



- 60 - 160VDC Input to EN50155/IEC60571
- EN/IEC 61373 Shock and Vibration
- Base plate Cooled
- Full Power at +100°C base plate
- Five Year Warranty

## Key Market Segments & Applications

- Railway Applications
- Suitable for battery powered railway systems
- Power Plants

## CN-A Series

30W to 200W 110VDC Input  
Quarter Brick & Half Brick Railway DC-DC Converters

### CN-A Features and Benefits

#### Features

- Small Size
- Quarter & Half Brick Footprint
- Full Power from -40°C to +100°C
- UVLO Function
- Coating Option

#### Benefits

- Less PCB space used
- Industry Standard size
- No Derating required - covers TX class for Railway
- Protects battery against deep discharges
- According to EN50155

### Specifications

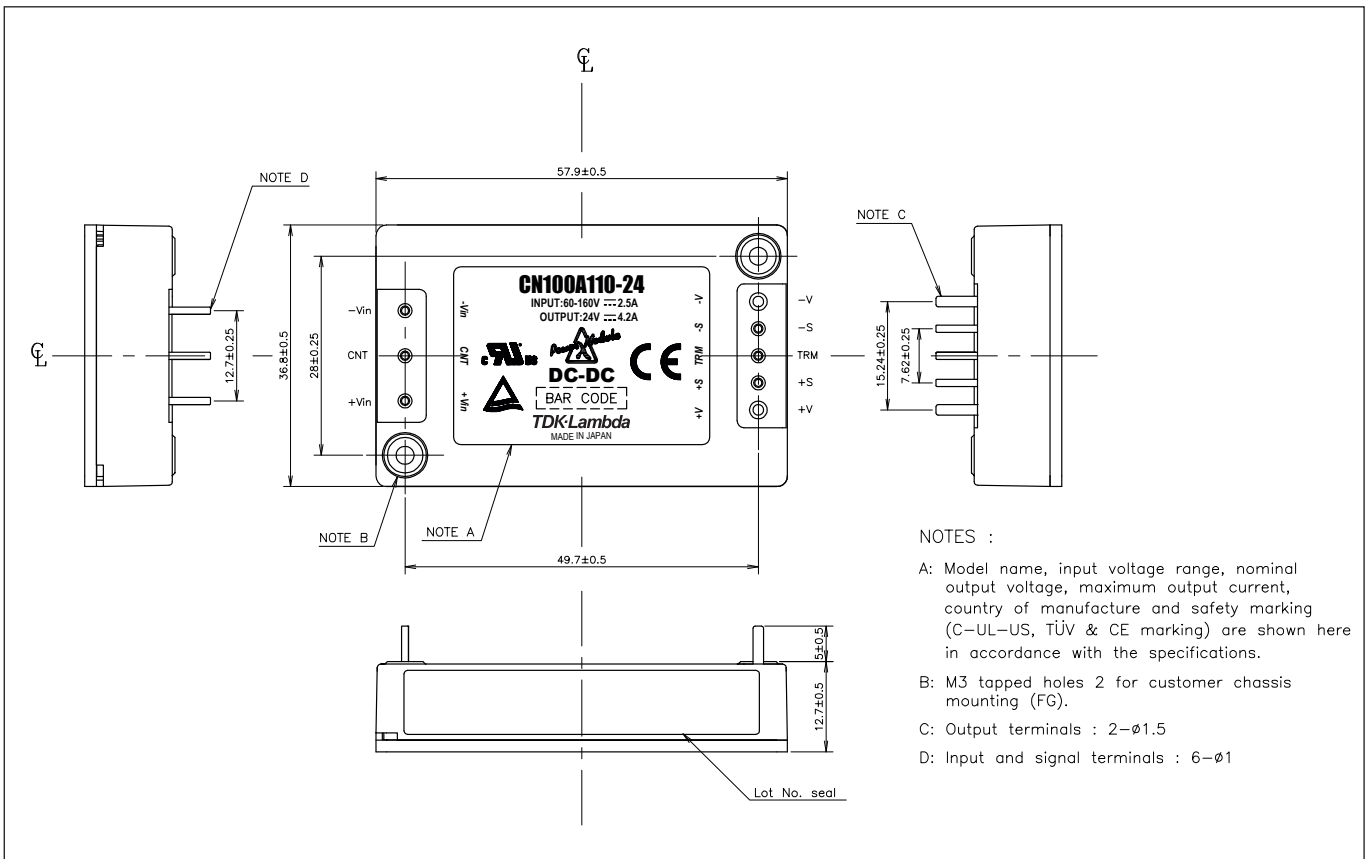
ITEMS	MODELS	CN30A110, CN50A110, CN100A110, CN200A110			
		See model selector			
Nominal Output Voltage	VDC	5V	12V	15V	24V
Input Voltage Range (1)	VDC	60 - 160VDC			
Input Current	A	0.34 - 2.16A (model dependant)			
Output Voltage Adjustment	VDC	4.5 - 6	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4
Ripple & Noise (max) pk-pk	mV	100	150	150	240
Line Regulation (max)	mV	20	48	60	96
Load Regulation (max)	mV	40	96	120	192
Overcurrent Protection	%	105 - 140%			
Overvoltage Protection	%	125 - 145% (Cycle input or remote on/off to reset)			
Remote Sense	-	Yes			
Remote On/Off	-	Yes; Low = ON, Open = OFF			
Parallel Operation	-	CN30,50 & 100 : No / CN200 : 5V : No; 12, 15, 24V : 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 (1)	-	Optional - /CO suffix			
Cooling	-	Conduction (See Installation Manual for heatsink selection)			
Withstand Voltage	VAC	Input to Baseplate: 1.5kVAC; Input to Output 3.0kVAC for 1 min.; Output to Baseplate: 500VAC for 1 min			
Isolation Resistance	Ω	>100MΩ at 25°C and 70%RH, Output to Base plate 500VDC			
Vibration (1)	-	Non Operating, 10-55Hz (sweep for 1 min.) Amplitude 0.825mm constant (Max 49 m/s <sup>2</sup> ) X,Y,Z 1 hour each IEC61373 - Category 1, Grade B			
Shock (1)	-	196.1m/s <sup>2</sup> , EN/IEC61373 - Category 1, Grade B			
Safety Agency Certifications	-	IEC/UL/CSA/EN60950-1, IEC/UL/CSA/EN62368-1, CE			
Weight (Typ)	g	CN30-50 : 70 / CN200 : 100			
Size (WxHxD)	mm	CN30A - 100A : 36.8 x 12.7 x 57.9, CN200A : 61 x 12.7 x 57.9			
Warranty	yrs	5			

**Notes:** See Installation Manual for full details, test methods of parameters and application notes  
(1) Compliance to EN50155 & IEC60571

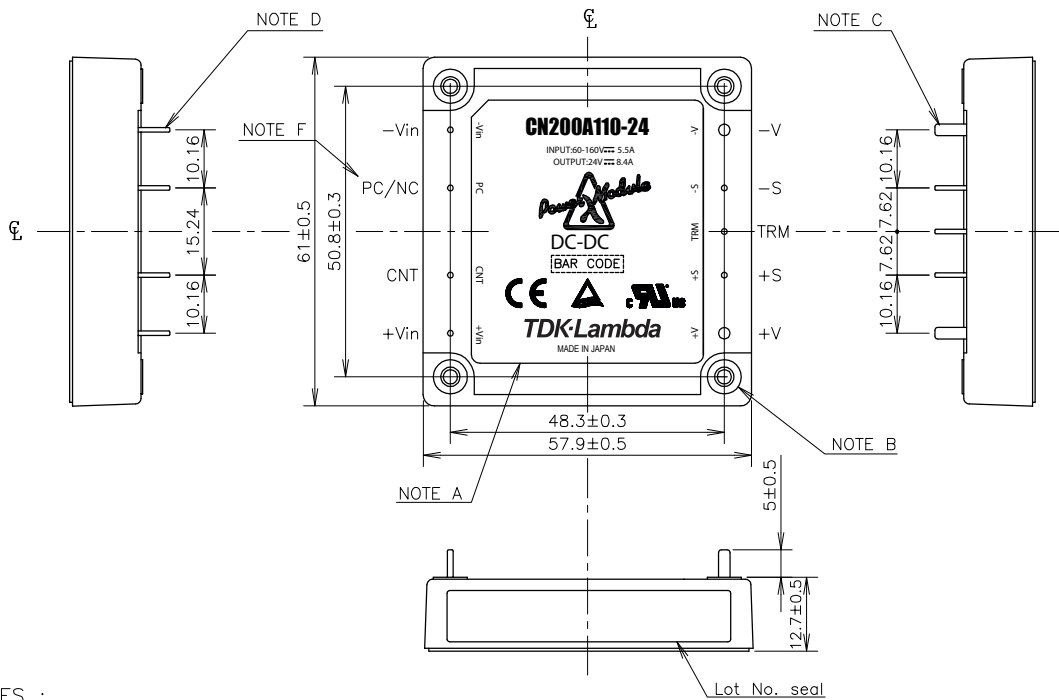
Model Selector					
Model	Voltage (V)	Output Current (A)	Maximum Power (W)	Input Current (A)	Efficiency (%) (100% load, 110VDC In)
CN30A110-5	5	6.0	30.0	0.34	83
CN50A110-5	5	10.0	50.0	0.55	85
CN100A110-5	5	20.0	100.0	1.08	85
CN200A110-5	5	40.0	200.0	2.16	85
CN30A110-12	12	2.5	30.0	0.34	84
CN50A110-12	12	4.2	50.4	0.55	86
CN100A110-12	12	8.4	100.8	1.05	88
CN200A110-12	12	16.7	200.4	2.09	88
CN30A110-15	15	2.0	30.0	0.34	84
CN50A110-15	15	3.4	51.0	0.55	86
CN100A110-15	15	6.7	100.5	1.05	88
CN200A110-15	15	13.4	201	2.1	88
CN30A110-24	24	1.3	31.2	0.34	84
CN50A110-24	24	2.1	50.4	0.55	86
CN100A110-24	24	4.2	100.8	1.05	88
CN200A110-24	24	8.4	201.6	2.11	88

Option: Conformal coating for EN50155 & IEC60571 compliance: add /CO suffix to model name

**Outline Drawing CN30A-CN100A**



## Outline Drawing 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

### Heat Sink Accessories

Model	Description
HAQ-10T	CN35A to 100A 25mm transverse fins
HAH-10T	CN200A 25mm transverse fins
HAH-15T	CN200A 38mm transverse fins
HAH-15L	CN200A 38mm longitudinal fins



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