

TDK | 东京电子 CN100A24-24 **PDF**



深圳创唯电子有限公司

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Industrial



Cots



Railroad

50W & 100W 24VDC Input Quarter Brick Railway DC-DC Converters



| Features | Benefits |
|-----------------------------------|--|
| • Small Size | • Less PCB space used |
| • Quarter Brick Footprint | • Industry Standard size |
| • Full Power from -40°C to +100°C | • No Derating required - covers TX class for Railway |
| • UVLO Function | • Protects battery against deep discharges |
| • Coating Option | • According to EN50155 |

| Specification | | |
|------------------------------|------|---|
| Model | | <div style="display: flex; justify-content: space-around;"> CN50A24-xx CN100A24-xx </div> |
| Input Voltage Range (5) | VDC | 14.4 - 36VDC |
| Input Voltage Transient | VDC | 40V for 3s |
| Input Current | A | 2.5 to 4.91A (model dependant) |
| Output Voltage Adjustment | VDC | 5V models: -10/+20% ; 12 & 24V models: +/-10% |
| Ripple & Noise (max) pk-pk | mV | see Model Selector |
| Line Regulation (max) | mV | see Model Selector |
| Load regulation (max) | mV | see Model Selector |
| Output Voltage Accuracy (1) | % | +/- 1% |
| Overcurrent Protection (2) | % | 105 - 140% |
| Overvoltage Protection (3) | % | 125 - 145% |
| Remote Sense (4) | - | Yes |
| Remote On/Off (4) | - | Yes (short: On - Open: Off) |
| Parallel Operation | - | No |
| Series Operation (4) | - | Yes |
| Operating temperature | °C | -40°C to +100°C Baseplate |
| Storage Temperature | °C | -40°C to +100°C |
| Temperature Coefficient | %/°C | 0.02%/°C |
| Humidity (non condensing) | %RH | 5-95% RH, Operating and Non Operating |
| Conformal Coating (5) | - | Optional - /CO suffix |
| Cooling (4) | - | Conduction Cooled |
| Withstand Voltage | VAC | Input to Baseplate: 2kVAC, Input to Output: 3kVAC for 1mn (20mA) Output to Baseplate: 500VAC for 1mn (20mA) |
| Isolation Resistance | Ω | 100MΩ at 25°C and 70%RH, Output to Baseplate 500VDC Non Operating, 10-55Hz (sweep for 1mn). |
| Vibration (5) | - | Amplitude 0.825mm Constant (Maximum 49.9m/s ²) X,Y,Z 1 hour each EN/IEC 61373 - Category 1 - Grade B |
| Shock (5) | - | 196.1m/s ² , EN/IEC 61373 - Category 1, Grade B |
| EMC Compliance (5) | - | Refer to Application Notes |
| Safety Agency Certifications | - | UL 60950-1, CSA 60950-1, EN 60950-1, CE LVD |
| Weight (Typ) | g | 70 |
| Size (WxHxD) | mm | 36.8 x 12.7 x 57.9 |
| Warranty | yrs | 5 |

Notes

- (1) At 24VDC input and maximum output current; baseplate temperature = +25°C.
- (2) 5V delay shutdown when left in OCP conditions, with output voltage less than LVP (Low Voltage Protection) level.
12 & 24V : constant current limiting with automatic recovery LVP reset : Line off or Control off
- (3) OVP reset : Line off or Control off
- (4) Refer to Instruction Manual
- (5) Compliance to EN50155 & IEC60571

Model Selector

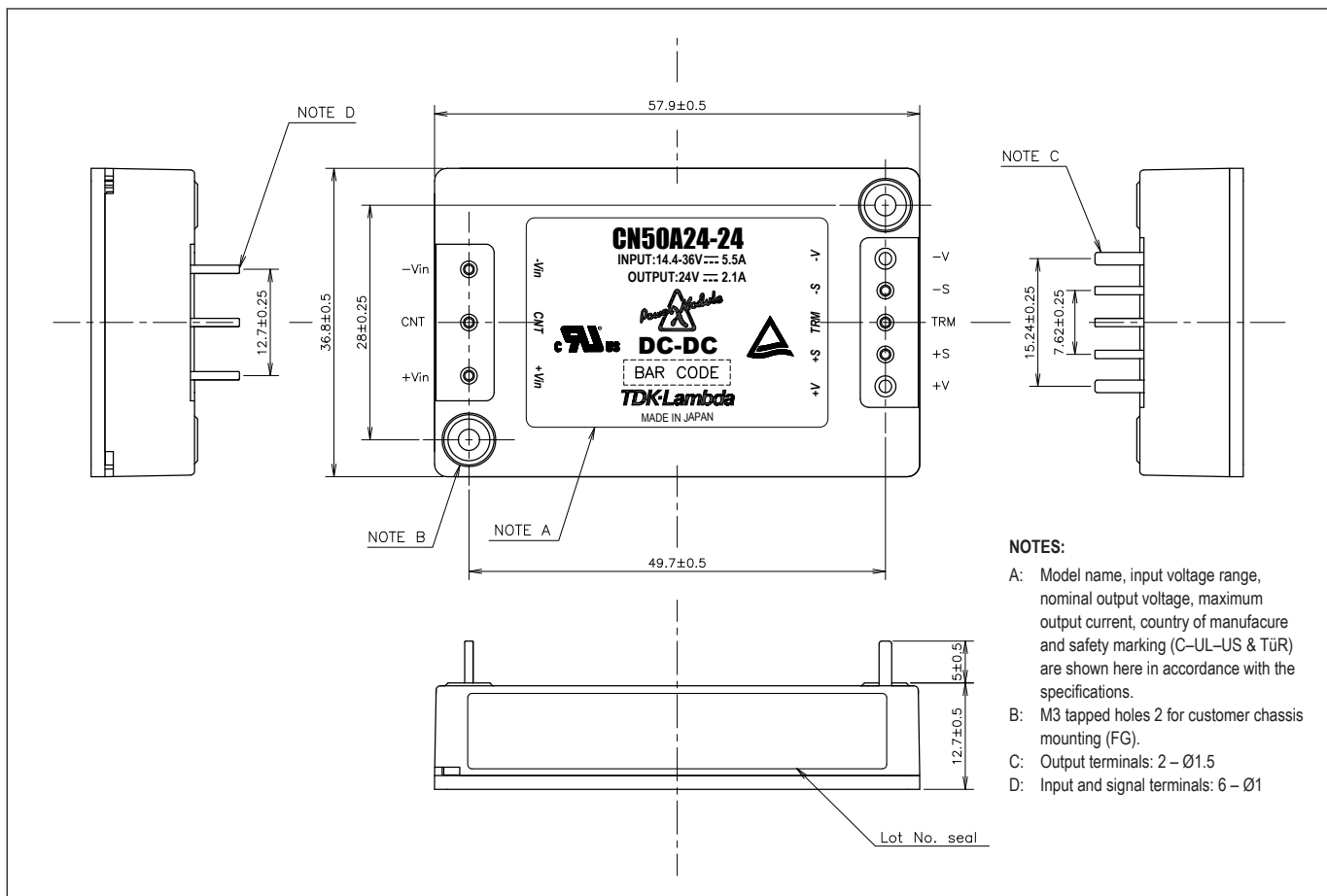
| Model | Output Voltage (VDC) | Output Current (A) | Maximum Power (W) | Input ⁽¹⁾ Current (A) | Efficiency ⁽¹⁾ (%) | Output Voltage Adj (VDC) | Ripple & Noise (mV pk-pk) ⁽⁴⁾ | Line ⁽²⁾ Regulation (mV) | Load ⁽³⁾ Regulation (mV) |
|-------------|----------------------|--------------------|-------------------|----------------------------------|-------------------------------|--------------------------|--|-------------------------------------|-------------------------------------|
| CN50A24-5 | 5 | 10 | 50 | 2.48 | 85 | 4.5-6 | 100 | 20 | 40 |
| CN50A24-12 | 12 | 4.2 | 50.4 | 2.47 | 86 | 10.8-13.2 | 150 | 48 | 96 |
| CN50A24-24 | 24 | 2.1 | 50.4 | 2.47 | 86 | 21.6-26.4 | 240 | 96 | 192 |
| CN100A24-5 | 5 | 20 | 100 | 4.91 | 86 | 4.75-6 | 100 | 20 | 40 |
| CN100A24-12 | 12 | 8.4 | 100.8 | 4.83 | 88 | 10.8-13.2 | 150 | 48 | 96 |
| CN100A24-24 | 24 | 4.2 | 100.8 | 4.83 | 88 | 21.6-26.4 | 240 | 96 | 192 |

Notes:

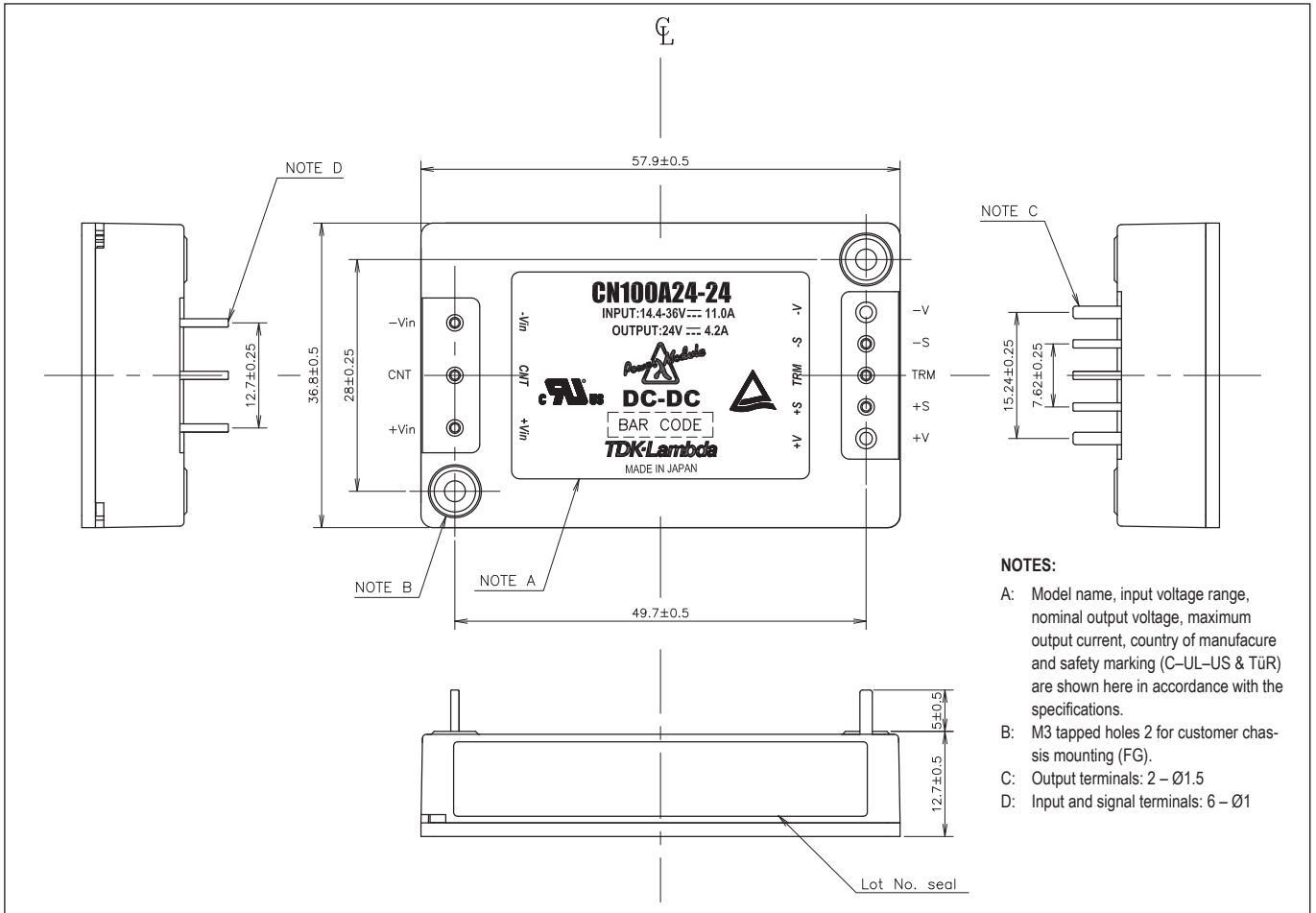
- (1) At 24VDC input and maximum output current; baseplate temperature = +25°C
- (2) 14.4 - 36VDC, constant load
- (3) No load - Full Load, constant input voltage
- (4) External components are necessary for operation; refer to Instruction Manual

Option: Conformal Coating for EN50155 & IEC60571 compliance: add /CO suffix to Model Name

Outline Drawing CN50A24



Outline Drawing CN100A24



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