

# Chameleon 25W AC Power Module with Power Access (ACP-1PA)

## High-Performance Programmable Controllers for Extreme Environments



### KEY FEATURES



- 110VAC Input / 25.5VDC 25W Output Power Supply
- Multiple Modules can be Paralleled to Provide Load Sharing, Uninterrupted Power During Hot Swap, and/or Redundant Power Sources
- Fully Sealed Enclosure (NEMA 4X, 6P, 13 Protection)
- -40°C to +65°C (-40°F to +149°F) Operating Range
- MIL-STD-901D for High Impact Shock
- MIL-STD-167B for Vibration
- MIL-STD-461E for Electro-Magnetic Interference (Pending)
- Compatible with MIL-STD-1399 Section 300 Voltage Spike
- Supports Hot Swapping

The Chameleon 25W AC Power Module with Power Access (ACP-1PA) isolates, filters, and converts an AC input source into a regulated DC output to power external devices. The ACP-1PA is derived from the standard ACP-1 module. The ACP-1PA is intended to serve as a power supply for external devices only. The standard ACP-1 version is intended to serve as a power supply for other modules in a Chameleon node (these other modules may in turn feed external devices thru a lower power secondary regulated output).

Multiple power modules attached to each other and fed from different power sources can provide seamless redundancy, reducing susceptibility to power outages, or load sharing to increase the power availability. Power modules on the same node are always online—if one should lose input power, another will instantaneously compensate and deliver uninterrupted power to all loads.

ACP-1PA units are hot swappable: should the need arise to replace one, simply swap the front panel (with attached power board) and the unit is back online—there is no need to shut off the power. When the module is swapped out, all storage capacitors are automatically discharged to prevent shocking hazard. The module also features input circuit fusing and automatic output over-current shutdown.

As with all Chameleon modules, the ACP-1 offers unequalled ruggedness. It is specifically designed for sustained operation in severe environments, including those characterized by extreme shock, vibration, electro-magnetic interference, temperature, and/or humidity. Its fully-sealed enclosure (sealing end-caps not pictured) ensures long-lasting operation in the grimmest settings. In fact, Chameleon modules can operate fully submerged!

# Chameleon 25W AC Power Module with Power Access (ACP-1PA)



## High-Performance Programmable Controllers for Extreme Environments

### ENVIRONMENTAL CHARACTERISTICS

Operating Ambient Temperature Range.....	-40°C to 65°C
Storage/Transport Ambient Temperature Range.....	-40°C to 85°C
High Impact Shock.....	MIL-STD-901D
Mechanical Vibration.....	MIL-STD-167B
Electro-Magnetic Interference.....	MIL-STD-461E (Pending)
Facial/Housing Protection.....	NEMA 1,2,4,4X,5,6,12,12K,13
Operating Humidity.....	100% RH, Condensing

### ELECTRICAL CHARACTERISTICS

Input Voltage Range.....	75-123VAC
Input Frequency.....	DC, 40 to 400Hz
Input Spike Tolerance.....	1000V (2Ω source impedance)
Interface Standard.....	MIL-STD-1399
Output Voltage Range.....	25.0 – 26.9VDC; 25.5VDC typical
Output Power.....	25 Watts
Output Isolation (Primary to Secondary).....	1500 VAC
Max inrush current (115 VAC at Full Load).....	12 A RMS for 5 mS
Max steady state input power (115 VAC at Full Load).....	35 Watts
Power Factor (115 VAC at Full Load).....	0.63
Turn-on time at 90 VAC.....	40 mS
Hold-up time at 90 VAC.....	30 mS
Input Fuse.....	1A rating, I <sup>2</sup> T=2.01 A <sup>2</sup> -Sec
Supported Cable Diameters.....	Two glands 0.24"-0.47" and two glands 0.16"-0.31"
Supported Wire Gauges.....	16-28 AWG

### PHYSICAL CHARACTERISTICS

Status Readout.....	One Power ON LED Indicator
Weight.....	1.5 lb
Front Panel Dimensions.....	2.5" W x 6" L
Enclosure Height.....	3" H

### MAINTAINABILITY / RELIABILITY

- One primary or secondary lead can be shorted to ground without loss of operation
- Supports hot swapping
- Each power supply module can be paralleled to provide load sharing, uninterrupted power during hot swap, and/or redundant power sources

### SAFETY FEATURES

- Storage capacitors automatically discharge after power board is removed from enclosure
- Over-current shutoff
- Input circuit is fused