



# ETR+ 2048

**Efficient : Trusted : Reliable**

## PRODUCT DESCRIPTION

The fully Digital Controlled ETR+ 2048 rectifier module is designed and optimized for the demanding power needs across different applications and industries.

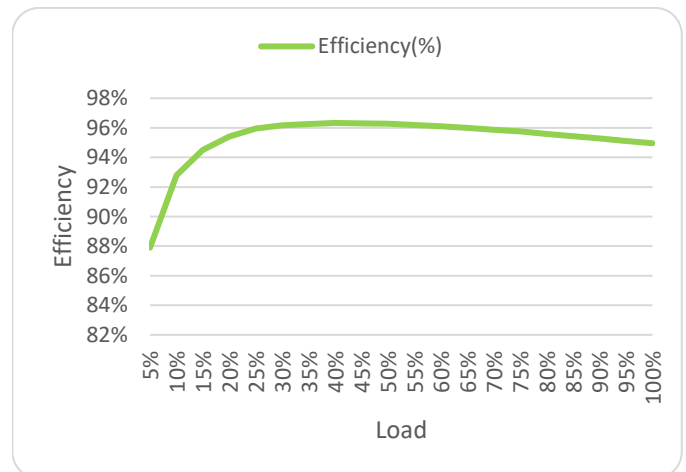
The modularity design, coupled with its cost-effectiveness package, power density and reliability, ensures the overall availability and performance of the system solution.

## KEY FEATURES

- **Fully Digital Controlled**  
Reduces component count and improves reliability
- **Modular, Scalable and Hot Swappable**  
Flexible installations
- **High Power Density**  
Reduces footprint
- **Highly Efficient @ >96%**  
Reduces losses and lowers operating costs
- **Front-to-back Airflow**  
Unobstructed scalability of shelves
- **Excellent EMC Performance**  
Lower interference and excellent susceptibility
- **Wide Input Voltage Range**  
Continued operation in demanding grid conditions
- **Wide Temperature Range**  
Applications in harsh climatic conditions
- **Compliant with Global Standards**  
Delivers quality, performance and reliability in power solutions.

## APPLICATIONS

- Macro cell BTS
- Microwave
- LTE / WiMax
- FTTX
- Broadband Access
- Optical Fibre Transmission System
- IDC (Internet Data Centres)



## TECHNICAL SPECIFICATIONS

<b>PART NUMBER</b>	<b>381030.100</b>
Capacity	2000W
<b>AC INPUT</b>	
Voltage Range	85Vac to 305Vac (Nominal @ 185Vac to 275Vac)
Frequency	45Hz to 66Hz
Maximum Input Current	Max. 12Arms @ 185Vac (full load)
Power Factor	≥0.99 @ rated input and ≥50% load
Input Protection	Varistors for transient protection, Mains Fuse for both input lines Shutdown @ > 305Vac with hysteresis
<b>DC OUTPUT</b>	
Output Voltage	53.5Vdc (adjustable 43Vdc to 58Vdc)
Output Power (Maximum)	2000W @ nominal input
Output Current (Maximum)	41.7A @ 48Vdc with nominal input
Peak Efficiency	>96%
Current Sharing	≤±5% of max current from 20% to 100% load
Static Voltage Regulation	≤±0.6% from 10% to 100% load
Dynamic Voltage Regulation	≤±5% for 10%-90% or 90%-10% load variation, regulation time <50ms
Hold Up Time	>20ms; output voltage >43.5Vdc @ 1000W
Ripple and Noise	≤150mVp-p, 20MHz bandwidth ≤2mVrms psophometric
Output Protection	Overvoltage shutdown; hot plug-in, inrush current limiting; high temperature protection; short circuit proof
<b>CONTROL and MONITORING</b>	
Rectifier Alarm and Signaling	High & low mains shutdown, high temperature shutdown, rectifier failure, overvoltage shutdown, fan failure, communication failure
Visual Indications	Alarms - RED
	Warning - YELLOW
	Normal operation - GREEN
<b>OTHER SPECIFICATIONS</b>	
Isolation	Input to Output: 3.0kVac, Input to Earth: 1.5kVac, Output to Earth: 0.5kVdc
Cooling	Fan-cooled, front to back airflow
Fan Speed	Regulated by temperature and output power
MTBF	> 300,000 hrs @ 25°C
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	-40°C to +75°C (de-rates above 55°C)
Storage Temperature Range	-40°C to +85°C
Relative Humidity	Operating: 5% to 95% RH non-condensing
	Storage: 0% to 99% RH non-condensing
Acoustic Noise	≤58dB @ full load, 25°C
<b>PHYSICAL</b>	
Dimensions WxDxH (mm)	108 x 325 x 41 (1U)
Net Weight (kg)	≤1.7
<b>DESIGN STANDARDS</b>	
Electrical Safety	EN/IEC62368-1
EMC	ETSI EN 300 386 V2.1.1, EN61000-6-1/-2/-3/-4
AC Harmonics / AC Flicker & Fluctuations	EN61000-3-2 / EN61000-3-3
Others	CE, RoHS compliant