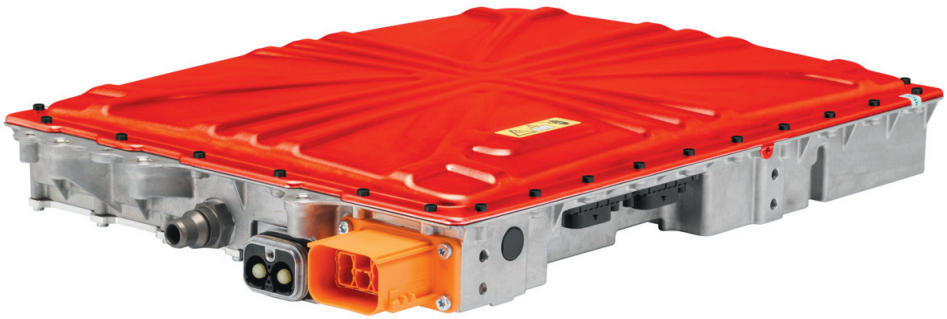
NLG6 - On-Board-Fast Charger

The synthesis of performance and efficiency



eCarTec AWARD WINNER

CE

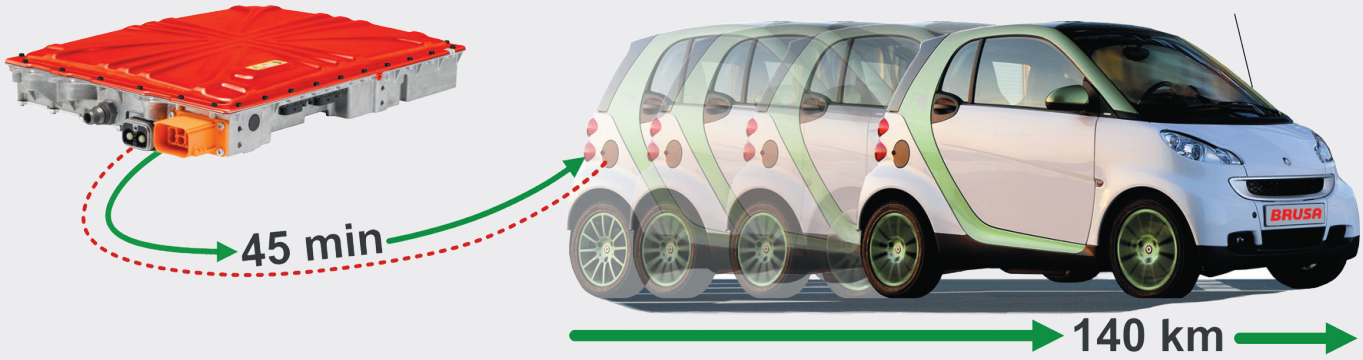
Safety first

- Full separation of mains and HV battery through galvanic isolation
- Complies to automotive standards such as IEC 61851-1 (CE compliant)
- Meets all EMC requirements
- High IP-protection rating
- Evaluation of external PT1000 sensors
- Fully complied with the LV 123
- No DC-fault current, therefore the use of a Class A leakage circuit breaker is possible

Cutting-Edge Technology

- Compatible to all combined charging systems
- 2 x 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 – full charge in less than 60 minutes!
- 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 ISO 15118
- And many more...

6 times faster than standard!



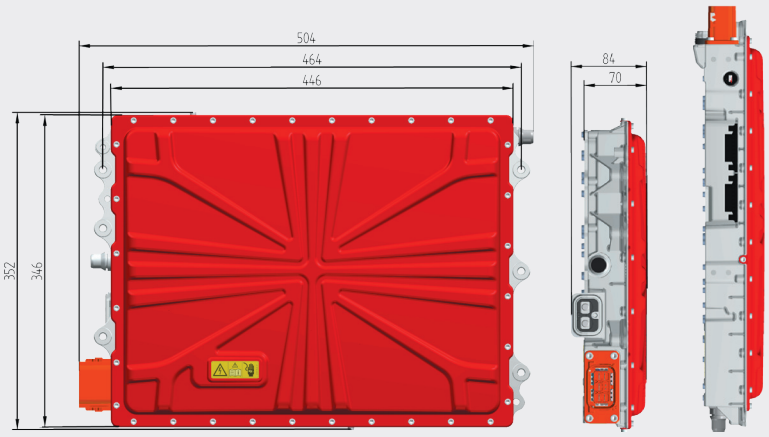
BRUSA Elektronik AG
Neudorf 14
CH-9466 Sennwald
+41 81 758 19 00
info@brusa.biz

www.brusa.biz

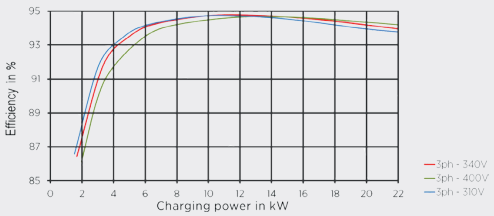
Specifications NLG66x

AC Input	NLG664	NLG665	
Voltage range single-phase (L1 → N)	200 - 250	200 - 250	V_{rms}
Voltage range three-phase (Phase - Phase L1 → L2 → L3)	360 - 440	360 - 440	V_{rms}
Max. input current three - phase (each phase)	32	32	A_{rms}
Max. input current single - phase	16	16	A_{rms}
Input frequency (+/- 1%)	50	50	Hz
Powerfactor (at 16 A mains voltage single - and three - phase)	>0.99	>0.99	---
DC Output	**NLG664**	**NLG665**	
Voltage range three - phase (derating / full power)	310 - 410	350 - 450	V_{DC}
Voltage range single - phase (derating / full power)	200 - 410	230 - 450	V_{DC}
Max. charging current three - phase	60	60	A_{DC}
Max. charging current single - phase	12.0	10.7	A_{DC}
Max. charging power three - phase	20.75	20.75	kW
Max. charging power single - phase	3.3	3.3	kW
Efficiency (P = $Pa1_{max}$) three - phase	>94	>94	%
Efficiency (P = $Pa1_{max}$) single - phase	>90	>90	%
Max. charging current ripple at max. charging power single - / three - phase (mains operated)	<8 / <10	<8 / <10	A^{eff}
Mechanical Data / Cooling System	**NLG664**	**NLG665**	
Housing material	Aluminium (EN AC - AlSi9MgMn)		---
Weight	12.0	12.0	kg
Housing volume (without interfaces)	11.0	11.0	l
IP - protection	IP 6K9K	IP 6K9K	---
Coolant quantity in device	0.21	0.21	l
Coolant pressure loss @ 6 l / min, $T_{coolant}$ = 25°C (water / glycol = 50 / 50)	<100	<100	mbar
Safety	**NLG664**	**NLG665**	
Isolation between Mains input and DC - output	LV 123 / IEC 61851	LV 123 / IEC 61851	---
Mains input overvoltage protection	264	264	V
Open circuit protection	yes	yes	---
Internal overtemperature protection	yes	yes	---
Insulation resistance (initial) min.	>5	>5	MΩ

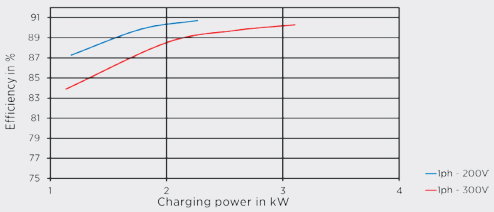
Dimensions & Diagrams



Efficiency 3-phase charging



Efficiency 1-phase charging



BRUSA / 02.2013 / NLG66x

BRUSA Elektronik AG
Neudorf 14
CH-9466 Sennwald
+41 81 758 19 00
info@brusa.biz

www.brusa.biz