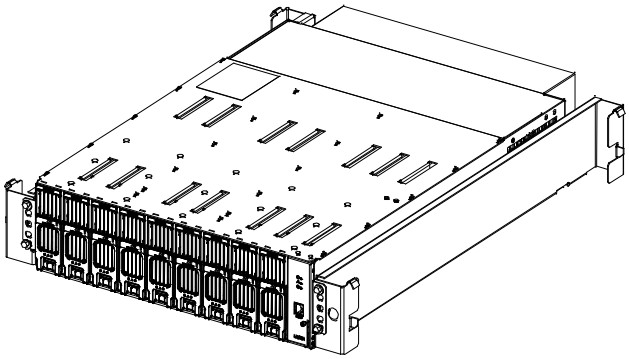
SYSTEM OVERVIEW

Description: +12 VDC @ up to 2200 Amperes Power System

The Vertiv™ NetSure™ ITS Model PSS12/2200-19BC 12 VDC Power System is an integrated power system containing a main module mounting assembly, rectifiers, intelligent control, and monitoring. The Vertiv™ NetSure™ ITS Model PSS12/2200-19B are companion expansion assemblies.



A system consists of the following components.

Note: *The installation may consist of one (1) main module mounting assembly and up to two (2) expansion module mounting assemblies, or all main module mounting assemblies. In installations with one main module mounting assembly and up to two expansion module mounting assemblies, all module mounting assemblies are on one DC bus and are controlled by a single SCC controller. A common CAN bus is shared across all module mounting assemblies and all rectifiers load share and all rectifiers are load managed via the SCC. In installations with all main module mounting assemblies, each module mounting assembly is on a separate DC bus and each module mounting assembly is controlled by (contains) a separate SCC controller. A separate CAN bus exists per module mounting assembly, rectifiers load share per module mounting assembly, and rectifiers are load managed via an SCC per module mounting assembly.*

- **Main Module Mounting Assembly**

  The main module mounting assembly houses up to nine (9) rectifier modules, plus the SCC controller. Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

  SCC (System Control Card) Controller: The controller provides power system control, monitoring functions, and local/remote alarm functions. The controller also provides data acquisition, system alarm management. The controller provides an Ethernet port for remote access. It also comes with SNMP capability for remote system management. Operation of the SCC controller requires a master upstream supervisory and control unit, such as the Avocent UMG, connected to the system’s Ethernet port and utilizing an SNMP interface. Refer to the SCC Controller Instructions (UM1M520HNA) for more information.

  Note: *The rectifiers will continue to operate if the SCC controller fails. The rectifiers will work if the system is powered up without an SCC controller; however, an SCC controller is required to get any monitoring/status information from the system. The application should be designed with an SCC controller.*

- **Expansion Module Mounting Assembly**

  Each expansion module mounting assembly houses up to nine (9) rectifier modules. Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

- **Rectifier Modules**

  The system contains rectifier modules, which provide load power. Refer to the Rectifier Instructions (UM1R123000) for more information.

Proprietary and Confidential © 2023 Vertiv Group Corp.

General Specifications

See detailed specifications on page 50.

Family:	Vertiv™ NetSure™ ITS
System Spec. No.:	588706100
Shelf Model:	PSS12/2200-19BC (Main), PSS12/2200-19B (Expansion)
System AC Input Ratings:	These ratings represent the AC input currents at nominal input voltage for the subject module mounting assemblies while limiting the output power to 26.4 kW (2200 A at 12.0 VDC). These ratings are subject to change if the assembly is equipped with AC input cable(s) and plug(s) based on the limitations of the cable(s) and plug(s). List 01: 208 VAC / 240 VAC nominal, 89 A / 77 A, 3-Phase, 50 Hz / 60 Hz. One feed. Operating range is 176 VAC to 264 VAC. List 02: 208 VAC / 240 VAC nominal, 59 A / 51 A, 3-Phase, 50 Hz / 60 Hz. Two feeds. Operating range is 176 VAC to 264 VAC. List 03, 13: 230 VAC / 400 VAC (4-Wire + PE) nominal, 47 A, 3-Phase, 50 Hz / 60 Hz. One feed. Operating range is 195 VAC to 253 VAC. 240 VAC / 415 VAC (4-Wire + PE) nominal, 45 A, 3-Phase, 50 Hz / 60 Hz. One feed. Operating range is 204 VAC to 264 VAC. List 05, 15: 277 VAC / 480 VAC (4-Wire + PE) nominal, 39 A, 3-Phase, 50 Hz / 60 Hz. One feed. Operating range is 235 VAC to 310 VAC. List 01, 02, 03, 05, 13, 15: Acceptable input frequency range is 45 Hz to 65 Hz.
System DC Output Ratings:	+12 VDC to +13.2 VDC, 2200 A to 2000 A @ +45°C. See “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for restrictions.
1R123300 Rectifier Rating:	See UM1R123000.
System Agency Approval:	UL 60950 Recognized (“c UR”), CE Mark. List 3 and 13 with List 532 is CE Mark only.
Framework Type:	19” rack mounting in an IT rack (see “Overall Dimensions” on page 52). Mountings kits are available for version 1 and version 2 Open Compute (OCP) racks.
Mounting Width:	482.6 mm (19 inches), nominal
Mounting Depth:	656 mm (25.8 inches)
Access:	Front for Operation Front and Rear for Installation and Maintenance
Expansion Assembly Available:	up to Two (2)
Control:	Microprocessor
Color:	Module Mounting Assembly: Plated Steel Module Faceplates: Black
Environment:	-10 °C to +45 °C (+14 °F to +113 °F)

Proprietary and Confidential © 2023 Vertiv Group Corp.

TABLE OF CONTENTS

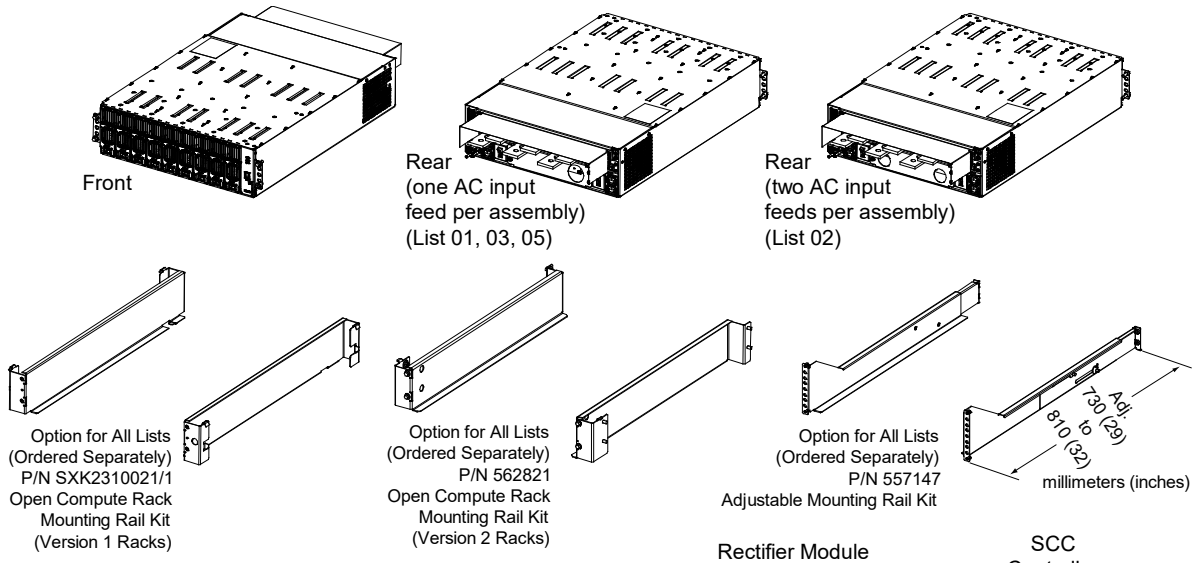
Proprietary and Confidential © 2023 Vertiv Group Corp.

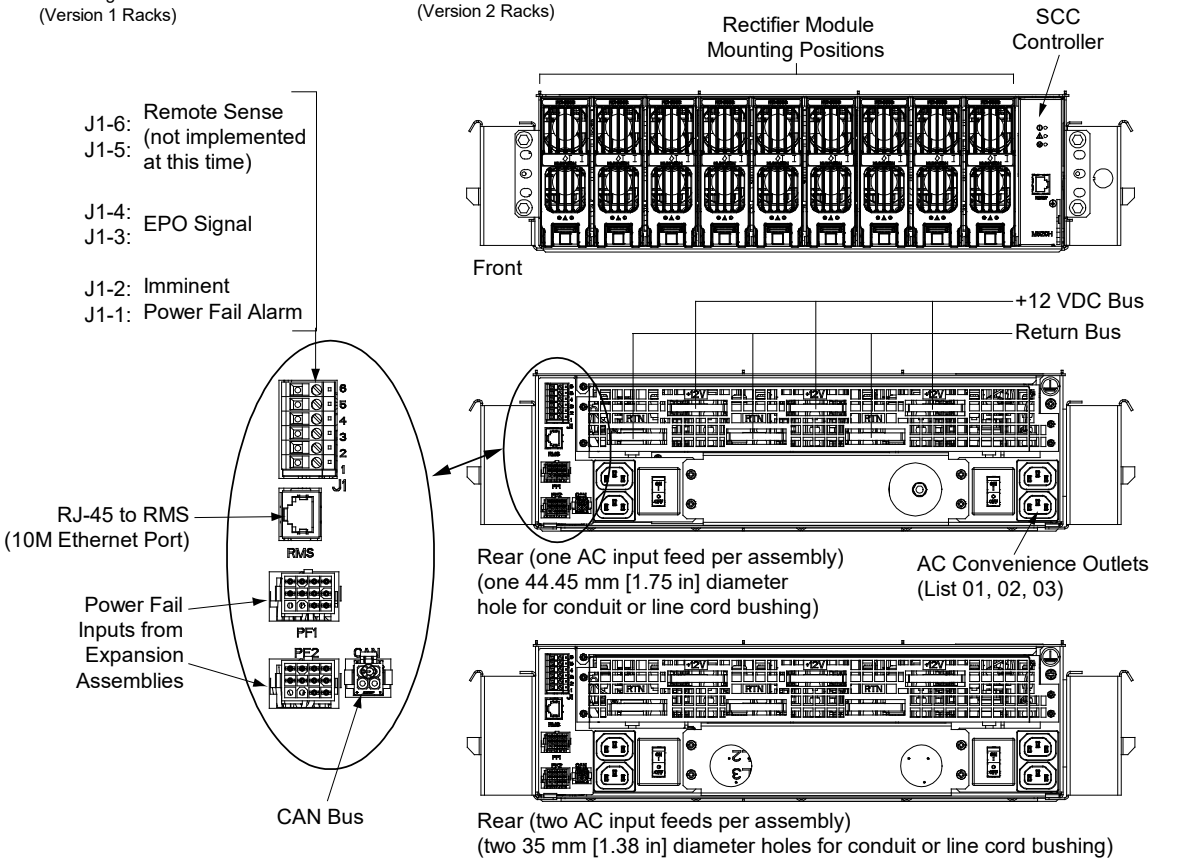
Proprietary and Confidential © 2023 Vertiv Group Corp.

MAIN COMPONENTS ILLUSTRATION

Main Module Mounting Assembly (List 01, 02, 03, 05)

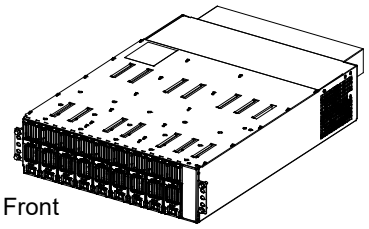
List	Description	AC Input	AC Feeds per Module Mounting Assembly
01	2200 A Main Module Mounting Assembly	208 VAC / 240 VAC, 3-Phase	1
02	2200 A Main Module Mounting Assembly	208 VAC / 240 VAC, 3-Phase	2
03	2200 A Main Module Mounting Assembly	230 VAC / 400 VAC, 4-Wire + PE, 3-Phase 240 VAC / 415 VAC, 4-Wire + PE, 3-Phase	1
05	2200 A Main Module Mounting Assembly	277 VAC / 480 VAC, 4-Wire + PE, 3-Phase	1

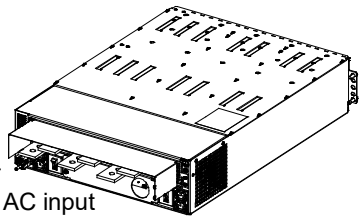


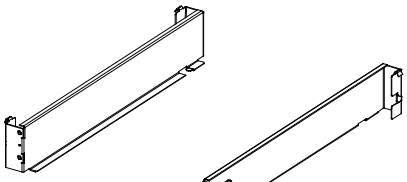


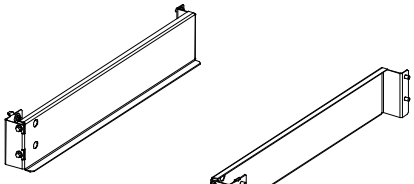
Expansion Module Mounting Assembly (List 13, 15)

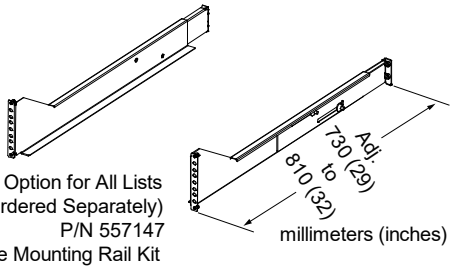
List	Description	AC Input	AC Feeds per Module Mounting Assembly
13	2200 A Expansion Module Mounting Assembly	230 VAC / 400 VAC, 4-Wire + PE, 3-Phase 240 VAC / 415 VAC, 4-Wire + PE, 3-Phase	1
15	2200 A Expansion Module Mounting Assembly	277 VAC / 480 VAC, 4-Wire + PE, 3-Phase	1

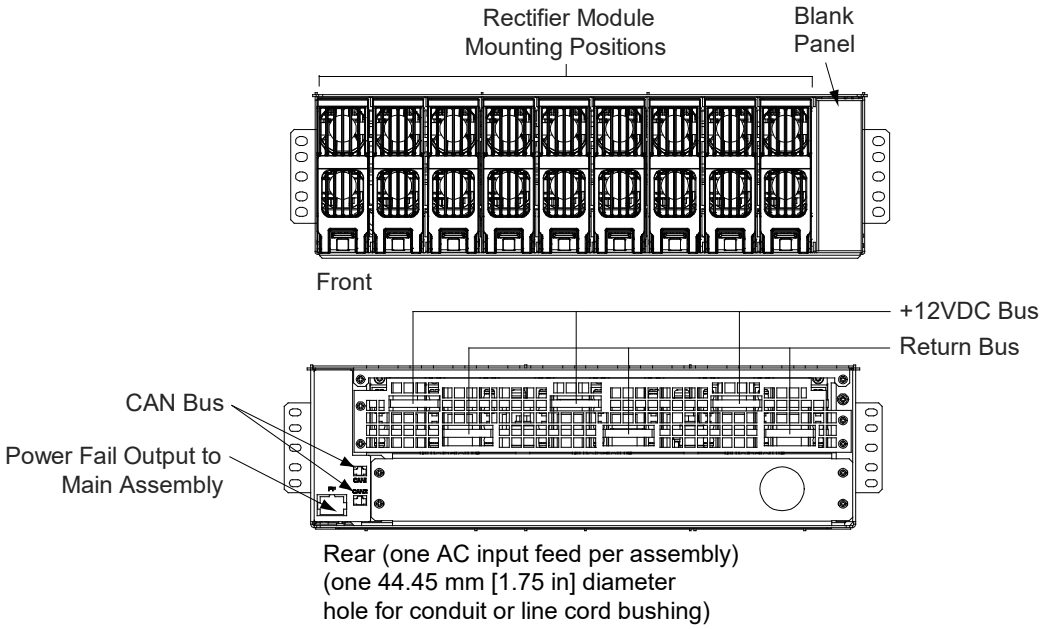






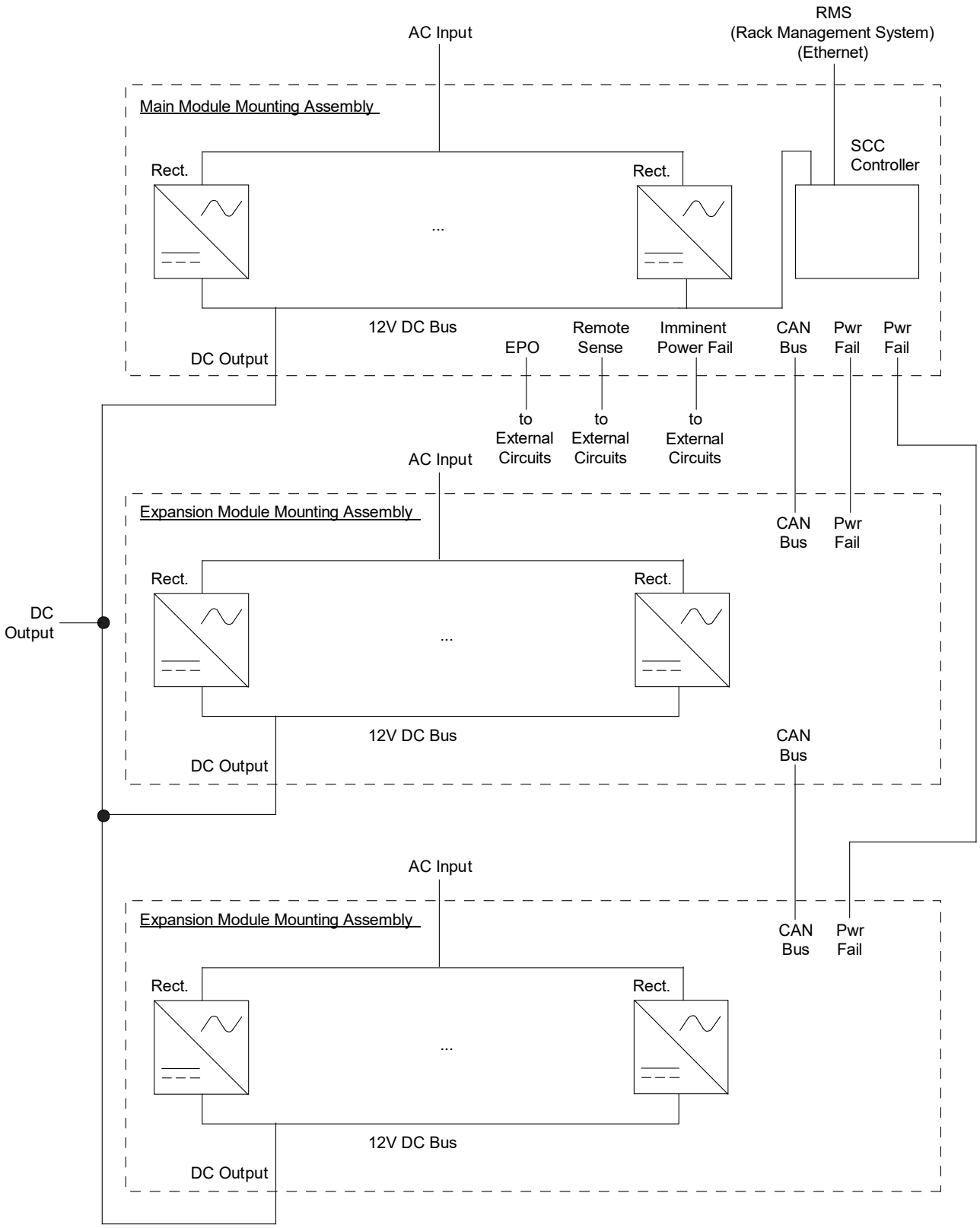






Proprietary and Confidential © 2023 Vertiv Group Corp.

ONE LINE DIAGRAM



Proprietary and Confidential © 2023 Vertiv Group Corp.

MAXIMIZING OUTPUT POWER AND OPTIMIZING AC INPUT CURRENT BALANCING

Refer to the following for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

588706100 12 VDC Power Shelf List No. and AC Input Ratings vs. Output Power

List 01: Hard Wired with One (1) AC Feed
2 AWG Wire / 125 A OCPD at 208 VAC / 3 Phase
2 AWG Wire / 110 A or 125 A OCPD at 240 VAC / 3 Phase

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without load on Convenience Outlet	Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
		208 VAC / 240 VAC	208 VAC	240 VAC
9	(3) on AB, (3) on BC, (3) on CA	26.4 kW	26.4 kW	26.4 kW
8	(2 or 3) on AB, (3) on BC, (2 or 3) on CA	26.4 kW	25.6 kW	26.4 kW
7	(2) on AB, (3) on BC, (2) on CA	23.1 kW (Note 1)	23.1 kW (Note 1)	23.1 kW (Note 1)
6	(2) on AB, (2) on BC, (2) on CA	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)
5	(1 or 2) on AB, (2) on BC, (1 or 2) on CA	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)
4	(1) on AB, (2) on BC, (1) on CA	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)
3	(1) on AB, (1) on BC, (1) on CA	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on AB, (1) on BC (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2, 5 and 8.

Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from Phases A (Line 1) and C (Line 3).

Maximum input current not to exceed 92 A under all conditions.

Maximum wire gauge acceptable for use with the product is 2 AWG.

Table 1

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 01 with List 460: One (1) AC Feed with 60 A Plug and 4 AWG Cable
208 VAC / 240 VAC / 3 Phase
48 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
		208 VAC	240 VAC	208 VAC	240 VAC
9	(3) on AB, (3) on BC, (3) on CA	16.0 kW	18.4 kW	13.8 kW	15.8 kW
8	(2 or 3) on AB, (3) on BC, (2 or 3) on CA	14.3 kW	16.4 kW	13.2 kW	15.1 kW
7	(2) on AB, (3) on BC, (2) on CA	14.9 kW	17.1 kW	13.9 kW	15.9 kW
6	(2) on AB, (2) on BC, (2) on CA	16.0 kW	18.4 kW	13.8 kW	15.8 kW
5	(1 or 2) on AB, (2) on BC, (1 or 2) on CA	13.4 kW	15.4 kW	12.4 kW	14.3 kW
4	(1) on AB, (2) on BC, (1) on CA	13.2 kW (Note 1)	13.2 kW (Note 1)	13.1 kW	13.2 kW (Note 1)
3	(1) on AB, (1) on BC, (1) on CA	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on AB, (1) on BC (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2, 5 and 8.

Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from Phases A (Line 1) and C (Line 2).

Maximum input current not to exceed 48 A under all conditions.

Maximum wire gauge acceptable for use with the product is 4 AWG.

Table 2

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 01 with List 450: One (1) AC Feed with 50 A Plug and 6 AWG Cable
208 VAC / 240 VAC / 3 Phase
39 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
		208 VAC	240 VAC	208 VAC	240 VAC
9	(3) on AB, (3) on BC, (3) on CA	13.0 kW	15.0 kW	10.6 kW	12.2 kW
8	(2 or 3) on AB, (3) on BC, (2 or 3) on CA	11.6 kW	13.4 kW	10.6 kW	12.2 kW
7	(2) on AB, (3) on BC, (2) on CA	12.1 kW	14.0 kW	11.0 kW	13.1 kW
6	(2) on AB, (2) on BC, (2) on CA	13.0 kW	15.0 kW	10.7 kW	12.3 kW
5	(1 or 2) on AB, (2) on BC, (1 or 2) on CA	10.8 kW	12.5 kW	9.9 kW	11.4 kW
4	(1) on AB, (2) on BC, (1) on CA	11.6 kW	13.2 kW (Note 1)	10.5 kW	12.2 kW
3	(1) on AB, (1) on BC, (1) on CA	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on AB, (1) on BC (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2, 5 and 8.

Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from Phases A (Line 1) and C (Line 2).

Maximum input current not to exceed 39 A under all conditions.

Maximum wire gauge acceptable for use with the product is 6 AWG.

Table 3

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 01 with List 430: One (1) AC Feed with 30 A Plug (L15-30P) and 8 AWG Cable
208 VAC / 240 VAC / 3 Phase
24 A Maximum Input Current

List 01 with List 430: One (1) AC Feed with 30 A Plug (L21-30P) and 8 AWG Cable
208 VAC Only / 3 Phase
24 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power Without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
		208 VAC	240 VAC	208 VAC	240 VAC
9	(3) on AB, (3) on BC, (3) on CA	7.7 kW	8.8 kW	5.9 kW	6.7 kW
8	(2 or 3) on AB, (3) on BC, (2 or 3) on CA	7.1 kW	8.2 kW	6.0 kW	7.0 kW
7	(2) on AB, (3) on BC, (2) on CA	7.4 kW	8.5 kW	6.3 kW	7.4 kW
6	(2) on AB, (2) on BC, (2) on CA	7.7 kW	8.8 kW	5.8 kW	6.6 kW
5	(1 or 2) on AB, (2) on BC, (1 or 2) on CA	6.7 kW	7.7 kW	5.7 kW	6.6 kW
4	(1) on AB, (2) on BC, (1) on CA	7.1 kW	8.2 kW	6.0 kW	7.0 kW
3	(1) on AB, (1) on BC, (1) on CA	7.7 kW	8.8 kW	5.9 kW	6.7 kW
2	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	5.4 kW	6.2 kW	4.5 kW	5.1 kW
1	(0) on AB, (1) on BC (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

Product equipped with L15-30P plug is rated for operation at both 208 VAC and 240 VAC.

Product equipped with L21-30P plug is rated for operation at 208 VAC only.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2, 5 and 8.

Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from Phases A (Line 1) and C (Line 3).

Maximum input current not to exceed 24 A under all conditions.

Maximum wire gauge acceptable for use with the product is 8 AWG.

Table 4

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 02: Hard Wired with Two (2) AC Feeds
4 AWG Wire / 80 A or 90 A OCPD at 208 VAC / 3 Phase
4 AWG Wire / 70 A or 90 A OCPD at 240 VAC / 3 Phase

No. of Rectifiers		Optimal Phasing of Rectifiers		Maximum DC Output Power without load on Convenience Outlet		Maximum DC Output Power with 4A load on one or both Convenience Outlets	
AC #1	AC #2	AC Feed No. 1	AC Feed No. 2	208 VAC	240 VAC	208 VAC	240 VAC
6	3	(2) on AB, (2) on BC, (2) on CA	(1) on AB, (1) on BC, (1) on CA	26.4 kW	26.4 kW	26.4 kW	26.4 kW
5	3	(1) on AB, (2) on BC, (2) on CA	(1) on AB, (1) on BC, (1) on CA	26.4 kW (Note 1)	26.4 kW (Note 1)	26.4 kW (Note 1)	26.4 kW (Note 1)
4	3	(1) on AB, (2) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	23.1 kW (Note 1)	23.1 kW (Note 1)	23.1 kW (Note 1)	23.1 kW (Note 1)
3	3	(1) on AB, (1) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)
3	2	(1) on AB, (1) on BC, (1) on CA	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)
2	2	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)
2	1	(0) on AB, (1) on BC, (1) on CA	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
1	1	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	0	(0 or 1) on AB, (0 or 1) on BC (0 or 1) on CA	(0) on AB, (0) on BC (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

AC input No. 1 provides power to shelf positions 1, 2, 3, 4, 5 and 6.
AC input No. 2 provides power to shelf positions 7, 8 and 9.

AC Input No. 1: Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1 and 4.

AC Input No. 1: Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2 and 5.

AC Input No. 1: Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3 and 6.

AC Input No. 2: Phase A (Line 1) and Phase B (Line 2) provides power to shelf position 7.

AC Input No. 2: Phase B (Line 2) and Phase C (Line 3) provides power to shelf position 8.

AC Input No. 2: Phase A (Line 1) and Phase C (Line 3) provides power to shelf position 9.

Convenience outlet No. 1 is powered from AC input No. 1 Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from AC input No. 2 Phases A (Line 1) and B (Line 2).

Maximum wire gauge acceptable for use with the product is 4 AWG.

Table 5

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 02 with List 450: Two (2) AC Feeds with 50 A Plug and 6 AWG Cable
208 VAC / 240 VAC / 3 Phase
39 A Maximum Input Current

No. of Rectifiers		Optimal Phasing of Rectifiers		Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
AC #1	AC #2	AC Feed No. 1	AC Feed No. 2	208 VAC	240 VAC	208 VAC	240 VAC
6	3	(2) on AB, (2) on BC, (2) on CA	(1) on AB, (1) on BC, (1) on CA	19.5 kW	22.4 kW	17.8 kW	20.5 kW
5	3	(1 or 2) on AB, (2) on BC, (1 or 2) on CA	(1) on AB, (1) on BC, (1) on CA	17.3 kW	20.0 kW	17.3 kW	20.0 kW
4	3	(1) on AB, (2) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	20.3 kW	23.1 kW (Note 1)	18.5 kW	21.4 kW
3	3	(1) on AB, (1) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)
3	2	(1) on AB, (1) on BC, (1) on CA	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)
2	2	(1) on AB, (1) on BC, (1) on CA	(0) on AB, (1) on BC, (0) on CA	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)
2	1	(1) on AB, (1) on BC, (1) on CA	(0) on AB, (0) on BC, (0) on CA	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
1	1	(0 or 1) on AB, (1) on BC, (0 or 1) on CA	(0) on AB, (0) on BC, (0) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	0	(0) on AB, (1) on BC, (0) on CA	(0) on AB, (0) on BC, (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

AC input No. 1 provides power to shelf positions 1, 2, 3, 4, 5 and 6.
AC input No. 2 provides power to shelf positions 7, 8 and 9.

AC Input No. 1: Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1 and 4.

AC Input No. 1: Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2 and 5.

AC Input No. 1: Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3 and 6.

AC Input No. 2: Phase A (Line 1) and Phase B (Line 2) provides power to shelf position 7.

AC Input No. 2: Phase B (Line 2) and Phase C (Line 3) provides power to shelf position 8.

AC Input No. 2: Phase A (Line 1) and Phase C (Line 3) provides power to shelf position 9.

Convenience outlet No. 1 is powered from AC input No. 1 Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from AC input No. 2 Phases A (Line 1) and B (Line 2).

Maximum input current not to exceed 39 A per AC input feed under all conditions.

Maximum wire gauge acceptable for use with the product is 6 AWG.

Table 6

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 02 with List 430: Two (2) AC Feeds with 30 A Plug (L15-30P) and 8 AWG Cable
208 VAC / 240 VAC / 3 Phase, 24 A Maximum Input Current

List 02 with List 430: Two (2) AC Feeds with 30 A Plug (L21-30P) and 8 AWG Cable
208 VAC Only / 3 Phase, 24 A Maximum Input Current

No. of Rectifiers		Optimal Phasing of Rectifiers		Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
AC #1	AC #2	AC Feed No. 1	AC Feed No. 2	208 VAC	240 VAC	208 VAC	240 VAC
6	3	(2) on AB, (2) on BC, (2) on CA	(1) on AB, (1) on BC, (1) on CA	12.0 kW	13.8 kW	10.2 kW	11.7 kW
5	3	(1) on AB, (2) on BC, (2) on CA	(1) on AB, (1) on BC, (1) on CA	10.6 kW	12.2 kW	10.6 kW	12.2 kW
4	3	(1) on AB, (2) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	12.3 kW	14.2 kW	10.5 kW	12.1 kW
3	3	(1) on AB, (1) on BC, (1) on CA	(1) on AB, (1) on BC, (1) on CA	15.5 kW	17.6 kW	13.6 kW	15.6 kW
3	2	(1) on AB, (1) on BC, (1) on CA	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	13.3 kW	15.3 kW	11.3 kW	13.0 kW
2	2	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	10.6 kW	12.2 kW	10.6 kW	12.2 kW
2	1	(0) on AB, (1) on BC, (1) on CA	(0) on AB, (0 or 1) on BC, (0 or 1) on CA	8.1 kW	9.3 kW	8.1 kW	9.3 kW
1	1	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	(0 or 1) on AB, (0 or 1) on BC, (0 or 1) on CA	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	0	(0 or 1) on AB, (0 or 1) on BC (0 or 1) on CA	(0) on AB, (0) on BC, (0) on CA	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

Product equipped with L15-30P plug is rated for operation at both 208 VAC and 240 VAC.

AC input No. 1 provides power to shelf positions 1, 2, 3, 4, 5 and 6.
AC input No. 2 provides power to shelf positions 7, 8 and 9.

AC Input No. 1: Phase A (Line 1) and Phase B (Line 2) provides power to shelf positions 1 and 4.

AC Input No. 1: Phase B (Line 2) and Phase C (Line 3) provides power to shelf positions 2 and 5.

AC Input No. 1: Phase A (Line 1) and Phase C (Line 3) provides power to shelf positions 3 and 6.

AC Input No. 2: Phase A (Line 1) and Phase B (Line 2) provides power to shelf position 7.

AC Input No. 2: Phase B (Line 2) and Phase C (Line 3) provides power to shelf position 8.

AC Input No. 2: Phase A (Line 1) and Phase C (Line 3) provides power to shelf position 9.

Convenience outlet No. 1 is powered from AC input No. 1 Phases A (Line 1) and B (Line 2).
Convenience outlet No. 2 is powered from AC input No. 2 Phases A (Line 1) and B (Line 2).

Maximum input current not to exceed 24 A per AC input feed under all conditions.

Maximum wire gauge acceptable for use with the product is 8 AWG.

Table 7

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 03 and List 13 – Hard Wired with One (1) AC Feed
6 AWG Wire / 70 A OCPD at 230 VAC / 400 VAC (4W + PE)
6 AWG Wire / 60 A or 70 A OCPD at 240 VAC / 415 VAC (4W + PE)

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or Both Convenience Outlets	
		230 VAC	240 VAC	230 VAC	240 VAC
9	(3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (3) on Line 3 to Neutral	26.4 kW	26.4 kW	26.4 kW	26.4 kW
8	(2 or 3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2 or 3) on Line 3 to Neutral	26.4 kW (Note 1)	26.4 kW (Note 1)	26.4 kW (Note 1)	26.4 kW (Note 1)
7	(2) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2) on Line 3 to Neutral	23.1 kW (Note 1)	23.1 kW (Note 1)	23.1 kW (Note 1)	23.1 kW (Note 1)
6	(2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (2) on Line 3 to Neutral	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)
5	(1 or 2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1 or 2) on Line 3 to Neutral	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)
4	(1) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1) on Line 3 to Neutral	13.2 kW (Note 1)	13. 2kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)
3	(1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (1) on Line 3 to Neutral	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0 or 1) on Line 3 to Neutral	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0) on Line 3 to Neutral	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Neutral provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Neutral provides power to shelf positions 2, 5 and 8.

Phase C (Line 3) and Neutral provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phase A (Line 1) and Neutral.
Convenience outlet No. 2 is powered from Phase C (Line 3) and Neutral.

Maximum wire gauge acceptable for use with the product is 4 AWG.

Table 8

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 03 and List 13 with List 560: One (1) AC Feed with 60 A Plug and 4 AWG Cable
230 VAC / 400 VAC and 240 VAC / 415 VAC (4W + PE) 3 Phase
48 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or both Convenience Outlets	
		230 VAC	240 VAC	230 VAC	240 VAC
9	(3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (3) on Line 3 to Neutral	26.4 kW (Note 1)	26.4 kW (Note 1)	26.4 kW	26.4 kW
8	(2 or 3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2 or 3) on Line 3 to Neutral	26.4 kW (Note 1)	26.4 kW (Note 1)	25 kW	26 kW
7	(2) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2) on Line 3 to Neutral	23.1 kW (Note 1)	23.1 kW (Note 1)	21.8 kW	22.8 kW
6	(2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (2) on Line 3 to Neutral	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)	19.8 kW (Note 1)
5	(1 or 2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1 or 2) on Line 3 to Neutral	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)	16.5 kW (Note 1)
4	(1) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1) on Line 3 to Neutral	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)	13.2 kW (Note 1)
3	(1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (1) on Line 3 to Neutral	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0 or 1) on Line 3 to Neutral	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0) on Line 3 to Neutral	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Neutral provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Neutral provides power to shelf positions 2, 5 and 8.

Phase C (Line 3) and Neutral provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phase A (Line 1) and Neutral.
Convenience outlet No. 2 is powered from Phase C (Line 3) and Neutral.

Maximum input current not to exceed 48 A under all conditions.

Maximum wire gauge acceptable for use with the product is 4 AWG.

Table 9

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 03 and List 13 with List 532: One (1) AC Feed with 32 A Plug and 8 AWG Cable
230 VAC / 400 VAC and 240 VAC / 415 VAC (4W + PE) 3 Phase
30 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or both Convenience Outlets	
		230 VAC	240 VAC	230 VAC	240 VAC
9	(3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (3) on Line 3 to Neutral	19.3 kW	19.8 kW	16.7 kW	17.4 kW
8	(2 or 3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2 or 3) on Line 3 to Neutral	17.1 kW	17.6 kW	14.8 kW	15.5 kW
7	(2) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2) on Line 3 to Neutral	15.0 kW	15.4 kW	15.0 kW	15.0 kW
6	(2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (2) on Line 3 to Neutral	19.3 kW	19.8 kW	16.7 kW	17.4 kW
5	(1 or 2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1 or 2) on Line 3 to Neutral	16.1 kW	16.5 kW (Note 1)	13.9 kW	14.5 kW
4	(1) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1) on Line 3 to Neutral	12.8 kW	13.2 kW (Note 1)	12.8 kW	13.2 kW (Note 1)
3	(1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (1) on Line 3 to Neutral	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)	9.9 kW (Note 1)
2	(0 or 1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0 or 1) on Line 3 to Neutral	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)	6.6 kW (Note 1)
1	(0) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0) on Line 3 to Neutral	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Neutral provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Neutral provides power to shelf positions 2, 5 and 8.

Phase C (Line 3) and Neutral provides power to shelf positions 3, 6 and 9.

Convenience outlet No. 1 is powered from Phase A (Line 1) and Neutral.
Convenience outlet No. 2 is powered from Phase C (Line 3) and Neutral.

Maximum input current not to exceed 30 A under all conditions.

Maximum wire gauge acceptable for use with the product is 8 AWG.

Table 10

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 03 and List 13: One (1) AC Feed with 60 A Plug and 4 AWG Cable
230 VAC / 400 VAC and 240 VAC / 415 VAC (4W + PE) 1 Phase
48 A Maximum Input Current

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power without Load on Convenience Outlet		Maximum DC Output Power with 4 A Load on One or both Convenience Outlets	
		230 VAC	240 VAC	230 VAC	240 VAC
9	(3) on Line 1 / Neutral, (3) on Line 2 / Neutral (3) on Line 3 / Neutral	26.4kW (Note 1)	26.4kW (Note 1)	26.4kW	26.4kW
8	(2 or 3) on Line 1 / Neutral, (3) on Line 2 / Neutral (2 or 3) on Line 3 / Neutral	26.4kW (Note 1)	26.4kW (Note 1)	25.0kW	26.0kW
7	(2) on Line 1 / Neutral, (3) on Line 2 / Neutral (2) on Line 3 / Neutral	23.1kW (Note 1)	23.1kW (Note 1)	21.8kW	22.8kW
6	(2) on Line 1 / Neutral, (2) on Line 2 / Neutral (2) on Line 3 / Neutral	19.8kW (Note 1)	19.8kW (Note 1)	19.8kW (Note 1)	19.8kW (Note 1)
5	(1 or 2) on Line 1 / Neutral, (2) on Line 2 / Neutral (1 or 2) on Line 3 / Neutral	16.5kW (Note 1)	16.5kW (Note 1)	16.5kW (Note 1)	16.5kW (Note 1)
4	(1) on Line 1 / Neutral, (2) on Line 2 / Neutral (1) on Line 3 / Neutral	13.2kW (Note 1)	13.2kW (Note 1)	13.2kW (Note 1)	13.2kW (Note 1)
3	(1) on Line 1 / Neutral, (1) on Line 2 / Neutral (1) on Line 3 / Neutral	9.9kW (Note 1)	9.9kW (Note 1)	9.9kW (Note 1)	9.9kW (Note 1)
2	(0 or 1) on Line 1 / Neutral, (1) on Line 2 / Neutral (0 or 1) on Line 3 / Neutral	6.6kW (Note 1)	6.6kW (Note 1)	6.6kW (Note 1)	6.6kW (Note 1)
1	(0) on Line 1 / Neutral, (1) on Line 2 / Neutral (0) on Line 3 / Neutral	3.3kW (Note 1)	3.3kW (Note 1)	3.3kW (Note 1)	3.3kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers, not AC input current.

Note 2. Maximum input current not to exceed 48A under all conditions

The AC input provides power to shelf positions 1,2,3,4,5,6,7,8,9

Phase A (Line 1) and Neutral provides power to shelf positions 1,4 and 7

Phase B (Line 2) and Neutral provides power to shelf positions 2,5 and 8

Phase C (Line 3) and Neutral provides power to shelf positions 3,6 and 9

Convenience outlet No.1 is powered from Phase A (Line 1) and Neutral

Convenience outlet No. 2 is powered from Phase C (Line 3) and Neutral.

Maximum wire gauge acceptable for use with the product is 4 AWG.

Table 11

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 05 and List 15 with List 560: One (1) AC Feed with 60 A Plug and 6 AWG Cable
277 VAC / 480 VAC (4W + PE) 3 Phase
39 A Maximum Input Current

List 05 and List 15: Hard Wired with One (1) AC Feed
8 AWG Wire / 50 A OCPD at 277 VAC / 480 VAC (4W + PE) 3 Phase

No. of Rectifiers	Optimal Phasing of Rectifiers	Maximum DC Output Power
9	(3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (3) on Line 3 to Neutral	26.4 kW
8	(2 or 3) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2 or 3) on Line 3 to Neutral	26.4 kW (Note 1)
7	(2) on Line 1 / Neutral, (3) on Line 2 / Neutral, (2) on Line 3 to Neutral	23.1 kW (Note 1)
6	(2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (2) on Line 3 to Neutral	19.8 kW (Note 1)
5	(1 or 2) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1 or 2) on Line 3 to Neutral	16.5 kW (Note 1)
4	(1) on Line 1 / Neutral, (2) on Line 2 / Neutral, (1) on Line 3 to Neutral	13.2 kW (Note 1)
3	(1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (1) on Line 3 to Neutral	9.9 kW (Note 1)
2	(0 or 1) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0 or 1) on Line 3 to Neutral	6.6 kW (Note 1)
1	(0) on Line 1 / Neutral, (1) on Line 2 / Neutral, (0) on Line 3 to Neutral	3.3 kW (Note 1)

Note 1. Output power is limited by maximum output power of rectifiers or shelf, not AC input current.

The AC input provides power to shelf positions 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Phase A (Line 1) and Neutral provides power to shelf positions 1, 4 and 7.

Phase B (Line 2) and Neutral provides power to shelf positions 2, 5 and 8.

Phase C (Line 3) and Neutral provides power to shelf positions 3, 6 and 9.

Product rated at 277Vac / 480Vac cannot be provided with convenience outlets.

Maximum input current not to exceed 39 A under all conditions.

Table 12

Proprietary and Confidential © 2023 Vertiv Group Corp.

LIST DESCRIPTIONS

Module Mounting Assembly

List 01: Main Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC main module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Provides AC convenience outlets on the rear.
- Accepts the SCC controller (see page 30).
- Accepts up to a total of nine (9) rectifier modules.
- Configured for one (1) 208 VAC / 240 VAC, 3-phase AC input feed per module mounting assembly. Feeds 208 VAC / 240 VAC input voltage to each module (9 modules per shelf) plus the convenience AC outlets.
- Terminal blocks provided for hardwiring AC input or an AC input cable and plug can be ordered. When ordered, the AC input cable and plug are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order as required.
2) Order the SCC controller P/N 1M520HNA (see page 30).
3) Order up to a total of nine (9) rectifier modules (see restrictions above).
4) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
5) Order an AC input cable and plug if desired. See "AC Input Cord Integration" starting on page 24
6) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19" EIA mounting rail kit (P/N 557147). See page 31.

List 02: Main Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC main module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Provides AC convenience outlets on the rear.
- Accepts the SCC controller (see page 30).
- Accepts up to a total of nine (9) rectifier modules.
- Configured for two (2) 208 VAC / 240 VAC, 3-phase AC input feeds per module mounting assembly. One feeds 208 VAC / 240 VAC input voltage to six (6) modules plus the convenience AC outlets on one side; the other 208 VAC / 240 VAC input voltage to three (3) modules plus the convenience AC outlets on one side.
- Terminal blocks provided for hardwiring AC inputs or AC input cables and plugs can be ordered. When ordered, the AC input cables and plugs are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order as required.
2) Order the SCC controller P/N 1M520HNA (see page 30).
3) Order up to a total of nine (9) rectifier modules (see restrictions above).

Proprietary and Confidential © 2023 Vertiv Group Corp.

4) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
5) Order an AC input cable and plug if desired. See "AC Input Cord Integration" starting on page 24
6) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19" EIA mounting rail kit (P/N 557147). See page 31.

List 03: Main Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC main module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Provides AC convenience outlets on the rear.
- Accepts the SCC controller (see page 30).
- Accepts up to a total of nine (9) rectifier modules.
- Configured for one (1) 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-wire + PE, 3-phase AC input feed per module mounting assembly. Feeds 230 VAC (Line to Neutral) or 240 VAC (Line to Neutral) input voltage to each module plus the convenience AC outlets. Each "Line to Neutral" (L1-N, L2-N, L3-N) feeds three (3) modules.
- Terminal blocks provided for hardwiring AC input or an AC input cable and plug can be ordered. When ordered, the AC input cable and plug are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order as required.
2) Order the SCC controller P/N 1M520HNA (see page 30).
3) Order up to a total of nine (9) rectifier modules (see restrictions above).
4) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
5) Order an AC input cable and plug if desired. See "AC Input Cord Integration" starting on page 24
6) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19" EIA mounting rail kit (P/N 557147). See page 31.

List 05: Main Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC main module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Accepts the SCC controller (see page 30).
- Accepts up to a total of nine (9) rectifier modules.
- Configured for one (1) 277 VAC / 480 VAC, 4-wire + PE, 3-phase AC input feed per module mounting assembly. Feeds 277 VAC (Line to Neutral) input voltage to each module. Each "Line to Neutral" (L1-N, L2-N, L3-N) feeds three (3) modules.
- Terminal blocks provided for hardwiring AC input or an AC input cable and plug can be ordered. When ordered, the AC input cable and plug are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Proprietary and Confidential © 2023 Vertiv Group Corp.

Ordering Notes

1) Order as required.
2) Order the SCC controller P/N 1M520HNA (see page 30).
3) Order up to a total of nine (9) rectifier modules (see restrictions above).
4) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
5) Order an AC input cable and plug if desired. See "AC Input Cord Integration" starting on page 24
6) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19" EIA mounting rail kit (P/N 557147). See page 31.

List 13: Expansion Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC expansion module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Provides AC convenience outlets on the rear.
- Accepts up to a total of nine (9) rectifier modules.
- Configured for one (1) 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-wire + PE, 3-phase AC input feed per module mounting assembly. Feeds 230 VAC (Line to Neutral) or 240 VAC (Line to Neutral) input voltage to each module plus the convenience AC outlets. Each "Line to Neutral" (L1-N, L2-N, L3-N) feeds three (3) modules.
- Terminal blocks provided for hardwiring AC input or an AC input cable and plug can be ordered. When ordered, the AC input cable and plug are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Up to two (2) expansion module mounting assemblies can be interconnected to a main module mounting assembly.

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order as required.
2) Order up to a total of nine (9) rectifier modules (see restrictions above).
3) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
4) Order an AC input cable and plug if desired. See "AC Input Cord Integration" starting on page 24.
5) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19" EIA mounting rail kit (P/N 557147). See page 31.

List 15: Expansion Module Mounting Assembly

Features

- Provides a 2200 A @ 12 VDC expansion module mounting assembly.
- Includes Open Compute Rack shipping support bracket P/N 561578 (see page 31).
- Accepts up to a total of nine (9) rectifier modules.
- Configured for one (1) 277 VAC / 480 VAC, 4-wire + PE, 3-phase AC input feed per module mounting assembly. Feeds 277 VAC (Line to Neutral) input voltage to each module. Each "Line to Neutral" (L1-N, L2-N, L3-N) feeds three (3) modules.
- Terminal blocks provided for hardwiring AC input or an AC input cable and plug can be ordered. When ordered, the AC input cable and plug are factory installed (see "AC Input Cord Integration" starting on page 24).

Restrictions

Up to two (2) expansion module mounting assemblies can be interconnected to a main module mounting assembly.

Proprietary and Confidential © 2023 Vertiv Group Corp.

Maximum rectifier capacity is 2200 amps (26.4 kW maximum at 12 VDC).

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order as required.
2) Order up to a total of nine (9) rectifier modules (see restrictions above).
3) Order a module mounting position blank cover panel, P/N 558291, for each empty module mounting position in the system, as desired.
4) Order an AC input cable and plug if desired. See “AC Input Cord Integration” starting on page 24.
5) Order optional Open Compute rack mounting rail kit for version 1 racks (P/N SXK2310021/1), optional Open Compute rack mounting rail kit for version 2 racks (P/N 562821), or optional adjustable 19” EIA mounting rail kit (P/N 557147). See page 31.

Proprietary and Confidential © 2023 Vertiv Group Corp.

AC Input Cord Integration

List 430: 4 Wires, 30 A – AC Input Integration

Features

- Instructs the factory to use P/N TFV204001/2 AC input cable with P/N RPT404001/5 plug (NEMA, L21-30P, 30 A) or P/N RPT404002/1 plug (NEMA, L15-30P, 30 A) for 58870610001 or 58870610002. See also "AC Input Cables" on page 26 and "AC Input Plugs" on page 28.

Restrictions

For use with List 01 and List 02.

Ordering Notes

1) Order as required for List 01 or List 02.
2) Select cable as required from "AC Input Cables" on page 26.
3) Select plug as required from "AC Input Plugs" on page 28.

List 450: 4 Wires, 50 A – AC Input Integration

Features

- Instructs the factory to use P/N 151646 AC input cable with P/N 151635 plug (Hubbell, CS8365C, 50 A) for 58870610001 and 58870610002. See also "AC Input Cables" on page 26 and "AC Input Plugs" on page 28.

Restrictions

For use with List 01 and List 02.

Ordering Notes

1) Order as required for List 01 and List 02.
2) Select cable as required from "AC Input Cables" on page 26.
3) Select plug as required from "AC Input Plugs" on page 28.

List 460: 4 Wires, 60 A – AC Input Integration

Features

- Instructs the factory to use P/N 149068 AC input cable with P/N RPT404001/4 plug (IEC, 3P4W, 60 A) for 58870610001. See also "AC Input Cables" on page 26 and "AC Input Plugs" on page 28.

Restrictions

For use with List 01.

Ordering Notes

1) Order as required for List 01.
2) Select cable as required from "AC Input Cables" on page 26.
3) Select plug as required from "AC Input Plugs" on page 28.

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 532: 5 Wires, 32 A – AC Input Integration

Features

- Instructs the factory to use P/N TFV204001/3 AC input cable with P/N RPT404001/8 plug (IEC, 532P6, 32 A) for 58870610003 and 58870610013. See also “AC Input Cables” on page 26 and “AC Input Plugs” on page 28.

Restrictions

For use with List 03 and List 13.

Ordering Notes

1) Order as required for List 03 or List 13
2) Select cable as required from “AC Input Cables” on page 26.
3) Select plug as required from “AC Input Plugs” on page 28.

List 560: 5 Wires, 60 A – AC Input Integration

Features

- Instructs the factory to use P/N 149642 AC input cable with P/N RPT404001/6 plug (IEC, 4P5W, 60 A) for 58870610005/58870610015, or P/N 149588 AC input cable with P/N RPT404001/7 plug (IEC, 4P5W, 60 A) for 58870610003/58870610013. See also “AC Input Cables” on page 26 and “AC Input Plugs” on page 28.

Restrictions

For use with List 03, 05, 13, 15.

Ordering Notes

1) Order as required for List 03, 05, 13, 15.
2) Select cable as required from “AC Input Cables” on page 26.
3) Select plug as required from “AC Input Plugs” on page 28.

Proprietary and Confidential © 2023 Vertiv Group Corp.

AC Input Cables

Cable, P/N 149068

Features

- Cable for constructing one (1) 4-wire 4 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 460.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N 149068 and specify the length in feet, as required, as part of List 460.

Cable, P/N 151646

Features

- Cable for constructing one (1) 4-wire 6 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 450.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N 151646 and specify the length in feet, as required, as part of List 450.

Cable, P/N TFV204001/2

Features

- Cable for constructing one (1) 4-wire 8 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 430.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N TFV204001/2 and specify the length in feet, as required, as part of List 430.

Proprietary and Confidential © 2023 Vertiv Group Corp.

Cable, P/N TFV204001/3

Features

- Cable for constructing one (1) 5-wire 8 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 532.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N TFV204001/3 and specify the length in feet, as required, as part of List 532.

Cable, P/N 149642

Features

- Cable for constructing one (1) 5-wire 6 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 560.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N 149642 and specify the length in feet, as required, as part of List 560.

Cable, P/N 149588

Features

- Cable for constructing one (1) 5-wire 4 AWG AC input line cord that is terminated inside the specified shelf, and terminated on the remaining end with a plug that was ordered with the cable (see “AC Input Plugs” on page 28).

Restrictions

Cable for use with List 560.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this cable size and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N 149588 and specify the length in feet, as required, as part of List 560.

Proprietary and Confidential © 2023 Vertiv Group Corp.

AC Input Plugs

Plug, P/N RPT404001/5

Features

- One (1) NEMA, L21-30P, 30 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

30 A plug for use with List 430.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N RPT404001/5 as required.

Plug, P/N RPT404002/1

Features

- One (1) NEMA, L15-30P, 30 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

30 A plug for use with List 430.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N RPT404002/1 as required.

Plug, P/N 151635

Features

- One (1) Hubbell, CS8365C, 50 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

50 A plug for use with List 450.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N 151635 as required.

Plug, P/N RPT404001/4

Features

- One (1) IEC, 3P4W, 60 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

60 A plug for use with List 460.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N RPT404001/4 as required.

Proprietary and Confidential © 2023 Vertiv Group Corp.

Plug, P/N RPT404001/6

Features

- One (1) IEC, 4P5W, 60 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

60 A plug for use with List 560.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N RPT404001/6 as required.

Plug, P/N RPT404001/7

Features

- One (1) IEC, 4P5W, 60 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

60 A plug for use with List 560.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

1) Order by P/N RPT404001/7 as required.

Plug, P/N RPT404001/8

Features

- One (1) IEC, 532P6, 32 A plug that connects to an AC input cable (see “AC Input Cables” on page 26).

Restrictions

32 A plug for use with List 532.

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of this plug and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

Ordering Notes

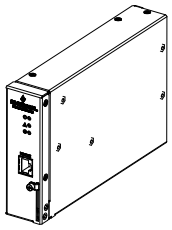
1) Order by P/N RPT404001/8 as required.

Proprietary and Confidential © 2023 Vertiv Group Corp.

ACCESSORY DESCRIPTIONS

Controller

SCC Controller, P/N 1M520HNA



Features

- Provides one (1) Model M520H, Spec. No. 1M520HNA, SCC Controller.
- Factory programmed.
- Refer to the SCC Controller Instructions (UM1M520HNA) for more information.

Restrictions

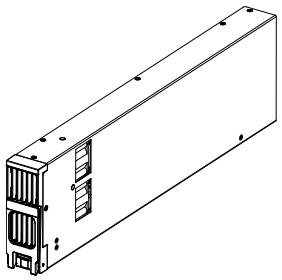
Each main module mounting assembly requires an SCC Controller.

Ordering Notes

1) Order one P/N 1M520HNA for each module mounting assembly.
2) Specify configuration software as required.

Modules

Rectifier Module, P/N 1R123300



Features

- Provides one (1) Model R12-3300, Spec. No. 1R123300, 3300 watt / +12 volt rectifier module.
- Refer to the rectifier Instructions (UM1R123000) for more information.

Restrictions

Each shelf holds up to a total nine (9) rectifier modules. Refer to "Maximizing Output Power and Optimizing AC Input Current Balancing" starting on page 8 for recommendations on rectifier configurations to maximize output power and optimize AC input current balancing.

Ordering Notes

1) Order by P/N 1R123300 as required.

Module Mounting Position Blank Cover Panel, P/N 558291

Features

- Covers one (1) unused module mounting position.

Ordering Notes

1) Order by P/N 558291 as required. Order a module mounting position blank cover panel for each empty module mounting position in the system, as desired.

Proprietary and Confidential © 2023 Vertiv Group Corp.

Rack Mounting Rails and Shipping Support Bracket

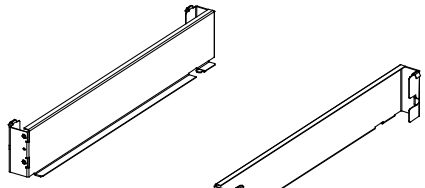
Open Compute Rack Mounting Rails, P/N SXK2310021/1

Features

- Provides an Open Compute rack mounting rail kit for version 1 racks.

Ordering Notes

1) Order as required.



P/N SXK2310021/1
(Open Compute Rack
Mounting Rail Kit
for Version 1 Racks)

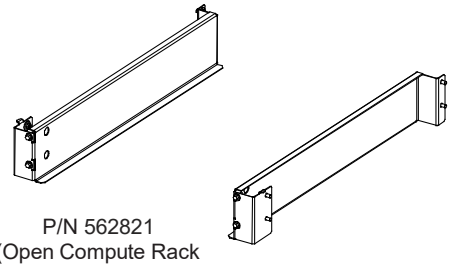
Open Compute Rack Mounting Rails, P/N 562821

Features

- Provides an Open Compute rack mounting rail kit for version 2 racks.

Ordering Notes

1) Order as required.



P/N 562821
(Open Compute Rack
Mounting Rail Kit
for Version 2 Racks)

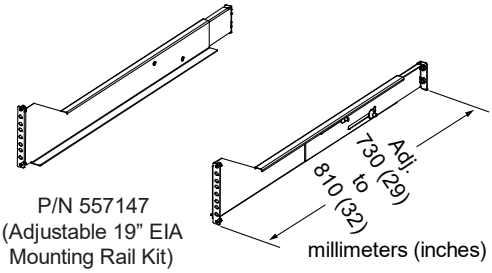
Adjustable 19" EIA Mounting Rail Kit, P/N 557147

Features

- Provides an adjustable 19" EIA mounting rail kit.

Ordering Notes

1) Order as required.



P/N 557147
(Adjustable 19" EIA
Mounting Rail Kit)

millimeters (inches)

Open Compute Rack Shipping Support Bracket, P/N 561578

Features

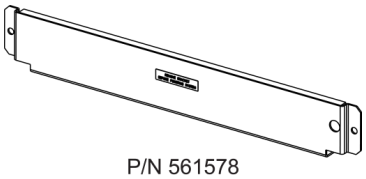
- Provides an Open Compute Rack shipping support bracket which allows a List 01, 02, 03, 05, 13, 15 module mounting assembly to be installed in an Open Compute Rack and then shipped with rectifier modules installed.

Restrictions

Remove shipping support bracket before powering system.

Ordering Notes

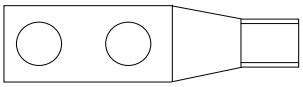
1) Furnished with List 01, 02, 03, 05, 13, and 15.



P/N 561578
(Open Compute Rack
Shipping Support Bracket)

Proprietary and Confidential © 2023 Vertiv Group Corp.

Standard DC Output Crimp Lugs

Lead Size	Part Number	
4/0 AWG	245347400	
250 kcmil	245347500	
300 kcmil	245347600	
350 kcmil	245347700	
400 kcmil	245347800	
500 kcmil	245347900	
600 kcmil	245348000	
750 kcmil	245348100	

Lugs should be crimped per lug manufacturer's specifications.

Table 13
Crimp Lug
Two-Hole, 11 mm (0.433 inch) Bolt Clearance Holes, 25.4 mm (1 inch) Centers

User Replaceable Components

Ordering Notes

1) Refer to Table 14 for user replaceable components.

Item	Part Number
Rectifier Module	1R123300
SCC Controller	1M520HNA (must have a software configuration file matching that of the original being replaced)

Table 14
User Replaceable Components

Proprietary and Confidential © 2023 Vertiv Group Corp.

RECOMMENDED WIRING SIZES, BRANCH CIRCUIT PROTECTION, CRIMP LUGS, AND WIRING ILLUSTRATIONS

Refer to the current edition of the American National Standards Institute (ANSI) approved National Fire Protection Association's (NFPA) National Electrical Code (NEC), applicable local codes, and your specific site requirements. For operation in countries where the NEC is not recognized, follow applicable codes.

System Frame Grounding Requirements

A customer's frame grounding network lead can be attached to the rear of each module mounting assembly as shown in Figure 1. Provision is made for installing a lead with a one-hole lug that has an M4 bolt clearance hole. Recommended wire size is 10 AWG (6 mm2).

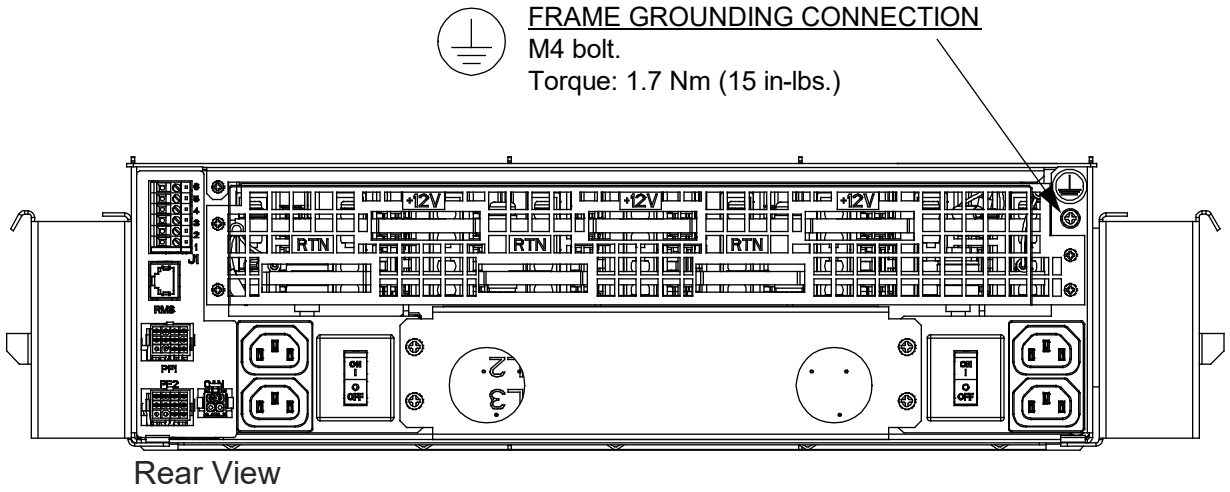


Figure 1

Proprietary and Confidential © 2023 Vertiv Group Corp.

Hardwired AC Input Connections

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for recommended AC input branch circuit protection and wire size.

List 01 Module Mounting Assembly (Hardwired)

Configured for one (1) 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-phase AC input feed per module mounting assembly. Feeds 208 VAC / 240 VAC input voltage to each module (9 modules per shelf) plus the convenience AC outlets.

See Figure 2.

AC Input Connections, 588706100 List 01, Hardwired
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

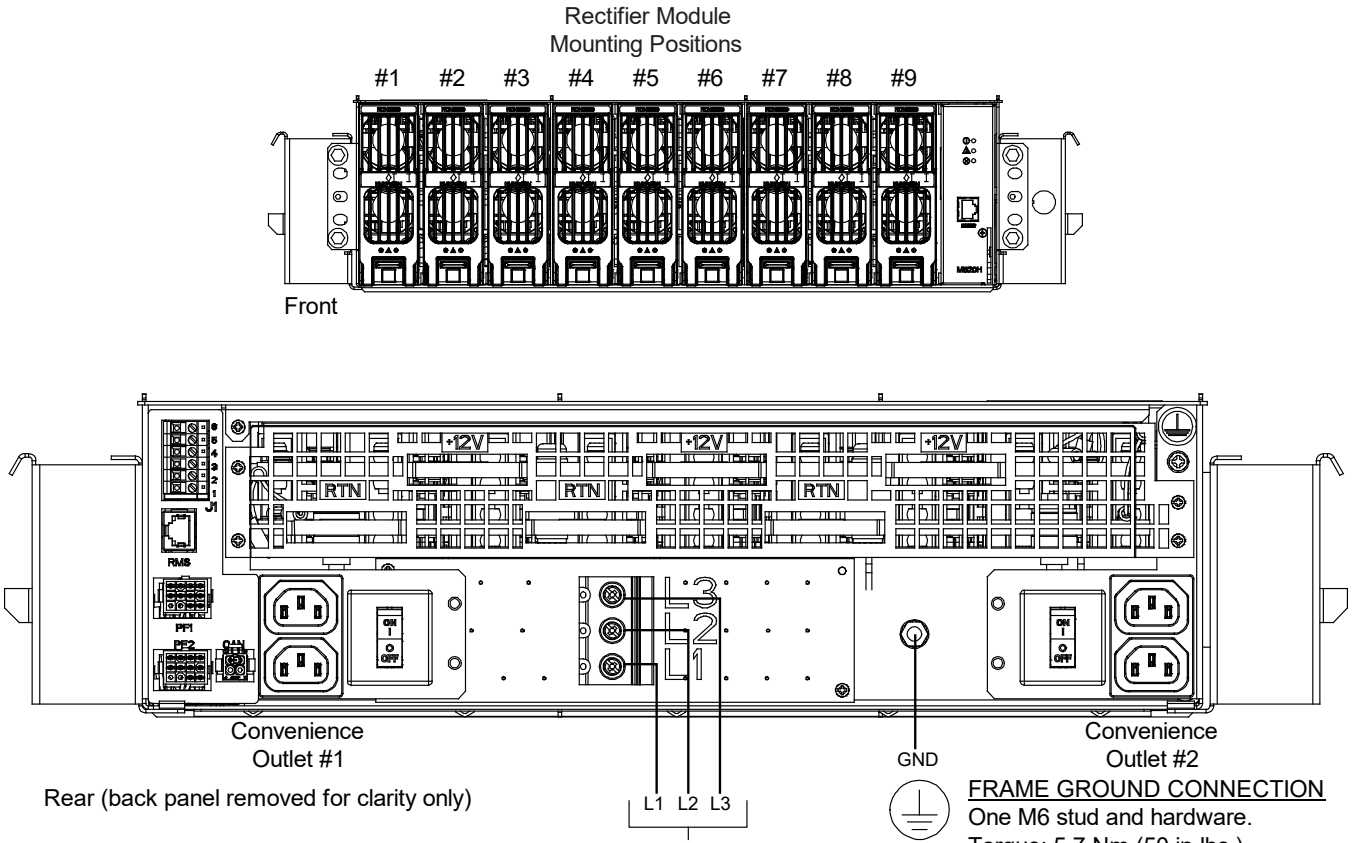


Figure 2

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 02 Module Mounting Assembly (Hardwired)

Configured for two (2) 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-phase AC input feeds per module mounting assembly. One feeds 208 VAC / 240 VAC input voltage to six (6) modules plus the convenience AC outlets on one side; the other 208 VAC / 240 VAC input voltage to three (3) modules plus the convenience AC outlets on one side.

See Figure 3.

AC Input Connections, 588706100 List 02, Hardwired
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 2 Feeds per Module Mounting Assembly
(1 Feed per 6 Module Positions, 1 Feed per 3 Module Positions)

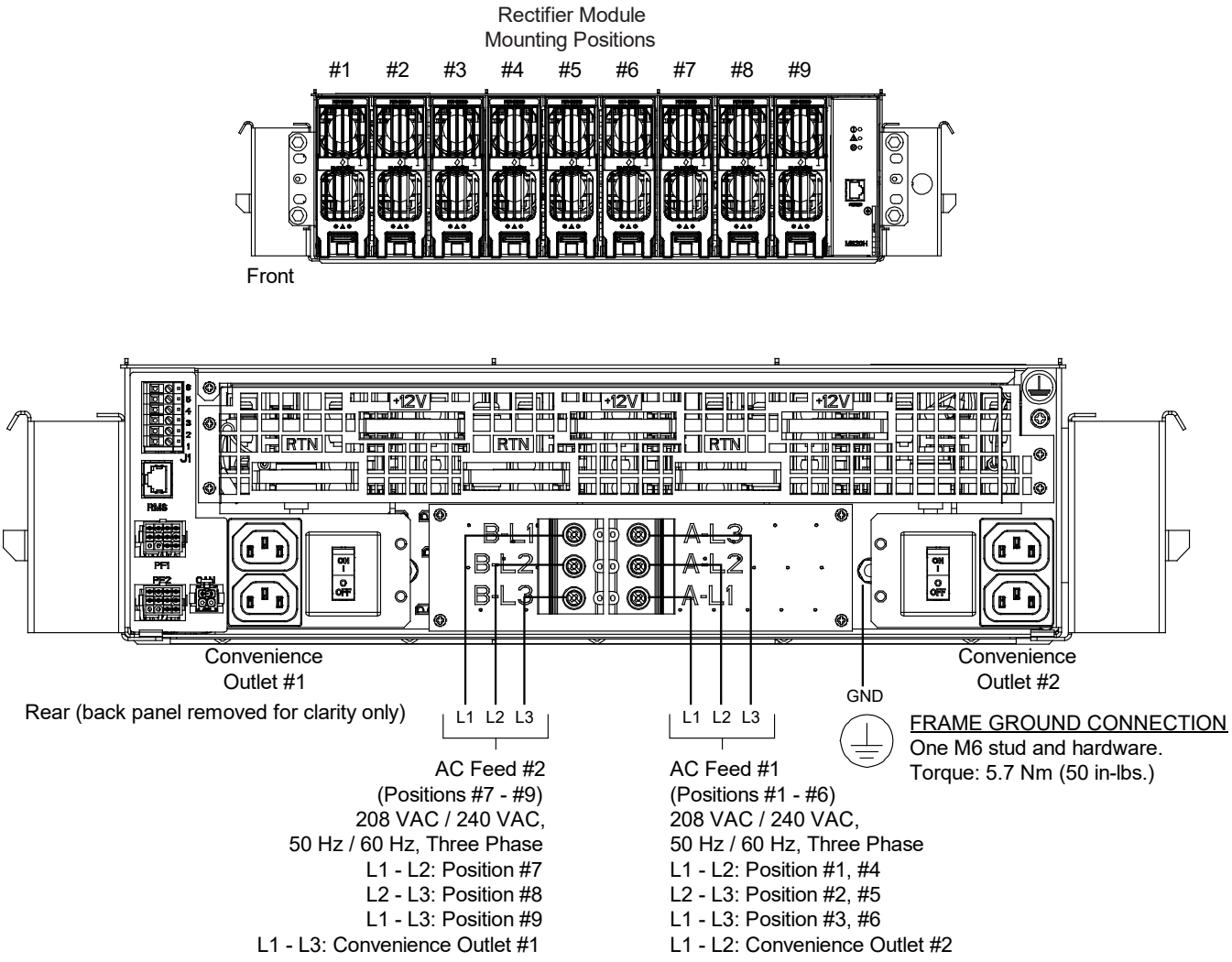


Figure 3

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 03, 13 Module Mounting Assembly (Hardwired)

Configured for one (1) 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-wire + PE, 50 Hz / 60 Hz, 3-phase AC input feed per module mounting assembly. Feeds 230 VAC (Line to Neutral) or 240 VAC (Line to Neutral) input voltage to each module plus the convenience AC outlets. Each "Line to Neutral" (L1-N, L2-N, L3-N) feeds three (3) modules.

See Figure 4.

AC Input Connections, 588706100 List 03 / List 13, Hardwired
Nominal 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-Wire + PE, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly (1 Feed per 9 Module Positions)

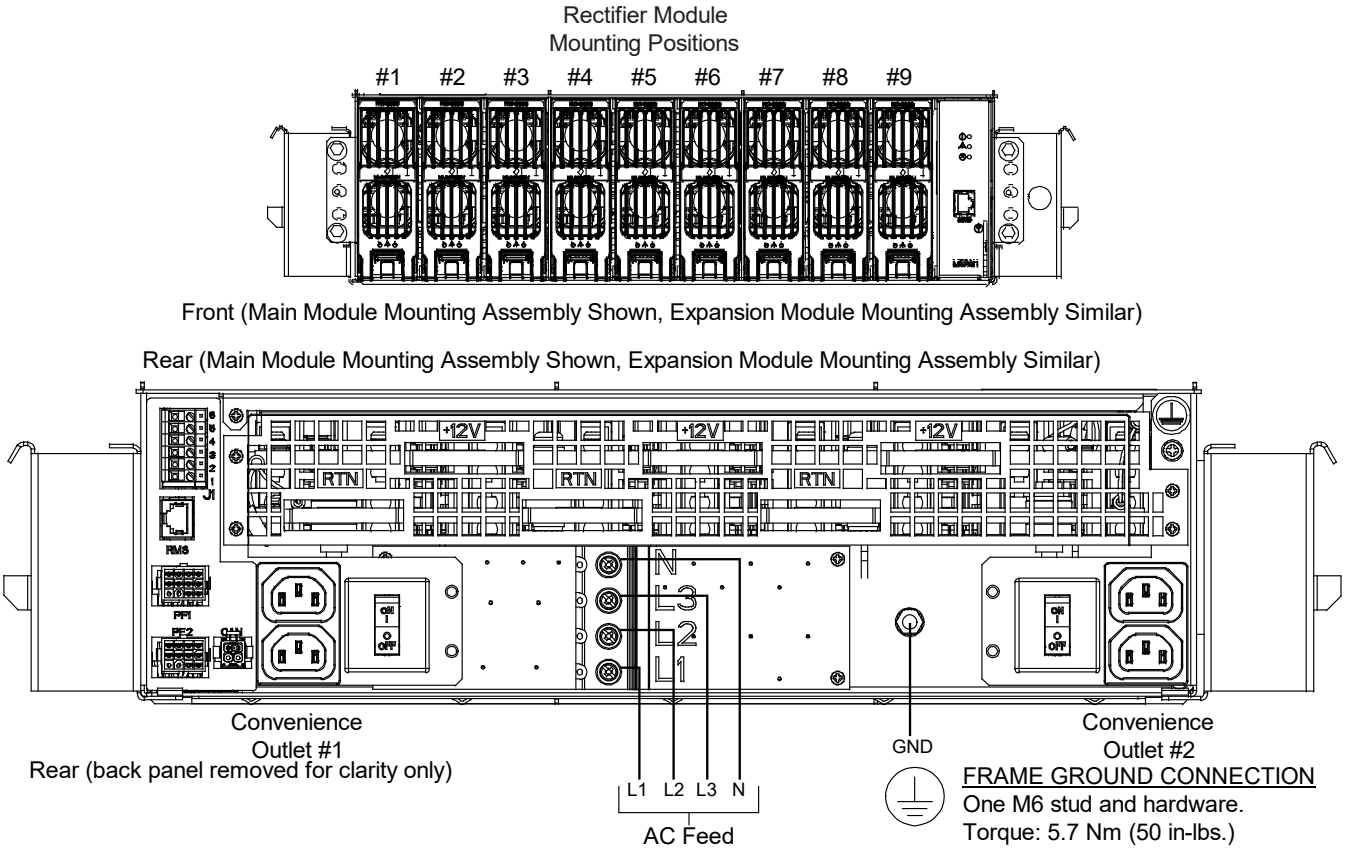


Figure 4

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 05, 15 Module Mounting Assembly (Hardwired)

Configured for one (1) 277 VAC / 480 VAC, 4-wire + PE, 50 Hz / 60 Hz, 3-phase AC input feed per module mounting assembly. Feeds 277 VAC (Line to Neutral) input voltage to each module. Each “Line to Neutral” (L1-N, L2-N, L3-N) feeds three (3) modules.

See Figure 5.

AC Input Connections, 588706100 List 05 / List 15, Hardwired
Nominal 277 VAC / 480 VAC, 4-Wire + PE, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

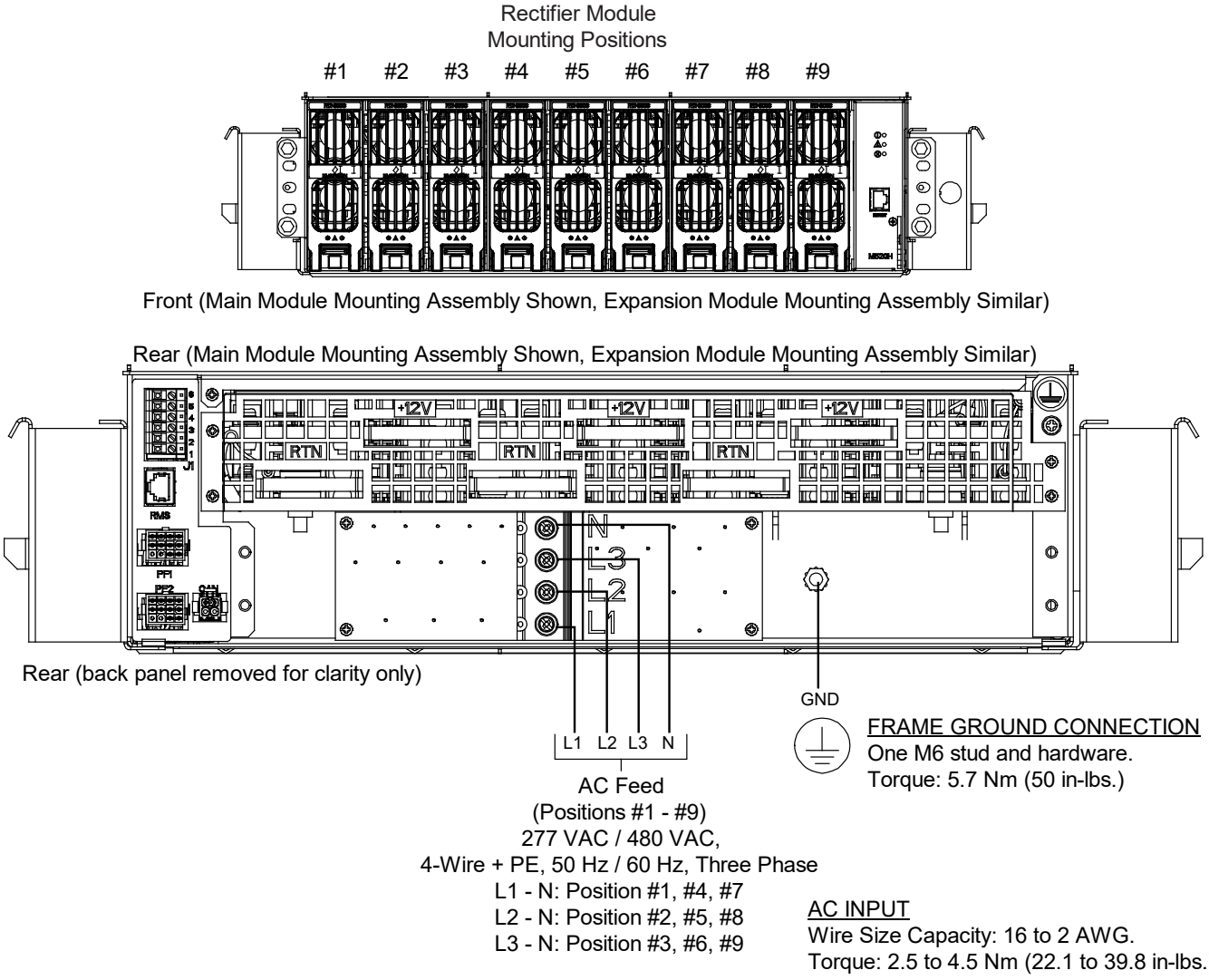


Figure 5

Proprietary and Confidential © 2023 Vertiv Group Corp.

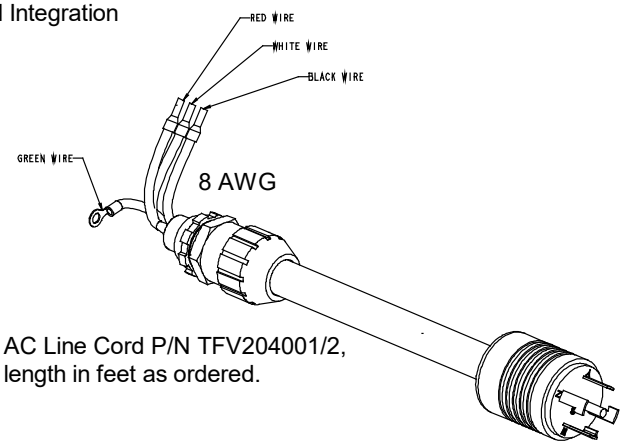
AC Input Cord Integration

Refer to “Maximizing Output Power and Optimizing AC Input Current Balancing” starting on page 8 for output power capacities based on the use of the AC input cord integration and the number and position of rectifiers installed, with and without the convenience outlets providing rated output current (4 amps each).

When used with AC input cables and plugs, size the overcurrent protective devices per the AC input cable plug rating.

List 430 AC Input Cord Integration

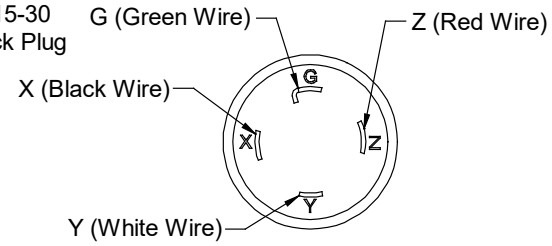
AC Input Connections, 588706100 List 430, AC Line Cord Integration



AC Line Cord P/N TFV204001/2,
length in feet as ordered.

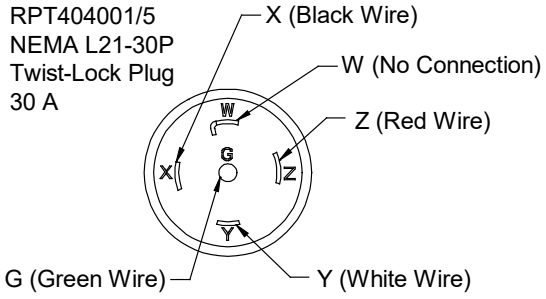
AC Input Connections, 588706100 List 430, AC Line Cord Integration
For Use With 588706100 List 01
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

RPT404002/1
NEMA L15-30
Twist-Lock Plug
30 A



AC Feed
(Positions #1 - #9)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4, #7
L2 - L3: Position #2, #5, #8
L1 - L3: Position #3, #6, #9
L1 - L3: Convenience Outlet #1
L1 - L2: Convenience Outlet #2

RPT404001/5
NEMA L21-30P
Twist-Lock Plug
30 A

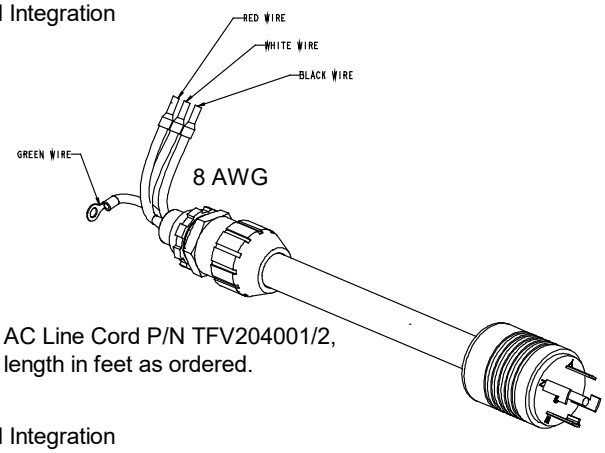


AC Feed
(Positions #1 - #9)
208 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4, #7
L2 - L3: Position #2, #5, #8
L1 - L3: Position #3, #6, #9
L1 - L3: Convenience Outlet #1
L1 - L2: Convenience Outlet #2

Figure 6 (cont’d on next page)

Proprietary and Confidential © 2023 Vertiv Group Corp.

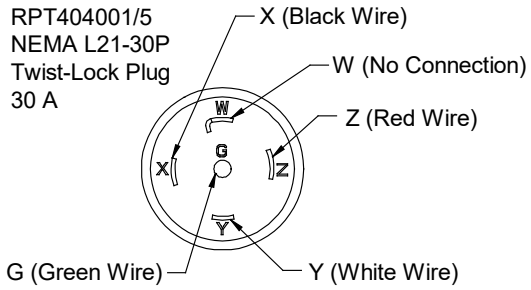
AC Input Connections, 588706100 List 430, AC Line Cord Integration



AC Line Cord P/N TFV204001/2,
length in feet as ordered.

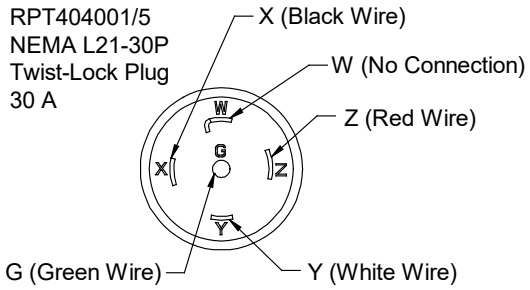
AC Input Connections, 588706100 List 430, AC Line Cord Integration
For Use With 588706100 List 02
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 2 Feeds per Module Mounting Assembly
(1 Feed per 6 Module Positions, 1 Feed per 3 Module Positions)

RPT404001/5
NEMA L21-30P
Twist-Lock Plug
30 A



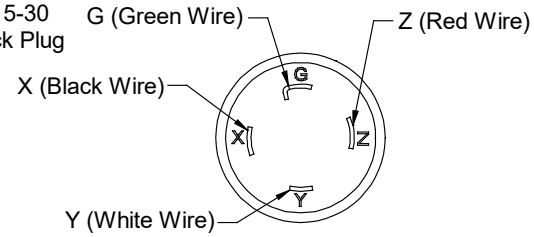
AC Feed #2
(Positions #7 - #9)
208 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #7
L2 - L3: Position #8
L1 - L3: Position #9
L1 - L3: Convenience Outlet #1

RPT404001/5
NEMA L21-30P
Twist-Lock Plug
30 A



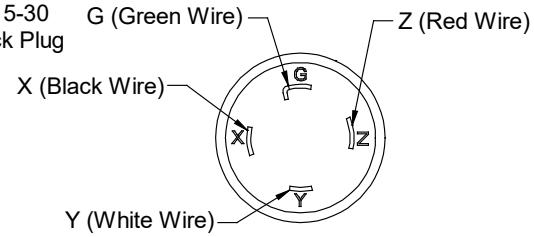
AC Feed #1
(Positions #1 - #6)
208 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4
L2 - L3: Position #2, #5
L1 - L3: Position #3, #6
L1 - L2: Convenience Outlet #2

RPT404002/1
NEMA L15-30
Twist-Lock Plug
30 A



AC Feed #2
(Positions #7 - #9)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #7
L2 - L3: Position #8
L1 - L3: Position #9
L1 - L3: Convenience Outlet #1

RPT404002/1
NEMA L15-30
Twist-Lock Plug
30 A



AC Feed #1
(Positions #1 - #6)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4
L2 - L3: Position #2, #5
L1 - L3: Position #3, #6
L1 - L2: Convenience Outlet #2

Figure 6 (cont'd from previous page)

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 450 AC Input Cord Integration

AC Input Connections, 588706100 List 450, AC Line Cord Integration
For Use With 588706100 List 01
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

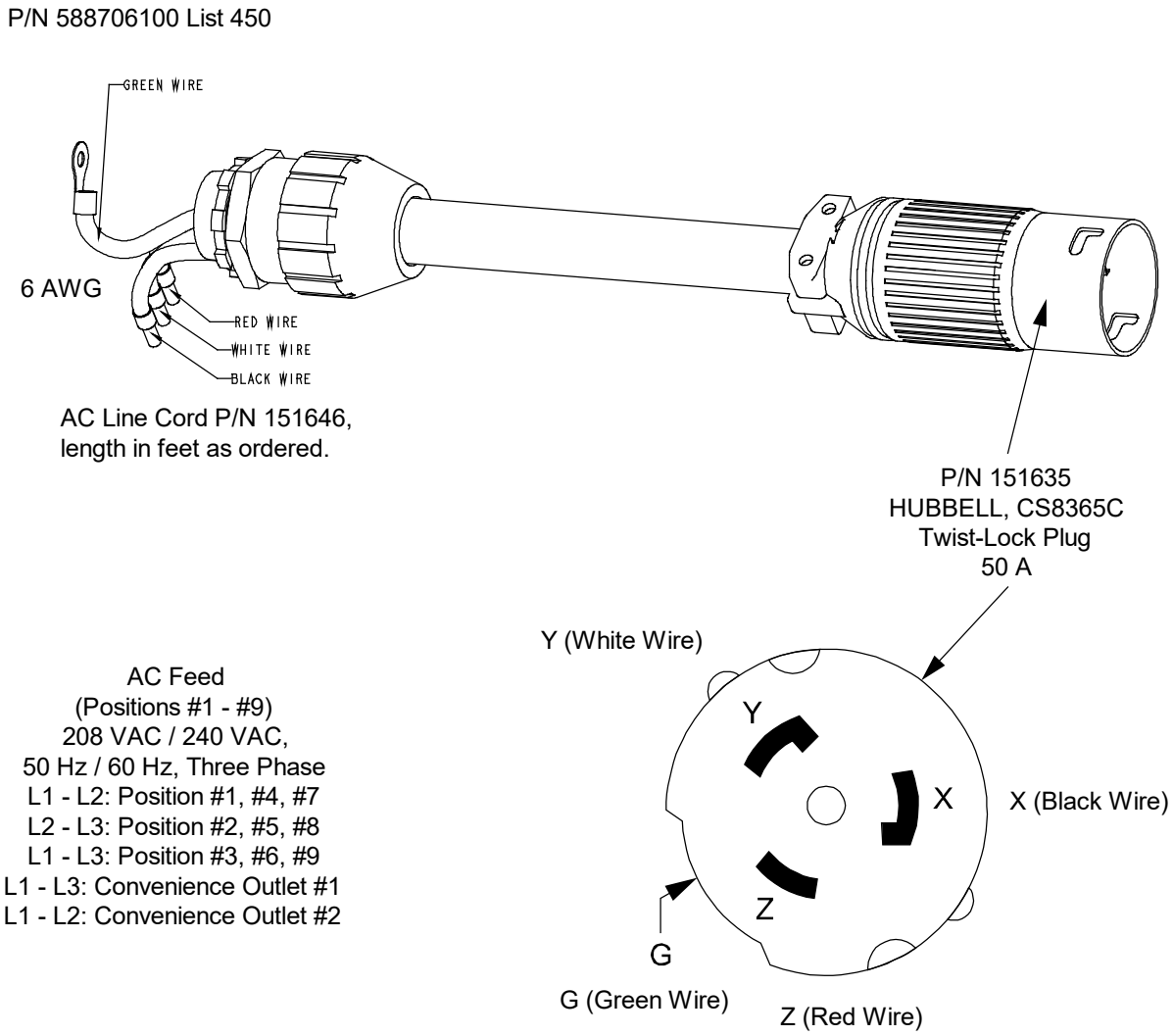
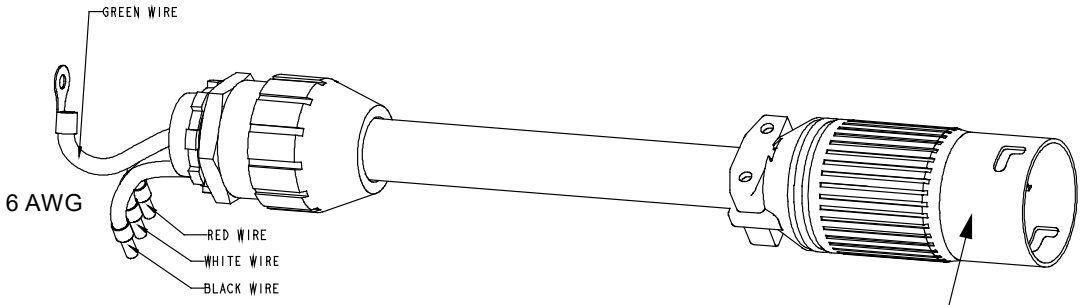


Figure 7 (cont'd on next page)

Proprietary and Confidential © 2023 Vertiv Group Corp.

AC Input Connections, 588706100 List 450, AC Line Cord Integration
For Use With 588706100 List 02
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 2 Feeds per Module Mounting Assembly
(1 Feed per 6 Module Positions, 1 Feed per 3 Module Positions)

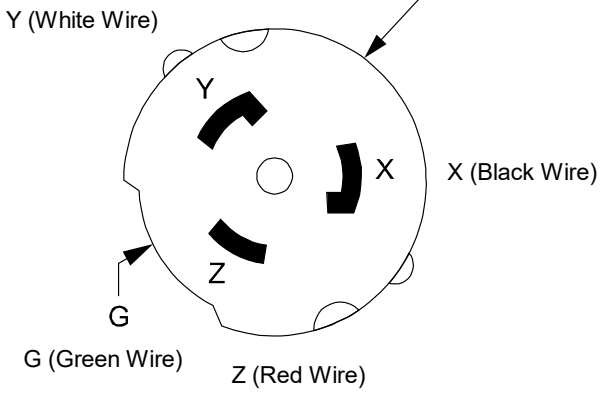
P/N 588706100 List 450



AC Line Cord P/N 151646,
length in feet as ordered.

P/N 151635
HUBBELL, CS8365C
Twist-Lock Plug
50 A

AC Feed #1
(Positions #1 - #6)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4
L2 - L3: Position #2, #5
L1 - L3: Position #3, #6
L1 - L2: Convenience Outlet #2



AC Feed #2
(Positions #7 - #9)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #7
L2 - L3: Position #8
L1 - L3: Position #9
L1 - L3: Convenience Outlet #1

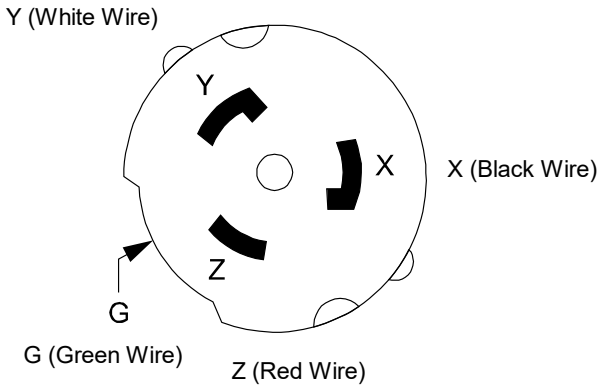
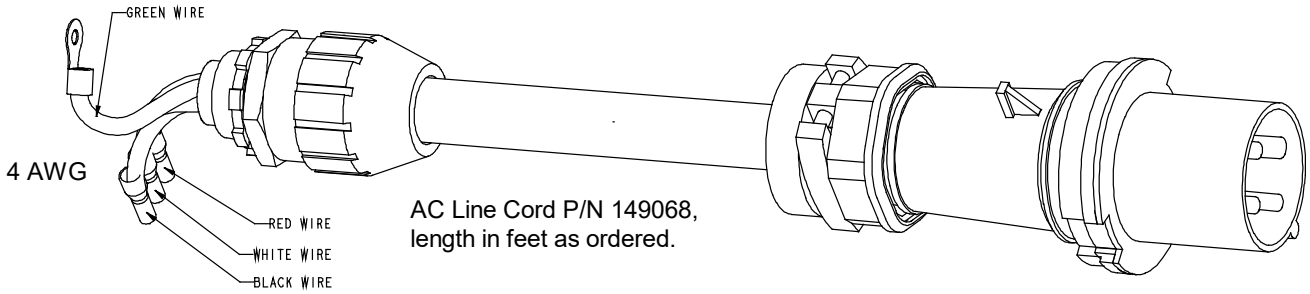


Figure 7 (cont'd from previous page)

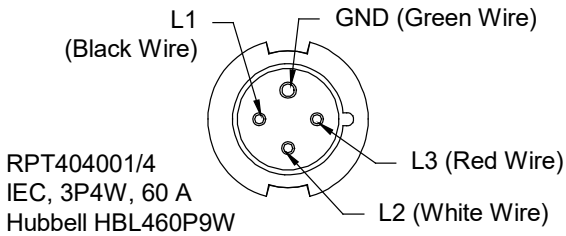
Proprietary and Confidential © 2023 Vertiv Group Corp.

List 460 AC Input Cord Integration

AC Input Connections, 588706100 List 460, AC Line Cord Integration
For Use With 588706100 List 01
Nominal 208 VAC / 240 VAC, 50 Hz / 60 Hz, 3-Phase, 1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)



AC Feed
(Positions #1 - #9)
208 VAC / 240 VAC,
50 Hz / 60 Hz, Three Phase
L1 - L2: Position #1, #4, #7
L2 - L3: Position #2, #5, #8
L1 - L3: Position #3, #6, #9
L1 - L3: Convenience Outlet #1
L1 - L2: Convenience Outlet #2



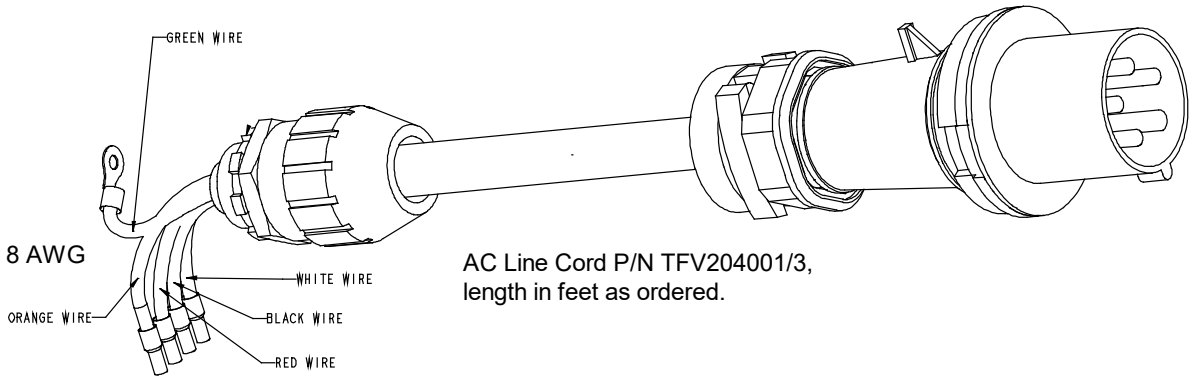
RPT404001/4
IEC, 3P4W, 60 A
Hubbell HBL460P9W
(or equivalent)

Figure 8

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 532 AC Input Cord Integration

AC Input Connections, 588706100 List 532, AC Line Cord Integration



AC Input Connections, 588706100 List 532, AC Line Cord Integration
For Use With 588706100 List 03, 13
Nominal 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-Wire + PE, 50 Hz / 60 Hz, 3-Phase,
1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

AC Feed
(Positions #1 - #9)
230 VAC / 400 VAC or 240 VAC / 415 VAC,
4-Wire + PE, 50 Hz / 60 Hz, Three Phase
L1 - N: Position #1, #4, #7
L2 - N: Position #2, #5, #8
L3 - N: Position #3, #6, #9
L3 - N: Convenience Outlet #2
L1 - N: Convenience Outlet #1

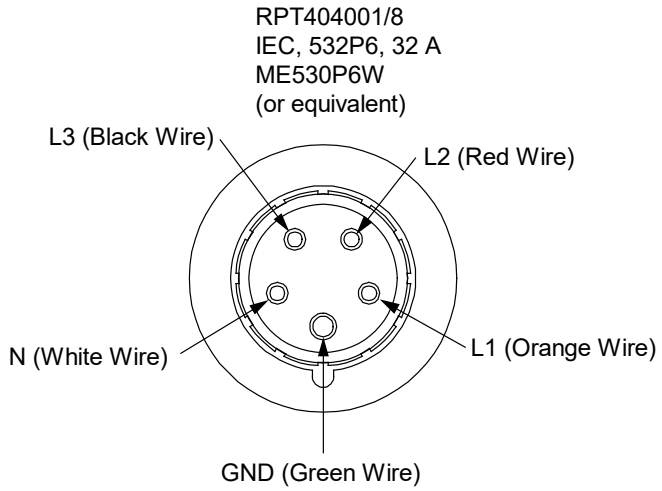


Figure 9

Proprietary and Confidential © 2023 Vertiv Group Corp.

List 560 AC Input Cord Integration

AC Input Connections, 588706100 List 560, AC Line Cord Integration

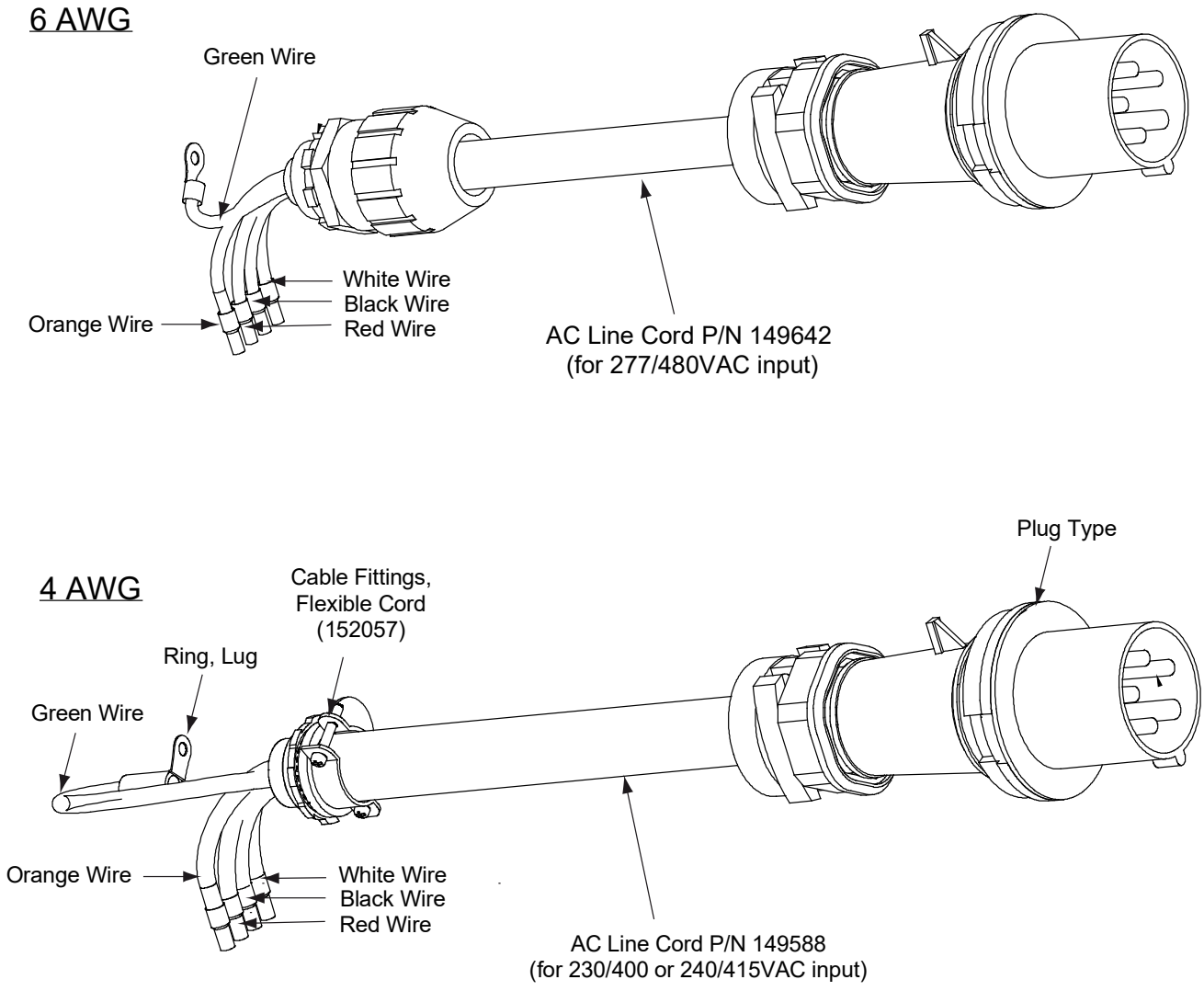


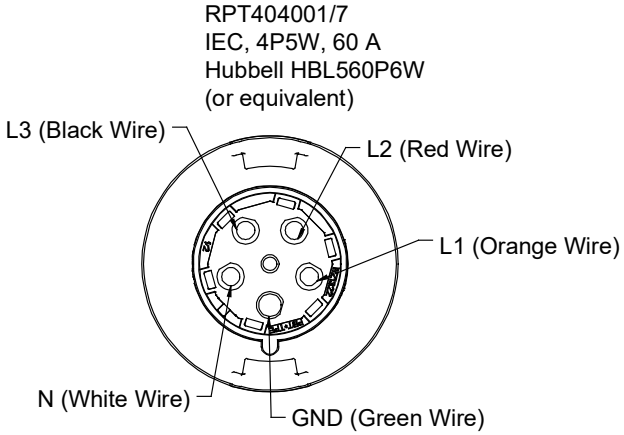
Figure 10

Proprietary and Confidential © 2023 Vertiv Group Corp.

AC Input Connections, 588706100 List 560, AC Line Cord Integration

AC Input Connections, 588706100 List 560, AC Line Cord Integration
For Use With 588706100 List 03, 13
Nominal 230 VAC / 400 VAC or 240 VAC / 415 VAC, 4-Wire + PE, 50 Hz / 60 Hz, 3-Phase,
1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

AC Feed
(Positions #1 - #9)
230 VAC / 400 VAC or 240 VAC / 415 VAC,
4-Wire + PE, 50 Hz / 60 Hz, Three Phase
L1 - N: Position #1, #4, #7
L2 - N: Position #2, #5, #8
L3 - N: Position #3, #6, #9
L3 - N: Convenience Outlet #2
L1 - N: Convenience Outlet #1



AC Input Connections, 588706100 List 560, AC Line Cord Integration
For Use With 588706100 List 05, 15
Nominal 277 VAC / 480 VAC, 4-Wire + PE, 50 Hz / 60 Hz, 3-Phase,
1 Feed per Module Mounting Assembly
(1 Feed per 9 Module Positions)

AC Feed
(Positions #1 - #9)
277 VAC / 480 VAC,
4-Wire + PE, 50 Hz / 60 Hz, Three Phase
L1 - N: Position #1, #4, #7
L2 - N: Position #2, #5, #8
L3 - N: Position #3, #6, #9

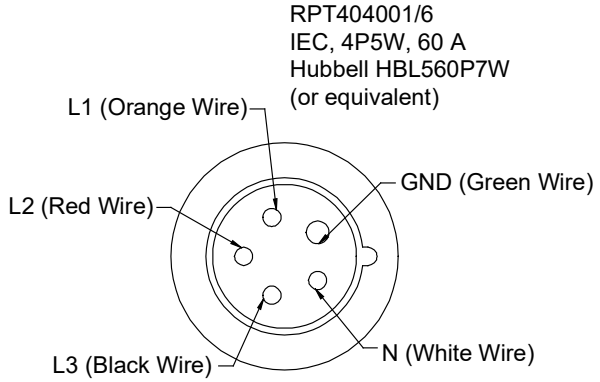


Figure 11

Proprietary and Confidential © 2023 Vertiv Group Corp.

DC Load Distribution (Bulk Output from Module Mounting Assemblies)

Note: *The system is intended to be negative pole grounded (+12 VDC). Field provide a properly sized DC power return wire to earth reference from the GND/RETURN busbar to Earth. Recommended wire size is 2/0 AWG.*

Note: *The installation may consist of one (1) main module mounting assembly and up to two (2) expansion module mounting assemblies, or all main module mounting assemblies. In installations with one main module mounting assembly and up to two expansion module mounting assemblies, all module mounting assemblies are on one DC bus and are controlled by a single SCC controller. A common CAN bus is shared across all module mounting assemblies and all rectifiers load share and all rectifiers are load managed via the SCC. In installations with all main module mounting assemblies, each module mounting assembly is on a separate DC bus and each module mounting assembly is controlled by (contains) a separate SCC controller. A separate CAN bus exists per module mounting assembly, rectifiers load share per module mounting assembly, and rectifiers are load managed via an SCC per module mounting assembly.*

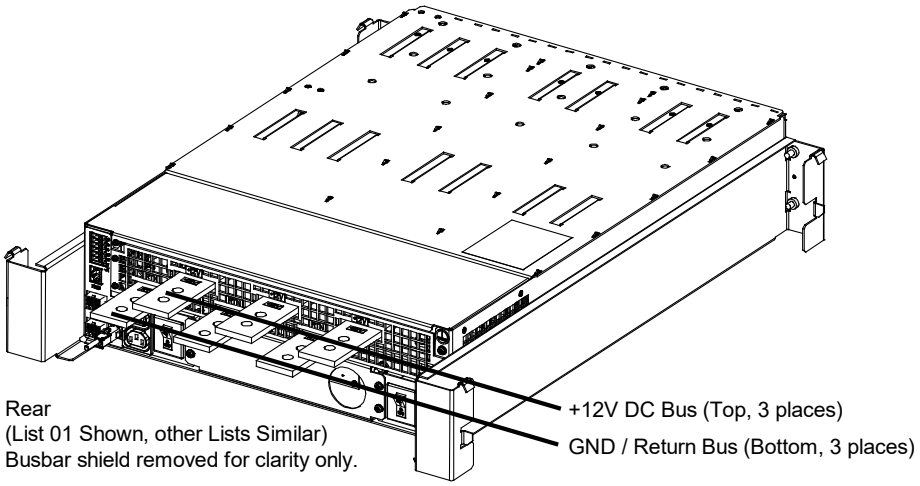
Recommended +12 VDC Output Wire Sizes and Lugs

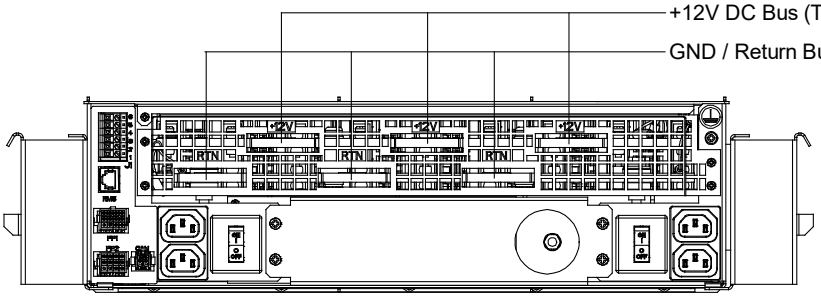
+12 VDC output wire size and lug requirements are determined by site requirements. For lug selection; refer to the following.

- +12 VDC and GND / Return output busbars are designed to accommodate the lugs listed in Table 12. Refer also to Figure 12.

Proprietary and Confidential © 2023 Vertiv Group Corp.

DC Output Connections Illustration





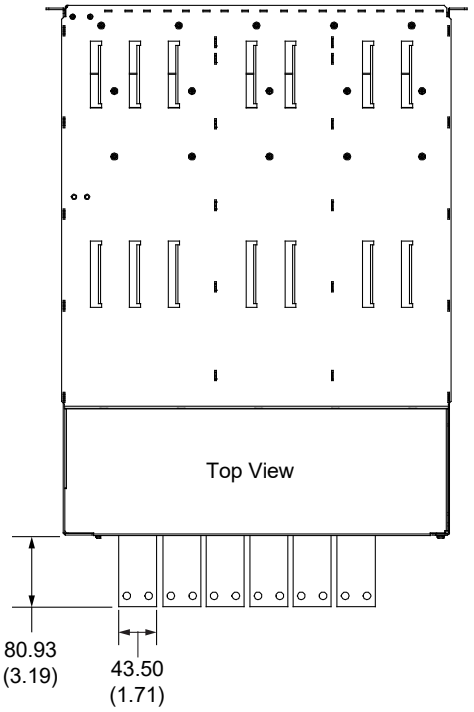
Rear
(List 01 Shown, other Lists Similar)

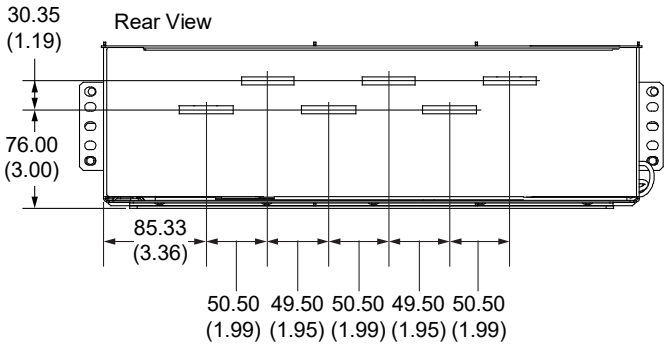
+12V DC OUTPUT CONNECTIONS
11 mm (0.433") Clearance Holes
on 25.4 mm (1") Centers

(Customer must order or supply lugs and lug mounting hardware.)

Maximum Lug Width: 1".

Torque: 180 in-lbs.





Notes:
1. All dimensions are in millimeters (inches).
2. Components removed in illustration for clarity only.

Figure 12

Proprietary and Confidential © 2023 Vertiv Group Corp.

External Alarm, Reference, Monitoring Connections

Recommended External Alarm, Reference, Monitoring, and Control Wire Sizes

Recommended wire size is 22 AWG for loop lengths up to 200 ft. and 18-20 AWG for loop lengths over 200 ft.

External Alarm, Reference, Monitoring, and Control Connections Illustration

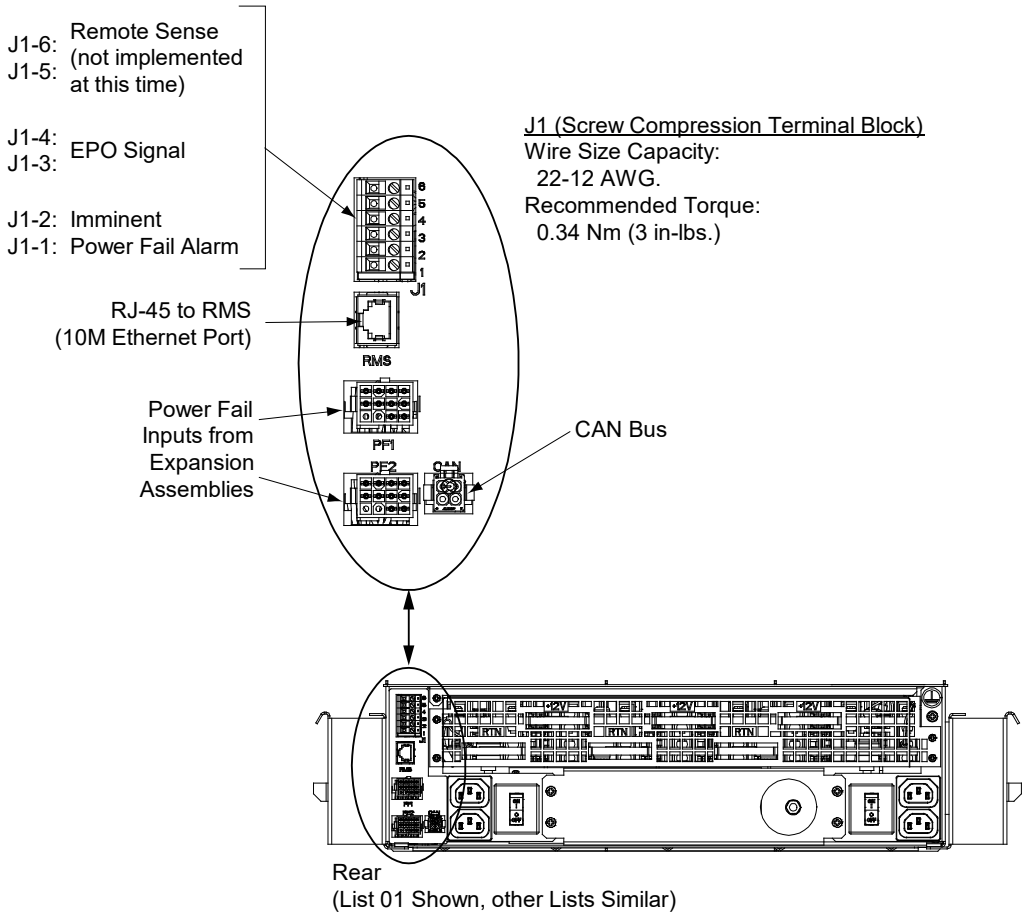


Figure 13

System Cable Connections Illustration

Note: *The installation may consist of one (1) main module mounting assembly and up to two (2) expansion module mounting assemblies, or all main module mounting assemblies. In installations with one main module mounting assembly and up to two expansion module mounting assemblies, all module mounting assemblies are on one DC bus and are controlled by a single SCC controller. A common CAN bus is shared across all module mounting assemblies and all rectifiers load share and all rectifiers are load managed via the SCC. In installations with all main module mounting assemblies, each module mounting assembly is on a separate DC bus and each module mounting assembly is controlled by (contains) a separate SCC controller. A separate CAN bus exists per module mounting assembly, rectifiers load share per module mounting assembly, and rectifiers are load managed via an SCC per module mounting assembly.*

Note: *These connections are not to be made between multiple main module mounting assemblies (containing SCC controllers).*

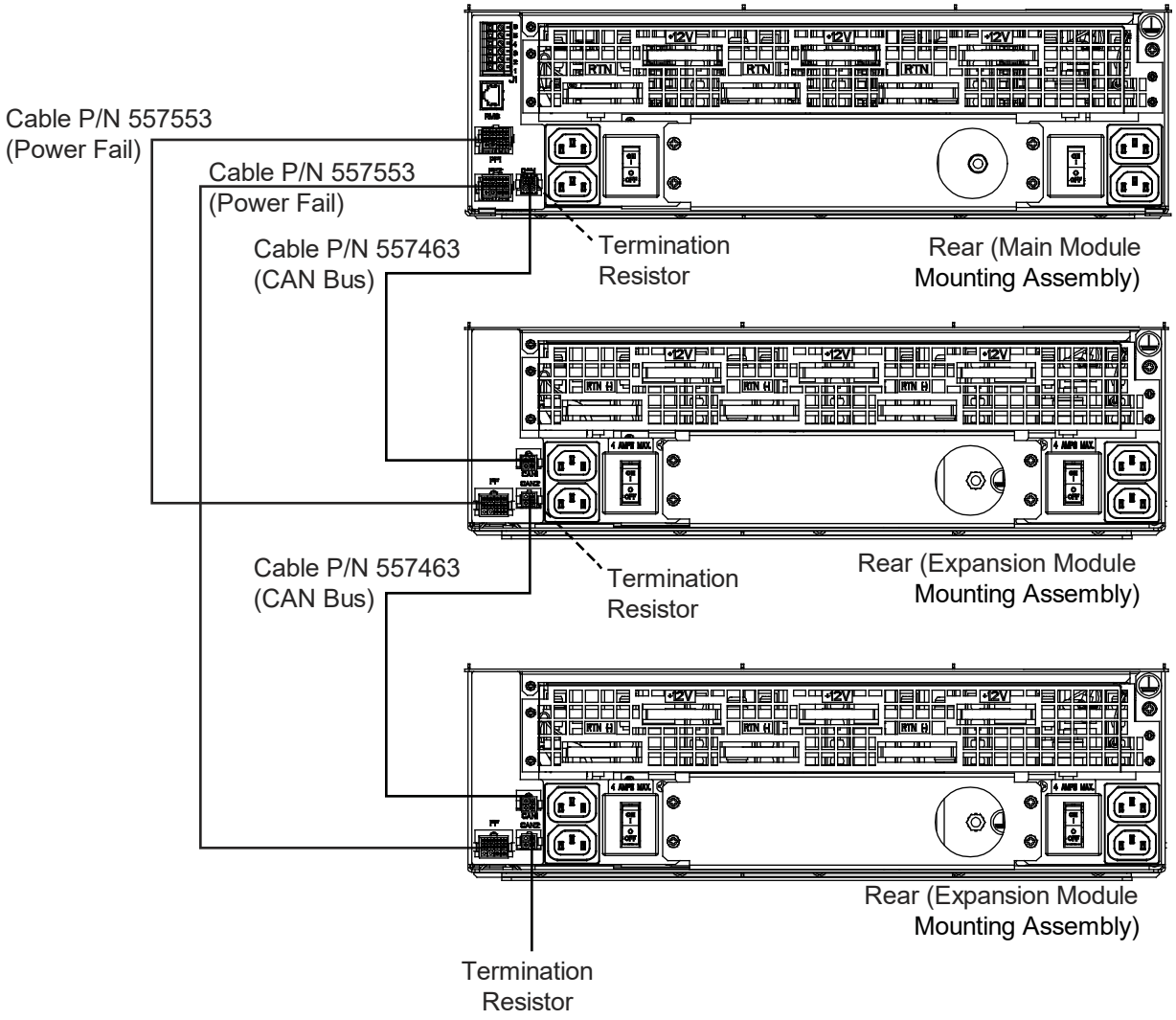


Figure 14

Proprietary and Confidential © 2023 Vertiv Group Corp.

SPECIFICATIONS

1. SYSTEM
   - 1.1 System DC Output Ratings
     - 1.1.1 See page 2.
   - 1.2 System AC Input Ratings
     - 1.2.1 See page 2.
   - 1.3 System Environmental Ratings
     - 1.3.1 Operating Ambient Temperature Range: -10 °C to +45 °C (+14 °F to +113 °F).
     - 1.3.2 Storage Ambient Temperature Range: -40 °C to +85 °C (-40 °F to +185 °F).
     - 1.3.3 Relative Humidity: This power system is capable of operating in an ambient relative humidity range of 0% to 95%, non-condensing.
     - 1.3.4 Altitude: This power system is capable of operating in an altitude range of -200 feet to 10,000 feet. The maximum operating ambient temperature should be de-rated by 3 °C per 1000 feet above 6000 feet.
     - 1.3.5 Ventilation Requirements: The rectifiers are fan cooled and utilize front to back forced ventilation. The power system must be mounted so ventilating openings are not blocked and temperature of the air entering the power system does not exceed the operating ambient temperature range stated above.
     - 1.3.6 Audible Noise: ≤ 71.4 dB(A), at 25 °C (measurement made at 1 m distances in front of the system at maximum fan speed).

       Note: *Testing was performed by forcing the fans at Full Speed through an SCC controller. This simulated the fan speed at Full Load.*
     - 1.3.7 Surge Protection: Compliance with EN61000-4-5 Installation Class 4, and capable of withstanding surges per ANSI/IEEE C 62.41 1999 Category B3 across the input terminals.

       Note: *This level of protection is a widely used standard for telecommunications and data center power equipment. As with all such equipment, it is the end user's responsibility to provide an adequately sized Surge Suppression Device (Type 1) at the commercial power service entrance of the building that reduces all incoming surges to levels below the classes/categories stated for the equipment.*
     - 1.3.8 EMI: EN 300 386, Class A and FCC Part 15, Class A.
     - 1.3.9 Mounting: This product is intended only for installation in a restricted access location on or above a non-combustible surface.

       This product must be located in a controlled environment with access to crafts persons only.

       This product is intended for installation in data centers or network telecommunication facilities (CO, vault, hut, or other environmentally controlled electronic equipment enclosure).

       This product is intended to be installed in a data center facility and be connected to a MESH-bonding network (MESH-BN) or to the common bonding network in a network telecommunication facility (CO, vault, hut, or other environmentally controlled electronic equipment enclosure).

       This system is suitable for installation as part of the Common Bonding Network (CBN) or a data center building MESH-bonding network (MESH-BN).

       Rectifier module and module mounting assembly ventilating openings must not be blocked and temperature of air entering these must not exceed the rated operating ambient temperature range.

       Clearance requirements are:

       a) Recommended minimum space clearance for the front of each system is 80 mm (3 inches).

       b) Recommended minimum space clearance for the rear of each system is 80 mm (3 inches).
   - 1.4 Physical
     - 1.4.1 Form Factor: 19" Rack, EIA-310-D Compliant. Requires P/N SXK2310021/1 Open Compute rack mounting rail kit for version 1 racks or P/N 562821 Open Compute rack mounting rail kit for version 2 racks or P/N 557147 adjustable 19” EIA mounting rail kit.
   - 1.5 System Compliance Information
     - 1.5.1 Safety Compliance: This unit meets the requirements of UL 60950-1, Standard for Information Technology Equipment, and is UL Recognized as a power supply for use in Telephone, Electronic Data Processing or Information Processing Equipment (List 3 and 13 with List 532 is CE Mark only.)
     - 1.5.2 CE Mark: EN 60950-1; CE Mark in accordance with the Low-Voltage Directive 2014/35/EU and the EMC Directive, 2014/30/EU including amendments by the CE Marking Directive, 93/68/EEC.

Proprietary and Confidential © 2023 Vertiv Group Corp.

1.5.3 The system is RoHS compliant (pending) and REACH compliant (pending).

1.6 Local Controls and Indicators

1.6.1 SCC Controller: Refer to the SCC Controller Instructions (UM1M520HNA).

1.6.2 Rectifier Module: Refer to the Rectifier Instructions (UM1R123000).

2. SCC CONTROLLER

   For SCC Controller specifications, refer to the SCC Controller Instructions (UM1M520HNA).

3. RECTIFIER MODULE

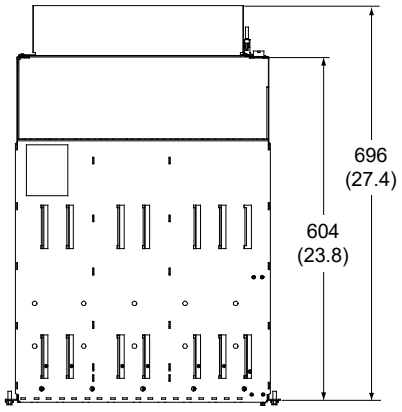
   For rectifier module specifications, refer to the Rectifier Instructions (UM1R123000).

Proprietary and Confidential © 2023 Vertiv Group Corp.

MECHANICAL SPECIFICATIONS

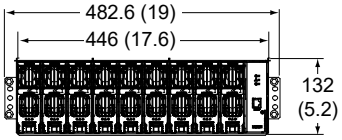
Overall Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Finish:
   Module Mounting Assembly: Plated Steel
   Module Faceplates: Black



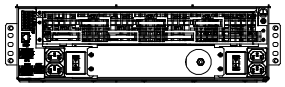
Top View

Left Side View

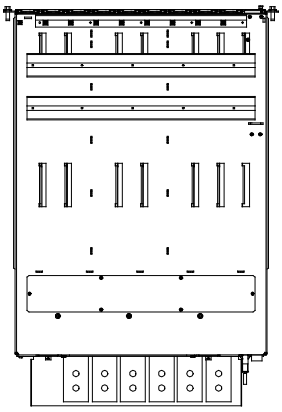


Front View

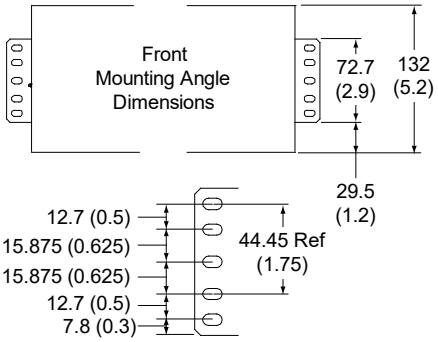
Right Side View

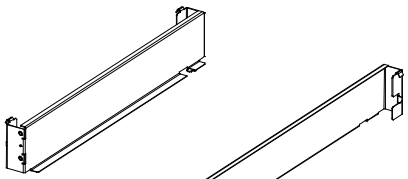


Rear View

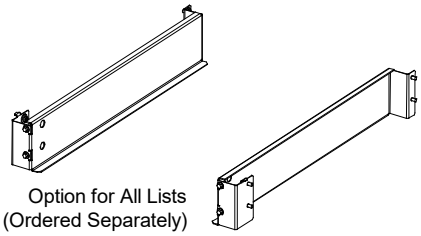


Bottom View

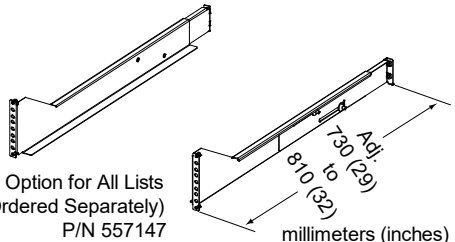




Option for All Lists
(Ordered Separately)
P/N SXK2310021/1
Open Compute Rack
Mounting Rail Kit
(Version 1 Racks)



Option for All Lists
(Ordered Separately)
P/N 562821
Open Compute Rack
Mounting Rail Kit
(Version 2 Racks)



Option for All Lists
(Ordered Separately)
P/N 557147
Adjustable Mounting Rail Kit

millimeters (inches)

Proprietary and Confidential © 2023 Vertiv Group Corp.

Weights

List Number or Part Number	Net Weight, each
Module Mounting Assembly	
58870610001	20.0 kg (44.0 lbs)
58870610002	
58870610003	
58870610005	
58870610013	
58870610015	
Rectifier Module	
1R123300	3.0 kg (6.6 lbs)
SCC Controller	
1M520HNA	0.68 kg (1.5 lbs)
AC Input Cables (per foot)	
149068	0.05 kg (1.1 lbs)
TFV204001/2	0.27 kg (0.6 lbs)
149642	0.45 kg (1.0 lbs)
149588	0.64 kg (1.4 lbs)
151646	0.38 kg (0.83 lbs)
AC Input Plugs	
RPT404001/5	0.15 kg (0.32 lbs)
RPT404002/1	0.11 kg (0.25 lbs)
RPT404001/4	1.02 kg (2.25 lbs)
RPT404001/6	1.06 kg (2.35 lbs)
RPT404001/7	1.16 kg (2.55 lbs)
151635	0.18 kg (0.40 lbs)

RELATED DOCUMENTATION

System Installation and User Instructions:	UM588706100
SCC Controller Instructions:	UM1M520HNA
Rectifier Instructions:	UM1R123000
Main Schematic Diagrams:	SD588706100 (System)
Main Wiring Diagrams:	T588706100 (System)

Vertiv.com | Vertiv Headquarters, 505 N Cleveland Ave, Westerville, OH 43082, USA

© 2023 Vertiv Group Corp. All rights reserved. Vertiv™ and the Vertiv logo are trademarks or registered trademarks of Vertiv Group Corp. All other names and logos referred to are trade names, trademarks or registered trademarks of their respective owners. While every precaution has been taken to ensure accuracy and completeness here, Vertiv Group Corp. assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions.