

TECHNICAL DATA SHEET



HYBRI9 - 250A

9 phases low voltage battery charger alternators

HYBRI9 - 250A

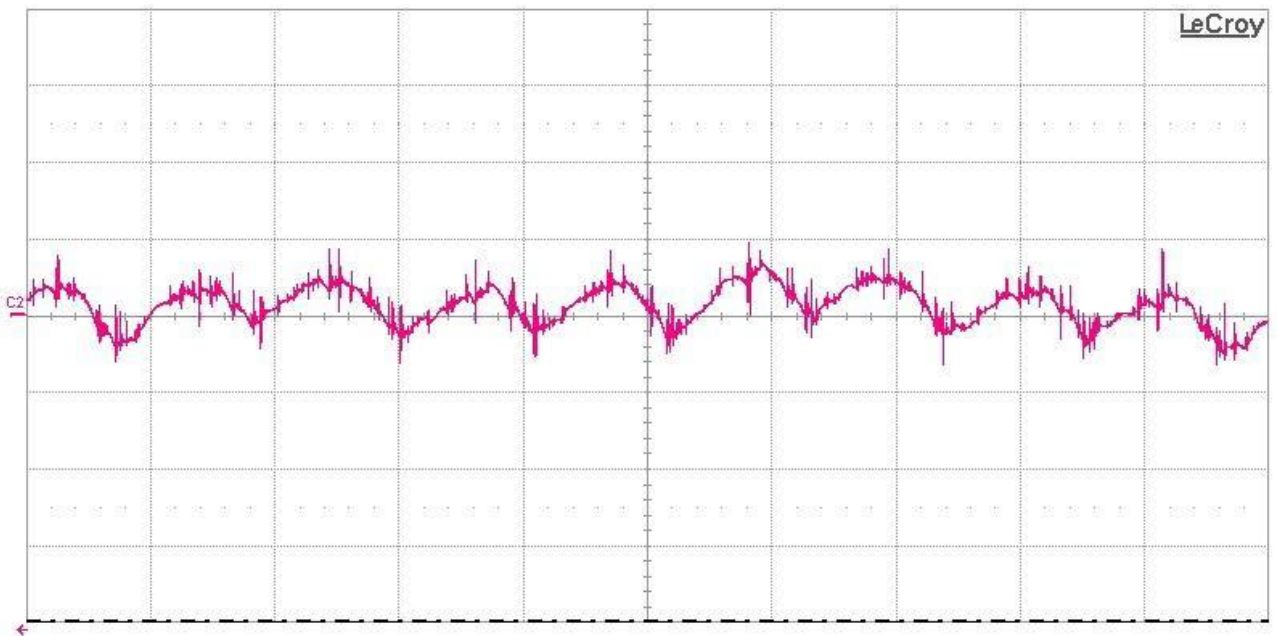
TYPICAL FEATURES

- Very low output ripple: <1% without battery
- Output voltage: 24V_{DC} - 48V_{DC}
- Max power output: 12kW
- Max rectified current: 250A_{DC}
- From 1600 to 3600 RPM
- AVR output voltage that allows:
 - ±0,5% of voltage accuracy
 - Over-excitation protection
 - Under-speed protection
- Brushless alternator with auxiliary winding
- Nine phases AC source
- Oversized and reliable internal DC power rectifier: up to 250A with air flow
- Protection of stator winding and rectifier with thermal trips
- DINSE socket used as DC output connector to guarantee simple, safe and durable connections.
- IP23
- SAE Coupling

HYBRI9 - 250A

TYPICAL TECHNICAL DATA

DC output (Vdc)	24 ÷ 28,8	48 ÷ 58
Power outlet (kW)	2,5 - 7,5	5 - 12,5
DC output current	Up to 250A	
Max Efficiency	>86%	
RPM	From 1600 to 3600 RPM	
Output ripple	< 1% without battery	
Output accuracy	± 0,5%	



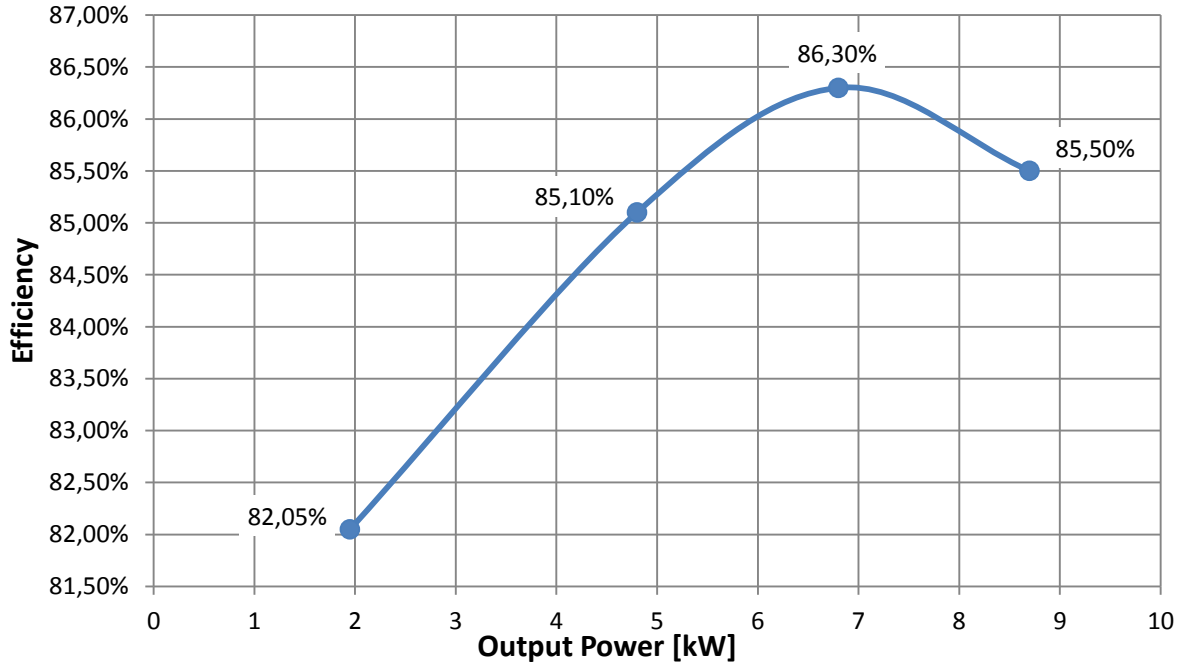
C2 A/F/ACTM
 200 mV/div
 2.00 mV offset
 58 #
 -794 mV
 -800 mV
 Δy -6 mV

Tbase -5.02 ms Trigger C1 DC
 1.00 ms/div Stop 0.0 V
 2.50 MS 250 MS/s Edge Positivo

Picture 1: Ripple waveform @ 50V_{DC} / 143 A_{DC} 1500RPM. V_{RMS} < 100mV

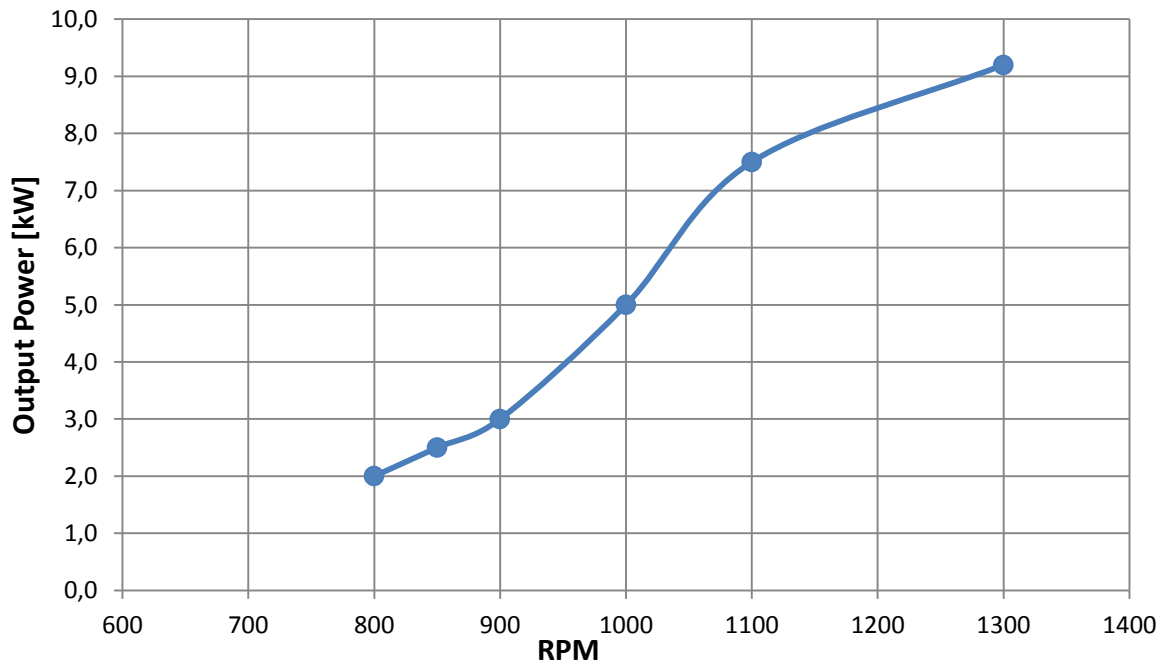
HYBRI9 - 250A

EFFICIENCY @ 1300RPM ANC 56V



Picture 2: Output power @56V

OUTPUT POWER @56V

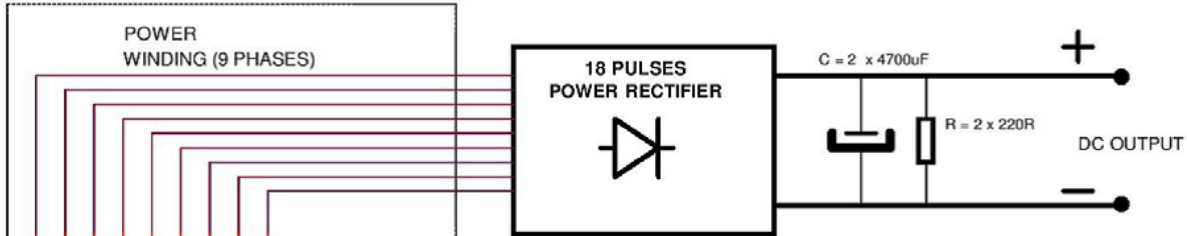


Picture 3: Efficiency @56V and 1300RPM

HYBRI9 - 250A

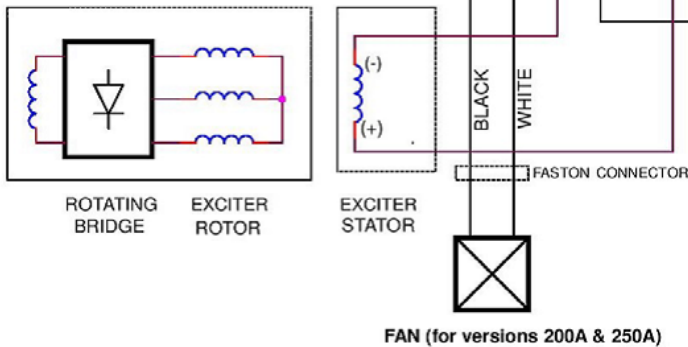
ELECTRIC DIAGRAM

MAIN STATOR

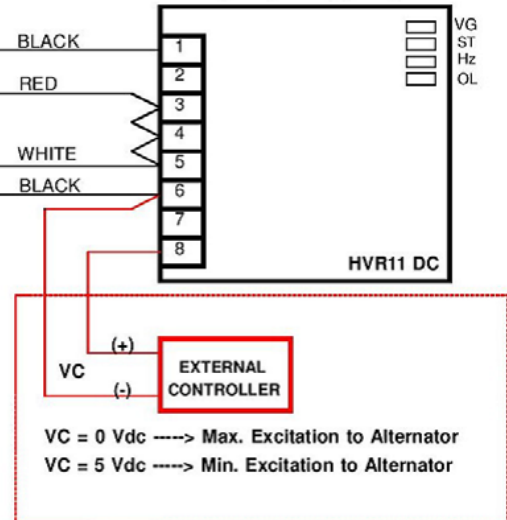


VG: Voltage trimmer, the voltage increases in clockwise direction
 ST: Stability trimmer, the stability increases in clockwise direction
 Hz: Under frequency trimmer, the protection is OFF in clockwise direction
 OL: Overload trimmer, the protection is OFF in clockwise direction

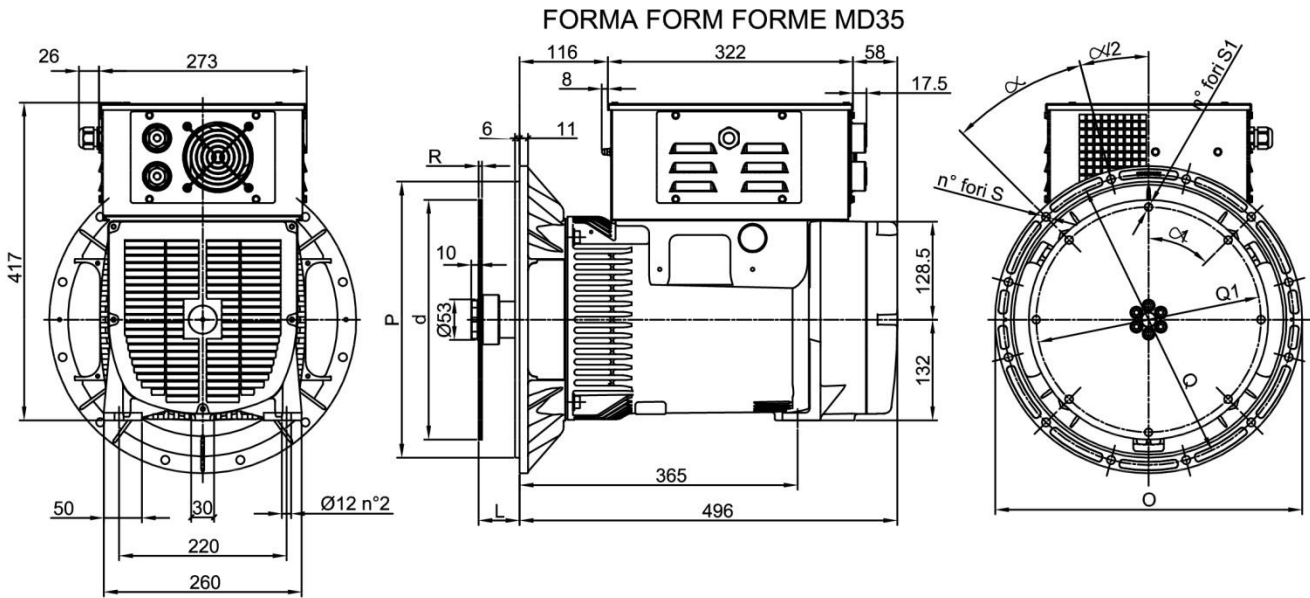
MAIN ROTOR



VOLTAGE REGULATOR



HYBRI9 - 250A



SAE N.	FLANGIE - BRIDE - FLANGE						GIUNTI A DISCO - DISC COUPLING - ACC. DISQUE							
	O	P	Q	n. fori	S	α	L	d	Q1	n. fori	S1	α1	R	
5	356	314.3	333.4	8	11	45°	6 1/2	30.2	215.9	200	6	9	60°	3
4	403	362	381	12		7 1/2	30.2	241.3	222.25	8	9	45°		
3	451	409.6	428.6	12	11	30	8	62	263.52	244.47	6	10.5	60°	4.5
						10	53.8	314.32	295.27	8	10.5	45°		
						11 1/2	39.6	352.42	333.37	8	10.5	45°		