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Model TC206L-NY AC Input, 120W Single DC Output



TC206L-NY FRONT VIEW



TC206L-NY REAR VIEW

GENERAL OVERVIEW

Jasper Electronics Model TC206L-NY is a switching power supply capable of delivering up to 120 Watts of DC power through a single, regulated +24V DC output. It provides full output regulation across changes in AC Line voltage and output load over the full operating temperature range of -34°C to +74°C. Power Factor Correction is provided, reducing peak AC Line input current and the associated stress on wiring. This model has a functional AC input range of 80V AC to 270V AC input and 47 to 63Hz. Model TC206L-NY is designed to be rack mounted in a TEES type PDA #2L, PDA #3L or PDA #4L assembly as commonly found in 332 or 336 style traffic signal control cabinets.







TECHNICAL SPECIFICATIONS

INPUT		
Voltage/ Current Label Rating	AC 90-250V, 47-63Hz, 1.6A max, Single Phase	
TEES Minimum	AC 90-132V, 57-63Hz, 1.6A max	
Power Factor	>0.98 line PFC typical at AC 115V, full load	
Fusing	AC 3.15A, 250V delayed (slow-blow) action 5x20mm AG cartridge type external line fuse provided, operator accessible. Fuse IEC 60127-2/3 compliant	
Inrush Current	Soft start (~25°C cold start) 30Apk @ AC 115V	
Efficiency	At AC 115V: >75% @ 1.0A; >84% @ 2.5A; >86% @ 5.0A	
OUTPUT		
Voltage/ Current (V/A)	V1	
Model CM121-5-M1375G	24.0V, 5.0A	
Total loading not to exceed 120 Watts at +165.2°F[+74°C]		
Output Voltage Setpoint	Factory preset within ±2.0% of nominal voltage	
Line/ Load Regulation	$<\pm2.0\%$ at the output connection over the full AC input range and 0 – 100% output loading	
Minimum Loading	None required	
Output Turn-on Delay	<200mSec from AC turn-on	
Over/ Under Shoot	None at turn-on or turn-off	
Stability	<±0.2% output drift after 20 minute warm-up	
Temperature Coefficient	<±0.02%/ºC, 0º - 50ºC, after 20 minute warm-up	
Dynamic Response	$<\pm5.0\%$ deviation with a 50% load change at a slew rate of 1A/µsec. Output recovers to within 5% in less than 300µsec	
Ripple and Noise (PARD)	2.0V max peak-to-peak / 500mV RMS nominal at the output terminal with a 20MHz bandwidth limit. May be measured with a 0.1μ F ceramic capacitor in parallel with a 22μ F tantalum capacitor connected between the measured output and its return	
Over Voltage Protection (OVP)	Non-crowbar type from 27.6V to 32.4V	
Over Current/ Short Circuit Protection	Protected against overload from 6A to 8A and short-circuit faults. Automatic recovery when overload removed	
Over Temperature Protection	Internal temperature sensing. Causes output to shut down. Automatic recovery	
Output Transient Protection	Minimum 1400W voltage transient suppressor provided	
Output Fusing	AC 8.0A, 250V delayed (slow-blow) action 5x20mm AG cartridge type external fuse provided in the (+) output, operator accessible. Fuse IEC 60127-2/3 compliant	
SIGNALS, INDICATORS AND CONTROLS		
AC Power Indicator	Front panel mounted, single-color LED. Red indicates AC power ON. Off indicates an input fault	
DC Power Indicator	Front panel mounted, single-color LED. Green indicates DC power ON. Off indicates an output fault	
Output Test Points	Two "banana jack" type test sockets provided on the front panel, color coded red and black. Allows operator to verify output voltage	
MECHANICAL		
(Refer to JE Outline Configuration Dwg, P/N 03606-000.)		
Mounting Orientation	Designed for horizontal insertion into a TEES specified Power Distribution Assembly (PDA) # 2L, 3L or 4L	
Weight	1.36Kg [3.00 lbs]	
Retaining Fastener	Operator accessible, 8-32 UNC threaded stud and wing nut provided on the rear panel	
OPERATING ENVIRONMENT		
Operating Temperature	-34.6° – +165.2°F (-37.0° – +74.0°C) ambient at full load	
Cooling	Convection only	
Relative Humidity	Up to 95% RH, non-condensing	

*Specifications subject to change without notice.





Operational Vibration	0.75G peak, 5 – 500Hz along three orthogonal axis	
Storage Temperature	-40° to +185°F (-40° to +85°C)	
Altitude	Operating to 10,000 ft. Storage to 30,000 ft	
MTBF	Designed for 150,000 hrs at 25°C	
INTERCONNECT		
Input/ Output Connector	6-circuit (2x3) panel-to-panel plug with 0.250"[6.35mm]x0.055"[1.40mm] blade type contact terminals, rated 15A/pin. General purpose black phenolic insulator material. Secured in the unit rear panel. Cinch model P-2406H-SB. Mates with Cinch model S-2406-SB or equivalent	
Note: Use of the specified mating connector is required to insure proper current capacity		
Pin #	Function	
7	+V1 (+24VDC) Output	
8	DC Ground	
9	Earth Ground	
10	No Connection	
11	N – Neutral (ACC) Input	
12	L – Line (AC) Input	
Note: Pin number assignments per CalTrans spec TEES 2009, based on the connector manufacturers pin identification method		
SAFETY, REGULATORY AND EMC		
Designed to comply with the relevant industry standards of the authorities having jurisdiction, typically UL 60950-1, CSA 22.2 and IEC 60950		
EMI Filtering	Meets CISPR22B Level B, EN55022 Level B, and FCC Part 15, Level B, for conducted emissions	
Immunity	EN 61000-4-2 Level 4, ESD 8kV direct, 15kV air discharge; EN 61000-4-3 Level 3, radiated EMI field; EN 61000-4-4 Level 3, EFT/B; EN 61000-4-5 Level 3, differential / common mode voltage surge; EN 61000-4-6 Level 3, conducted susceptibility	
Harmonics	Meets EN 61000-3 (harmonics and voltage fluctuations)	
Touch Current	1.2mA max @ 50/60Hz, 264V AC per UL 60950 test procedures (Sec. 5.0)	
Routine Factory Tests	Di-electric strength (hi-pot) to 2121V DC input-to-chassis and input-to-outputs; MegOhm to 500V output-to-chassis	

*Specifications subject to change without notice.

STANDARD MARKING AND LABELING

Dual adhesive labels applied to the rear of the unit. A 40mm x 17mm model ID label is imprinted with JE model identification data, including JE name, JE model description, JE part number, revision code, and input and output ratings.

A second label, 40mm x 10mm, is imprinted with a human readable 19 to 21-digit bar code in Code 128 that contains internal factory information. In addition, positions 12-15 indicate production year/week (YYWW), and 16-20 are a sequentially assigned serial number (4-digit only until production exceeds 9,999 units).

Use of non-standard labels or any additional marks or information required by the user, such as a user specified part number, revision codes, model description, user name or logo, etc, is possible but will require the addition of a third label and may incur additional costs. Consult the factory.

ENVIRONMENTAL CONSIDERATIONS

The model TC206L is fully compliant with the requirements of Directive 2002/95/EC Restrictions of Hazardous Substances (RoHS). RoHS compliant models are identified with the letter code "G" suffix added to the model description and/or part number on the unit labels and related documents (sales orders, etc). All materials, processes and packaging used in the assembly and shipping of RoHS versions comply.

A Certificate of Compliance is available on request. Contact the factory.

LIMITED WARRANTY POLICY

Jasper

Electronics

All Jasper Electronics (JE) standard model power supplies and products are guaranteed to be free of defects in workmanship and materials for a minimum of two (2) years from the date of original shipment, when operated within specification. Non-standard (custom) power supplies and products may be warranted on an individual basis. The unused portion of this warranty is fully transferable with the original equipment in which the power supply is installed. Please see our website for full warranty statement.



TC206NY OUTLINE DRAWING









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

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

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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

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



ASR ISO9001:2015

American Systems REGISTRAR



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