

## Features:

- 3U High
- Up to 9,000W in a 19" Rack
- Single & Three Phase Input Models
- Fits 3 Hot-Plug / N+1 Redundant Rectifiers
- Current Sharing and Remote Sensing
- World-wide safety approvals
- Optional 1U Controller Available



| FEATURES                      | BENEFITS   |
|-------------------------------|--|
| Single wire current sharing   | Provide system stress balancing and increases reliability          |
| Constant power characteristic | Better suited for battery charging applications                    |
| No Minimum Load               | Eliminates need for pre-load resistors. Reduces cost of ownership. |
| Optional 1U High Controller   | Addresses telecom application requirements for redundant operation |

### KEY MARKETS & APPLICATIONS

- Central Office
- Telecom Access Nodes
- Satellite Hubs
- Broadband Switchers
- XDSL Access Networks
- Cellular Base Stations
- Wireless
- RF Amplifiers
- PCS Installations
- Factory Automation

| SPECIFICATIONS                     | 9,000 Watt Power Shelf for CAR3000 Front End Modules  |                |                  |                |  |                |                  |                |
|------------------------------------|---|----------------|------------------|----------------|--|----------------|------------------|----------------|
|                                    | ACE303  |                | ACE303N          |                | ACE333   |                | ACE333N          |                |
| Rack Model Number                  | ACE303  |                | ACE303N          |                | ACE333   |                | ACE333N          |                |
| Rectifier Module Part Number       | CAR3010L1-1A  | CAR3010K1-1A   | CAR3010L1N-1A    | CAR3010K1N-1A  | CAR3030L1-1A   | CAR3030K1-1A   | CAR3030L1N-1A    | CAR3030K1N-1A  |
| Voltage Range                      | +43.2~52.8 VDC  | +21.6~26.4 VDC | -43.2~52.8 VDC   | -21.6~26.4 VDC | +43.2~52.8 VDC   | +21.6~26.4 VDC | -43.2~52.8 VDC   | -21.6~26.4 VDC |
| Output Current                     | 187.5A @ +48Vout  | 375A @ +24Vout | 187.5A @ -48Vout | 375A @ -24Vout | 187.5A @ +48Vout   | 375A @ +24Vout | 187.5A @ -48Vout | 375A @ -24Vout |
| Input Voltage                      | Single Phase 180-264 VAC / 47-63 Hz   |                |                  |                | Three Phase 180-264 VAC / 47-63 Hz                           |                |                  |                |
| Maximum Input Current (per module) | 19A @ Full Load and 180 VAC Operation (per module)  |                |                  |                | 11A per phase @ Full Load and 180 VAC Operation (per module) |                |                  |                |
| Maximum Output Power               | 9,000 Total Output Power (6,000 Watts Redundant Output Power)                               |                |                  |                |  |                |                  |                |
| AC Input Feeds                     | Individual Input Feeds for each rectifier for 4mm2 cable                                    |                |                  |                |  |                |                  |                |
| Input Protection                   | Each CAR rectifier module is equipped with it's own internal fuse                           |                |                  |                |  |                |                  |                |
| Efficiency                         | 90% typical at 230VAC   |                |                  |                |  |                |                  |                |
| Regulation (Line & Load)           | +/- 0.5% of V1  |                |                  |                |  |                |                  |                |
| Ripple & Noise                     | 1% of V1 (pk-pk) - using 10µF tantalum cap. and 0.1µF ceramic cap.                          |                |                  |                |  |                |                  |                |
| Load Sharing                       | Single wire. +/- 5% of nominal current  |                |                  |                |  |                |                  |                |
| DC Bus                             | Rectifiers connected in parallel. Floating bus with common "+". Maximum current is 250A     |                |                  |                |  |                |                  |                |
| Status Indicators                  | DC Good and Temperature OK (Green), AC Good (Amber)   |                |                  |                |  |                |                  |                |
| Alarm Signals                      | Over Temperature, Over/Under Voltage, No Power, Module not present                          |                |                  |                |  |                |                  |                |
| Battery Interface                  | RJ45 signal connector per rectifier. RS232 for programming via laptop (with Controller).    |                |                  |                |  |                |                  |                |
| Temperature Range                  | 0 to 50°C at rated output power. Derates linearly to 60°C at 2.2% per °C                    |                |                  |                |  |                |                  |                |
| Shock & Vibration                  | Per MIL STD-810F, NEBS Compliant to GR 63 Core  |                |                  |                |  |                |                  |                |
| EMI / EMC                          | Meets EN61000-3-2, -3 CISPR22 and FCC Part 15 Class A, Bellcore GR-1089-Core                |                |                  |                |  |                |                  |                |
| Safety Approvals                   | UL: 478, 1012, 1950; CSA 22.2 No. 650; IEC: 380, 435, 950; VDE: 0804, 0806; & CE Mark (LVD) |                |                  |                |  |                |                  |                |
| Dimensions                         | Chassis Measures 16.00"/406.4mm (depth) x 17.165"/436.0mm (width) x 5.12"/132.1mm (height)  |                |                  |                |  |                |                  |                |

rev 100506

[www.lineagepower.com/oem](http://www.lineagepower.com/oem)

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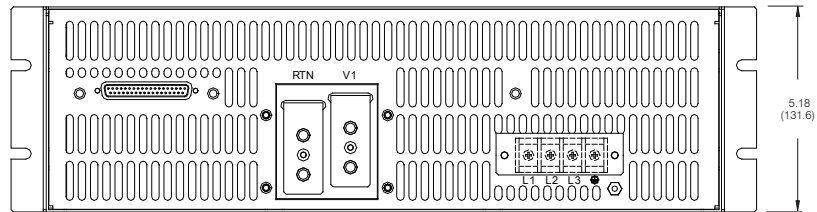
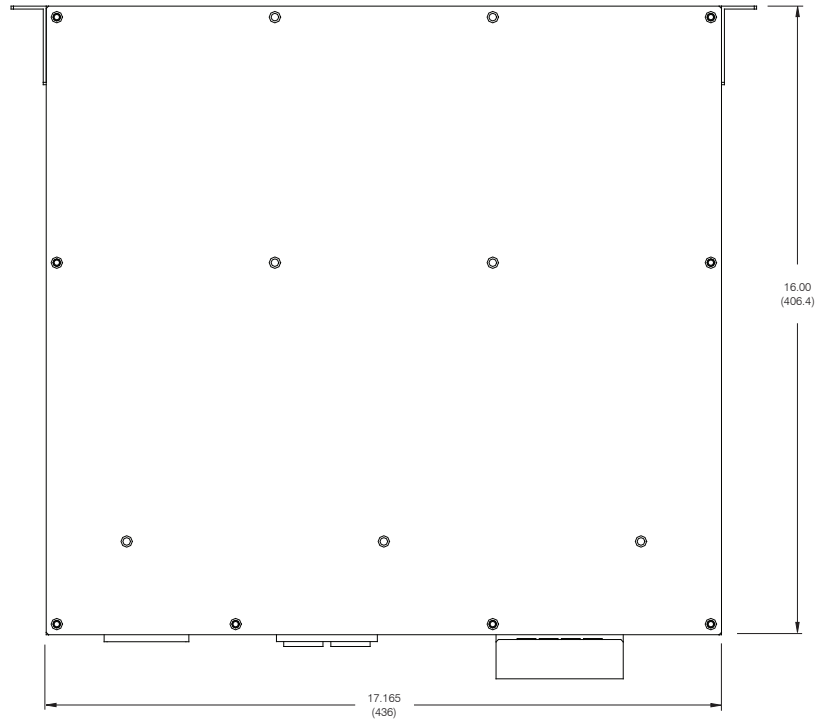
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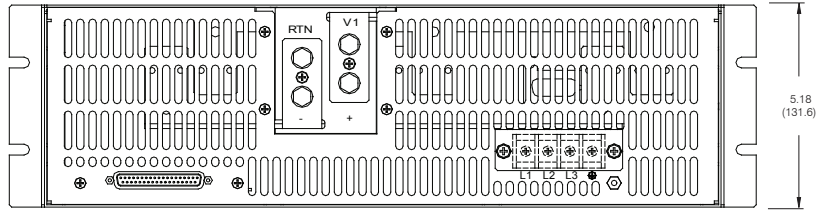
Outline Drawing

Status / Control Connector  
37 Pin D Sub Connector

| PIN | FUNCTION  |
|-----|-----------|
| 1   | 5VSBRTN   |
| 2   | TEMPOK1   |
| 3   | PGOOD1    |
| 4   | ACFAIL1   |
| 5   | PRESENT1  |
| 6   | ON/OFF1   |
| 7   | 5VSBRTN   |
| 8   | TEMPOK2   |
| 9   | PGOOD2    |
| 10  | ACFAIL2   |
| 11  | PRESENT2  |
| 12  | ON/OFF2   |
| 13  | 5VSBRTN   |
| 14  | TEMPOK3   |
| 15  | PGOOD3    |
| 16  | ACFAIL3   |
| 17  | PRESENT3  |
| 18  | ON/OFF3   |
| 19  | N/C       |
| 20  | N/C       |
| 21  | N/C       |
| 22  | N/C       |
| 23  | N/C       |
| 24  | N/C       |
| 25  | V1 SENSE  |
| 26  | RTN SENSE |
| 27  | MARGIN 1  |
| 28  | MARGIN 2  |
| 29  | N/C       |
| 30  | I-SHARE   |
| 31  | RTN       |
| 32  | N/C       |
| 33  | 5VSBRTN   |
| 34  | 5VSBRTN   |
| 35  | 5VSB      |
| 36  | 5VSB      |
| 37  | N/C       |

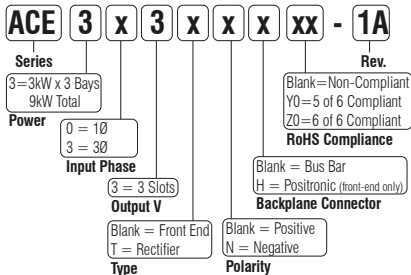


FRONT END POWER SHELVES (POSITIVE POLARITY)



FRONT END POWER SHELVES (NEGATIVE POLARITY)

PART NUMBER DEFINITION GUIDE



Example Part Numbers:

| Part #   | Type      | Phase  | Polarity | Backplane Connector |
|----------|-----------|--------|----------|---------------------|
| ACE303   | Front End | Single | Positive | Bus Bar             |
| ACE333   | Front End | Three  | Positive | Bus Bar             |
| ACE303N  | Front End | Single | Negative | Bus Bar             |
| ACE333N  | Front End | Three  | Negative | Bus Bar             |
| ACE303H  | Front End | Single | Positive | Positronic          |
| ACE333H  | Front End | Three  | Positive | Positronic          |
| ACE303NH | Front End | Single | Negative | Positronic          |
| ACE333NH | Front End | Three  | Negative | Positronic          |