

# ECOR1048TN

## 1KW 48V HIGH PERFORMANCE RECTIFIER

- 94,8% efficiency
- Operating from -40°C to 80°C
- Compatible with CAR0948TN and CAR1048TN
- Wide input range

The ECOR1048TN 1000W feeds DC power and enables the infrastructure management of telecom access nodes with one the **lowest total cost of ownership** of the market. Backward compatible with the former generation of 850W and 1000W rectifiers (CAR0948TN and CAR1048TN), it brings further savings of multiple tens of Euros on the energy bills and maintenance. Combined with the CAPTIN series of systems, it creates a wide range of opportunities for highly reliable controls of costs in energy consumption, load management, environmental operating conditions, inventory management, site maintenance and intervention.

In addition to a heat dissipation cut by half compared to the former generation, the ECOR1048TN 1000W operates up to 80°C with full rated power output up to 65°C, bringing further **savings in the thermal management design of cabinets and cooling costs**.

The rectifiers are designed to **last far beyond the life cycles** of many data and telecommunication equipment. Redundancy diode on the output allows for hot-swap fault-tolerant insertion. The unit is protected by a smart output power limitation and also protected against over-temperature, input undervoltage, input overvoltage (up to 280V without damage) and output overvoltage. A rigorous selection of the components and advanced thermal management design support the excellent MTBF of 500 000 hours calculated per Telcordia SR-332 RPP standard and an estimated life expectancy of more than 14 years.



### Electrical

Input Voltage:	
Standard: .....	90 to 265Vac
Maximum: .....	280Vac (without damages)
Input Frequency: .....	47 to 63Hz
Power factor: .....	0.99%
Input Current: .....	4.70A @ 230Vac
	5.00A @ 110Vac
Efficiency: .....	94.8% typical
Output voltage: .....	40.5 to 58Vdc
Output power: .....	1000W@230VAC input
	500W@110VAC input
Output current: .....	18.5A @ -54Vdc High mains
	9.3A @ -54Vdc Low mains
Load regulation: .....	±0.5%
Line regulation: .....	±0.2%
Wide band noise: .....	10mVrms
Psophometric noise: .....	5mVrms
Acoustic noise: .....	35dBA typ.(25°C)
MTBF: .....	500000 hours per Telcordia SR-332 (25°C)

### Mechanical

Dimensions:	
mm: .....	40.5H (1U) x 86W x 213.5D
inches: .....	1.6H x 3.4W x 8.4D
Weight: .....	1.1kg (2.4lb)

### Environmental

Temperature:	
Operation: .....	-40 to 80°C (-40 to 176°F)
Full Nominal Output Power: .....	-33 to 65°C (-27.4 to 149°F)
Humidity:	
Operating: .....	20 to 80% RH non-condensing
Storage: .....	10 to 95% RH non-condensing
Elevation: .....	Up to 3000m (9842ft)
Cooling: .....	Fan cooled (front to rear)

### Standards

Safety: .....	EN60950 - 1
	CEBEC marking
	CEBEC CB IEC 60950-1
Environment: .....	RoHS compliant
	ETSI EN 300 019 1-1 (class 1.2),
	1-2 (class 2.3) , 1-3 (class 3.3)
EMC*: .....	EN 61000-6-1
	EN 61000-6-3
	ETSI EN 300386

CE marked

\* See specifications sheet for more details

## Features

Indicators: ..... LEDs off - no power available  
Green LED permanent - OK  
Green LED blinking - Reduced power  
Orange LED - stand by (remote off)  
Red LED - Low DC voltage (<40Vdc)  
Blinking red LED - AC failure, thermal failure or short circuit

Protections: ..... Mains out of range (input fuse)  
Output overvoltage  
Output overload  
Short circuit current  
Smart power derating  
Thermal shutdown  
Hot swap

## Related Components

### Solution:

[ACE094](#): Low Profile Power System

[ACE102FALP](#): Low Profile Energy System

[ACE104](#): 850W/1000W/48DC fan cooled solutions: 1U high basic shelf

[CAPTIN 850BW](#): Site energy and management solution

[CAPTIN 850FA](#): Site energy and management solution

[Compas](#): Compas Board