Efficiency (@Full Load)	: >90%(1 phase) / >95% (3 phase)
Control Circuit Supply Range	: 9-36 VDC
Communication Interface	: CANBus

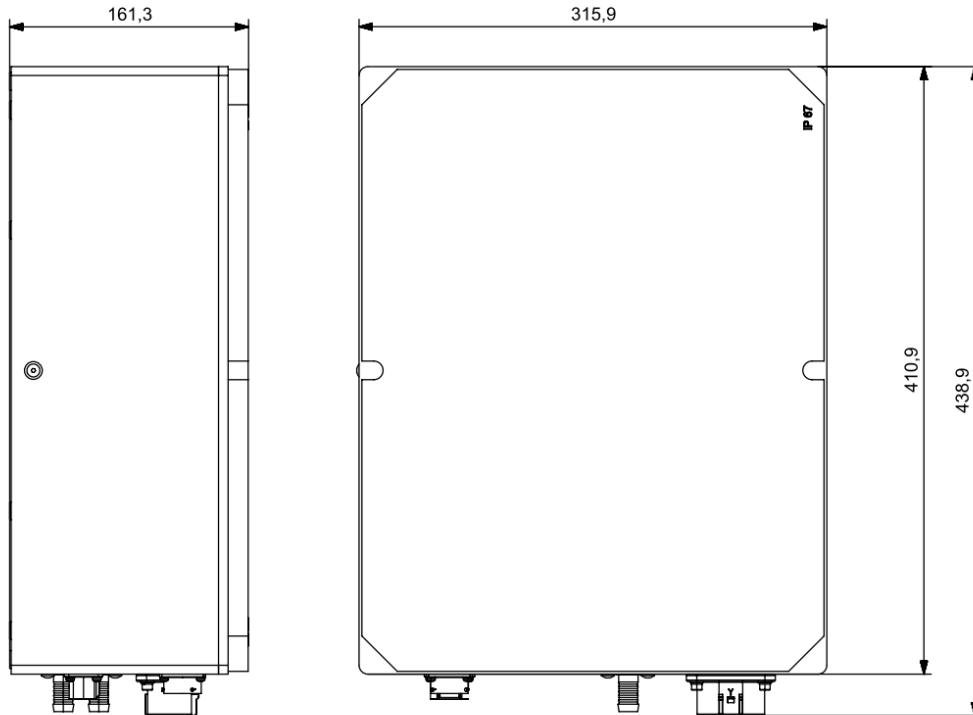
Standards

Automotive Qualified Components	: AEC-Q100 / Q101 / Q200
Functional Safety	: ISO26262
Communication with Charging Station:	IEC 61851 Mode 2 and 3

Thermal and Mechanical Properties

Operating Temperature	: -40 °C / +75 °C
Storage Temperature	: -40 °C / +85 °C
Sealing	: IP67
Weight	: 20 kg
Cooling	: Liquid Cooling (%50 water, %50 ethylene glycol)
Cooling Liquid Flow	: 10-12 lt/min
Cooling Liquid Temperature Range	: -20 °C / +60 °C

Mechanical Dimensions



*Can be updated according to the requirements and the applications.