

SEMaster

SE84.110.S to SE84.450.S

- Inverter for power generation plants
- Ultra-compact design for small footprint
- Speed modulation for extended operating times
- Static and dynamic grid stabilisation



Technical data

Designation	Size 6a					Size 7	
	SE84.110.S	SE84.130.S	SE84.160.S	SE84.200.S	SE84.240.S	SE84.375.S	SE84.450.S
Generator connection (AC)							
Voltage	130...400 V _{AC, eff}						
Frequency	0...400 Hz						
Recommended generator output	76 kVA	90 kVA	110 kVA	138 kVA	166 kVA	225 kVA	305 kVA
Mains power connection (AC)							
Mains voltage (±10 %)	400 V _{AC}						
Constant current at 4 kHz	110 A _{AC, eff}	130 A _{AC, eff}	160 A _{AC, eff}	200 A _{AC, eff}	240 A _{AC, eff}	375 A _{AC, eff}	450 A _{AC, eff}
Peak current ¹⁾ at 4 kHz	143 A _{AC, eff}	169 A _{AC, eff}	208 A _{AC, eff}	260 A _{AC, eff}	312 A _{AC, eff}	488 A _{AC, eff}	585 A _{AC, eff}
Continuous output / grid support operation (cos φ = 1)	76 kW	90 kW	110 kW	138 kW	166 kW	230 kW	311 kW
Continuous output / grid support operation (cos φ = 0.8)	61 kW	72 kW	88 kW	110 kW	132 kW	168 kW	249 kW
Intermediate circuit link (DC)							
Constant current ²⁾	120 A _{DC}	143 A _{DC}	174 A _{DC}	219 A _{DC}	263 A _{DC}	333 A _{DC}	485 A _{DC}
Peak current ^{1) 2)}	156 A _{DC}	186 A _{DC}	226 A _{DC}	285 A _{DC}	342 A _{DC}	488 A _{DC}	585 A _{DC}
Efficiency							
Max. efficiency (incl. LCL set at cos φ = 1) ³⁾	97.4 %	97.5 %	97.2 %	97.4 %	97.6 %	97.8 %	98.0 %
Dimensions							
Height (excl. terminals)	540 mm			540 mm	855 mm		
Width	280 mm			280 mm	380 mm		
Depth	322 mm			289 mm	287 mm		
Weight	40 kg			32 kg	90 kg		
General data							
Ambient temperature at 4 kHz	-10 °C...+45 °C						
Relative humidity	15 %...85 % (condensation not permitted)						
Cooling method	Air cooling				Liquid cooling		
Max. cable cross section generator / grid	50...150 mm ²				70...240 mm ²	Ring terminal end M10/M12	
Rec. cable cross section generator / grid	50 mm ²	50 mm ²	70 mm ²	95 mm ²	120 mm ²	185 mm ²	240 mm ²
Pollution severity (cf. EN 60664-1)	2						
Safety / protective devices							
Protection class (cf. IEC 60529)	IP20, except IP00 terminals						
Disconnection device (cf. VDE-AR-N-4105)	Integrated in the unit						
Standards							
General standards	<ul style="list-style-type: none"> - CE conformity - Compliant with 2009 renewable energy law (EEG) - DIN EN 61800-5-1: Adjustable speed electrical power drive systems Part 5-1: Safety requirements - Electrical, thermal and energy - DIN EN 61000-6-2 and DIN EN 61000-6-4: Electromagnetic compatibility 						
Grid monitoring	- As attested by VDE-AR-N-4105 certificate						
Interfaces / Features / Options							
Interfaces	<ul style="list-style-type: none"> - 1 x Ethernet (RJ45) - 1 x CAN - 1 x microSD card - 3 x analogue input (-10 V...+10 V); (0 mA / 4 mA...20 mA) - 11 x digital input PLC level (0/24 V) - 3 x PT100 input - 1 x ENPO (<500 Hz; at 24 V typ. 3 mA; response time 10 s) - 10 x digital output PLC level (0/24 V; 200 mA) - 2 x output for control of AC contactors 						
Features	<ul style="list-style-type: none"> - AC short-circuit capability - Extensive power factor control functions for static and dynamic grid stabilisation - Integrated data logger 						
Options	<ul style="list-style-type: none"> - Online monitoring of operating data - Transmission of fault messages by email - Maintenance contract, service extension 						
System components	- Line filter, boost converter, input restrictor with capacitor						

 1) At I²t for 10 s

2) At cos φ = 1

3) Depending on generator design