# PowerShift® PS-R-V4-MS

Rev B 07/2025

**TYPE: PS-R-V4-MS PowerShift® Shelf (2RU)**
**Product Series: V4**

## 1. Product Description

PowerShift® Macro V4 Main 2RU Shelf delivers the optimal voltage to your RRUs in real-time, automatically—regardless of power supply, distance, conductor size, or RRU power requirements. It optimizes backup power delivery by solving the voltage-drop problem. Inserted between the battery and trunk cable, PowerShift automatically senses and adjusts the battery's voltage output to the power cable to compensate for the voltage drop. As the battery discharges, PowerShift continues to boost output to maintain the optimal input voltage to the RRU to increase battery backup time. PowerShift® V4 Main 2RU Shelf accommodates up to 6 boost modules (PS-2000-73) per 2RU shelf. There are 3 separate circuits per boost module for a total capacity of 18 circuits (RRU's) per 2 RU shelf. Each circuit provides a maximum output of 2,708 Watts at 73Vdc and has an integrated bypass function that automatically passes the input power through to the load connections in case of a circuit failure. After the controller (PS-CNTRL-V4) calculates the voltage drop in the power cable due to line resistance, each circuit delivers about 2,000W at 54Vdc to the RRH input.

- Benefits of PowerShift®
  - Reduced capital/operating expenditures
  - Dynamic voltage regulation to the RRUs
  - Service continuity with improved battery backup run time
  - Significantly reduce installation time & wiring errors
  - Future-ready design for higher-powered radios

## 2. Key Features

- 2,708KW (73V) max power output per circuit at the module output
- 2,000KW (54V) max power output to the Radio per circuit
- 48,744kW total power capacity via 18 independent circuit outputs per shelf
- 36,000KW (54V) total power to the Radio per 18 circuit output
- 2RU form factor per shelf
- 19-inch standard rack mounting
- Adjustable mounting ears with setbacks at Flush to front and 3 and 5" back from the front.
- Controller, with Capability to manage ALR and manual configuration for 18 circuits
- Module, Built-in Bypass & Selectable (32A/38A) Overcurrent Protection

# PowerShift® PS-R-V4-MS



## 3. Controller

Controller Model: PS-CNTRL-V4 Controller (Sold Separately)
Controller Display: LCD user interface with menu navigation buttons


## 4. Module

Module Model: PS-2000-73 Module (Sold Separately)

## 5. Physical Specs

Dimension: Height: 88.9 mm (2 RU)
Wide: 482.6 mm (19")
Depth: Shelf, Connector with cable bend radius not to surpass 24"
Number of Supported RRU: 18 RRU (incl. RS485/Controller).
Number of Supported Expansion Shelf: 1 Maximum
Input Connection: Rear access, 6 pairs of input landings per 2U Shelf
(1 pair per module) suggested 2/0 cables
Output Connection: Rear access, 18 pairs of output landings per 2U Shelf
(3 pairs per module), suggested 6 AWG
Maximum Output Power: 48.744KW Total, 24.372KW per 1U Shelf
Weight: 24.8lbs(11.3kg)

Environmental per GR-3108 Class 2, EN 300 019

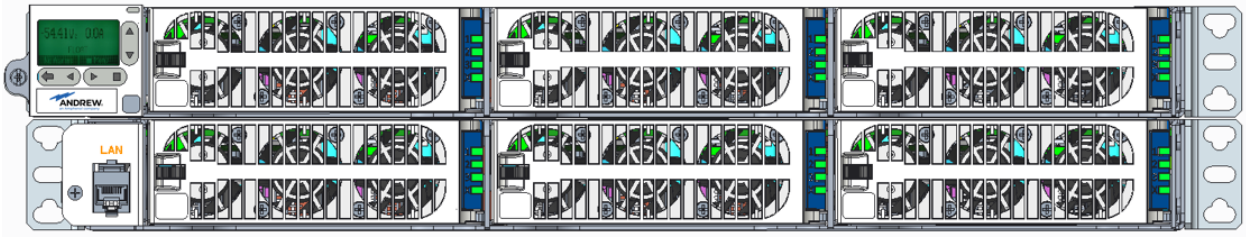
| | |
|---|---|
| Operating temperature | -40 to 65C (NEBS Class 2) with no derating. |
| Storage temperature | -40 to 85C |
| Humidity/Temp cycling | per GR-3108 section 4.6, non-condensing |
| Vibration, transport | GR-3108 section 6.3.3 |
| Packaged drop | GR-3108 section 4.4 |
| Vibration, product | GR-3108 section 6.1 and 6.3.3 |
| Shock, operating | IEC 60068-2-27 (1) |
| Salt fog | Utilizes a clear Zinc per ASTM B633-07 TYPE 5, SC 2 post plate |
| Seismic resistance | GR-3108 section 6.1 + 6.3.3 |
| Cold start | GR-3108 section 4.5.1 |
| Hot start | GR-3108 section 4.5.2 |
| Acoustics | GR-3108 section 6.6 |
| Fire resistance | GR-3108 section 6.5 |

| | |
|---|---|
| MTBF: | 300,000 hours @ 25C per Telcordia SR-332 |
| Design Life Expectancy: | 5 year |
| EMC: | EN55022 Class A |
| Surge Protection : | Telcordia GR-1089 |
| Safety: | UL 62368 - UR/cUR with CB Report |
| RoHS: | Compliant |
| Terminals: | Compliant w/NEBS |
| Labeling: | Dual Company Labeled |

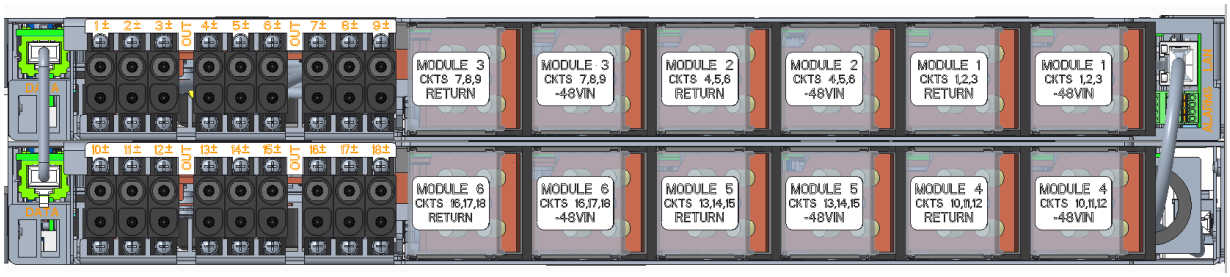
## 6. Product Layout

### 6.1. Main 2RU Shelf PS-R-V4-MS

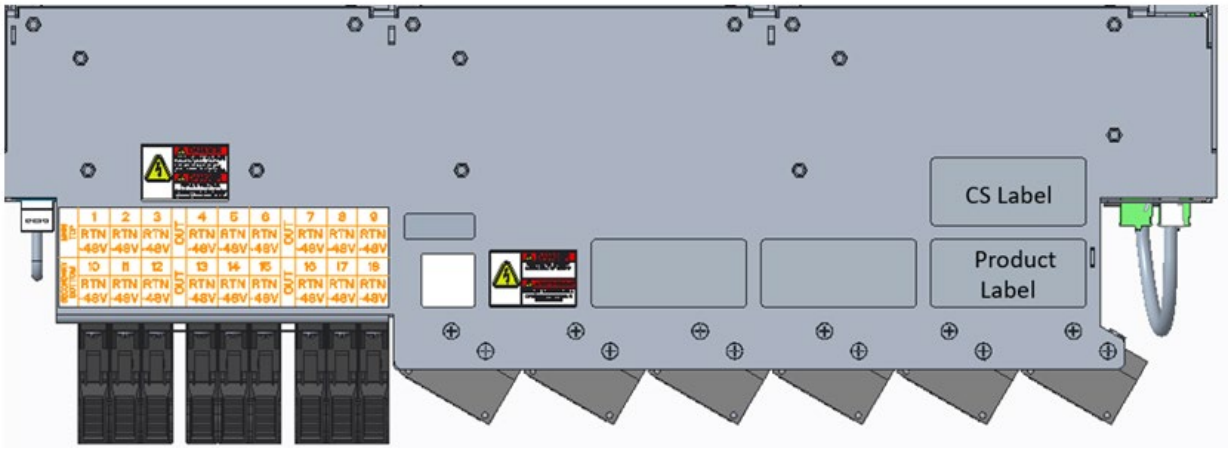

Front View – Main 2RU Shelf (No Modules)



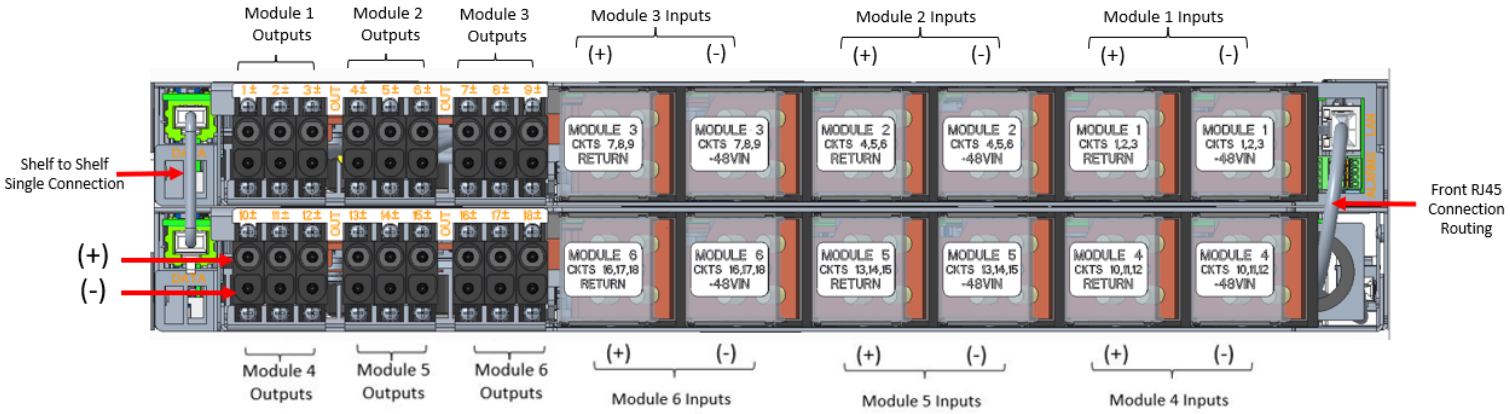

Front View – Main 2RU Shelf (with Modules)




Rear View – Main 2RU Shelf




Rear Top View – Main 2RU Shelf




Rear View – Main 2RU Shelf

## 7. Dimensional Specifications