

CompactPCI®: 350 WATT MULTI-OUTPUT SWITCHERS 6U High x 8HP Width, AC or DC Input, PICMG® Compliant

FEATURES

- Standard CompactPCI Outputs, 5, 3.3, ± 12 VDC
- Hot-Swap, N+1 Redundant Operation
- AC or DC Input
- Integral LED Status Indicators
- Power Factor Corrected (AC Input)
- Standard 47 Pin or Optional 38 Pin DIN Connector
- ORing Diodes on All Outputs
- Active Current Sharing on V1, V2 & V3
- Class B EMI Input Filter
- Universal 90 to 264VAC Input
- Wide Range 36 to 72 VDC or 20 to 28VDC Input
- Complies with PICMG Power Interface Specification
- Control & Monitoring Features

TWO-YEAR WARRANTY



ORDERING GUIDE

Max. Watts	V1 Output	V2 Output	V3 Output	V4 Output	Connector Type	Model No. AC Input	Model No. DC Input
350W	5.0V @ 40A	3.3V @ 40A	+12.0V @ 9.0A	-12.0V @ 1.0A	PICMG - 47	CPCIE2933	CPCIEQ2933
350W	5.0V @ 40A	3.3V @ 40A	+12.0V @ 9.0A	-12.0V @ 1.0A	DIN - 38	CPCIE2933-D	-

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SAFETY STANDARDS

UL60950
 CSA22.2, No. 60950
 EN60950

GENERAL SPECIFICATIONS

Typical at Nominal 115/230VAC Line or 48VDC, Full Load and 25°C Unless Otherwise Noted.

Input Specifications

Voltage/Current.....	AC 90-264V, 47-63Hz, Single Phase, 7.0A max. DC 36-72V (48V nominal), 16.0A max.
Fusing.....	Internal line fuse provided, non-user serviceable AC - 10.0A, 250V. 48VDC - 20.0A, 125V.
AC Power Factor.....	0.99 line PFC typical at 115VAC, full load.
Inrush Current.....	Thermistor soft start. ~25°C AC cold start 15Apk @ 115VAC; 30Apk @ 230VAC. 15Apk @ 48VDC.
Transient Protection.....	MOV. Withstands transients as specified by IEEE C62.41 - 3KV (differential and common mode).
AC EMI Line Filtering....	Meets IFCC Level A, and EN55022 Level A.
Efficiency.....	typical full load: 60% at 115VAC 65% at 48VDC, 60% at 24VDC.
Redundant/Hot Swap....	Full power N+1 redundant, hot-swap capable.

Output Specifications

Line/Load Regulation....	At the sense point, full input range, 0-100% loading: <±1% for V1, V2 & V3, sense leads connected. <±5% for V4.
Minimum Loading.....	None required for single unit applications. 10% loading required for sharing applications.
Stability.....	<±0.2% output drift after 20 minutes warm-up.
Temp. Coefficient.....	<±0.02%/°C, 0°- 50°C, after 20 minute warm-up.
Dynamic Response.....	<3% deviation with a 25% load change at 1A/µsec. Output returns to within 1% in less than 300µsec.
Ripple and Noise.....	<50mV for all outputs, or 1% pk-pk nominal, which ever is greater, DC to 20MHz bandwidth with a coaxial probe and 0.1µF/22µF capacitors at the output terminals.
Current Sharing/ N+1 Operation.....	V1, V2, V3 outputs, single wire connection for ±10% current sharing between any number of units.
Remote Sense.....	V1, V2, V3 outputs compensate for up to 0.25V total line drop in the load cables. Outputs are internally sensed if leads are opened.
Over/Under Shoot.....	None at turn-on or turn-off.
AC Hold-Up Time.....	>15msec following loss of AC power at low line, full load.
Over Current/Short Circuit Protection.....	Constant current limit on all outputs. Automatic recovery when overload is removed.
Over Temperature Protection.....	Internal temperature sensing. Causes all outputs to shut down. Automatic recovery.
Under Voltage Alarm.....	Any output dropping below 10% of nominal triggers the power fail warning signal.
OVP.....	Any output that exceeds 25% ±10% of nominal Vout will cause all outputs to latch off. Remote inhibit, enable or input recycle required to reset.

Reverse Sense

Protection..... Outputs latch off if remote sense connections
are installed in reverse. Remote inhibit, enable
or power input recycle required to reset.

Signal & Control Line, Indicators

Remote Enable.....	Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1.
Remote Inhibit.....	Enabled by open circuit or TTL logic 1. Disabled by closed circuit or TTL logic 0.
Power Fail Warning.....	Loss of input AC causes a TTL compatible signal to go low >4msec prior to any output dropping out of regulation. At AC turn-on, signal stays low until all outputs are in regulation. Also triggered in both AC and DC models by an under voltage condition on any output.
LED Indicator.....	Single bi-colour LED. Green indicates input power ON and outputs within regulation. OFF or RED indicates input and/or output power fault.

Operating Environment

Temperature Range	
Operating.....	0° to 50°C ambient at full load, with specified airflow.
Storage Temperature....	-40° to 85°C.
Cooling.....	Direct forward airflow required to achieve full rated power and specified MTBF. AC input versions require 90cfm for 47-pin configurations and 120 cfm for 38-pin configurations. DC input version requires 90 CFM for all configurations.
Relative Humidity.....	Up to 90% RH, non-condensing.
Operational Vibration....	0.75G peak, 5-500Hz along three orthogonal axes.
Altitude.....	Operating to 10,000 ft. Storage to 30,000 ft.
MTBF.....	Designed for 150,000 hrs at 25°C.

Mechanical

Outline.....	6U x 8HP front panel. Complies with all current PICMG [®] CompactPCI PSU specifications.
Weight (Approx.).....	4.8lbs / 2.38kgs.
Retaining Latches.....	Type IV Telecom Rittal #3286.903 upper and #3686.902 lower latches.

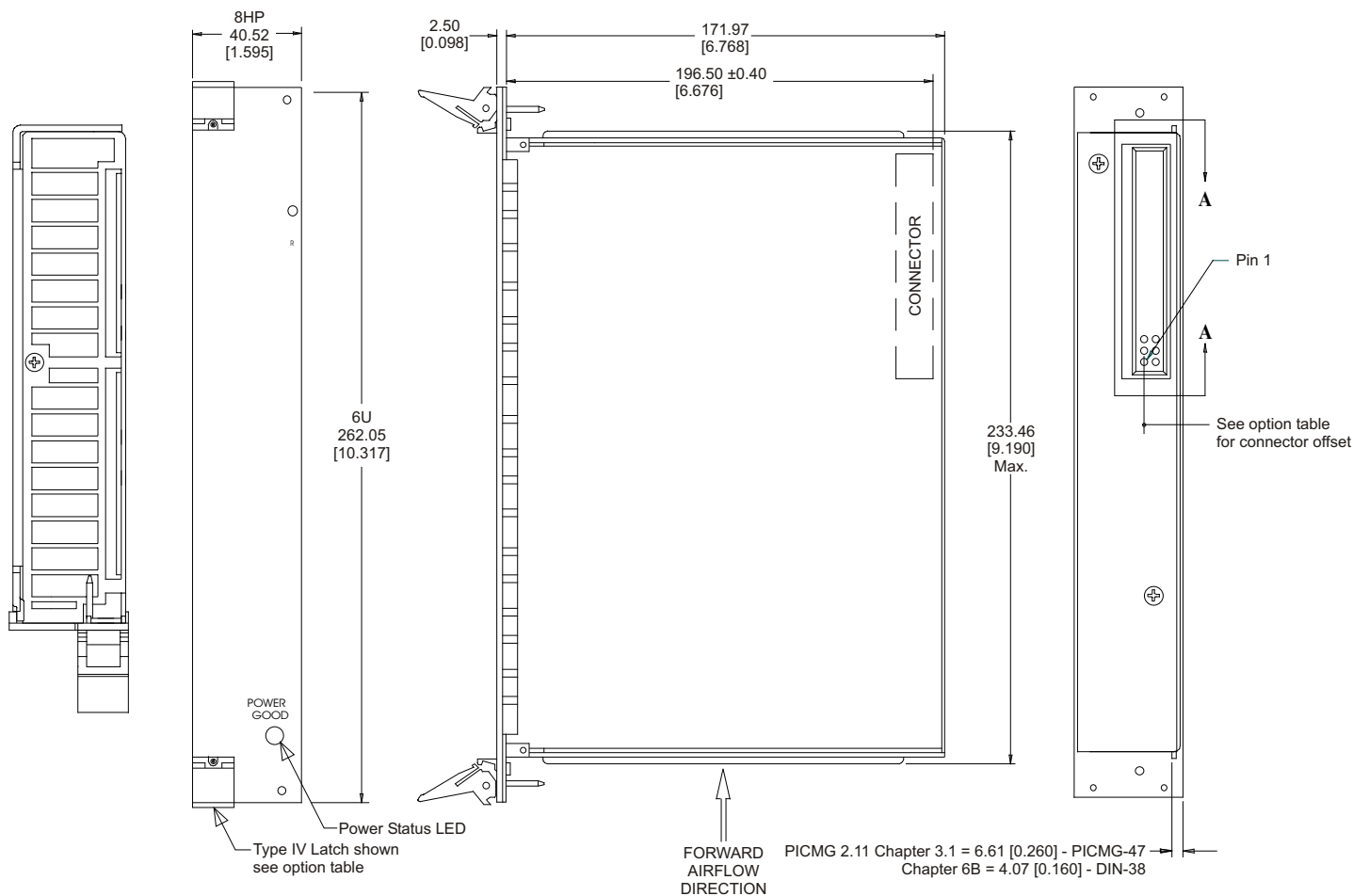
Safety

Recognised to U.S. and Canadian Bi-National Standard CSA22.2
 No. 60950 / UL60950, 3rd Edition (cULus).
 CE Marked in accordance with LVD73/23/EEC and EN60950/A11:1997.

Interconnect

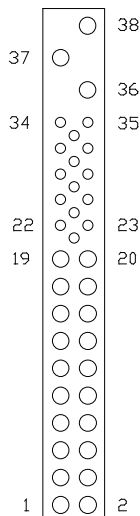
47 Circuit.....	Positronic Ind. P/N PCIH47M400A1. Mates with PI P/N PCIH47F300A1.
38 Circuit.....	Positronic Ind. P/N PCIH38M400A1-241.1. Mates with PI P/N PCIH38F300A1. Use of the specified mating connector is required to ensure proper contact sequence.

DIMENSIONS & CONNECTOR PINOUTS



PIN CONNECTIONS - 38 PIN

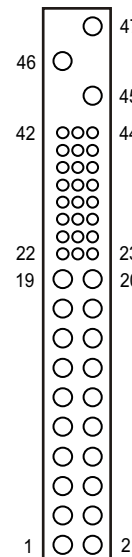
PIN	FUNCTION	PIN	FUNCTION
1	V1 Out (+5V)	20	N/C
2	V1 Out (+5V)	21	V4 Out (-12V)
3	V1 Out (+5V)	22	V4 Return
4	V1 Out (+5V)	23	V4 Return
5	V1 & V2 Return	24	Remote Sense V1 (+5V)
6	V1 & V2 Return	25	Remote Enable
7	V1 & V2 Return	26	Sense Return (V1, V2 & V3)
8	V1 & V2 Return	27	Remote Sense V2 (+3.3V)
9	V1 & V2 Return	28	N/C
10	V1 & V2 Return	29	N/C
11	V1 & V2 Return	30	Remote Sense V3 (+12V)
12	V1 & V2 Return	31	Remote Inhibit
13	V2 Out (+3V3)	32	Current Share V1
14	V2 Out (+3V3)	33	Current Share V2
15	V2 Out (+3V3)	34	Current Share V3
16	V2 Out (+3V3)	35	Input Power Fail
17	V3 Return	36	Chassis Ground
18	V3 Out (+12V)	37	AC Neutral / +DC Input
19	N/C	38	AC Live / -DC Input



Pin staging:
 Pin 36 is leading and first to connect.
 Pins 25, 32, 33 & 34 are lagging and last to connect.

PIN CONNECTIONS - 47 PICMG

PIN	FUNCTION	PIN	FUNCTION
1	V1 Out (+5V)	25	N/C
2	V1 Out (+5V)	26	N/C
3	V1 Out (+5V)	27	Remote Enable
4	V1 Out (+5V)	28	N/C
5	V1 & V2 Return	29	V1 Remote Adjust
6	V1 & V2 Return	30	Remote Sense V1 (+5V)
7	V1 & V2 Return	31	N/C
8	V1 & V2 Return	32	V2 Remote Adjust
9	V1 & V2 Return	33	Remote Sense V2 (+3.3V)
10	V1 & V2 Return	34	Sense Return (V1, V2 & V3)
11	V1 & V2 Return	35	Current Share V1
12	V1 & V2 Return	36	Remote Sense V3 (+12V)
13	V2 Out (+3V3)	37	N/C
14	V2 Out (+3V3)	38	N/C
15	V2 Out (+3V3)	39	Remote Inhibit
16	V2 Out (+3V3)	40	N/C
17	V2 Out (+3V3)	41	Current Share V2
18	V2 Out (+3V3)	42	Input Power Fail
19	V3 Return	43	N/C
20	V3 Out (+12V)	44	Current Share V3
21	V4 Out (-12V)	45	Chassis Ground
22	Signal Return	46	AC Neutral / +DC Input
23	N/C	47	AC Live / -DC Input
24	V4 Return		



Pin staging:
 Pin 45 is leading and first to connect.
 Pins 27, 35, 41 & 44 are lagging and last to connect.

ALL DIMENSIONS IN MILLIMETERS (in).
 All specifications subject to change without notice.