## Description

The Power-One Xscend rectifier provides extremely reliable, high density DC power. The rectifier incorporates the latest in power monitoring solutions through an internal microprocessor giving up-to-the-second updates to the system controller and adjacent rectifiers. This guarantees tightly-controlled load sharing among rectifiers and provides status and identification information to the controller.

At only two rack units high, these compact universal input rectifiers provide up to 1600 watts and allow up to five rectifier modules in a 23-inch shelf or four modules in a 19-inch shelf. Designed with diversity in mind, the Xscend rectifier is able to operate in a complete range of indoor and outdoor applications.






**Xscend Power System**

## Features

- Compact 2-rack unit height
- 703 W/L (11.5 W/in$^3$)
- Front or mid-mountable
- 110V/200-240 VAC single-phase input
- Input overvoltage disconnection
- Thermal protection in all load situations
- Hot-swappable
- No adjustments required
- 93.5% typical efficiency
- Active and droop current sharing
- International standards compliance

## Input

| Model | XR1648 | XR1424 |
|---|---|---|
| Input Voltage | 100-240 VAC ±15% single phase (44-66 Hz)<br>(180-85 VAC at derated output power) | |
| Current (max.) | <10 A | |
| Soft Start | <13 A/1 ms | |
| Harmonics | >0.98 typical | |
| Surge Immunity | EN 61000-4-5 | |
| Fuse | 12.5 A -line, 12.5 A -neutral | |
| Connection | FCI power connector™ | |
| EMC | EN 61000-6-2, EN 61000-6-3, FCC Part 15 Class B | |

## Output

| Model | XR1648 | XR1424 |
|---|---|---|
| Output Voltage | 45-57 VDC | 22.5-28 VDC |
| Power (max.) | 1600 W<br>at >180 VAC (50-57 VDC) | 1400 W<br>at >180 VAC (25-28 VDC) |
| | 675 W<br>at 180-85 VAC (50-57 VDC) | 675 W<br>at 180-85 VAC (25-28 VDC) |
| Current (max.) | 32 A | 56 A |
| Efficiency (at 40-90% load) | >93%<br>(93.5% typical) | >90%<br>(91% typical) |
| Tolerance | Vout +/- 1.0%, constant voltage regulation | |
| Transient Response | +/- 5% at load variation<br>10-90% or 90-10% | |
| Load Sharing | <5% of nominal current | |
| Ripple | <100 mV p-p (BW. 30 MHz) | |
| Psophometric | <2 mV, according to CCITT norms | |
| Connection | FCI power connector™ | |
| EMC | EN 61000-6-2, EN 61000-6-4 | |

## Mechanical

| Dimensions (WxHxD) | 102.87 x 88.9 x 241.3 mm<br>(4.05 x 3.5 x 9.5 in) |
|---|---|
| Weight | 2.3 kg (4.12 lb) |
| Cooling | Fan cooled, speed controlled, and alarmed |
| Insulation | Reinforced insulation, tested at:<br>4.25 kVDC primary-secondary<br>2.12 kVDC primary-ground<br>0.75 kVDC secondary-ground |
| Mounting | 19 in/ 2U subrack up to 4 modules<br>23 in/ 2U subrack up to 5 modules |

## Other Technical Data

| Safety | CSA C22-2 No. 950, UL 1950 and IEC60950/ EN 60950 | |
|---|---|---|
| Protection | Short circuit proof, automatic current limiting, selective shutdown of modules at excessive output voltage. Thermal protection derates the output power 65°C ambient temperature. Shutdown at >75°C with automatic restart. Shutdown is load dependant, at low load typ 85°C. Input overvoltage disconnection at >275VAC with automatic reset at >260VAC. | |
| Alarms | High output voltage/ shutdown, Low voltage/ module failure. Each alarm has an LED indicator on the front panel. | |
| Indications | Green LED<br>Yellow LED<br>Red LED | Power ON<br>Current limit/ thermal protection<br>Module failure |
| Audible Noise | <60dBA | |
| Operating Temperature | -40 to +65 °C up to 2000 m<br>-40 to +55 °C above 2000 m | |
| Storage Temperature | -40 to +85 °C | |
| Radiated EMC | EN 61000-6-2, EN 61000-6-3,<br>FCC Part 15, Class B | |
| Environment | Storage:<br>Transport:<br>Operation:<br>Earthquake: | ETS 300 019-2-1<br>ETS 300 019-2-2<br>ETS 300 019-2-3<br>GR 63 Core Zone 4 |

*Average performance for a single module.

NUCLEAR AND MEDICAL APPLICATIONS - Power-One products are not designed, intended for use in, or authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional president of Power-One, Inc.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.