

DEFENDER SFC-L SERIES



Defender SFC-L Series Technical Specifications

MODEL	SFC-L 3310	SFC-L 3320	SFC-L 3330	SFC-L 3340	SFC-L 3360	SFC-L 3380	SFC-L 33100	SFC-L 33120	SFC-L 33160	SFC-L 33200	SFC-L 33250	SFC-L 33300
Output Power (kVA)	10	20	30	40	60	80	100	120	160	200	250	300
Nominal Active Power (kW)	8	16	24	32	48	64	80	96	128	160	200	240
INPUT												
Voltage	380/400/415VAC±15%,3Phase+Neutral											
Frequency	50 or 60 Hz ±5%											
Protection	Adjustable rectifier operation limits+Fuse											
Current THD	<5% (at full load)											
OUTPUT												
Voltage	115/200VAC±1%,3Phase+Neutral											
Frequency	50 & 60 & 400Hz±0.5%											
Efficiency	>90%						>91%					
Voltage THD	<3%											
Power Factor	0,8											
Over Load	100-110% 1hour, 110-125% 10 mins, 125-150% 1 min											
Voltage Protection	Adjustable inverter operation limits. If inverter is out of limits, inverter off											
Temp. Protection	Temperature protection of IGBT heat sink and transformer											
Crest Factor	3:1											
DC												
Voltage	620VDC											
Ripple	<1%											
GENERAL												
Display	4 rows, 20 characters LCD display, warnings LEDS, mimic diagram											
Warnings	32 warning message memory (warning name, date, time) + 4 detailed warning report											
Operating System	Static Microprocessor Controlled											
Operating Technique	IGBT and High Frequency PWM Technique											
Operating Class	S-1 Continuous Operation (according to VDE 0530 standard)											
Communication	isolated RS485, Remote Control Panel (optional), SNMP (optional), Dry Contacts (Optional)											
RFI Level	EN 62040-2 and EN 61000-4:2, 4:4, 4:6 compliance											
Output Isolation	Galvanic isolation with isolated output transformer											
Short Circuit Protection	Electronic protection + fuse											
Start Rectifier	Additional starter rectifier (optional)											
PHYSICAL												
Ambient Temp.	0 - 40 °C											
Humidity	0-90% (non-condensing)											
Acoustic Noise	<60dB 1 meter						<65dB 1 meter			<70dB 1 meter		
Operation Altitude	2000m											
Protection Class	IP20											
Dimensions	Can be change according to the customer requirements											
Weight	Can be change according to the customer requirements											



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Defender SFC-L Series Static Frequency Converters

3 Phase Input & 3 Phase Output 10kVA to 300 KVA

- Micro Processor Controlled
- Static IGBT-PWM inverter
- Efficiency > %90
- Clear Sinusoidal Waveform
- Galvanic Isolated Transformer
- Emergency Stop Button
- Isolated RS485 Communication Contact
- Warning Memory with last 50 events
- LCD panel, 4 rows by 20 characters
- Output Power Factor: 0.8 Ind.- 0.8 Cap.
- Input Power Factor: > 0,90 (>0,98 optional)
- Input Current THD: < %8 (<%5 optional)
- By Soft Start compliant with generator

OPTIONS

- Operating with the batteries
- External By-Pass
- Various IP protection classes for cabinet
- Anti Condensation Unit
- 90 Degrees Door Stopper
- Remote Panel for remote monitoring and control
- SNMP Card (for Internet Management)
- Dry-Contacts
- Extra Analog-Digital multi-meters
- Earth leakage measuring
- 28.5VDC Starter Rectifier
- Redundant Inverter features



STANDARDS

Operation	S1 according to VDE 0530 (Continuous Operation)
EMC	MIL-STD-461-E / EN 62040-2 / EN 61000-4-2 / EN 61000-4-4 / EN 61000-4-6
Safety	EN 62040-1-1
Grounding	MIL-STD-1310-G
Short Circuit and Transient	VDE0610
Parallel Operation and Load Sharing	MIL-F-24638
Acoustic Noise	STANAG 4293
Electronic Printed Boards	MIL-P-55110E
Vibration	MIL-STD-167-1 (For Naval Applications)
Input Values	STANAG 1008 (Ed.9) (For Naval Applications)
Output Values	MIL-STD-1399 (300A) (For Naval Applications)
Circuit Breakers Connection Points	TS EN 60947
Protection Class	IES 60529