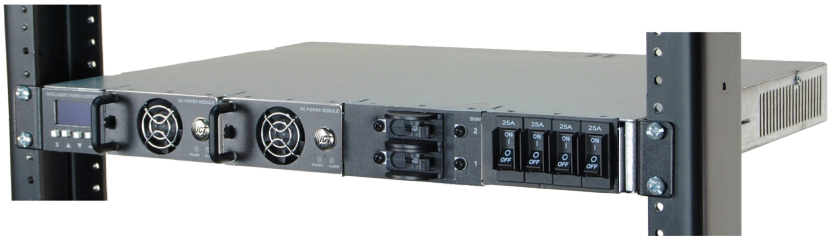
# MODULAR POWER SERIES

## 48 and 24 Volt Redundant Hot Swap DC Power System



### Features

- **Up to four hot swappable** 700 or 1500 watt, 48 or 24 volt power modules
- **100-300 volts** AC input
- **Up to 95%** efficiency
- **-30 C to +60 C** operating temperature range
- **TCP/IP Ethernet** is available and provides complete easy-to-use remote monitoring and control of the power system using secure graphical user interface or SNMPv3
- **Battery Backup with 150A LVD** is available with adjustable disconnect and reconnect voltage setpoints
- **Single or Dual** 100A battery disconnect breakers available
- **User Adjustable** output voltages and battery charge current limit
- **Advanced SLA Battery Management** features include state of charge, estimated run-time remaining and discharge testing
- **Support for Li-ion** battery management systems
- Available **Load Distribution Module** provides 4 fully managed breaker-protected 25A outputs
- **Digital and Analog** inputs for site monitoring sensor reporting

### Description

The ICT Modular Power Series system provides flexible, managed DC power up to 6KW for a broad range of communications and broadband applications. The foundation is the power shelf and 700 or 1500 watt hot swappable high efficiency power modules. A number of optional factory-installed modules can be selected to provide TCP/IP monitoring and control, advanced battery management features, battery breakers, low voltage disconnects, and four-position breaker-protected power distribution including load current monitoring and remote power cycling over Ethernet.

A dedicated slot holds the optional Intelligent Control Module for full TCP/IP remote monitoring and control. When combined with the optional Battery Management Module, the Intelligent Control Module also provides advanced sealed lead acid battery functions including battery state of charge, estimated run time remaining, and battery discharge testing. Li-ion battery management systems are supported as well.

One or two Load Distribution Modules can be ordered for supporting up to eight load devices. Rated at 25A max. each, every output is capable of monitoring and reporting load current conditions. Remote power control over Ethernet allows for the power-cycling or de-energizing of individual loads without having to visit the site.

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

### Applications

- Critical wireless communications networks
- Fixed Wireless Access
- Radio Access Networks
- FTTP/H PON GPON
- Distributed Antenna Systems
- Security and surveillance
- Industrial DC power

Questions? Visit www.Talleycom.com or contact Talley at 800.949.7079 or Sales@Talleycom.com today.

| ELECTRICAL SPECIFICATIONS - POWER MODULES | 700 Watt | | 1500 Watt | |
|---|---|---|---|---|
| AC input voltage (nominal) Input voltage range | 120/240VAC | | 120/240VAC (derate to 50% power at 90VAC) | |
| AC input current (per module) at 230VAC nom. | 100-300VAC | | 90-300VAC | |
| AC input current (per module) at 115VAC nom. | 8.0A max. | | 8.0A max. 7.0A max. | |
| Power factor (typical) | 7.0A max. | | 0.99 | |
| Frequency Output voltage | 0.99 | | 50/60Hz | |
| Output voltage range (adjustable) | 50/60Hz | | | |
| Power output per module (230VAC nom.) | +/- 55.2 VDC | +/- 27.6 VDC | +/- 55.2 VDC | +/- 27.6 VDC |
| Power output per module (115VAC nom.) | 46.0 - 62.0 VDC | 23.0 - 31.0 VDC | 46.0 - 62.0 VDC | 23.0 - 31.0 VDC |
| Output current per module (230VAC nom.) | 700W | 700W | 1500W | 1500W |
| Output current per module (115VAC nom.) Efficiency (peak) | 700W | 700W | 900W | 900W |
| Output ripple (rms) | 12.5A | 25A | 27A | 54A |
| Max. system output current with 4 Power Modules (230VAC nom.) | 12.5A | 25A | 13A | 27A |
| Max. system output current with 4 Power Modules (115VAC nom.) | 93% | 91% | 95% | 94% |
| | 60mV | 30mV | 60mV | 40mV |
| | 50A | 100A | 108A | 175A |
| | 50A | 100A | 54A | 87.5A |

**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 CE Class A, UL/CSA 60950-1, UL/CSA 62368-1, ICES-003, EN55032, EN 61000-3-2 and EN 61000-3-3 (1500-watt) |
| | EMC compliance with CE Class B, FCC Part 15,UL/CSA60950-1, UL/CSA 62368-1, ICES-003, EN 61000-6-2 and EN 61000-6-3 (700-watt) |

**FACTORY INSTALLED OPTIONS** [(a)]

**POWER SHELF WITH INTEGRATED INTELLIGENT CONTROL MODULE**

| | |
|---|---|
| Front display | High resolution OLED with function keys |
| Remote communications | TCP/IP - RJ45 Ethernet connector on rear |
| I.P. protocols | 10/100 BASE-T, HTTPS, HTML, SNMPv3 |
| Inputs | 4 digital, 1 analog temp sensor contacts |
| Monitoring functions | DC, AC status, load output currents |
| Control functions | Disable DC outputs, open LVD, disable or power cycle load outputs |

**POWER SHELF WITH LOAD DISTRIBUTION MODULE**

| | |
|---|---|
| Load outputs | 4 |
| System current rating | 80A 30A[(b)] |
| Max. breaker size | Hydraulic/magnetic circuit breakers |
| Protection | Yes, with ICM installed [(c)] |
| Remote current monitoring | Yes, with ICM installed |
| Remote output control | |

**POWER SHELF WITH BATTERY MANAGEMENT MODULE**

| | |
|---|---|
| Circuit breaker | Single or Dual 100A |
| Low voltage disconnect | 150A contactor Busbar with 3/8" bolt |
| Battery terminal | |

(a) Battery Management Module and Load Distribution Module require Power Shelf with integrated Intelligent Control Module (ICT-IPS).
(b) Breakers and wiring should be continuously operated at no more than 80% of their current rating.
(c) Load breakers must be ordered separately.

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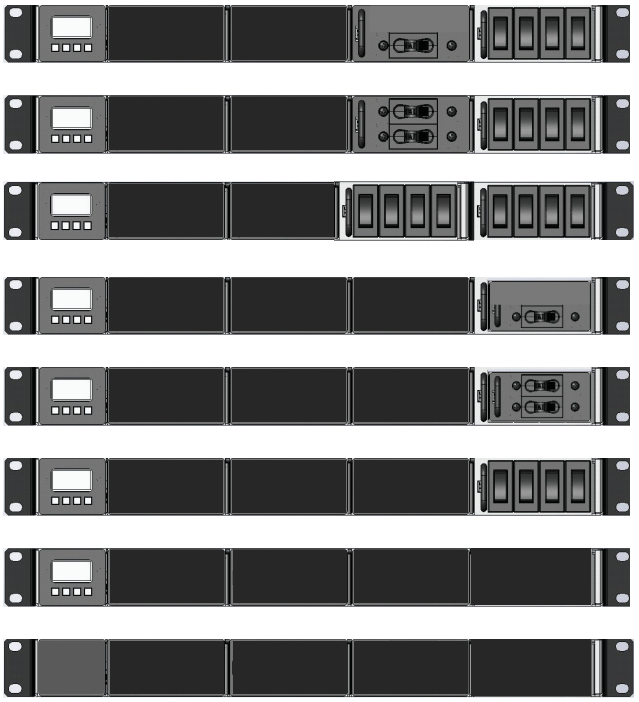
## STEP 1 Select Power Shelf

Select the Power Shelf that meets your requirement for DC voltage, battery management, and load distribution features.

| Description | NEG 48/24VDC | POS 48/24VDC |
|---|---|---|
| Intelligent Power Shelf with integrated Ethernet Control Module. Factory-installed 100A Battery Management Module with Low Voltage Disconnect and four position Intelligent Load Distribution Module. | ICT-IPS-BMM-LDM | ICT-IPS-BMM-LDMP |
| Intelligent Power Shelf with integrated Control Module and Ethernet communications. Factory-installed dual 100A Battery Breakers with Low Voltage Disconnect and four position Intelligent Load Distribution Module. | ICT-IPS-BMMD-LDM | ICT-IPS-BMMD-LDMP |
| Intelligent Power Shelf with integrated Control Module and Ethernet communications. Factory-installed intelligent load distribution modules provide eight positions. | ICT-IPS-LDM-LDM | ICT-IPS-LDM-LDMP |
| Intelligent Power Shelf with integrated Control Module and Ethernet communications. Factory-installed 100A Battery Management Module with Low Voltage | ICT-IPS-BMM | ICT-IPS-BMMP |
| Intelligent Power Shelf with integrated Control Module and Ethernet communications. Factory-installed dual 100A Battery Breakers with Low Voltage Disconnect. | ICT-IPS-BMMD | ICT-IPS-BMMDP |
| Intelligent Power Shelf with integrated Control Module and Ethernet Communications. Factory-installed four position Intelligent Load Distribution Module. | ICT-IPS-LDM | ICT-IPS-LDMP |
| Intelligent Power Shelf with integrated Control Module and Ethernet Communications. Accepts up to four Power Modules. | ICT-IPS | |
| Standard Power Shelf accepts up to four Power Modules. Designed to combine with ICT-IPS Intelligent Power Shelf, ICT-JMP and ICT-PAR to provide expanded 2RU power system. | ICT-SPS | |



## STEP 2 Select Power Modules

Depending on the Power Shelf selected, up to four hot-swappable Power Modules can be installed (must be same voltage). Mixing of 700 and 1500 watt Modules not recommended.

| | |
|---|---|
| Power Module, 48VDC, 700W output, hot swappable, floating output | ICT700-48PM |
| Power Module, 24VDC, 700W output, hot swappable, floating output | ICT700-24PM |
| Power Module, 48VDC, 1500W output, hot swappable, floating output | ICT1500-48PM |
| Power Module, 24VDC, 1500W output, hot swappable, floating output | ICT1500-24PM |

## STEP 3 Select Load Breakers and Accessories

| | |
|---|---|
| 5 Amp Hydraulic/Magnetic breakers for use with Load Distribution Module | ICT-CB5 |
| 10 Amp Hydraulic/Magnetic breakers for use with Load Distribution Module | ICT-CB10 |
| 15 Amp Hydraulic/Magnetic breakers for use with Load Distribution Module | ICT-CB15 |
| 25 Amp Hydraulic/Magnetic breakers for use with Load Distribution Module | ICT-CB25 |
| 30 Amp Hydraulic/Magnetic breakers for use with Load Distribution Module | ICT-CB30 |
| Output paralleling straps to install ICT-SPS as a slave power shelf to ICT-IPS | ICT-PAR |
| Communications cable to parallel ICT-SPS with ICT-IPS | ICT-JMP |
| Optional blanking panel for unused Power Module positions | ICT-BPM |

### INTELLIGENT POWER SHELF (IPS)

Includes fully integrated Ethernet controller to provide remote monitoring and control of system and installed options. HTTPS, SMTP and SNMP supported. Four site monitoring input contacts. Provides advanced SLA battery management features when used with Battery Management Module including temperature compensated charging, battery state-of-charge, run-time remaining, battery discharge testing. Supports Li-ion Battery Management Systems.

### BATTERY MANAGEMENT MODULE (BMM)

Factory installed option. Includes 150A Low Voltage Disconnect and single or dual string 100A battery disconnect breakers. (Contact factory to configure one 100A load disconnect breaker.) Monitor and adjust LVD setpoints over Ethernet. Battery disconnect breaker will send alarm via Ethernet and Form C contacts.

### LOAD DISTRIBUTION MODULE (LDM)

Factory installed option. Provides four breaker-protected load outputs. Monitor and power cycle each load individually via Ethernet. Sends email alarms. Automatic load shedding and network watchdog (ping) features maximize run-time for critical loads and will power cycle critical devices such as routers, possibly preventing unplanned trips to the site.

Questions? Visit www.Talleycom.com or contact Talley at 800.949.7079 or Sales@Talleycom.com today.



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