



BRUSA

NLG6 - On - Board - Fast Charger

The synthesis of performance and efficiency



**AWARD
WINNER**



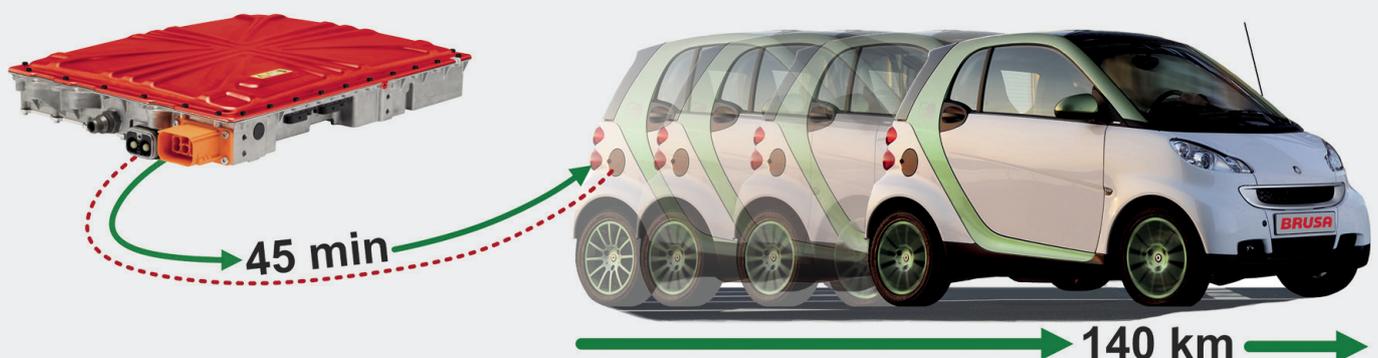
Safety first

- Full separation of mains and HV battery through galvanic isolation
- VDE certified charger complies with all applicable legal requirements in Europe. In case of EMC requirements, compliance is given in combination with the vehicle
- High IP - protection rating
- Evaluation of external PT1000 sensors
- Fully compliant with the LV123
- No DC - fault current, therefore the use of a Class A ground fault interrupter is possible

Cutting - Edge Technology

- Compatible to all combined charging systems
- 2x CAN interface: Vehicle CAN and Diagnostic CAN
- Battery - friendly high power charging due to low battery ripple current
- Single and three-phase charging with up to 22 kW
- Enhanced temperature handling and maximum performance through patented Liquid Pin® cooling - technology and integrated power factor correction
- Optional: Smart Charge Communication via PLC according to ISO15118
- minimal reactive power over the entire power range

6 times faster than standard!





Specifications NLG66x

AC Input

| | NLG664 | |
|--|-----------|------------------|
| Voltage range single-phase (L1→N) | 200 - 250 | V _{rms} |
| Voltage range three-phase (Phase - Phase L1 → L2 → L3) | 360 - 440 | V _{rms} |
| Max. input current three - phase (each phase) | 32 | A _{rms} |
| Max. input current single - phase | 16 | A _{rms} |
| Input frequency (+/- 1%) | 50 | Hz |
| Powerfactor (at 16 A mains voltage single - and three - phase) | > 0.99 | --- |

DC Output

| | NLG664 | |
|---|------------|------------------|
| Voltage range three - phase | 310 - 430 | V _{DC} |
| Voltage range single - phase | 200 - 450 | V _{DC} |
| Max. charging current three - phase | 60 | A _{DC} |
| Max. charging current single - phase | 12 | A _{DC} |
| Max. charging power three - phase | 20.75 | kW |
| Max. charging power single - phase | 3.3 | kW |
| Efficiency (P = Pa _{lmax}) three - phase | > 94 | % |
| Efficiency (P = Pa _{lmax}) single - phase | > 90 | % |
| Max. charging current ripple at max. charging power single - / three - phase (mains operated) | < 8 / < 10 | A ^{eff} |

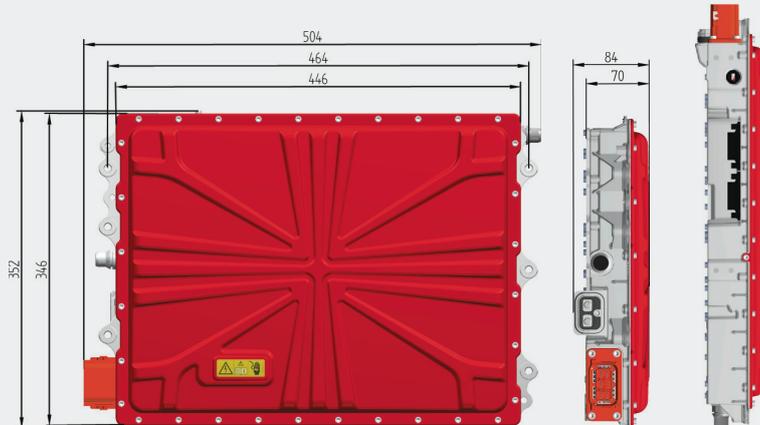
Mechanical Data / Cooling System

| | NLG664 | |
|--|-------------------------------|------|
| Housing material | Aluminium (EN AC - AlSi9MgMn) | --- |
| Weight | 12 | kg |
| Housing volume (without interfaces) | 11 | l |
| IP - protection | IP 6K9K | --- |
| Coolant quantity in device | 0.21 | l |
| Coolant pressure loss @ 6l / min, T _{coolant} = 25°C (water / glycol = 50 / 50) | < 100 | mbar |

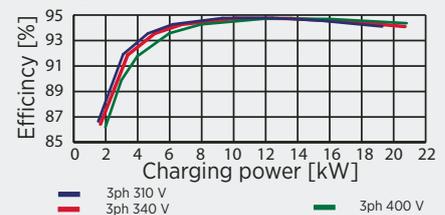
Safety

| | NLG664 | |
|---|--------------------|-----|
| Isolation between Mains input and DC - output | LV 123 / IEC 61851 | --- |
| Mains input overvoltage protection | 264 | V |
| Open circuit protection | yes | --- |
| Internal overtemperature protection | yes | --- |
| Insulation resistance (initial) min. | > 5 | MΩ |

Dimensions & Diagrams



Efficiency



Charging

