

DESCRIPTION

UNIPOWER Telecom's SABRE Series INV1048 & INV1548 are 1000VA/800W and 1500VA/1200W, sine wave, hot-swap inverter modules which are available with a compatible, two-unit 19-inch shelf. The shelf is 1RU high (1.75 inches). Operating from a 48VDC (40.5-58V range) input these units produce either 120VAC or 230VAC nominal output. Two units in the shelf can provide either twice the capacity of a single unit or operate fully automatically in an N+1 model. Multiple shelves can be connected together in parallel to provide up to a maximum 18kVA output. 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. Front panel LEDs indicate inverter status and the units are self-cooled by internal variable speed fans.

SABRE Series inverters can be operated independently or integrated with a matching Controller and Static Transfer Switch as well as a Power Distribution and Maintenance By-Pass unit. When the Controller is employed a Remote Communications option provides connection to a PC via USB, RS232 or RS485 serial connections. The controller also provides 5 relay alarm outputs that can be programmed for various system parameters. SNMP alarm traps (replacing the relay alarms) can also be provided over an Ethernet TCP/IP connection. See separate SABRE system brochure for information about these additional features.

TWO-YEAR WARRANTY
SAFETY STANDARDS

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



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INVERTER MODULES

| MODEL | OUTPUT POWER ¹ | OUTPUT VOLTS | FREQ. ² |
|----------|-------------------------------|--------------|--------------------|
| INV1048 | 1000VA @ 0.8PF 800W @ 1PF | 120VAC | 60Hz (50Hz) |
| INV1048H | | 230VAC | 50Hz (60Hz) |
| INV1548 | 1500VA @ 0.8PF 1200W @ 1PF | 120VAC | 60Hz (50Hz) |
| INV1548H | | 230VAC | 50Hz (60Hz) |

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 settings when the DSC2048 controller is used or alternatively it can be requested at time of order.

INVERTER SHELVES

| MODEL | INPUT / OUTPUT CONNECTIONS | MODULES | MAX. POWER |
|------------|----------------------------|---------|--------------|
| INVR1U2 | bus bars / bus bars | 1 or 2 | 3kVA / 2.4kW |
| INVR1U2-LN | term. block / NEMA 5-15 | 1 or 2 | 3kVA / 2.4kW |
| INVR1U2-LE | term. block / IEC320-C13 | 1 or 2 | 3kVA / 2.4kW |

Notes:

1. INVR1U2-LN and INVR1U2-LE can be used only for standalone single shelf applications up to a maximum 3kVA capacity. For systems of higher capacity or where the STS, controller or other parts of the system are to be employed INVR1U2 must be used.
2. INVR1U2-LN is restricted to use with 120VAC modules, INVR1U2-LE may be used with either 120VAC or 230VAC modules.
3. Module types may not be mixed in the same shelf or system.

FEATURES

- ◆ Hot-Swap Replacement in Shelf
- ◆ One Rack Spaces High: 1.75"
- ◆ 19-Inch or 23-Inch Rack Mounting
- ◆ 1000 or 1500 VA Module Output
- ◆ 2000 or 3000 VA for Two Units in 19" Shelf
- ◆ 10.5 VA per Cubic Inch Density
- ◆ 120VAC or 230VAC
- ◆ Low Distortion 50 or 60Hz Sine Wave
- ◆ 40.5 to 58 VDC Input
- ◆ DSP Management & Control
- ◆ >89% Efficiency

SPECIFICATIONS

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

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 I _{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 |

CONTROL/STATUS

| | |
|---|---|
| Load Sharing | <5% of Rated Load |
| LED Indicators | |
| Inverter Status | Green OK, Red FAIL |
| Overload | Off OK, Yellow for Overload |
| Reverse Polarity | Off OK, Red for Reversed |
| Status/Alarm Information | |
| Inverter Failure | Relay, Dry Contact |
| On/Off Function | Remote Control |
| Remote Communications (requires 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. |
| Communications | CANbus |
| Runtime Info. | Through Maintenance Feature in Controller |

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) |

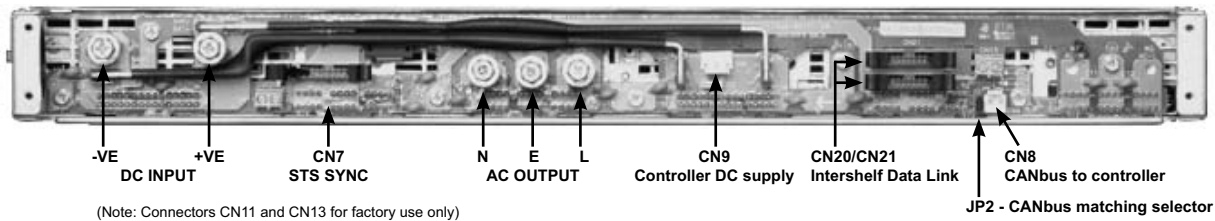
REGULATORY

| | |
|----------------------|----------------------------------|
| Safety | UL60950-1, EN60950-1, IEC60950-1 |
| EMC | EN300 386:2001 Class B |
| Acoustic Noise | 55dB ETS300 753, Class 3.1 |

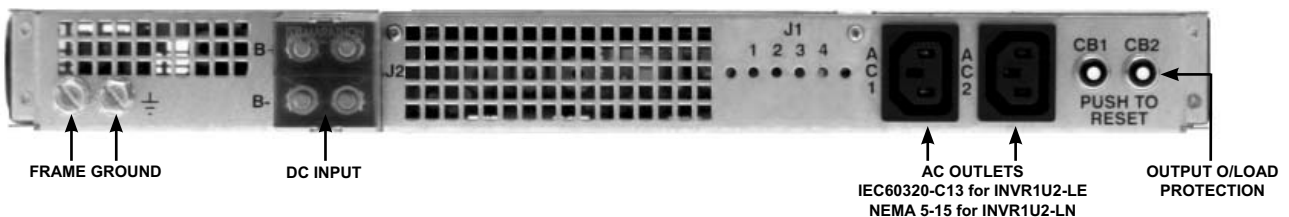
PHYSICAL SPECIFICATIONS

| | |
|-------------------------|--|
| Case Material | Steel |
| Dimensions, Inches (mm) | |
| Module | 1.59H x 8.46W x 10.6D (40.4 x 214.9 x 269.2) |
| Front Panel | 1.72H (43.7) |
| Shelf | 1.72H x 17.3W x 13.0D [15.4"D for LN & LE] (43.7 x 439.4 x 330.2 [390.0 for LN & LE]) |
| Rack Mounting | 19" or 23", 1U High |

INVR1U2 - REAR VIEW (cover removed)



INVR1U2-LE - REAR VIEW



ALL DIMENSIONS IN INCHES (mm).
All specifications subject to change without notice.

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