Power

INEX System

48V Modular Inverter System

- Versatile modular design provides flexibility for different power applications
- Expandable capacity up to 24KVA with N+1 redundancy configuration
- “All master” dynamic mechanism eliminates single point failure to optimize reliability
- Hot-swappable operation allows module addition or removal without powering down
- High power density and high efficiency

The INEX inverter series is an integrated telecommunications power system, including inverter, static switch, LCD display controller, and interface modules. With a versatile “building block” design and N+1 redundant configuration, the INEX inverter system facilitates complex telecommunications and industrial power demands, and provides ultimate flexibility for your current and future power requirements.

N+1 parallel redundancy allows power capacity expandable up to 24KVA. INEX "all master" dynamic mechanism automatically shares and re-organizes critical loads to prevent interruption should any inverter module fail. The DSP-microprocessing controller gives real-time system status through a comprehensive LCD display, and allows programmable settings through the display panel. With a communication interface module installed, you can further control and monitor the system remotely.

Inverter Module

The INEX inverter module provides pure sine wave AC power output for critical telecommunications equipment. Adopting N+1 redundancy design, the INEX inverter can operate up to 24 units in parallel. The INEX inverter module is specially designed with a compact size of maximized power density that can reach up to 5.57W/inch^3 for INEX 1000 and 8.36W/inch^3 for INEX1500. A 1U height design allows the module to be installed onto a standard ETSI 300mm rack. The INEX module is a revolutionary telecom power solution in terms of maximum flexibility and reliability.

- Pure sine wave
- Hot-swap replacement in shelf
- High efficiency >88%
- DSP design for higher system reliability
- Lower audible noise <55dBA
- Smart fan speed control
- N+1 redundancy system, load sharing difference < 5%
- High power density
- CAN Bus interface embedded
- -48VDC Telecom system application
- Wide operation temperature range, -20 to 70˚C

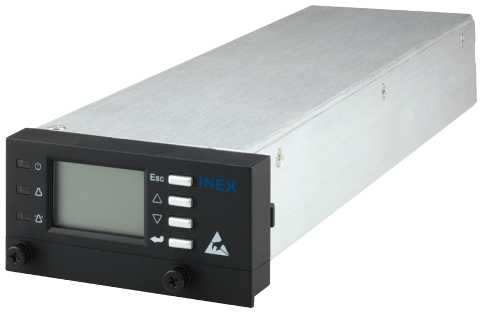
STS Module

The INEX STS (Static Transfer Switch) module increases system reliability by automatic power transfer between the inverter output and the AC mains. By setting up the priority of operation mode, users can change the system status of “on line mode” or “off line mode”. The on line mode will keep the input power provided by the inverter line and when the inverter fails, the line will switch to AC utility line. In off line mode, the system power is always connected to the AC utility line and will switch to inverter power line when AC utility fails. The transfer time is less than a quarter cycle which prevents the power interruption. The reliable performance of INEX STS module will provide the maximum protection to the connected telecommunication equipment against possible damage caused by the system power failure.

- Universal input range
- Back-feed protection
- Redundant fan design
- Redundant power supply design
- Operation Priority Setup of transfer side by setting in Control Module
- Fast transfer time, typically less than 1/4 cycle
- Wide operation temperature range, -20 to 70˚C
- Lower audible noise <55dBA
- No-cross connect
- Optional maintenance bypass switch function
- CAN Bus interface embedded

Controller Module

The INEX controller module allows users to monitor the system status in real time. Its superior design enables users to manage the inverter and STS module status including voltage, current, frequency, capacity and temperature. With a user-friendly interface design, users can easily manage the inverter and STS module settings including voltage, frequency, redundancy (for inverter module), and priority (STS module). The controller module can also record the alarm history which can help to understand the operating status while maintaining the system or making further adjustments to improve system performance.



- CAN Bus protocol for module communication
- Relay contact output for customized alarms
- Hot swappable design
- Real time clock embedded
- Comprehensive LCD & LED for status display
- Audible alarm function

Communication Interface

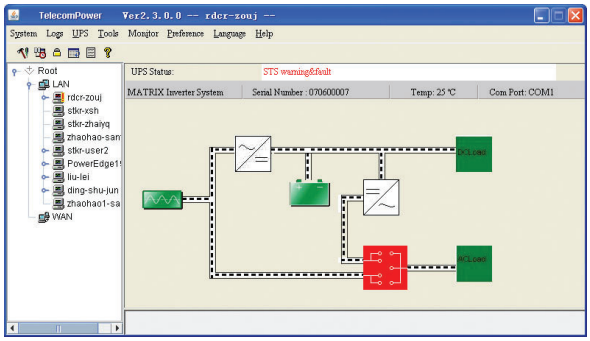
The communication interface includes several options for wider applications which facilitates the remote managing to the system. The standard ports include relay contacts, RS-232, RS-485 and USB. Relay contacts provide five programmable settings to display customized information. RS-232 & USB ports provide the serial connection to the PC for software monitoring. RS-485 provides a long distance connection for direct monitoring. The communication interface provides powerful monitoring and management solutions to the system manager.

- Relay contacts
- RS-232
- RS-485
- USB

WinPower Monitoring Software

WinPower is a monitoring software which supports either a stand alone computer or network connected computers.

- Real time monitoring of each module in the inverter system
- Panoramic views of all the related information; utility power, system status and STS status
- Auto search function with any inverter power modules in LAN.
- Password security protection
- Comprehensive installation (and uninstallation) process



Inex System 48V Modular Inverter System

Electrical

Inverter Module

DC input:
- Nominal voltage: 48VDC
- Operating range: ..... 40.5VDC ~ 58VDC
- Input protection: ..... Reverse polarity protection
- Psophometric noise voltage: ..... ≤1.0mV ITU-T O.41 (16.66~6000Hz)

AC output:
- Power rating: 1000VA/800W, 1500VA/1200W
- Waveform: ..... Pure sine wave
- Power factor: 0.8
- Nominal output voltage: 110/115/120VAC, 208/220/230/240VAC
- Voltage variation: ..... Max ±2%
- Output frequency: 50/60Hz
- Crest factor: 3:1
- THD: ..... <3%, linear load
<5%, non-linear load
- Efficiency: ..... Min 88%
- Isolation AC-enclosure: ..... Basic isolation (Pri-Gnd) 2121VDC/1min
- Dynamic response: ..... <±10%
- Over load protection: ..... 1.5*Inom >20s
1.25*Inom temperature controlled

STS Module

Input:
- Over voltage threshold: ..... Adjustable between
127 to 138VAC for 120VAC systems,
the default value is 132VAC
233 to 252VAC for 220VAC systems,
the default value is 242VAC
- Under voltage threshold: ..... Adjustable between
100 to 114VAC for 120VAC systems,
the default value is 108VAC
176 to 209VAC for 220VAC systems,
the default value is 198VAC
- Backfeed protection: ..... Comply with safety requirement
- Redundant power: ..... Startup power-on by priority
- Design: ..... Source or alternative

Output:
- Nominal output voltage: ..... Same as utility or the output of inverter modules
- Permissible frequency area: ..... Max. +/-2.5%
(inverter synchronization)
- Transfer time: ..... Typical 1/4cycle
- Rated power: ..... 50A for 110/115/120VAC
& 208/220/230/240VAC
- Operation methods: ..... Inverter priority/mains priority

Environmental

- Operating temperature: ..... -20 to 70°C (-4 to 158°F)
-5 to 58°C (23 to 122°F) with full performance
- Storage temperature: ..... -40 to +85°C (-40 to 185°F)
- Humidity: ..... 90% relative humidity (non-condensing)
- Audible noise: 55dB

Controller Module

Input:
- Nominal voltage: 48VDC
- Operating range: ..... 30VDC ~ 72VDC
- Over current protection: .2A fuse

Human interface:
- LCD: ..... Resolution (line X array)
4 X 16 charactor
- LED indicator: ..... 3 colored indicators for normal, warning and fault display
- Alarm: ..... Audio alarm when inverter, STS, controller module operate abnormally

System parameter:
- Baud Rate: ..... Setting controller com port baud rate
- Keypad tones: ..... Setting keypad tones
- Time & date: ..... Setting current time and date
- Setting password: ..... Setting system password
- Brightness: ..... Setting LCD brightness
- Default: ..... Change current system parameters to default value

Mechanical

Inverter Module

Dimension:
- mm: ..... 270D x 215W x 43.8H
- inches: ..... 10.63D x 8.46W x 1.72H

Weight: 2.5kg (5.5lb)

STS Module

Dimension:
- mm: ..... 270D x 215W x 43.8H
- inches: ..... 10.63D x 8.46W x 1.72H

Weight: 2.0kg (4.4lb)

Controller Module

Dimensions:
- mm: ..... 277D x 87.9W x 43.5H
- inches: ..... 10.9D x 3.46W x 1.71H

Weight: 1.0kg (2.2lb)

Hot-swap Chassis

19/23" mounting brackets
Inverter chassis
Dimension:
- mm: ..... 329.5D x 440W x 44H
- inches: ..... 13D x 17.32W x 1.73H

Weight: 2.5kg (5.5lb)

STS & controller chassis
Dimension:
- mm: ..... 329.5D x 440W x 44H
- inches: ..... 13D x 17.32W x 1.73H

Weight: 3.4kg (7.5lb)

Communication Interface

- RS-232×1: ..... Communicate with PC
- RS-485×2: ..... Communicate with supervision
- Dry contact×5: ..... Communicate with external monitor
- USB×1: ..... Communicate with PC

Standards

UL, CE, RoHS

For more information visit www.argusdcpower.com

Argus Technologies Canada Burnaby, British Columbia **Tel:** 604 436 5900 **Fax:** 604 436 1233
United States Bellingham, Washington **Tel:** 360 647 2360 **Fax:** 360 671 4936

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