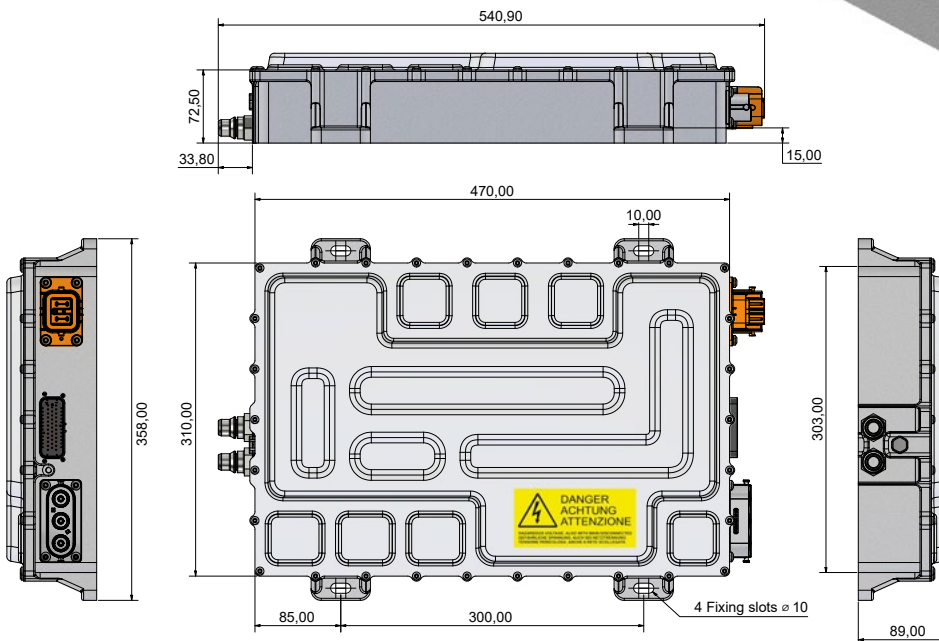


BHP19KL

19.2 kW single phase bidirectional on-board charger for heavy duty and rugged applications



APPLICATIONS

BHP19KL charger series is a 19.2 kW bidirectional high power density power module, very versatile, safe, optimized for on-board battery powered vehicle applications. The module is based on the latest SIC semiconductors and power converter technologies which results in high efficiency and prime performance in all harsh applications.

The BHP19KL can be configured in "Forward Charger Mode" or "Reverse Power Mode" (bidirectional operations) to perform V2G, V2L, V2H applications.

The BHP19KL has been successfully tested to meet international EMC, safety and environmental standards.

FEATURES

- 19.2 kW AC single bidirectional operation
- Paralleable in charge mode
- AC charger - SAE J1772 and EN 61851 compliance
- DC fast charging (CCS) communication (optional) - DIN 70121, ISO 15118
- AC plug locking/unlocking management
- HVDC interlock monitoring
- Typical efficiency >94%
- AC/DC galvanic isolation
- UDS, functional safety (ASIL-A), cybersecurity compliant
- IP67, IP6K9K protection
- HVDC outputs are short-circuit and reverse polarity protected
- Fully CAN monitored and controlled (v2.0B and FD)
- SAE J1939 compliant
- UL1741, IEEE1547 compliant

ACCESSORIES

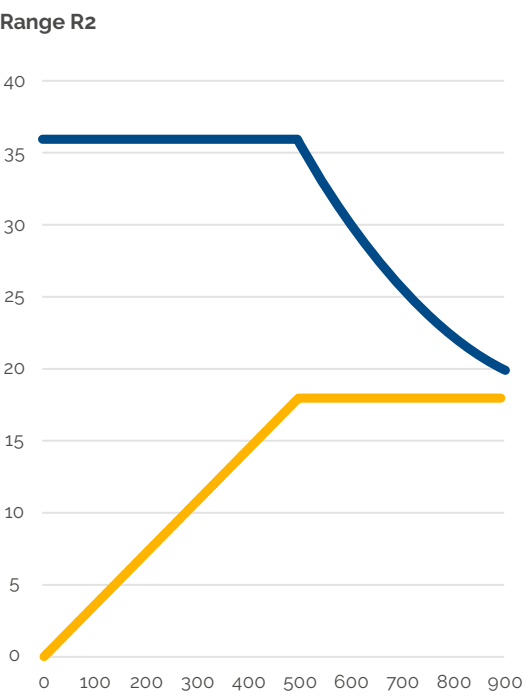
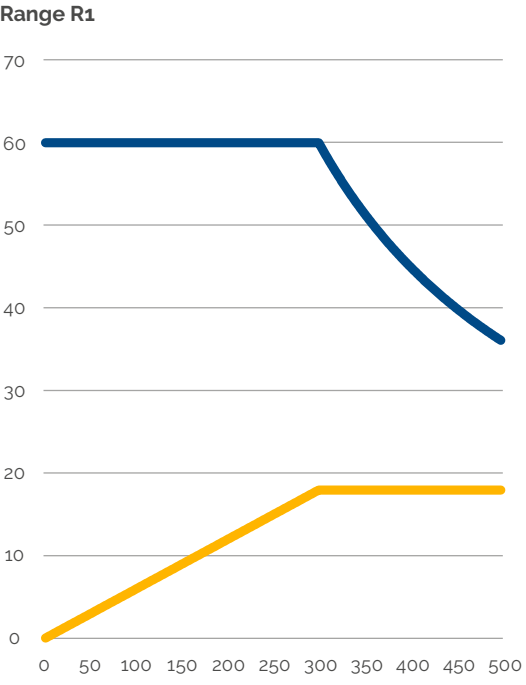
- | | |
|-----------|----------------------------|
| HBI19D-02 | AC and LV mating cable 2 m |
| HBI19D-05 | AC and LV mating cable 5 m |
| HBO19D-02 | HVDC mating cable 2 m |
| HBO19D-05 | HVDC mating cable 5 m |



SPECIFICATIONS		
AC input data (Forward Charge Mode)		Units
1-phase AC voltage	95 ÷ 265	Vac
Line frequency	47 ÷ 63	Hz
AC input current (max)	80	Aac
Absorbed apparent power (max)	19.2	kVA
Power factor	>0.98	-
AC current THD	<10	%
AC output reverse power mode (V2L/V2G)		
1-phase AC voltage	120/230/240 (split voltage)	Vac
Line frequency	50/60	Hz
AC voltage THD	<3	%
AC output current (max)	75	Aac
Apparent power (max)	9	kVA
Battery voltage range	500 ÷ 370 (range R1) 900 ÷ 570 (range R2)	Vdc
HVDC output Forward Charge Mode		
V01 HV output voltage (constant power range)	300 ÷ 500 (range R1) 500 ÷ 900 (range R2)	Vdc
V01 HV voltage accuracy (typ)	±0.5	%
V01 HV output current (max)	60 (range R1) 36 (range R2)	Adc
V01 HV rated output power (max)	>18	kW
General data		
Ambient temperature (operating)	-40 ÷ +85	degC
Ambient temperature (full performance)	-40 ÷ +70	degC
Power de-rating	+50 (of the coolant liquid)	degC
Heat dissipation	Liquid cooling (50:50% Glycol/Water, F > 6 lt/min)	-
Coolant pressure loss at 6 lt/min, 25 °C	<200	mbar
Protection degree	IP67/IP6K9K	-
Efficiency	>94 at from 50% to max load	%
Communication and Control interface	CAN V2.0B - SAE 1939 - UDS	-
Standard applied		
Environment	ISO 16750-4, SAE J1455	-
EMC – Emission and immunity	ECE regulation 10	-
Safety	ECE Regulation 100; SAE J2344; ISO 16750-2; ISO 26262 Functional Safety (ASIL A); ISO SAE21434 (Secure Boot, Secure Programming)	-
Insulation resistance	HVDC output/PE: >10 MΩ at 1000 Vdc	-
Touch current	<3.5	mA
Chassis ground stud	Directly on the chassis	-
Mechanical data		
Dimensions (width x depth x height)	470x310x89	mm
Weight	17.7	kg
Case material	Aluminum alloy	-

CHARGE MODE

— Current [A]
— Power [kW]



Discover MTA complete range of on-board chargers on www.mta.it. Please check on MTA website the latest version of this technical data sheet.

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