

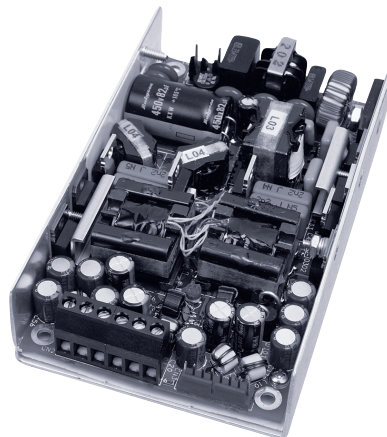
## Model

## Miniature Switch Mode Power Supply

# AAD160

**H.A.L.T.** Highly Accelerated  
TESTED Life Testing

- 160 Watts output power
- Power Factor Correction
- Parallel/Redundant Operation
- Up to 88% Efficiency



### Electrical Specifications

Input Voltage:	90-264 VAC, 47-63 Hz
Input Current:	<2A RMS @ 115 VAC @ full load <1A RMS @ 230 VAC @ full load
Inrush Current:	<35A, pk @ 132 VAC @ cold start <75A, pk @ 264 VAC @ cold start
Power Factor:	>0.98 @ full load @ 115/230VAC input
Harmonic Distortion:	Meets EN61000-3-2
EMI Filtering:	Meets CISPR 11 and 22 and FCC Part 15 Class B (conducted)
Input Protection:	Internal AC line fuse; 250 VAC, 4.0A
Surge Withstand:	Meets EN61000-4
Output Power:	160W with 20CFM air; 80W Convection cooled (consult factory for current ratings)
Line Regulation:	± 0.3%
Load Regulation:	± 1% for V1 and V2 ± 7% for V3; ± 5% for V4
PARD:	Greater of 1% or 50mV 20MHz bandwidth
Hold-up Time:	>20 ms @ full load
Turn-on Delay:	<2 seconds
Output Polarity:	See Voltage Chart
Minimum Load:	10% for V1 and V2 5% for V3 and V4
Transient Response:	Greater of 150mV or 3% for 25% load change @ 1A/μs (V1 and V2)

Output Rise Time:	<100 ms (10% to 90%)
Remote Sense:	Standard on V1 and V2 Up to 400mV of cable drop
AC Power Fail:	TTL <sub>LOW</sub> logic "0" at least 5 ms before DC output drops 5% (without signal jitter). <10mA sink current for Power Fail "0". <1mA source current for Power Fail "1".
Overshoot/Undershoot:	<5% overshoot with remote sense at output terminals
Current Share (option):	Load currents of V1 and V2 for similar units can be shared @ ±5% of total load
Overvoltage Protect:	Factory set, 125% ±5% on V1 and V2 cycle AC to reset
Short Circuit Protection:	All outputs are auto recovery
Reverse Voltage:	Reverse current up to rated outputs
Case Power Protection:	Standard operation interrupt (hiccup mode)
Efficiency:	Up to 88%
MTBF:	MIL-STD-HDBK 217E >200,000 hours @ 25°C Highly Accelerated Life Testing

### Available Voltage Outputs\*

Voltage Codes	V1 Voltages (Volts)	V1 Currents (Amps)	V2 Voltages (Volts)	V2 Currents (Amps)	V3 Voltages (Volts)	V3 Currents (Amps)	V4** Voltages (Volts)	V4 Currents (Amps)
-1	+1.8	16	+1.8	14	+1.8	3	-1.8	2
-2	+3.3	16	+3.3	14	+3.3	3	-3.3	2
-3	+5	16	+5	14	+5	3	-5	2
-4	+12	6	+12	6	+12	3	-12	2
-5	+15	5	+15	5	+15	2.5	-15	2
-6			+24	3	+24	1.75	-24	1.5
-7			+28	2.5	+28	1.5	-28	1
-8			+36	2	+36	1.5	-36	1
-9			+48	1.5	+48	1	-48	1

\* Consult factory for other voltages and OEM quantities.

\*\* Standard Polarity for V4 is negative (-). V4 is available with positive polarity as a Tailored or Custom model.

Note: Standard models are 3244, 3255, 3264, 3404 and 3464

### PART # STRUCTURE:

**MODEL** - **VOLTAGE CODE** - **OPTION CODES** (See sheet 2)  
 - V1 V2 V3 V4 -  
**AAD160** - **X X X X** - **ABC...**

Example: Model Number **AAD160-3244-AM** = 160W Power Factor Corrected, (V1) +5V @ 16A, (V2) +3.3V @ 14A, (V3) +12V @ 3A and (V4) -12V @ 2A with Current Sharing and Metric Mounting.

[CLICK HERE TO SEE THE AAD160 CODE TABLE AND AVAILABLE OPTIONS.](#)

# TAMURA Corporation of America



## Model AAD160

### Options (code)

- #6-32 PEM Nut (Standard)
- PF Invert (B)
- Metric Mounting (M)
- Input and Options with Gold Pins (G)
- Molex Output Connector with Gold Pins (J)
- Molex Connectors with Standard Pins (K)
- Current Sharing (A)
- Thru-Hole Mounting (C)
- PF Open Collector (O)

### Compliance

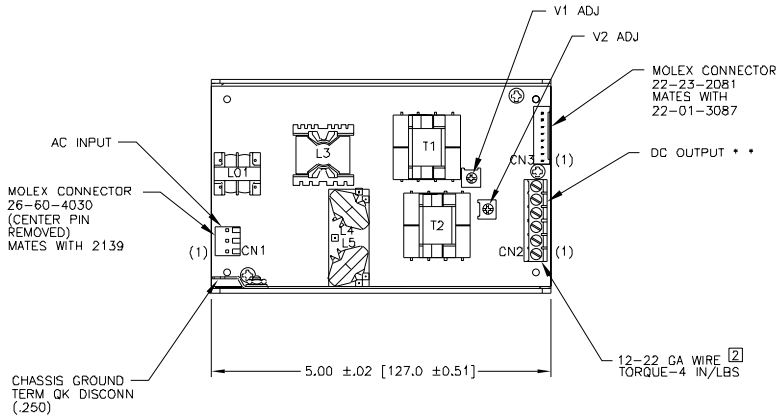
- EN61000-4-5 Level 3
- EN61000-3-2
- EN61000-4-4 Level 3
- CISPR 11 and 22 FCC Part 15 Class B (conducted)
- EN61000-4-2 Level 2
- EN61000-4-2 Level 3 (Air Only)
- EN61000-4-11

### Certifications

- UL60950
- IEC60950
- CE Declaration to Low Voltage Directive 72/73/EEC
- CSA C22.2 No. 60950-00
- EN60950: 2000

### Physical Specifications

- Dimensions: (HxWxL) 1.25" x 3.14" x 5"
- Operating Temp: 0 to 50°C; rated power to 50°C with 20CFM air
- Relative Humidity: 5% to 90%, non-condensing
- Storage: -50 to 85°C/20-90% RH
- Altitude: 10,000' operating; 40,000' storage



PIN NO.	CN1
1	AC LINE
2	
3	NEUTRAL

MOLEX CONNECTOR  
26-60-4030  
CENTER PIN  
REMOVED

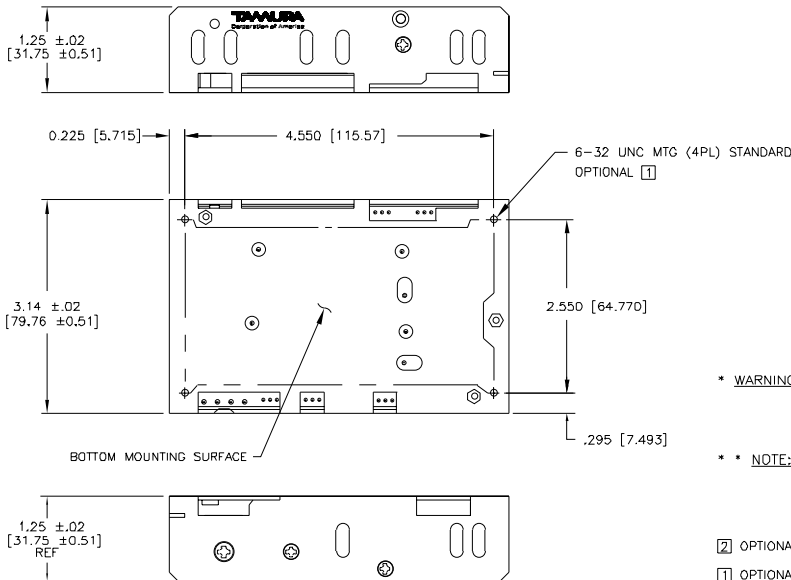
PIN NO.	CN2	
1	V3	**
2	V2	**
3	RTN	
4	RTN	
5	V1	**
6	V4	**

FOR  
12-22 GA WIRE  
TORQUE-4 IN/LBS

PIN NO.	CN3	
1	V2 CURRENT SHARE	
2	V1 CURRENT SHARE	
3	POWER FAIL	
4	RTN	
5	V1 -REMOTE SENSE	*
6	V1 +REMOTE SENSE	*
7	V2 +REMOTE SENSE	*
8	V2 -REMOTE SENSE	*

MOLEX CONNECTOR  
22-23-2081

UNIT WEIGHT	
0.72 LBS	



\* **WARNING:** DAMAGE WILL OCCUR IF REMOTE SENSE LEADS ARE REVERSED OR USED WITH LOAD DISCONNECTED FROM RESPECTIVE OUTPUTS.

\* **NOTE:** FOR PROPER REGULATION MINIMUM LOADS ARE REQUIRED, 0.5A FOR V1 AND V2, 0.1A FOR V3 AND V4

[2] OPTIONAL- MOLEX CONNECTOR LIMITED TO 7A FOR V1, V2 OUTPUT

[1] OPTIONAL- #6 CLEARANCE HOLE PROVIDED THROUGH THE BOARD AND CHASSIS FOR TOP SIDE MOUNTING OF POWER SUPPLY.

NOTES: UNLESS OTHERWISE SPECIFIED.

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