
## Features

- Wide AC input; 85 to 300 VAC
- Wide operating temperature range
- Designed for 300 mm deep ETSI compliant systems
- Input overvoltage disconnection
- Thermal protection
- Hot-swappable
- 90% typical efficiency
- International standards compliance

## Description

The XR04.48G (400 W) and XR08.48G (800 W) are a family of single-phase, hot-pluggable, fan-cooled rectifiers. The high power density of this product offers the optimum 1U or 2U shelf solution for space-critical applications.

Both rectifiers offer excellent efficiency as well as wide operating temperature and wide input voltage range. Together with advanced technology they enable cost effective and reliable solutions.
The typical applications for this rectifier are both in indoor and outdoor environments, which is ideal for broadband access, cable head ends, micro/pico BTS Cells, Enterprise E911, and GSM-R applications.

*1.6 kW in 19", 1 RU with Controller, Load & Battery Distribution*

*3.2 kW in 19", 6 RU with Controller, Load & Battery Distribution*

*2.4 kW in 19", 2 RU with Controller, Load & Battery Distribution*

## Input

| Model | XR04.48 | XR08.48 |
|---|---|---|
| Input Voltage | Nominal: 100-240 VAC | |
| | Fully compliant: 85-275 VAC<br>Permitted variation: 85-300 VAC<br>(L-PE and N-PE <250 VAC) | |
| Input Current | <5.5 A | <9.3 A |
| Frequency | 47 - 63 Hz | |
| Power Factor | >0.98 typical | |
| Fuse | Two 8 A fast blow (Line & Neutral) | Two 16 A fast blow (Line & Neutral) |

## Output

| Output Voltage | 46-57 VDC | |
|---|---|---|
| Output Power (48-57.6 VDC) | 400 W | 800 W |
| Output Current | 9.1 A maximum | 18.2 A maximum |
| Efficiency | 88 % typical | 90% typical |
| Tolerance | Vout ± 1.0% | |
| Transient Response | ±3% at load variation 10-90%<br>or<br>90-10% recovery time 50 ms | |
| Load Sharing | <5% of nominal current | |
| Ripple | <100 mV p-p (BW 20 MHz) | |
| Psophometric | <2 mV, according to CCITT norms | |

## Standards

| Inrush Current | ETSI EN 300 132-1 |
|---|---|
| Harmonics | EN 61000-3-2 |
| EMC | ETSI EN 300 386 V.1.3.2<br>EN 61000-6-1, EN 61000-6-3<br>EN55024 performance criterion A<br>EN 61000-6-2, EN 61000-6-4<br>EN 55022 Class B<br>Telcordia NEBS GR1089 |
| Safety | IEC 60950-1, EN 60950-1,<br>CAN/CSA-C22.2 60950-1-3 |
| Environment | Storage: ETSI EN 300 019-2-1<br>Transport: ETSI EN 300 019-2-2<br>Operation: ETSI EN 300 019-2-3<br>Damp Heat: IEC 60068-2-78 |

## Mechanical Data

| Dimensions | 102 x 229 x 41 mm (W x D x H) |
|---|---|
| Weight | 1.1 kg |
| Cooling | Fan-cooled, speed controlled |
| Insulation | 4.25 kVDC primary-secondary |
| | 2.12 kVDC primary-ground |
| | 0.5 kVDC secondary-ground |
| Enclosure | IP20 |
| Mounting | 19in/23in/1U subrack up to 5 modules, or 2/3U rack including controller and load/battery distribution |

## Other Technical Data

| Protection | Short circuit/arcing protection, automatic current/power limiting, input/output overvoltage protection, thermal protection. |
|---|---|
| Alarms | Fan failure<br>Short circuit/arcing protection<br>High temperature/output voltage<br>Low output voltage<br>Input voltage out of range<br>Low fan speed (warning)<br>Internal communication failure |
| Indicators | Green LED AC in range<br>Yellow LED Low fan speed, High temperature<br>Flashing Communications failure<br>Red LED Module failure / shutdown |
| Audible Noise (nominal input) | <55 dBA according to ISO7779 |
| Temperature | Operating:<br>-40˚C to +65℃ up to 2000 m<br>Reduced spec -40˚C to -20˚C<br>Derated output power 65˚C to 75˚C<br>For 3000 m altitude derate by 5˚C<br>Storage: -60℃ to +85℃ |
| MTBF | >350,000 hours (without fan) at 25℃ to MIL-HDBK-217F-2 |