



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		
		CN50A24-xx      CN100A24-xx
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 <sup>2</sup> ) X,Y,Z 1 hour each EN/IEC 61373 - Category 1 - Grade B
Shock (5)	-	196.1m/s <sup>2</sup> , EN/IEC 61373 - Category 1, Grade B
EMC Compliance (5)	-	Refer to Application Notes
Safety Agency Certifications	-	IEC/UL/CSA/EN60950-1, IEC/UL/CSA/EN62368-1, CE
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

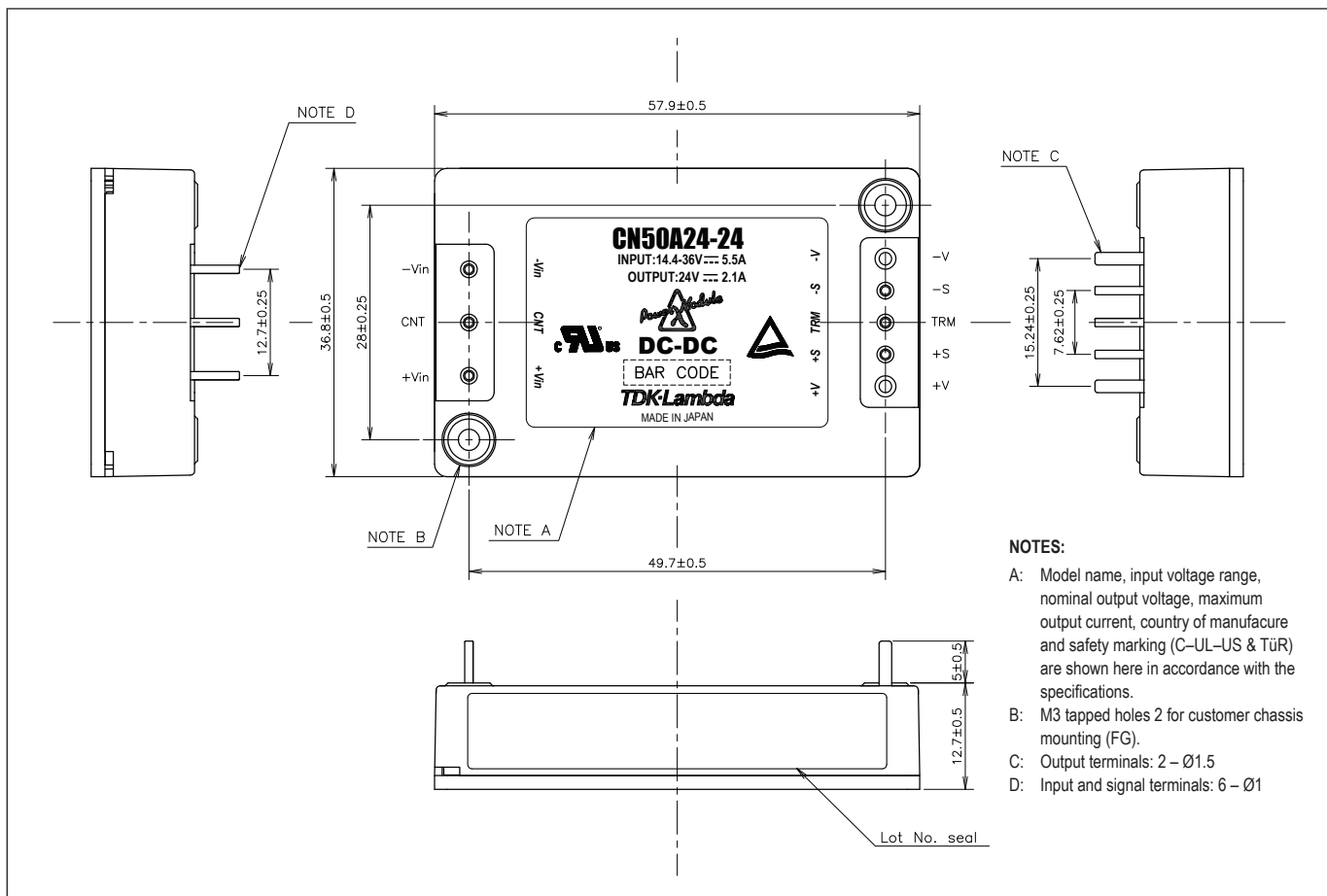
Model	Output Voltage (VDC)	Output Current (A)	Maximum Power (W)	Input <sup>(1)</sup> Current (A)	Efficiency <sup>(1)</sup> (%)	Output Voltage Adj (VDC)	Ripple & Noise (mV pk-pk) <sup>(4)</sup>	Line <sup>(2)</sup> Regulation (mV)	Load <sup>(3)</sup> Regulation (mV)
CN50A24-5	5	10	50	2.48	85	4.5-6	100	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:

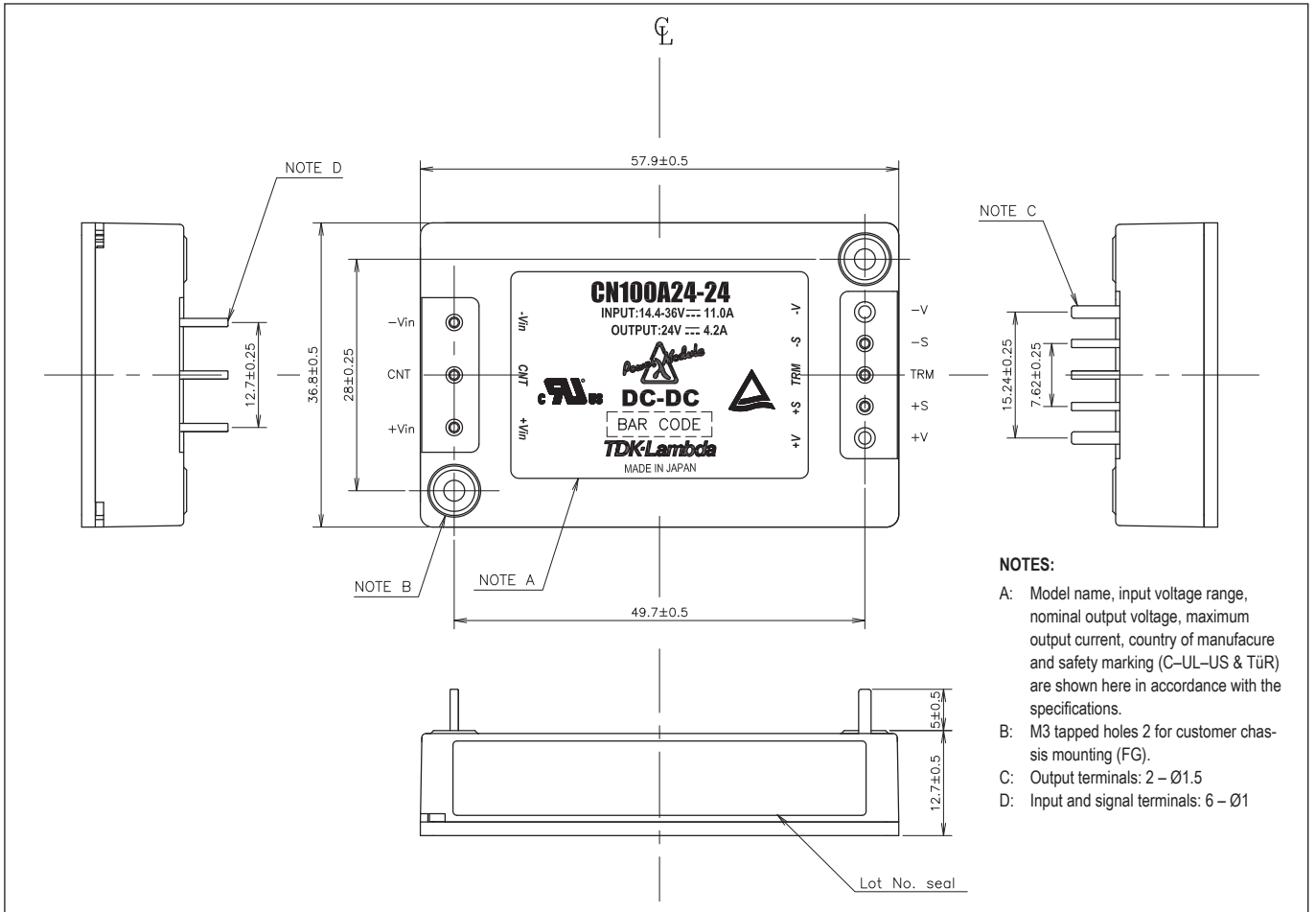
- (1) At 24VDC input and maximum output current; baseplate temperature = +25°C
- (2) 14.4 - 36VDC, constant load
- (3) No load - Full Load, constant input voltage
- (4) External components are necessary for operation; refer to Instruction Manual

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

## Outline Drawing CN50A24



## Outline Drawing CN100A24



### Heat Sink Accessory

Model	Description
HAQ-10T	25mm transverse fins



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