



SR-1600 PLUS Inverters



SR-1600 PLUS Inverters is a highly reliable, modular DC-AC inverter system designed for use in telecommunication applications where a very high reliability AC supply is required.

SR-1600 PLUS modular design ensures maximum flexibility to configure solutions to customers requirements. Comprising modular 2RU inverter modules with both AC and DC input, solutions can be scaled from 1.6 kVA to 51.2 kVA

The range is completed with optional CR-21 PLUS module to provide real-time system status through comprehensive LCD / LED display and SN-1 PLUS SNMP module. An external maintenance by-pass switch can be added for system resilience.

Features

- Zero transfer time (inbuilt static switch)
- Standard 19" 2U rackmount
- Selectable DC mode / AC mode (AC sharing)
- High efficiency up to 95 % at AC mode
- Dual input sources (AC & DC)
- Up to 32 modules can be connected in parallel
- Hot swappable module design
- Replaceable fan module
- Input protection: Reverse polarity / Under voltage / Over voltage
- Output protection: Short circuit / Over temperature
- Unity power factor at AC input
- Various AC input / output and DC input options
- Modbus protocol communication



Technical Specifications

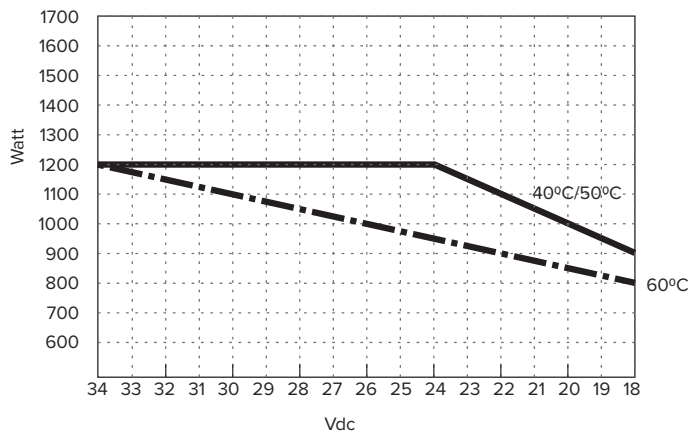
Model No.		SR-1600 PLUS-124	SR-1600 PLUS-148	SR-1600 PLUS-224	SR-1600 PLUS-248
AC Output	Rating power	1200 W / 1600 VA	1600 W / 1600 VA	1200 W / 1600 VA	1600 W / 1600 VA
	Overload capacity	150 % 15 sec.			
	Nominal voltage (AC)	120 VAC		230 VAC	
	Output voltage range (AC)	100 - 120 VAC \pm 3%		200 - 240 VAC \pm 2 %	
	Efficiency AC mode (Max.)	94 %		95 %	
	Efficiency DC mode (Max.)	89 %	90 %	90 %	91 %
	Frequency range	50 / 60 Hz			
	Frequency accuracy	\pm 0.01 % (DC mode)			
	THD (above 80 % resistive load)	< 3 %			
	Turn on delay	< 10 sec.			
	Crest factor at nominal power	DC mode : 3 In \bar{X} / AC mode : 6 In \bar{X}		DC mode : 3 In \bar{X} / AC mode : 10 In \bar{X}	
	AC Input	Nominal voltage (AC)	120 VAC		230 VAC
Voltage range (AC)		90 ~ 132 VAC \pm 3 % (adjustable from 75 V to 132.5 V)		180 ~ 260 VAC \pm 2 % (adjustable from 150 V to 265 V)	
Power factor @ Rating power		> 0.99			
Frequency range		50 / 60 Hz			
Synchronization range		47 ~ 53 Hz, 57 ~ 63 Hz			
DC Input	Nominal voltage (DC)	24 VDC	48 VDC	24 VDC	48 VDC
	Voltage range (DC)	18 ~ 34 VDC \pm 3 %	36 ~ 68 VDC \pm 3 %	18 ~ 34 VDC \pm 3 %	36 ~ 68 VDC \pm 3 %
	Nominal current (at 24 VDC / 48 VDC)	56 A	37 A	56 A	37 A
	Maximum input current (15 sec.)	90 A	60 A	90 A	60 A
Signal & control	Indicator	LED			
	Advanced control	RS485 control interface (Modbus), CR-21 LCM (Optional), SN-1 SNMP (Optional)			
	Failure indication	Buzzer alarm			
	Historical record	Event log			
Protection	DC Input	Over / Under voltage, Reverse polarity			
	AC Input	Over / Under voltage, Over current			
	Output	Short-circuit, Overload, Over temperature			
Transfer performance	Inverter to utility AC	0 sec.			
	Utility AC to Inverter	0 sec.			
Environment	Operating temperature	-25 °C ~ 40 °C ; Power de-rating from 40 °C to 60 °C			
	Storage temperature	-40 °C ~ 70 °C			
	Relative humidity	95 %, non-condensing			
	Vibration	Meet BS EN 61373			
Safety & EMC	Safety standards	Meet UL 62368-1		EN 62368-1	
	EMC standards	Certified FCC Class B		Certified EN 55032 Class B; EN 55024; EN 300386; EN 61000-3-2, -3-3, -6-1, -6-3; IEC 61000-4-2, 3, 4, 5, 6, 8, 11	
Others	Dimension (W x H x D) module	105 x 83 x 410 mm / 4.13 x 3.27 x 16.14 inch			
	Dimension (W x H x D) shelf	446 x 85 x 509 mm / 17.56 x 3.35 x 20.04 inch			
	Weight (module / shelf)	4 kg / 6.5 kg			

\bar{X} In = Nominal current

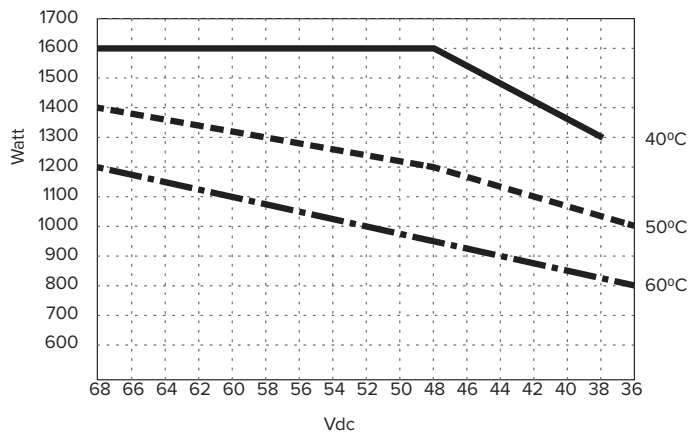


Technical Specifications

De-rating curve
SR-1600 PLUS - 124 / 224:

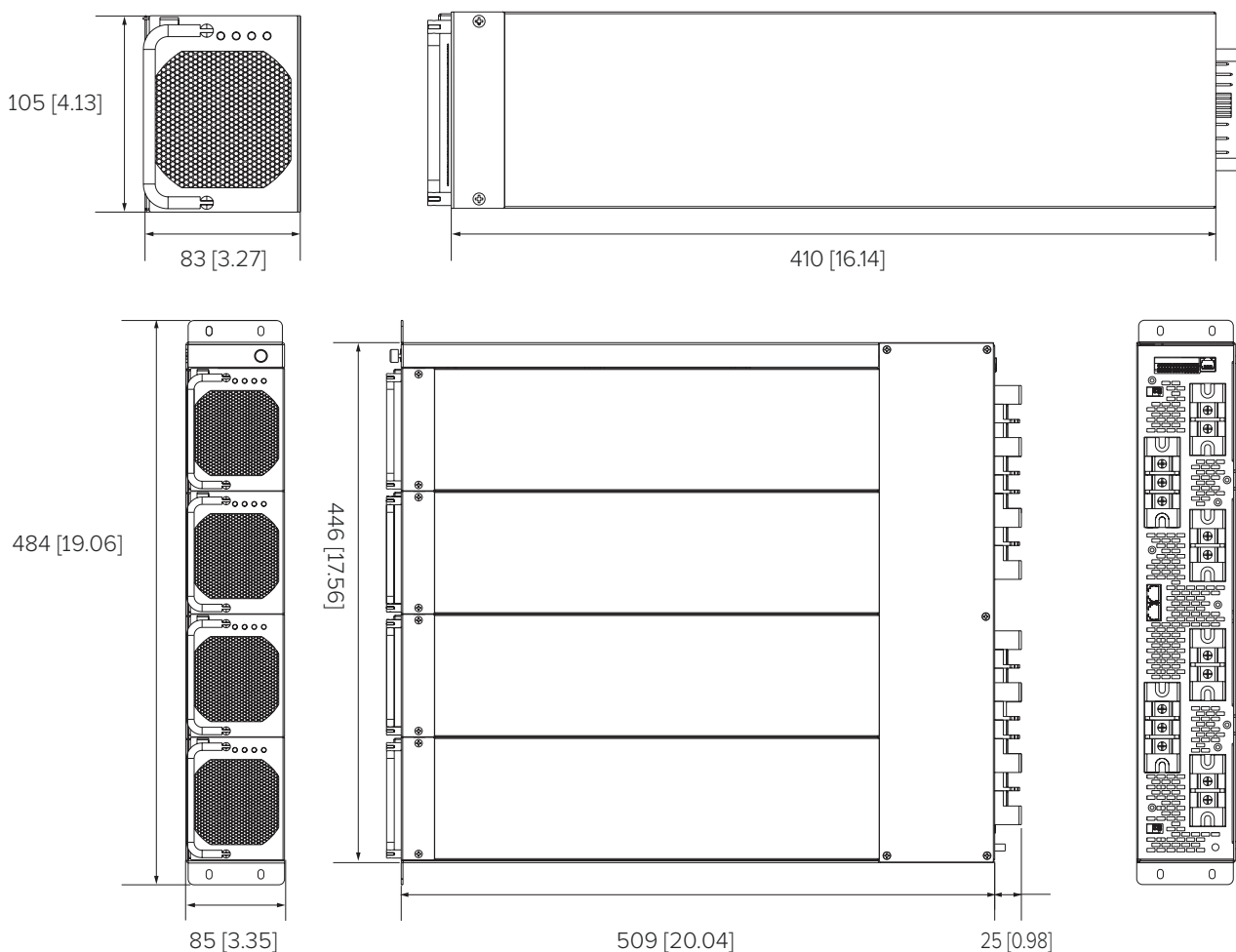


SR-1600 PLUS - 148 / 248:

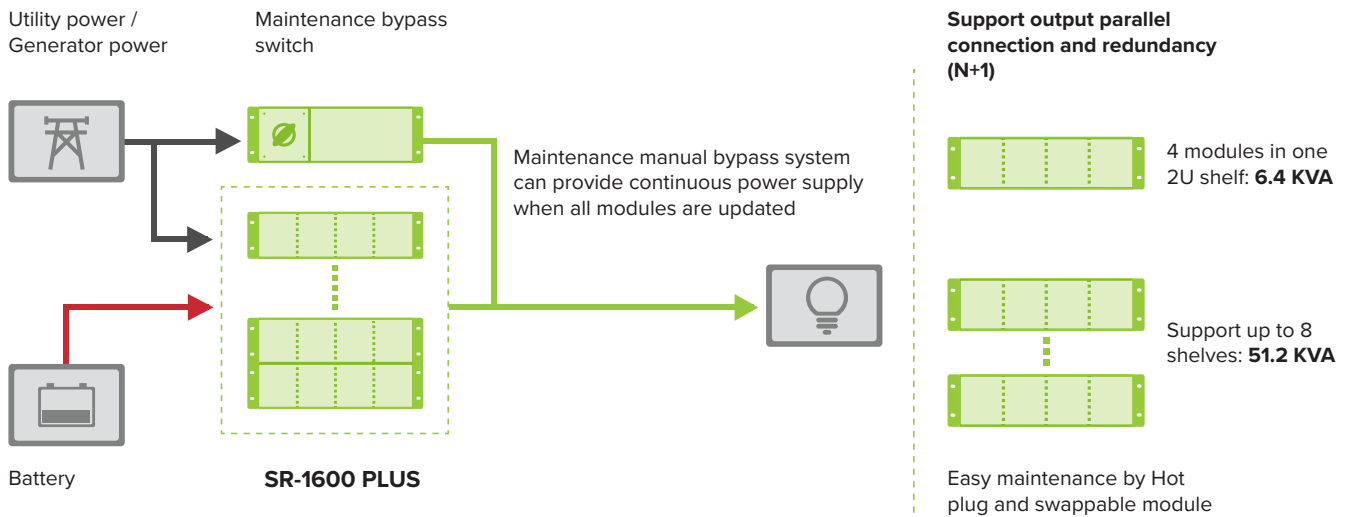


Mechanical specification – inverter module and single shelf

Dimension : 105 x 83 x 410mm Weight: 4kg/module



Block diagram and configurations



Rack Height	Present		Future (Expandability)		No. Module	VA
	No. Module	VA	No. Module	VA		
1 2U	1	1600	3	4800	4	6400
	2	3200	2	3200		
	3	4800	1	1600		
	4	6400	0	0		
2 2U+CR-21 PLUS	1	1600	2	3200	3	4800
	2	3200	1	1600		
	3	4800	0	0		
3 4U+CR-21 PLUS	1	1600	6	9600	7	11200
	2	3200	5	8000		
	3	4800	4	6400		
	4	6400	3	4800		
	5	8000	2	3200		
	6	9600	1	1600		
	7	11200	0	0		

