

DESCRIPTION

UNIPower Telecom's SABRE Series pre-configured inverter systems operate from a 48VDC (40.5-58V range) input and produce either 120VAC or 230VAC nominal output at up to 6kVA total capacity. The low distortion 50 or 60Hz sine wave is produced using an advanced DSP controlled Architecture which achieve better than 89% efficiency and 10.5VA per cubic inch power density.

SABRE Series pre-configured inverters systems include a Controller and Static Transfer Switch with optional Power Distribution and Maintenance By-Pass facilities. Remote Communications to a PC is provided USB, RS232 or RS485 serial connections. SNMP alarm traps delivered over an Ethernet TCP/IP connection are also provided as standard.

TWO-YEAR WARRANTY



CE
2006/95/EC

FEATURES

- ◆ Hot-Swap Inverter, STS and Controller Modules
- ◆ 19-Inch Rack Mounting
- ◆ 1000 to 6000 VA System Capacity
- ◆ 120VAC or 230VAC
- ◆ Low Distortion 50 or 60Hz Pure Sine Wave
- ◆ 40.5 to 58 VDC Input
- ◆ DSP Management & Control
- ◆ >89% Efficiency



STANDARD SYSTEM CONFIGURATIONS

MAX. OUTPUT POWER		MAX. No. MODULES	OUTPUT VOLTAGE ¹	OUTPUT FREQUENCY ²	DISTRIBUTION SOCKET TYPE	MANUAL BYPASS	RACK HEIGHT	MODEL NUMBER
3kVA	2.4kW	2	120VAC or 230VAC	60Hz / 50Hz	none	no	2U	IX2U-1-TS50S
3kVA	2.4kW	2	120VAC only	60Hz	6 x NEMA	no	3U	IX3U-1-TS50S-D1N
3kVA	2.4kW	2	120VAC or 230VAC	60Hz / 50Hz	6 x IEC60-320	no	3U	IX3U-1-TS50S-D1E
3kVA	2.4kW	2	120VAC only	60Hz	8 x NEMA	yes	4U	IX4U-1-TS50S-D2N
3kVA	2.4kW	2	120VAC or 230VAC	60Hz / 50Hz	8 x IEC60-320	yes	4U	IX4U-1-TS50S-D2E
6kVA	4.8kW	4	120VAC or 230VAC	60Hz / 50Hz	none	no	3U	IX3U-2-TS50S
6kVA	4.8kW	4	120VAC only	60Hz	6 x NEMA	no	4U	IX4U-2-TS50S-D1N
6kVA	4.8kW	4	120VAC or 230VAC	60Hz / 50Hz	6 x IEC60-320	no	4U	IX4U-2-TS50S-D1E
6kVA	4.8kW	4	120VAC only	60Hz	8 x NEMA	yes	5U	IX5U-2-TS50S-D2N
6kVA	4.8kW	4	120VAC or 230VAC	60Hz / 50Hz	8 x IEC60-320	yes	5U	IX5U-2-TS50S-D2E

Notes:

1. Inverter modules must be ordered separately based on output voltage and total system capacity required. Modules types may not be mixed in the same system.
2. 120VAC inverters are preprogrammed to 60Hz, 230VAC inverters are pre-programmed to 50Hz. These settings can be changed from the front panel of the controller or remotely using the WIN-power client application.

SAFETY STANDARDS

UL60950-1
CSA22.2, No. 60950-1
EN60950-1

www.unipowertelecom.com

NORTH AMERICA CALL: 954-346-2442 • EUROPE CALL: +44 (0)1903 768200

MOUNTING OPTIONS

Add **-F** to Model Number for Front Mount or **-M** for Mid-Mount

INVERTER MODULES

OUTPUT POWER ¹	OUTPUT VOLTAGE	OUTPUT FREQUENCY ²	MODEL NUMBER
1000VA @ 0.8PF 800W @ 1PF	120VAC	60Hz (50Hz)	INV1048
	230VAC	50Hz (60Hz)	INV1048H
1500VA @ 0.8PF 1200W @ 1PF	120VAC	60Hz (50Hz)	INV1548
	230VAC	50Hz (60Hz)	INV1548H

Notes:

1. If in doubt about load PF (Power Factor) assume that it is 1.0PF.
2. The frequency shown in brackets can be obtained by reprogramming the unit from the system controller.

SPECIFICATIONS

Typical at 48V Input, Full Load and 25°C Unless Otherwise Noted.

INVERTER MODULES

INPUT

Voltage Range	40.5-58VDC
Undervoltage Warning Threshold	45VDC
Undervoltage Threshold	40VDC
Overvoltage Warning Threshold	58VDC
Overvoltage Threshold	60VDC
Input Current, 48VDC Input	
INV1048	19.0A
INV1548	28.4A
Input Protection	Fused Reverse Polarity Protection
Inrush Current	Less than 2x Rated In (IEC62040-3-1999)
Isolation	
Input to Output	Reinforced Pri-Sec, 4242VDC / 1 min.
Input to Ground	707VDC (Varistor & filter caps removed)
Psophometric Noise Voltage	<1mV ITU-T 0.41 (16.66-6000Hz)
Reflected Psophometrics Noise Current	<1% YD/T 777-2006
Reflected Relative Band Wide Current	<10% YD/T 777-2006 (0-2MHz)
Wide Band Noise	<20mVrms (25Hz-20kHz)
Peak to Peak Noise	<150mV up to 100MHz

OUTPUT

AC Waveform	Pure Sine Wave
Output Power	
INV1048	1000VA @ 0.8PF or 800W @ 1PF
INV1548	1500VA @ 0.8PF or 1200W @ 1PF
Power Factor or Load	-0.8 to +0.8
Rated Output Voltage	120VAC or 230VAC (see model table)
Output Voltage Variation	<±2%
Output Frequency	50Hz or 60Hz (see model table)
Frequency Variation	<±0.5%
Crest Factor	3:1 max.
THD of Voltage Waveform	
Linear Load	<3%
Non-Linear Load	<5%
Capacitive/Inductive Load	+0.8 to +0.8 PF
without exceeding permissible distortion for resistive load	
Efficiency	>89%
Overload Protection	Electronic Current Limit at Overload & Short Circuit
1.25 x Rated Current, Temperature Controlled	
1.50 x Rated Current for Periods <20 Seconds	
Dynamic Response	<±10%
Isolation, Output to Chassis	Basic Isolation (Pri-Gnd) 2121 VDC/1 min.
Surge Protection	EN61000-4-5
Telcordia GR-1089 Core ANSI C62.41-IEEE, STD 587-1980	
Load Sharing	<5% of Rated Load

CONTROL/STATUS

LED Indicators

Inverter Status	Green OK, Red FAIL
Overload	Off OK, Yellow for Overload
Reverse Polarity	Off OK, Red for Reversed
Status/Alarm Information (via controller)	Inverter Fail, Overload, LVD Alarm, Fail Alarm, Thermal Derating, Power Output, Input Voltage, Output Voltage, Output Current, Output Frequency, Low Input Voltage Shutoff, Inventory Data.
Runtime Info	Through Maintenance Feature in Controller

STATIC TRANSFER SWITCH

INPUT

Voltage Range	
110/115/120VAC Systems	89-138VAC
208/220/230/240VAC Systems	176-276VAC
Over / Undervoltage Threshold (adjustable from controller)	
110VAC Systems	117 to 127VAC / 89 to 105VAC
115VAC Systems	122 to 132VAC / 93 to 110VAC
120VAC Systems	127 to 138VAC / 100 to 114VAC
208VAC Systems	220 to 240VAC / 176 to 198VAC
220VAC Systems	233 to 252VAC / 176 to 209VAC
230VAC Systems	244 to 264VAC / 185 to 218VAC
240VAC Systems	254 to 276VAC / 193 to 228VAC

OUTPUT

AC Waveform	Sine Wave
Output Voltage	Same as utility or inverter modules
Permissible Frequency Variation to Synchronise Inverters	±2.5%
Transfer Time	Typically 1/4 cycle
Rated Current	50A
Operation Modes (programmable)	Inverter Priority or Utility Priority
Default Priority	Inverters

CONTROL/STATUS

LED Indicators

Fault (red)	Off OK, On FAIL
Warning (yellow)	Off OK, Flashing for warning condition
Power On (green)	On OK, Flashing for bypass
Status/Alarm Information	CAN communication failure
back-feed relay open, SCR short, utput short, overload	
over temperature, mains unavailable, inverter unavailable	
output abnormal, fan failure, MBS position error	

GENERAL

ENVIRONMENTAL

Operating Temp. Range	
Without Derating	-5°C to 50°C
With Derating	-20°C to 70°C
Storage Temp. Range	-40°C to +85°C
Humidity	0% to 95%, Non-Condensing
Cooling	Variable Speed Internal Fans (Field Replaceable)
Operating Altitude	1500m without derating

REGULATORY

Safety

Inverter/PDU/MBS/chassis	UL60950-1, EN60950-1, IEC60950-1
STS module	UL1778
EMC (individual modules)	EN300 386:2001 Class B
Acoustic Noise (individual modules)	55dB ETS300 753, Class 3.1

ORDERING GUIDE

1. Choose the output voltage and total system capacity required and insert below the model number and quantity of inverter modules:

Inverter Model _____ **Quantity** _____ (4 max.)

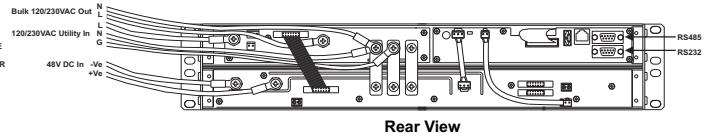
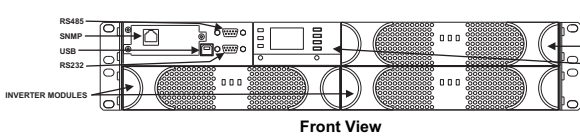
2. Select the 3kVA or 6kVA system that provides the required features such as load distribution and manual bypass and insert below, including the required mounting option.

System Model _____

3kVA SYSTEM CONFIGURATIONS

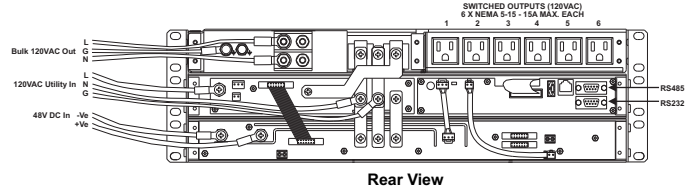
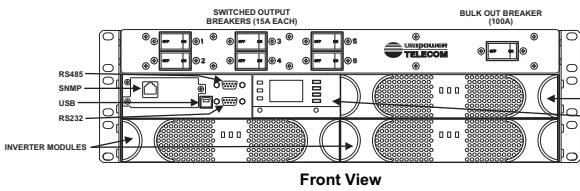
IX2U-1-TS50S

Bulk AC Output - 120VAC or 230VAC
STS not Hot-Swappable



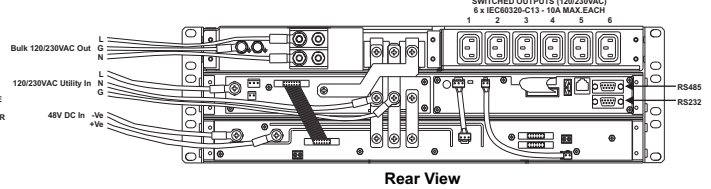
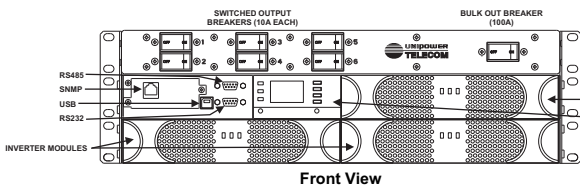
IX3U-1-TS50S-D1N

Bulk AC Output / 6 x NEMA 5-15 Outlets - 120VAC Only
STS not Hot-Swappable



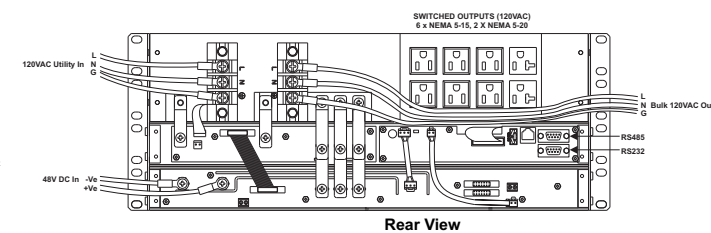
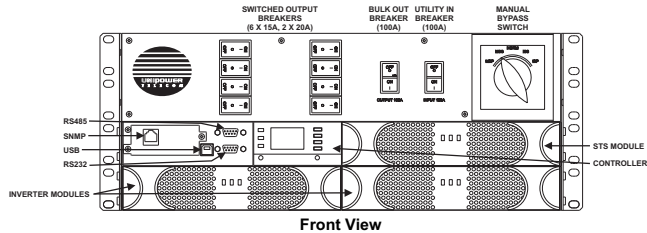
IX3U-1-TS50S-D1E

Bulk AC Output / 6 x IEC60320-C13 Outlets - 120VAC or 230VAC
STS not Hot-Swappable



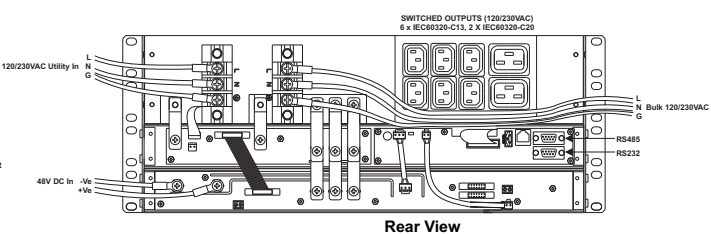
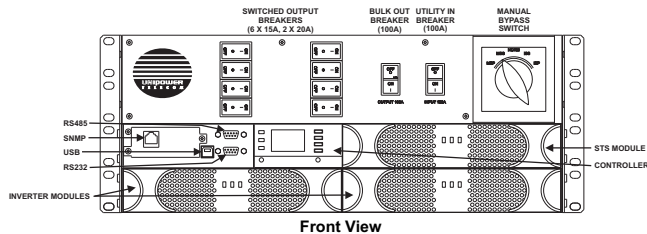
IX4U-1-TS50S-D2N

Bulk AC Output / 6 x NEMA 5-15 Outlets / 2 x NEMA 5-20 Outlets - 120VAC Only
STS Hot-Swappable using Manual Bypass



IX4U-1-TS50S-D2E

Bulk AC Output / 6 x IEC60320-C13 Outlets / 2 x IEC60320-C20 Outlets - 120VAC or 230VAC
STS Hot-Swappable using Manual Bypass

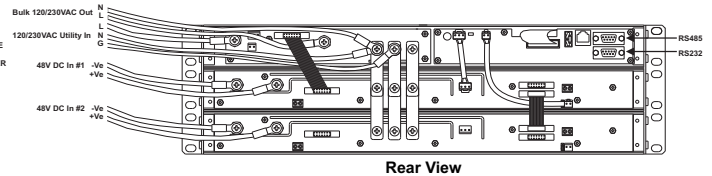
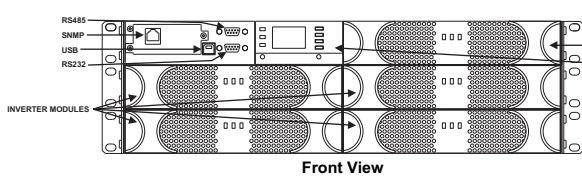


Rear views are with safety covers removed to show input and output connection details.

6kVA SYSTEM CONFIGURATIONS

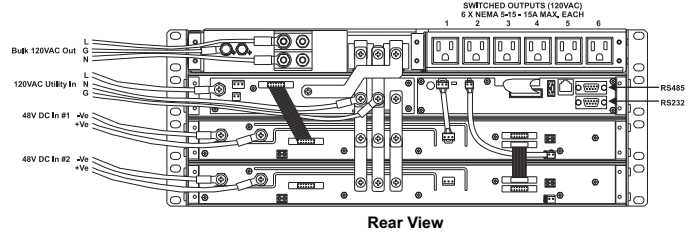
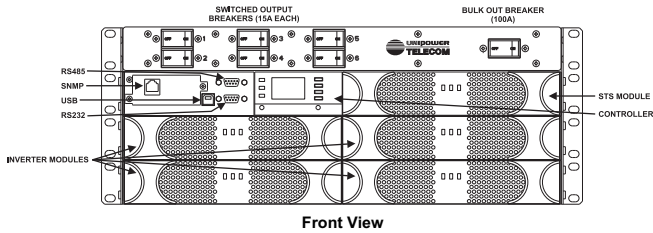
IX3U-2-TS50S

Bulk AC Output - 120VAC or 230VAC
STS not Hot-Swappable



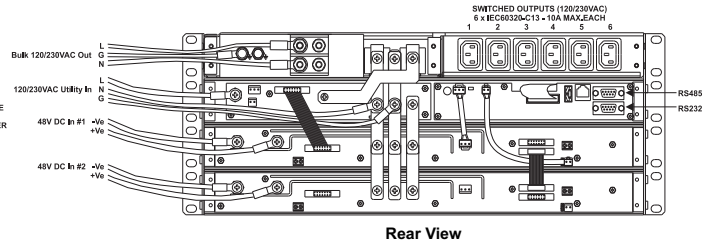
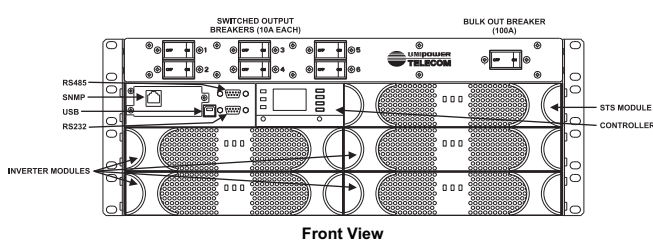
IX4U-2-TS50S-D1N

Bulk AC Output / 6 x NEMA 5-15 Outlets - 120VAC Only
STS not Hot-Swappable



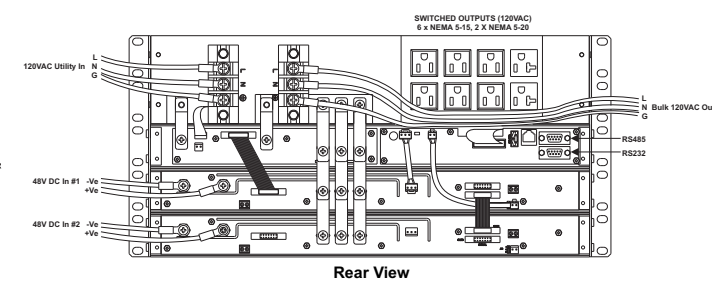
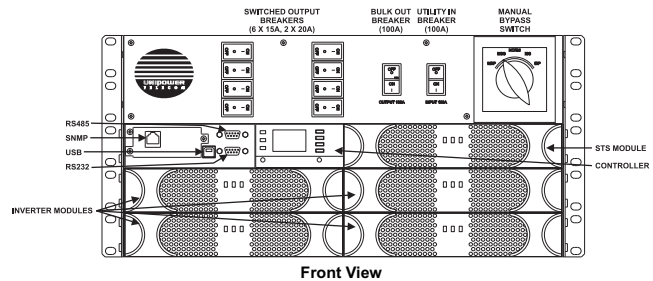
IX4U-2-TS50S-D1E

Bulk AC Output / 6 x IEC60320-C13 Outlets - 120VAC or 230VAC
STS not Hot-Swappable



IX5U-2-TS50S-D2N

Bulk AC Output / 6 x NEMA 5-15 Outlets / 2 x NEMA 5-20 Outlets - 120VAC Only
STS Hot-Swappable using Manual Bypass



IX5U-2-TS50S-D2E

Bulk AC Output / 6 x IEC60320-C13 Outlets / 2 x IEC60320-C20 Outlets - 120VAC or 230VAC
STS Hot-Swappable using Manual Bypass

