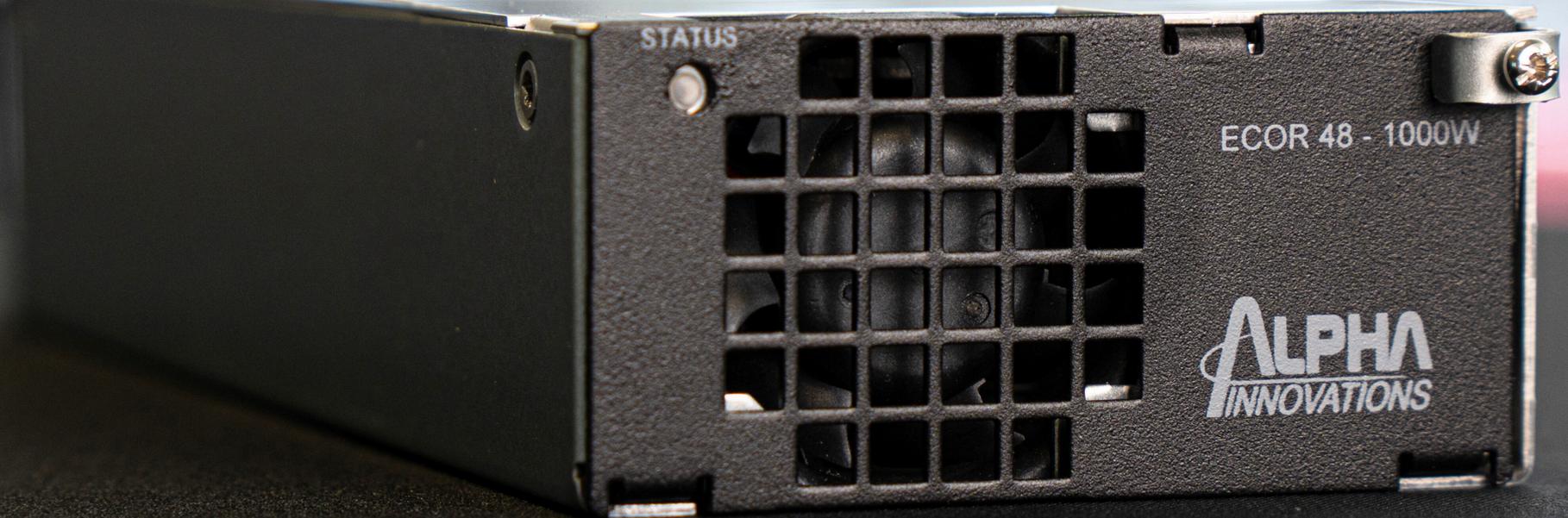


# ECOR1048

Modular and scalable power supply for  
48Vdc applications



DISCOVER →

# Product Highlights



**Wide input range AC or DC**



**Modular, from 1 to 10kW**



**Hot swappable**



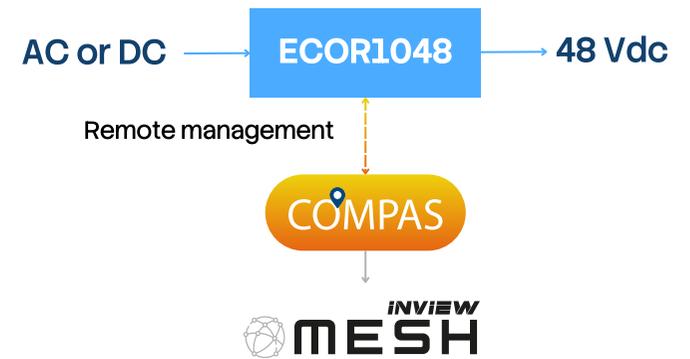
**Compact design**



**-40°C / +80°C**



**High Efficiency**



# Applications Areas



TELECOM NETWORK

**Customer :** Telecom integrators, Telecom operators  
**Application :** Telecom access network street cabinets  
**Country :** Worldwide  
**Expertise :** Customized system 2kW - 4kW, environmental monitoring



ENTERPRISE TELEPHONY

**Customer :** Telecom kit provider  
**Application :** Telephony service platforms  
**Country :** Worldwide  
**Expertise :** Custom mechanical shelf up to 2kW



UTILITY NETWORK

**Customer :** Utility company  
**Application :** Supply and back-up of their telecom infrastructure  
**Country :** Costa Rica  
**Expertise :** Dual input (AC-DC) 4kW, tropicalized

# ECOR1048

1kW - 48 Vdc  
Rectifier/Converter



## Versatile, Rugged, and Reliable Power Conversion

The **ECOR1048** efficiently powers DC loads from a wide input range, seamlessly operating from either **AC sources** (90 to 265 Vac) or **DC sources** (85 to 408 Vdc). It automatically detects the input type by monitoring frequency and intelligently adapts to ensure continuous operation without user intervention.

Built for **durability**, the ECOR1048 boasts a high MTBF of 500,000 hours, calculated according to Telcordia SR-332 RPP standards, ensuring long-term reliability in demanding applications.

Engineered for **harsh environments**, it operates across an extended temperature range from  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ , with derating starting at  $65^{\circ}\text{C}$ . This wide thermal tolerance helps reduce cabinet cooling requirements and contributes to cost savings in thermal management.

A built-in redundancy diode supports **hot-swap** and fault-tolerant configurations, enhancing system availability. The unit is safeguarded by advanced protection features, including smart output power limitation, overtemperature shutdown, input undervoltage and overvoltage protection (withstand up to 300 Vac without damage), and output overvoltage protection.

# Specifications

## Electrical

Input AC	
<b>Input Standard Voltage</b>	90 to 265 Vac
<b>Input Nominal Voltage</b>	200-240 Vac ; 230 Vac
<b>Input Frequency</b>	47 to 63Hz
<b>Power Factor</b>	> 98 %
<b>Input Current</b>	<ul style="list-style-type: none"> <li>4.60A @ 230Vac</li> <li>4.90A @ 110Vac</li> <li>7A max (AC or DC input mode)</li> </ul>
Input DC	
<b>Input Voltage Nominal</b>	85 to 408Vdc
Output DC	
<b>Output Voltage</b>	40.5 to 58Vdc
<b>Output power</b>	<ul style="list-style-type: none"> <li>1000W from 180Vac to 264Vac input</li> <li>500W from 90Vac to 132Vac input</li> <li>525W to 1000W from 85Vdc to 180Vdc input</li> <li>1000W from 180Vdc to 408Vdc input</li> </ul>
<b>Output current</b>	<ul style="list-style-type: none"> <li>18.5A @ -54Vdc High mains</li> <li>9.3A @ -54Vdc Low mains</li> <li>Load regulation :±0.5%</li> <li>Line regulation :±0.2%</li> <li>Wide band noise : 10mVrms</li> <li>Psophometric noise : 5mVrms</li> <li>Acoustic noise: 35dBA typ. (25°C)</li> </ul>
<b>Efficiency</b>	96 %
<b>MTBF</b>	500 000 hours per Telcordia SR-332 (25°C)

## Environmental

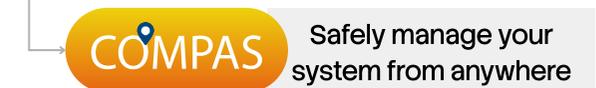
<b>Operating Temperature</b>	-40 to +80 °C
<b>Full nominal output power T°</b>	-33 to +65 °C
<b>Storage Temperature</b>	TBC
<b>Humidity Operating</b>	20 to 80% RH non-condensing
<b>Humidity Operating Option</b>	20 to 95% RH non-condensing
<b>Humidity Storage</b>	10 to 95% RH non-condensing
<b>Elevation</b>	Up to 3000 m
<b>Cooling</b>	Fan cooled (Front to rear)

## Standards

<b>Safety</b>	<ul style="list-style-type: none"> <li>CE marked</li> <li>EN 62368-1</li> <li>IEC 62368-1 (formerly IEC 60950-1)</li> <li>CEBEC and c-SGS-us markings</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>RoHS compliant</li> <li>1-2 (class 2.3),</li> <li>1-3 (class 3.3)</li> </ul>
<b>EMC</b>	<ul style="list-style-type: none"> <li>EN 61000-6-1</li> <li>ETSI EN300386</li> <li>EN 61000-6-3</li> </ul>
<b>Global Approvals</b>	<ul style="list-style-type: none"> <li>UL 62368 certified</li> <li>c-SGS-us</li> </ul>

## Features

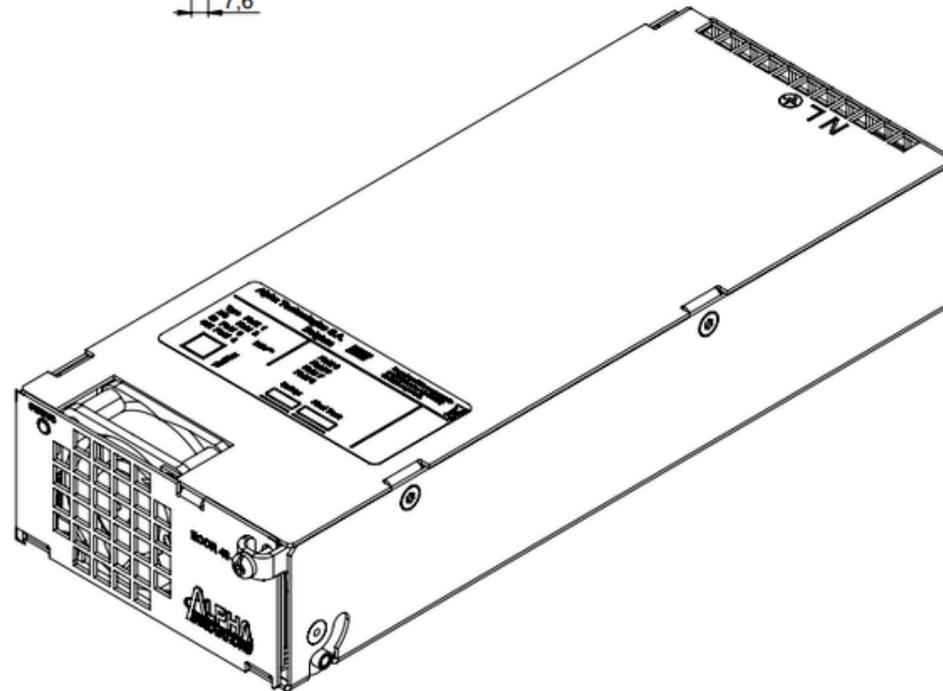
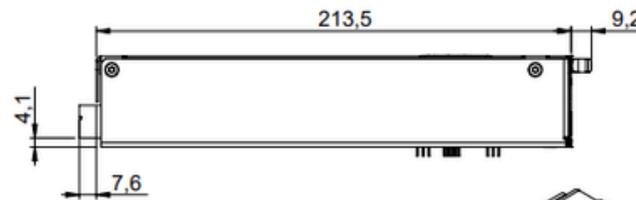
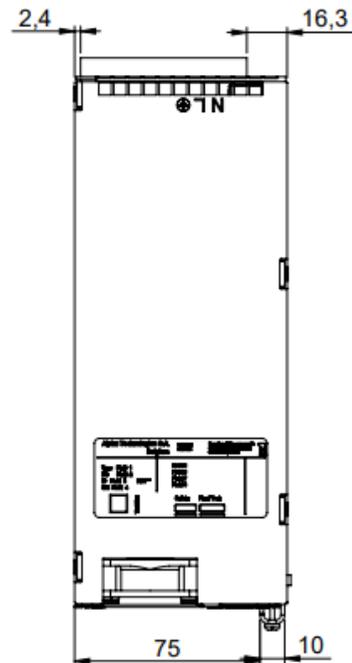
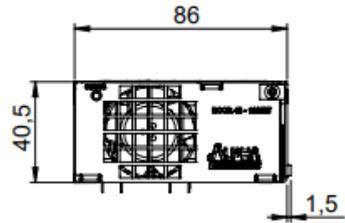
<b>Protection</b>	<ul style="list-style-type: none"> <li>Automatic input status (Power limits, AC or DC mode)</li> <li>Mains out of range (input software + fuse)</li> <li>Output overvoltage and overload Short circuit current</li> <li>Smart power derating between 65 and 80°C : <ul style="list-style-type: none"> <li>Derating of 3% @DC &amp; high AC voltage range</li> </ul> </li> <li>Smart power derating between 70 and 80°C : <ul style="list-style-type: none"> <li>Derating of 4% @low AC source voltage</li> </ul> </li> <li>Fan Failure protection</li> <li>Thermal shutdown Hot swap</li> </ul>
<b>Indicators</b>	<ul style="list-style-type: none"> <li>LED off : no power available</li> <li>Green LED : no failure</li> <li>Orange LED : Stand by (remote off)</li> <li>Red LED : Low DC voltage (&lt;37Vdc)</li> <li>Blinking green LED : output power is derated</li> <li>Blinking red LED : AC failure, thermal failure or short circuit</li> </ul>
<b>Customization if combined with monitoring unit</b>	<ul style="list-style-type: none"> <li>Specific configuration</li> <li>Python Scripting</li> <li>Specific alarming</li> </ul>



## Part Number

9411 011 05101	ECOR1048 1kW Rectifier
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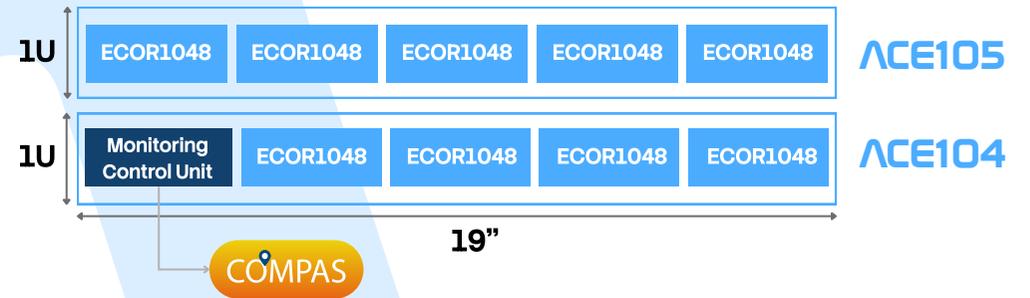
# Mechanical dimensions



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

# Related items

## Modular & Configurable Power Racks

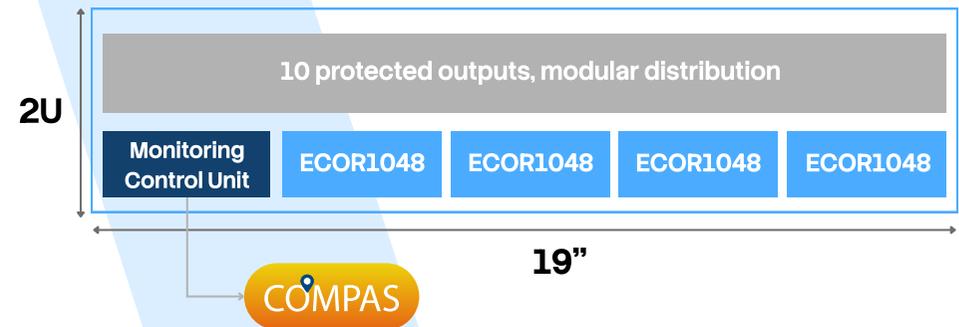


### ACE Shelves Series

The **ACE Series** is a compact line of 19" power racks from Alpha Innovations, with full front access, hot-swappable rectifiers, advanced monitoring, and flexible battery management, ideal for space-constrained, high-reliability applications.

# Related items

## Combining power supplies and distribution



### CAPTIN 1000BW

The **CAPTIN 1000BW** is an integrated 2U - 19" power rack from Alpha Innovations, designed for outdoor telecom cabinets. Delivering up to 4000 W, it integrates power conversion, distribution, and advanced monitoring

# More info ?

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