JASPER ELECTRONICS

Innovative Specialty DC Power Systems

CONTACT

1580 No. Kellogg Dr.
Anaheim, California, 92807

(714) 917-0749

www.jasperelectronics.com
sales@jasperelectronics.com

HML801 Series
Hot Swap Power Supplies

12 V, 650W and 24 V - 54V, 800 Watt Single Output

HML-SERIES POWER SUPPLIES

GENERAL OVERVIEW

Jasper's Ultra-Reliable HML-Series Power Supplies are most commonly used in redundant systems in applications such as nuclear plants, server rooms, security systems, and communication systems. Units in this series are available from 650W–800W, and universal AC input with single output from 12V-54V.

FEATURES ON SELECT MODELS INCLUDE:

- Front End Power Supplies – 12V through 54V
- >0.99 line Power Factor Corrected typical at AC 115V
- High Density
- Hot Swap-Redundancy
- Module for 19 Inch Rack (1U High)
- Optional Extended Operating Temperature Range
- cULus, TUV and CE Marked (800W Models Only)
- AC/Power Good LED Display
- Internal Oring Diodes Provided
- Custom Performance & Mechanical Modifications Readily Available
- Models can be ruggedized against high shock, vibration, and humidity to meet MIL-STD-810 requirements

Rev C-June-14-2026

TECHNICAL SPECIFICATIONS

AC INPUT	
Voltage/ Current	AC 90-264V, 47-63Hz, 1 Phase. 800W: 11.0A max; 650W: 9.0A max.
Fusing	AC 15.0A, 250V internal line fuse provided, non-user serviceable
Power Factor	>0.99 line PFC typical at AC 115V, full load
Inrush Current	Thermistor soft start (~25ºC cold start). 30Apk @ AC 115V, 60Apk @ AC 230V
Transient Protection	MOV. Withstands transients as specified by EN61000-4-5 (differential and common mode)
Under Voltage Protection	Auto DC output shutdown when AC input falls below safe operating limits (≈ 80V AC). Automatic recovery
EMI Filtering	Meets FCC Level A, and EN 55022 Level A
Efficiency	75% typical at AC 115V, full load
Redundant/ Hot Swap Capable	Full power N+1 redundant, hot swap capable
DC OUTPUTS	
Voltage/ Current (V/A)	**V1**
HML651-2	12.0V, 54.2A
HML801-5	24.0V, 33.3A
HML801-6	28.0V, 28.6A
HML801-8	48.0V, 16.7A
HML801-9	54.0V, 14.8A
HML801: Total loading not to exceed 800 Watts at 50oC, or 400 Watts at 70oC. See Op. Temp. Specifications	
Output Voltage Setpoint	Factory preset within ±0.5% of nominal voltage
Line/ Load Regulation	<±1% at the sense point over full AC input range and 0 – 100% output loading, with sense leads connected
Minimum Loading	None required
Output Turn-on Delay	<1sec from AC turn-on. <100msec from remote enable
Over/ Under Shoot	None at turn-on or turn-off
Stability	Output drift <±0.2% after 20 minute warm-up
Temperature Coefficient	<±0.02%/ºC, 0o - 50ºC, after 20 minute warm-up
Dynamic Response	Less than 3% deviation with a 25% load change at 1A/µsec. Output recovers to within 1% in less than 300µsec
Ripple and Noise (PARD)	<1% nominal with a 20 MHz bandwidth limit, measured with a 0.1µF ceramic capacitor in parallel with a 20µF tantalum capacitor con- nected between the measured output and its return at the connector
Current Sharing/ Parallel N+1 Operation	Single wire connection for ±10% current sharing between any number of units
Remote Sense	Output compensates for up to 0.25V total line drop in the load cables. Output is internally sensed if leads are opened
Over Temperature Protection	Internal temperature sensing. Causes output to shut down. Automatic recovery
Hold-Up Time	Output remains in regulation >15msec minimum following loss of AC power at low line, full load
Over Current/ Short Circuit Protection	Standard hiccup (cycles on/off) current limit when output current is 105% to 120% of full load
Over Voltage Protection	Non-crowbar type. V-out exceeding 25% ±10% of nominal will cause output to latch off. Remote enable or AC input recycle required to reset
SIGNALS, INDICATORS AND CONTROLS	
Remote Enable	Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1
Remote Adjust	External 0-5V DC on remote adjust pin refer- enced to negative sense equals -5% to +5% change of nominal output voltage
Power Good (DC-OK) Signal	High signal when V-out is above 97% of nominal voltage. Signal goes low when V-out drops below 95% of nominal

**Specifications subject to change without notice.*

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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 output is in regulation
Under Voltage Warning	Output dropping below 95% of nominal triggers the power fail warning signal
LED Indicator	Front panel mounted, single-color LED. Green indicates AC power ON and output within regulation. Off indicates an input and/or output fault
AC On/ Off Switch	Optional. Single pole, rocker type, on the front panel. Rocker face marked "I O". See option "O" in model configuration codes below. Not avail- able in combination with optional IEC AC inlet
OPERATING ENVIRONMENT	
Operating Temperature	Extended range: -40º – +50ºC ambient at full load, with specified airflow. Full load start-up @-40º. Above 50ºC, output derates linearly to 50% at 70ºC
Cooling	Front panel mounted, dual DC ball bearing fans provided, rated 13 cfm minimum each. Forward airflow direction is front to rear
Relative Humidity	Up to 90% RH, non-condensing
Operational Vibration	0.75G peak, 5 – 500Hz along three orthogonal axis
Storage Temperature	-40º to 85ºC
Altitude	Operating to 10,000 ft. Storage to 30,000 ft.
MTBF	Designed for 150,000 hrs at 25ºC
INTERCONNECT	
Input/ Output Connector	18-circuit (3X6), sequential contact, hot pluggable type, located on the rear panel. Positronic Ind. P/N PLC18M4BN0A2-164.10. Mates with PI P/N PLC18F300A1 or equivalent. **Note: Use of the specified mating connector is required to insure proper "make/break" sequential contact sequence**
AC Inlet Connector	Optional. Recessed 3-circuit, IEC 320/C14 type. User accessible on the front panel. See option "I" in the model configuration codes below. Not available in combination with optional On/Off switch, or with AC input via the "hot plug"
SAFETY	
HML801 Models Only	Recognized to U.S. and Canadian Bi-National Standard CSA C22.2 No. 60950 / UL 60950, Third (3rd) Edition (cULus); TUV approved to TUV EN60950/A1-A4/A11. CE marked
MECHANICAL	
	(Refer to JE Outline Configuration Dwg, P/N 02951-000.)
Weight	1.8kg [≈ 4.0lb]
Retaining Latch	Adjustable grip latch. User accessible on the front panel. Rotation of latch knob extends an arm down then forward into a user provided opening in the equipment to secure
Mounting Orientation	Add "H" at end of model code to designate horizontal (5.20"w x 1.60"h) or "V" for vertical (5.20"h x 1.60"w) installation

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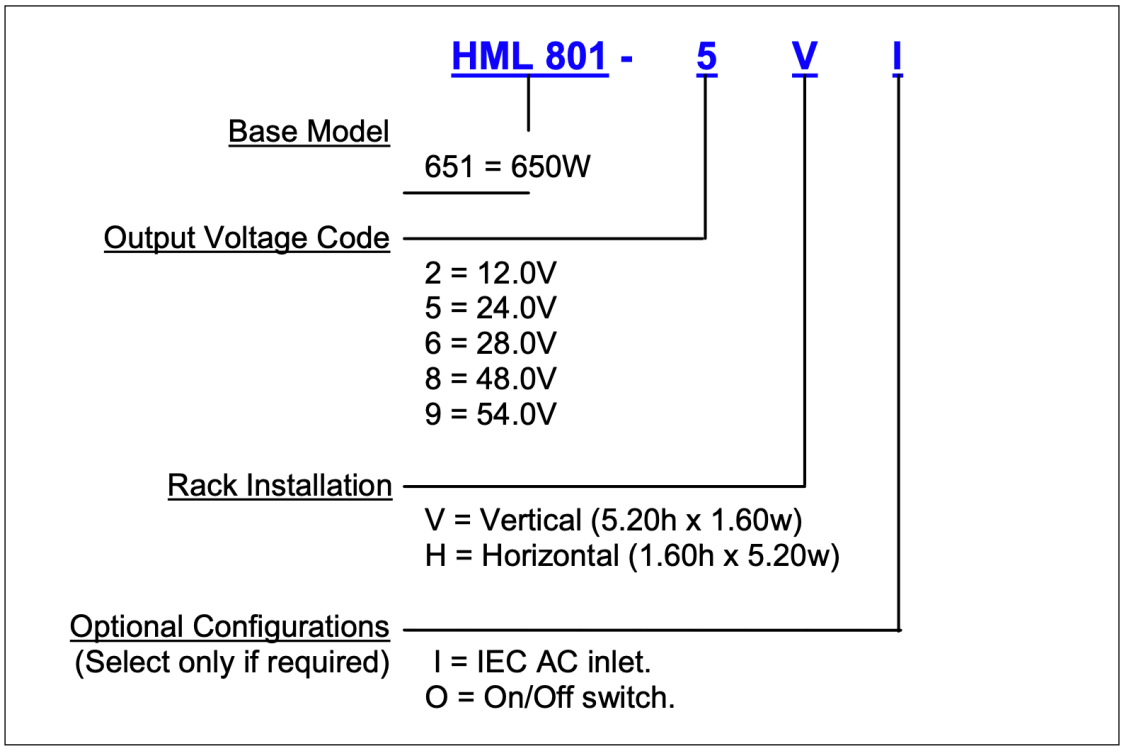
INPUT/OUTPUT AND SIGNAL CONNECTOR TYPE AND PIN FUNCTIONS

Positronics Ind. P/N PLC18M4BN0. 18 circuit (3x6) hot plug- able type, with 16ga contact pin terminals. Glass filled polyester insulator material, rated 94V-0. Secured in the unit rear. Use of Positronic PLC18F series mating connector is required to ensure correct mating contact sequence and current capacity.

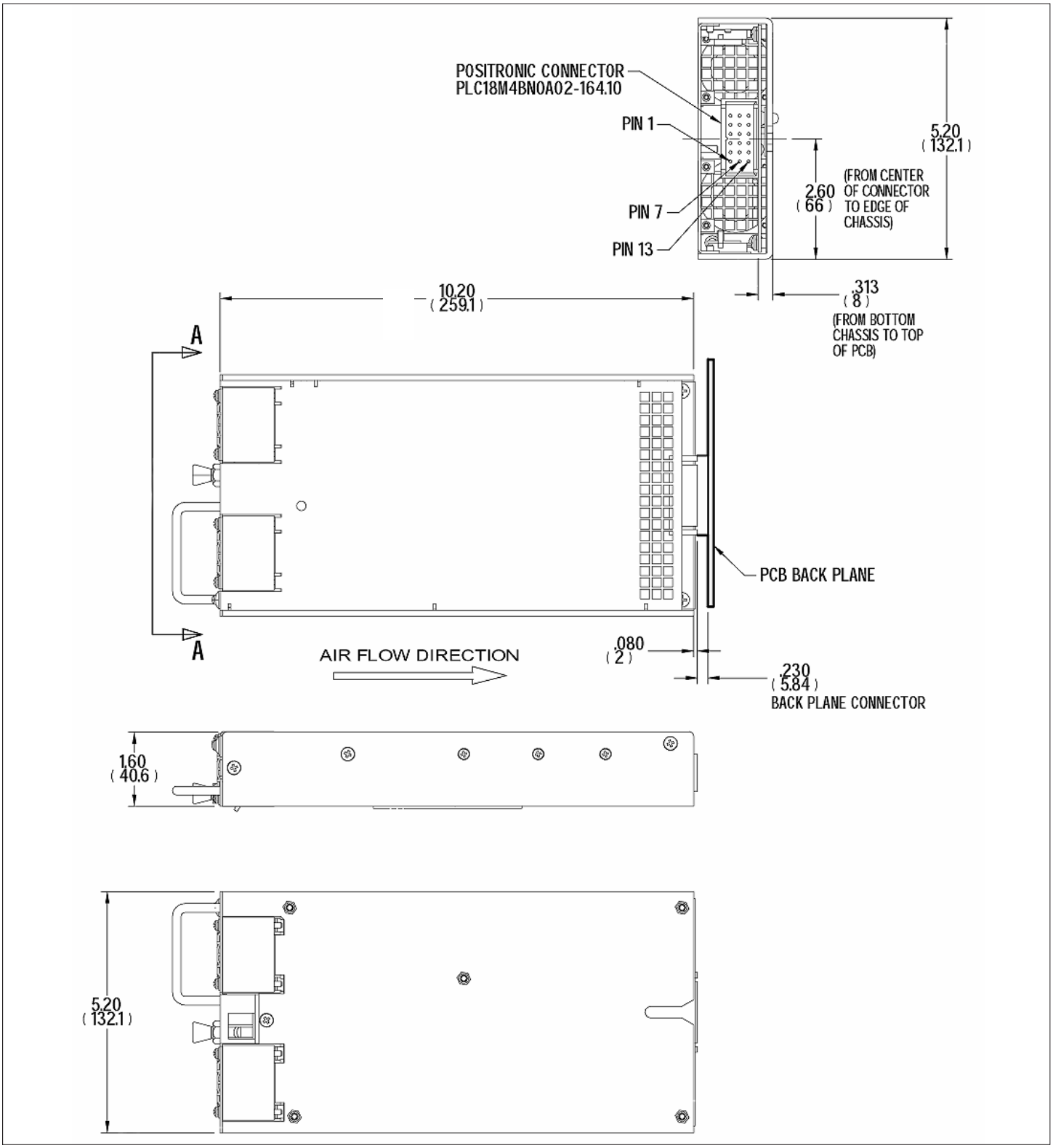
PIN#	SEQUENCE	FUNCTION
1	(2) Standard	Remote Voltage Adjust
2	(2) Standard	Power Fail Warning
3	(1) Postmate	Current Share Signal
4	(2) Standard	No Connection
5	Blank	Not Used
6	(2) Standard	L – Line (AC) Input. No connection on models with optional IEC AC input connector
7	(2) Standard	+S1 (+V1) Remote Sense
8	(2) Standard	DC-OK Signal
9	(2) Standard	–S1 (–V1) Remote Sense
10	(3) Postmate	Remote DC Enable TTL Low/Closed= ON
11	(1) Premate	Primary Earth (PE) chassis ground
12	Blank	Not Used
13,14	(2) Standard	+V1 (DC power output)
15	(1) Premate	–V1 (Rtn)
16	(2) Standard	–V1 (Rtn)
17	Blank	Not Used
18	(2) Standard	N – Neutral (ACC) Input. No connection on models with optional IEC AC input connector

CONFIGURATION OPTIONS

How to Use the Table: A two, three or four character code is required following the base model description to define the desired model configuration. The codes are added in this sequence. Please choose one from each of the categories. User selection of options I or O will incur a slight additional unit cost. Please consult the factory for additional information.



HML801 MECHANICAL DRAWING



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INNOVATIVE SPECIALTY DC POWER SYSTEMS

Standard and Custom Power Supplies from 5W to 10KW

TRAFFIC CONTROL POWER SUPPLIES

- 70-400+ Watts / 120 and 220 VAC Models Available
- CALTRANS TEES, NYSDOT, CDOT, GDOT Compliant for 332, 334, 336, 342, 344, and 346 Series cabinets
- RoHS and NEMA Compliant
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

CUSTOM POWER DISTRIBUTION ASSEMBLIES (PDAs)

- Compliant with TEES 2020
- 1U smaller than the PDA2-LX and PDA3-LX
- User accessible slots as specified
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

COMPACT PCI

- AC or DC input, 175W - 500W DC output, active PFC
- 3U x 8HP, 6U x 8HP sizes
- PICMG 2.11 compliant, UL/CSA, NEMKO/TUV/CE certified, ROHS compliant
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Industrial Computing, Military, Satellite Comm, Test, Transportation, Telecom, Aerospace

SPECIALTY HOT-SWAPPABLE POWER SUPPLIES

- 200-1500W, Universal Input, 5-54VDC Output
- Hot Swap. N+1, 90+% Efficiency
- 1U Form Factors
- 30+ Variations for Various Applications Including Nuclear
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

RACK POWER SYSTEMS

- 200W-1500W, 2-8 slots, single or mixed output voltages, up to 10KW total
- Single, dual, or individual unit AC or DC input
- Internally or externally redundant DC outputs
- Standard 19" and 23" size or user-specified configurations also available
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

CUSTOMS & MODIFIED STANDARDS

- 75W-2KW
- Single to 7 outputs
- Designed and built to custom or semi-custom specifications
- Ruggedization against shock/ vibration/ humidity optional
- Custom electrical specs, chassis, paint, labeling, connectors, interface all available

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

LOW NOISE CONVECTION / CONDUCTION COOLED POWER SUPPLIES

- 200W-500W, 90—264VAC full range input with 12-54 VDC Output
- Wide operating temperature range / high efficiency
- Small form factors
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, IT, Sensitive Electronics

MEDICAL ADAPTERS

- 6W-250W, Efficiency levels V & VI
- Desktop, Wall-mount, and Interchangeable AC plug types
- Large selection of output connectors – additional cable lengths available
- UL60601 (medical) approved adapters available
- Ruggedization against shock/ vibration/ humidity optional

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