

Power Supply Unit

RRYRS-600 Series PSU

Raycap's telecom DC
Power Supply Units.



RRYRS-600 Series Power Supply system is a 6U rack mount device that can be installed in remote shelters, equipment cabinets or enclosures to power up critical telecom equipment.

Features

- Compact 6U height, 23" rack mounted
- Wide input voltage
- Hot-pluggable, replaceable rectifier modules and controller unit
- Pluggable breakers for "in-field" replacement
- High efficiency rectifier modules
- Integrated Environmental Monitoring Unit based on Linux OS supporting HTTPS, SSH, SFTP, REST API, Kafka, DHCP, TCP/IP with IPv4 and IPv6 capability, SNMPv2c and SNMPv3
- Battery management and BMS monitoring
- Smart ECO energy management
- Alarm management
- Extensive logging saved to SD card
- Multiple I/O interfaces for environmental and external alarm monitoring
- Monitoring and control of external devices (HVAC, HEX, Batteries, Smart PDUs, etc) via multiple protocols (RS-485, SNMP, CAN bus, etc)
- Energy statistics
- Optional LTE modem for redundancy in remote communications
- Optional I/O expansion cards

Power Supply Unit

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System

Configuration

Available rectifier slots	8
Rectifier nominal capacity	4kW
DC distribution unit capacity @ -53.5Vd.c.	640A
Load breakers on the DC distribution bus	26x positions for 1P breakers up 100A
Battery breakers on the DC distribution bus	Optional. Battery cables are connected directly to busbars
Maximum breaker capacity	300A (3P module with 3P adapter)
Shunt for battery current measurement	600A / 25mV
Pluggable rectifier controller (RDIDC-CTRL-2900)	1x
Door-mounted system controller with integrated environmental monitoring unit	1x
I/O expansion cards (Analog or digital inputs, relay outputs, LTE modem)	1x rear mounted Up to 2x optional pluggable
Va.c. input feeds	Separate feed per rectifier module. 10AWG rear access terminals.

Rectifier Parameters

Input

Input voltage range	85Va.c.-300Va.c.
Input voltage range for full output power	200Va.c.-290Va.c.
Maximum input current	24A
Frequency range	45Hz-66Hz
Power factor	>0.99 @ 220Va.c. 20%-100% load
Peak efficiency	97%
Input current THD	< 3% @ loads over 50%

Output

Output voltage range	-42Vd.c. to -58Vd.c.
Output maximum current	81A@-53.5Vd.c.
Ripple @ 77°F, 20 MHz bandwidth	< 200 mVp-p

Signaling and Communication

Door Mounted System Controller

Network ports	1x WAN Ethernet port (10/100) 4x LAN Ethernet ports (10/100) with PoE+ IEEE802/3at capability 1x SFP port
USB ports	2x
RS-485 ports	2x
RS-232 console port	1x
Digital inputs	16x
Analog inputs	2x Voltage range : -60V to +60V Resolution: 0.1V or better Accuracy: ±0.5V or better Sampling rate: 1 sample per second
Relay outputs	3x

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Rear mounted I/O extension board

RS-485 ports	3x
Digital inputs	10x
Analog inputs	7x
Relay outputs	8x
12V output	1x

Environmental Parameters

Operating temperature	-40°F to 167°F. Max. output current per rectifier: 81A@-53.5Vd.c. up to 113°F 76A@-53.5Vd.c. at 122°F 71A@-53.5Vd.c. at 131°F 66A@-53.5Vd.c. at 140°F 55A@-53.5Vd.c. at 158°F 50A@-53.5Vd.c. at 167°F
Storage temperature	-40°F to +167°F
Humidity	5%-95% (non-condensing)

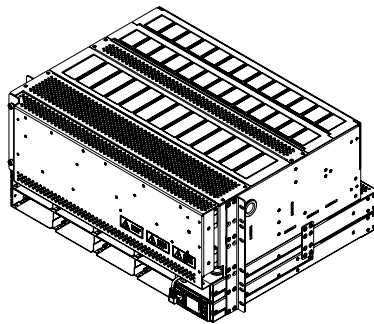
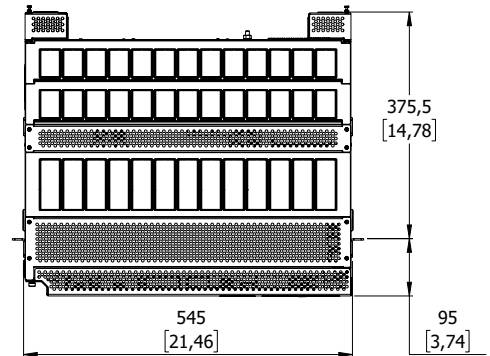
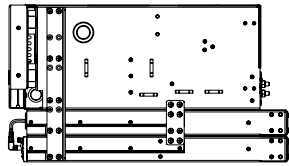
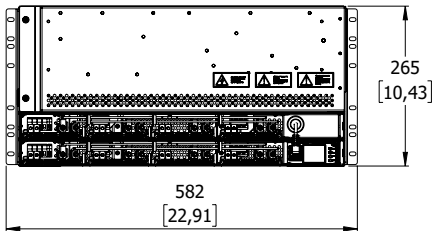
Mechanicals

Dimensions (H x W x D)	10.43" x 23" x 17.94"
System weight without rectifiers & breakers	60 lbs
Rectifier weight	4.4 lbs

Standards Compliance and Certifications

Safety certification	UL62368-1 3rd edition*
NEBS level 3	Telcordia GR-63-CORE Issue 5, GR-3108-CORE Issue 5 and GR1089-CORE Issue 8*
EMC	GR1089-CORE Issue 7*

Product Drawings



* pending