# **E-SURE™ RECTIFIER**

R48-5800A



### **KEY FEATURES**

#### Rectifier -48 VDC, 5800 W

- DSP (Digital Signaling Processor)-means fewer components, optimized operation and active load sharing for increased reliability
- Delivers quality, performance and reliability no matter what the application or location demands
- High efficiency, up to 92% reduces power consumption for lower operating costs
- Hot pluggable-facilitates future extensions
- Wide input voltage range operates in the most demanding environments where input voltage changes
- Wide temperature operating range from -40°C to +65°C / -40°F to +149°F meets the harshest climatic environment requirements

### **Description**

The R48-5800A rectifier converts 380 to 415 VAC 3-phase supply voltages into stable nominal -48V DC voltage adjustable to the needs of the application. The R48-5800A is a constant power rectifier designed with the latest patented switch-mode technology using DSP (Digital Signaling Processor) functionality for efficient operation.

For a larger load capacity, rectifiers can be connected in parallel and intelligent control can be added with the help of a separate controller.



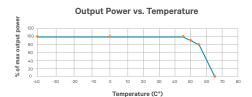
R48-5800A

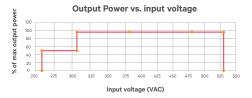
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## **Technical Specifications, R48-5800A**

| AC INPUT                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Voltage, Nominal                                                                                                       | 380 VAC                                                                                                                                                                                                                                                                                                                                              |
| Input Voltage, Permitted Variation                                                                                           | 260 VAC to 530 VAC                                                                                                                                                                                                                                                                                                                                   |
| Line Frequency                                                                                                               | 45 Hz to 65 Hz                                                                                                                                                                                                                                                                                                                                       |
| Max Input Current                                                                                                            | 12 A                                                                                                                                                                                                                                                                                                                                                 |
| Power Factor                                                                                                                 | 0.99                                                                                                                                                                                                                                                                                                                                                 |
| THD (Total Harmonic Distortion)                                                                                              | <5%                                                                                                                                                                                                                                                                                                                                                  |
| DC OUTPUT                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                      |
| Output Voltage, Adjustment Range                                                                                             | -42 VDC to -58 VDC                                                                                                                                                                                                                                                                                                                                   |
| Output Power                                                                                                                 | 5800 W @ Vout >48 VDC                                                                                                                                                                                                                                                                                                                                |
| Output Power, Derated for Input Voltage                                                                                      | See Diagram                                                                                                                                                                                                                                                                                                                                          |
| Output Current                                                                                                               | 120 A                                                                                                                                                                                                                                                                                                                                                |
| Output Current Limit Set Point                                                                                               | 0 to 120 A                                                                                                                                                                                                                                                                                                                                           |
| Efficiency                                                                                                                   | 92.5%                                                                                                                                                                                                                                                                                                                                                |
| Psophometric Noise (System)                                                                                                  | <2 mV                                                                                                                                                                                                                                                                                                                                                |
| Temperature Derating                                                                                                         | See Diagram                                                                                                                                                                                                                                                                                                                                          |
| CONTROL AND MONITORING                                                                                                       |                                                                                                                                                                                                                                                                                                                                                      |
| Rectifier Alarm and Signaling                                                                                                | Alarm and status reported via CAN bus to system controller                                                                                                                                                                                                                                                                                           |
|                                                                                                                              | Green Led = Normal Operation                                                                                                                                                                                                                                                                                                                         |
| Visual Indications                                                                                                           | Yellow Led = Alarm<br>Red Led = Failure<br>Flashing Red Led = Fan Failure                                                                                                                                                                                                                                                                            |
| Visual Indications  Current Indicator                                                                                        | Red Led = Failure                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                              | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel                                                                                                                                                                                             |
| Current Indicator                                                                                                            | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel                                                                                                                                                                                             |
| Current Indicator  ENVIRONMENTAL                                                                                             | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure  A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.                                                                                                                                 |
| Current Indicator  ENVIRONMENTAL  Temperature Range, Operating                                                               | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F                                                                                                |
| Current Indicator  ENVIRONMENTAL  Temperature Range, Operating  Temperature Range, Storage                                   | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F  40°C to +80°C / -40°F to +176°F                                                               |
| Current Indicator  ENVIRONMENTAL  Temperature Range, Operating  Temperature Range, Storage  Relative Humidity                | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F  40°C to +80°C / -40°F to +176°F  0 to 95%                                                     |
| Current Indicator  ENVIRONMENTAL  Temperature Range, Operating  Temperature Range, Storage  Relative Humidity  Altitude      | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F  40°C to +80°C / -40°F to +176°F  0 to 95%  2000 m / 6560 ft at full power                     |
| Current Indicator  ENVIRONMENTAL  Temperature Range, Operating  Temperature Range, Storage  Relative Humidity  Altitude  EMC | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F  40°C to +80°C / -40°F to +176°F  0 to 95%  2000 m / 6560 ft at full power EN 300 386; class A |
| ENVIRONMENTAL Temperature Range, Operating Temperature Range, Storage Relative Humidity Altitude EMC Safety                  | Red Led = Failure Flashing Red Led = Fan Failure  Red LED = Failure; Flashing Red Led = Fan Failure A 10-segment green LED is located on the front panel to represent output current, each segment represents 10 A.  -40°C to +65°C / -40°F to +149°F  40°C to +80°C / -40°F to +176°F  0 to 95%  2000 m / 6560 ft at full power EN 300 386; class A |





## **Ordering Information**

| PRODUCT CODE | DESCRIPTION               |
|--------------|---------------------------|
| 1R485800AXXX | Rectifier, 48 VDC, 5800 W |

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