

# CN-A SERIES

Rail DC / DC Converters: 30~200 Watts



## Features

- Wide input: 60 ~ 160vdc
- IEC 61373 Shock & Vibration
- Base plate cooled
- Full power at +100°C base plate temperature
- Parallel operation for 200W modules
- Quarter / Half brick industry standard package options
- -40°C operation
- Fully isolated output 3000vac
- International safety approvals
- Overvoltage protection
- Overload & Short circuit protection

## General Specifications

|                                       |  |              |              |              |
|---------------------------------------|--|--------------|--------------|--------------|
| <b>Input Voltage</b>                  | 60 ~ 160Vdc  |              |              |              |
| <b>Input current</b>                  | 0.34 ~ 2.16A ( model dependent )   |              |              |              |
| <b>Output Voltage</b>                 | Refer to table   |              |              |              |
| <b>Output Power</b>                   | 30 ~ 200 watts   |              |              |              |
| <b>External Trim</b>                  | Refer to table, via external trim network  |              |              |              |
| <b>Efficiency</b>                     | Typically 88% ( model dependent )  |              |              |              |
| <b>Ripple &amp; Noise</b><br>mV pk-pk | 5V<br>100mV  | 12V<br>150mV | 15V<br>150mV | 24V<br>240mV |
| <b>Line Regulation</b>                | 5V<br>20mV   | 12V<br>48mV  | 15V<br>60mV  | 24V<br>96mV  |
| <b>Load Regulation</b>                | 5V<br>40mV   | 12V<br>96mV  | 15V<br>120mV | 24V<br>192mV |
| <b>Protection</b>                     | Overcurrent protection set at 105~140%<br>Overvoltage protection ( cycle input or remote on/off to reset ) |              |              |              |
| <b>Remote Sense</b>                   | Yes  |              |              |              |
| <b>Remote ON/OFF</b>                  | Short = On, Open = Off   |              |              |              |
| <b>Parallel Operation</b>             | CN200A only  |              |              |              |
| <b>Operating Temp.</b>                | -40°C to +100°C base plate   |              |              |              |
| <b>Temperature Coeff.</b>             | 0.02% per °C   |              |              |              |
| <b>Humidity</b>                       | 5-95% RH non condensing  |              |              |              |
| <b>Cooling</b>                        | Conduction via base plate ( refer to manual )  |              |              |              |
| <b>Isolation</b>                      | Input-Output: 3kVAC,<br>Input-Baseplate: 1.5Kvac<br>Output-Baseplate: 500VAC                               |              |              |              |
| <b>Safety</b>                         | UL60950-1, EN60950-1, CSA60950-1   |              |              |              |
| <b>Vibration</b>                      | IEC61373 Cat 1, Grade B  |              |              |              |
| <b>Size</b>                           | CN30A ~ CN100A: 58 x 37 x 12.7mm<br>CN200A: 61 x 58 x 12.7mm   |              |              |              |
| <b>Weight</b>                         | CN30A ~ CN100A: 70g<br>CN200A: 150g  |              |              |              |

## Description

The **CN** series is “building Block” power module, that allows system design Engineers to integrate this module onto their own pcb.

This provides complete flexibility in system profile design and in addition reducing cost dramatically compare to a stand-alone dc/dc converter.

They are suitable for both rail rolling stock and fixed installations, enabling customers to design cost-effective EN50155 compliant systems.

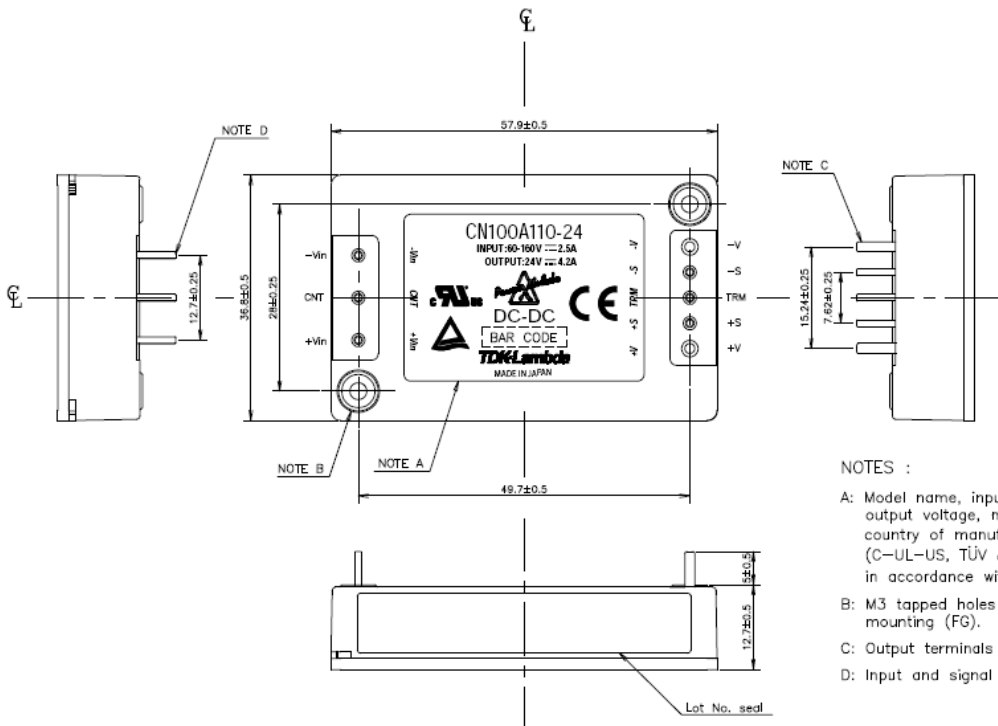
Designed for harsh environments, the **CN-A Series** meets the stringent shock and vibration requirements of IEC61373 Category 1 Class B. In addition, all models accept the wide-range DC input commonly found in railway applications, which allows operation from any voltage between 60 and 160V. These base-plate-cooled power supplies, with industry standard quarter-brick or half-brick pinout, provide exceptionally high, true useable power from -40 to +100°C, without derating.

- **Manual & Full Application notes on CN-A series, visit our website**

| Model               | Output |       | Voltage Range | Power W |
|---------------------|--------|-------|---------------|---------|
|                     | V      | A     |               |         |
| <b>CN30A110-5</b>   | 5V     | 6A    | 4.5 ~ 6V      | 30W     |
| <b>CN50A110-5</b>   | 5V     | 10A   | 4.5 ~ 6V      | 50W     |
| <b>CN100A110-5</b>  | 5V     | 20A   | 4.5 ~ 6V      | 100W    |
| <b>CN200A110-5</b>  | 5V     | 40A   | 4.5 ~ 6V      | 200W    |
| <b>CN30A110-12</b>  | 12V    | 2.5A  | 10.8 ~13.2V   | 30W     |
| <b>CN50A110-12</b>  | 12V    | 4.2A  | 10.8 ~13.2V   | 50W     |
| <b>CN100A110-12</b> | 12V    | 8.4A  | 10.8 ~13.2V   | 100W    |
| <b>CN200A110-12</b> | 12V    | 16.7A | 10.8 ~13.2V   | 200W    |
| <b>CN30A110-15</b>  | 15V    | 2.0A  | 13.5~16.5V    | 30W     |
| <b>CN50A110-15</b>  | 15V    | 3.4A  | 13.5~16.5V    | 50W     |
| <b>CN100A110-15</b> | 15V    | 6.7A  | 13.5~16.5V    | 100W    |
| <b>CN200A110-15</b> | 15V    | 13.4A | 13.5~16.5V    | 200W    |
| <b>CN30A110-24</b>  | 24V    | 1.3A  | 21.6~26.4V    | 30W     |
| <b>CN50A110-24</b>  | 24V    | 2.1A  | 21.6~26.4V    | 50W     |
| <b>CN100A110-24</b> | 24V    | 4.2A  | 21.6~26.4V    | 100W    |
| <b>CN200A110-24</b> | 24V    | 8.4A  | 21.6~26.4V    | 200W    |

# CN-A SERIES

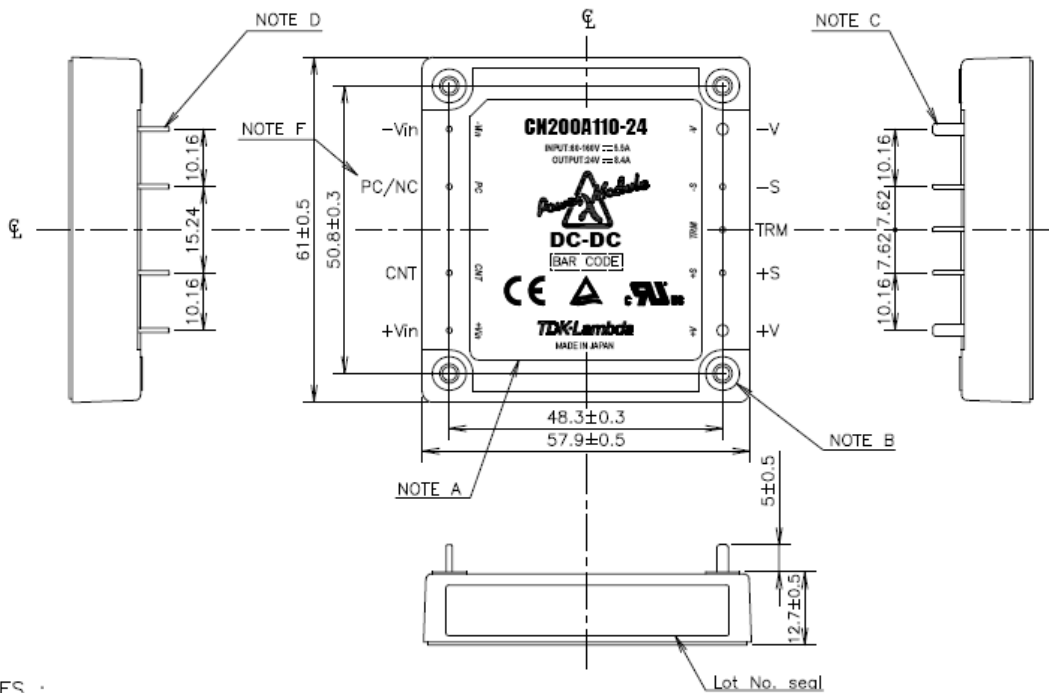
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**CN30A-100A**

**NOTES :**

- A: Model name, input voltage range, nominal output voltage, maximum output current, country of manufacture and safety marking (C-UL-US, TÜV & CE marking) are shown here in accordance with the specifications.
- B: M3 tapped holes 2 for customer chassis mounting (FG).
- C: Output terminals : 2- $\phi$ 1.5
- D: Input and signal terminals : 6- $\phi$ 1



**CN200A**

**NOTES :**

- A: Model name, input voltage range, nominal output voltage, maximum output current, country of manufacture and safety marking (C-UL-US, TÜV & CE marking) are shown here in accordance with the specifications.
- B: M3 tapped holes 4 for customer chassis mounting (FG).
- C: Output terminals : 2- $\phi$ 2.0
- D: Input and signal terminals : 7- $\phi$ 1
- E: Unless otherwise specified dimensional tolerance :  $\pm 0.25$
- F: 5V output model : NC  
12V, 15V, 24V output models : PC

|                   |           |
|-------------------|-----------|
| (unit : mm)       |           |
| MODEL NAME        | CN200A110 |
| <b>TDK-Lambda</b> |           |
| C257-02-01A       |           |