JASPER ELECTRONICS

BUILD AMERICA BUY AMERICA STANDARD

POPULAR OPTIONS

- Additional Labeling
- Custom Silkscreening
- Bar Codes

CONTACT

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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 (~25ºC 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[+74ºC]
Output Voltage Setpoint	Factory preset within ±2.0% of nominal voltage
Line/ Load Regulation	<±2.0% 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	<±5.0% 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 0.1µF ceramic capacitor in parallel with a 22µF 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	-34.6º – +165.2ºF (-37.0º – +74.0ºC) ambient at full load
Cooling	Convection only
Relative Humidity	Up to 95% RH, non-condensing

**Specifications subject to change without notice.*

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Operational Vibration	0.75G peak, 5 – 500Hz along three orthogonal axis
Storage Temperature	-40º to +185ºF (-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	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

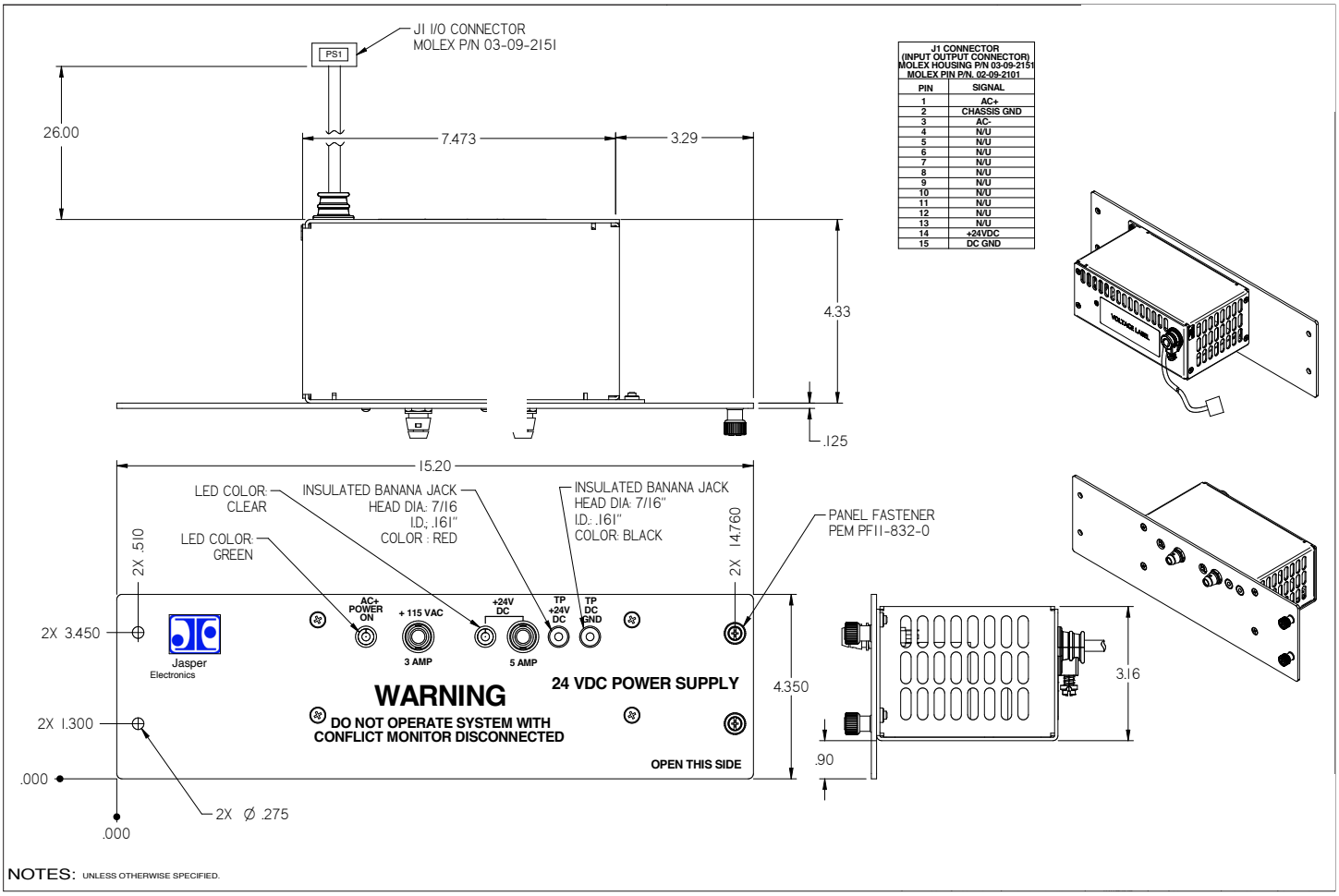
The model TC206L is fully compliant with the requirements of Directive 2002/95/EC Restrictions of Hazardous Substances (RoHS). RoHS compliant models are identified with the letter code "G" suffix added to the model description and/or part number on the unit labels and related documents (sales orders,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

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



J1 CONNECTOR (INPUT OUTPUT CONNECTOR) MOLEX HOUSING P/N 03-09-2151 MOLEX PIN P/N. 02-09-2101	
PIN	SIGNAL
1	AC+
2	CHASSIS GND
3	AC-
4	N/U
5	N/U
6	N/U
7	N/U
8	N/U
9	N/U
10	N/U
11	N/U
12	N/U
13	N/U
14	+24VDC
15	DC GND

NOTES: UNLESS OTHERWISE SPECIFIED.

Jasper Electronics

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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