

HYBRID POWER SERIES

48 and 24 Volt DC Power Systems with integrated 12 or 24 Volt DC Converter Output



Two DC Output Voltages, Advanced Battery Management Features, Standard TCP/IP Monitoring and Control, 1400 Watt Total Output Power in a Compact 1RU Package

Features

- ▶ **One or two hot swappable** 48 or 24 volt primary DC output power modules
- ▶ **700 watt 12 or 24 volt integrated** DC output converter
- ▶ **90 to 93%** efficiency
- ▶ **-30 C to +60 C** operating temperature range
- ▶ **TCP/IP Ethernet** is standard on every model - provides complete and easy-to-use remote monitoring and control of the power system using built-in web server and graphical user interface or SNMP
- ▶ **Battery Backup with 150A LVD** and adjustable disconnect and reconnect voltage setpoints
- ▶ **Single or Dual** 100A battery disconnect breakers
- ▶ **User Adjustable** output voltages and battery charge current limit
- ▶ **Advanced Battery Management** features:
 - Battery state of charge and charge current reporting
 - Estimated run-time remaining
 - Battery discharge testing
 - Temperature compensated charging
- ▶ **Digital and Analog** inputs for temperature and site sensors
- ▶ **Full range of certifications** including CSA/UL, FCC Class B, CE, ROHS

Description

Many wireless communications sites require different DC voltages to power a range of devices, whether 48, 24 or 12 volts DC. This often means installing multiple power supplies or DC converters which may not always be feasible given limited rack space or budgets.

The ICT Hybrid Power Series is designed to meet this need. It combines a 48 or 24 volt DC power system with a factory installed 12 or 24 volt DC converter module to provide a 1400 watt maximum power flexible hybrid DC solution for wireless network sites. The Hybrid Power Series accepts one or two hot swappable 48 or 24 volt, 700 watt DC Power Modules. The integrated DC converter provides up to 700 watts of 12 or 24 volts DC output through a separate output bus bar.

Ethernet-based communications and control is standard on every model. System and battery monitoring are provided through a secure web-based server or SNMP. Outputs can be turned off and on, and various parameters can be controlled and managed remotely.

The ICT Hybrid Power Series is designed, manufactured and supported in North America to meet the need for wireless communications, broadband and other demanding DC power applications.

Applications

- Wireless two-way communications networks
- Trunked radio systems
- Microwave
- Backhaul
- DAS
- Security and surveillance
- Industrial DC power

AC INPUT

Nominal system voltage	120/240VAC
Input voltage range	100-300VAC
Power factor (typical)	0.99
Frequency	50/60Hz

ELECTRICAL SPECIFICATIONS - POWER MODULES

Output voltage	+/- 48 VDC	+/- 24 VDC
Output voltage range (adjustable)	46.0 - 62.0 VDC	23.0 - 31.0 VDC
Power output per module	700W	700W
Output current per module	12.5A	25A
Efficiency (peak)	93%	91%
Output ripple (rms)	60mV	30mV
Max. system output current with 2 Power Modules	25A	50A

ELECTRICAL SPECIFICATIONS - DC CONVERTER

Output voltage	+/- 13.8 VDC	+/- 27.6 VDC
Output voltage range (adjustable)	10.5 - 15.5 VDC	21.0 - 31.0 VDC
Power output	700W	700W
Output current	50A	25A
Efficiency (peak)	92%	92%
Output ripple (rms)	20mV	30mV

MECHANICAL

AC input connector	Terminal Block, #8 - #16 AWG
DC output connectors	Busbars with 1/4-20 x 7/8" bolts
Remote alarm connectors	Terminal Block (#16 -24 AWG)
Mounting	1RU, 19 in rack mount
Weight	8.1lbs / 3.7 kg
Dimensions - H x W x L	1.74 x 19.0 x 15.7 in. / 44 x 483 x 398 mm

ENVIRONMENTAL

Operating temperature range	-30° to +60° C
Output derating	2% / °C (above 50° C)
Storage temperature	-45° to +85° C

DESIGN STANDARDS

Safety	EN 60950-1
Emissions	EMC compliance with FCC Part 15, Class B, EN61000-6-1, EN61000-6-3, EN61000-3-2, RoHS, CE

ORDERING INFORMATION

	Primary Output Voltage (nominal)			Secondary Output Voltage (Floating)
	System Voltage	Negative Voltage Output	Positive Voltage Output	
Intelligent Power Shelf with integrated Ethernet Controller. Factory-installed 100A Battery Management Module with LVD and 700 watt 12 volt DC secondary converter output.	48 or 24 VDC	ICT-IPS-DC12-BMM	ICT-IPS-DC12-BMMP	12 VDC
Intelligent Power Shelf with integrated Ethernet Controller. Factory-installed 200A Battery Management Module with LVD and 700 watt 12 volt DC secondary converter output.	48 or 24 VDC	ICT-IPS-DC12-BMMD	ICT-IPS-DC12-BMMDP	12 VDC
Intelligent Power Shelf with integrated Ethernet Controller. Factory-installed 100A Battery Management Module with LVD and 700 watt 24 volt DC secondary converter output.	48 or 24 VDC	ICT-IPS-DC24-BMM	ICT-IPS-DC24-BMMP	24 VDC
Intelligent Power Shelf with integrated Ethernet Controller. Factory-installed 200A Battery Management Module with LVD and 700 watt 24 volt DC secondary converter output.	48 or 24 VDC	ICT-IPS-DC24-BMMD	ICT-IPS-DC24-BMMDP	24 VDC
Power Module, 48 VDC, 700W output, hot swappable	ICT700-48PM			
Power Module, 24 VDC, 700W output, hot swappable	ICT700-24PM			
Optional blanking panel for unused Power Module positions	ICT-BPM			