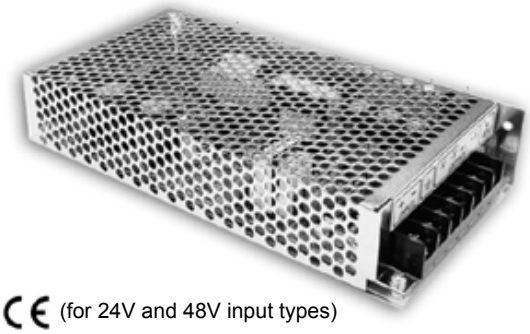
Wall Industries, Inc.

DCSD-100 Series
100 Watt
Single Output
Chassis Mount DC/DC Converter

FEATURES

- **105°C Output Capacitor**
- **Low Cost, High Reliability**
- **Compact Size, Light Weight**
- **100% Full Load Burn-In Tested**
- **Built-In EMI Filter, Low Ripple Noise**
- **High Efficiency, Low Working Temperature**
- **Short Circuit, Overload, and Over Voltage Protected**



CE (for 24V and 48V input types)

SPECIFICATIONS: *DCSD-100 Series*

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

INPUT SPECIFICATIONS	
Input Voltage	DCSD-100**B**: 19 ~ 36VDC DCSD-100**C**: 36 ~ 72VDC DCSD-100**D**: 72 ~ 144VDC or 85~132VAC
AC Current	5V outputs: 6A at 24VDC 12V outputs: 3A at 48VDC 24V outputs: 1.5A at 96VDC
Inrush Current	DCSD-100**D**: 20A at 96VDC
Leakage Current	DCSD-100**D**: < 0.75mA at 120VAC
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Voltage Tolerance (See Note 3)	5V outputs: ±2% 12V & 24V outputs: ±1%
Voltage Adjustability	See Table
Output Current	See Table
Line Regulation	5V outputs: ±0.5% 12V outputs: ±0.3% 24V outputs: ±0.2%
Load Regulation	5V outputs: ±0.5% 12V outputs: ±0.3% 24V outputs: ±0.2%
Ripple & Noise	See Table
Output Power	See Table
Setup, Rise, Hold Up Time	DCSD-100**D** (only): 2s, 50ms, 20ms
PROTECTION	
Over Voltage Protection	5V outputs: 5.75 ~ 6.75V / 10% Load 12V outputs: 16.8 ~ 20V / 10% Load 24V outputs: 31.5 ~ 37.5V / 10% Load
Over Load Protection	105%~135% Type: Foldback Current Limiting Reset: Auto recovery.
GENERAL SPECIFICATIONS	
Efficiency	See Table
Withstand Voltage	1.5KVAC (input to output), 1.5KVAC (input to FG), 0.5KVAC (output to FG)
Isolation Resistance	500VDC / 100MΩ (input to output, input to FG, output to FG)
ENVIRONMENTAL SPECIFICATIONS	
Working Temperature	-10°C to +60°C (refer to output derating curve)
Storage Temperature	-20°C to +85°C
Working Humidity	20% to 90% RH
Storage Humidity	10% to 95% RH
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60min. each axes
Temperature Coefficient	±0.03%/°C (0°C~50°C)
PHYSICAL SPECIFICATIONS	
Weight	600 grams
Dimensions	199(L) x 98(W) x 38(H) mm
SAFETY & EMC	
EMC Standards	EN55022 CLASS B (Radiation), EN61000-4-2,3,4,6,8 ENV50204 Verification for DCSD-100B/C Series only, not including DCSD-100D series.

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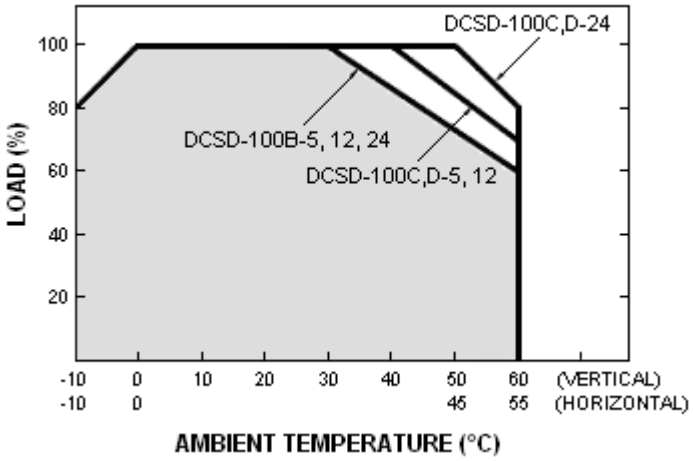
OUTPUT VOLTAGE / CURRENT RATING CHART

Model	Input Voltage	Output Voltage	Voltage Adjustability	Rated Output Current	Output Ripple & Noise	Output Power	Efficiency
DCSD-100B-5	24 VDC (19 ~ 36 VDC)	5 VDC	4.5 ~ 5.5VDC	20A	100mVp-p	100W	74%
DCSD-100B-12		12 VDC	11 ~ 16VDC	8.5A	120mVp-p	102W	75%
DCSD-100B-24		24 VDC	23 ~ 30VDC	4.2A	150mVp-p	100.8W	76%
DCSD-100C-5	48 VDC (36 ~ 72 VDC)	5 VDC	4.5 ~ 5.5VDC	20A	100mVp-p	100W	75%
DCSD-100C-12		12 VDC	11 ~ 16VDC	8.5A	120mVp-p	102W	77%
DCSD-100C-24		24 VDC	23 ~ 30VDC	4.2A	150mVp-p	100.8W	80%
DCSD-100D-5	96 VDC (72 ~ 144 VDC)	5 VDC	4.5 ~ 5.5VDC	20A	100mVp-p	100W	78%
DCSD-100D-12		12 VDC	11 ~ 16VDC	8.5A	120mVp-p	102W	81%
DCSD-100D-24		24 VDC	23 ~ 30VDC	4.2A	150mVp-p	100.8W	83%

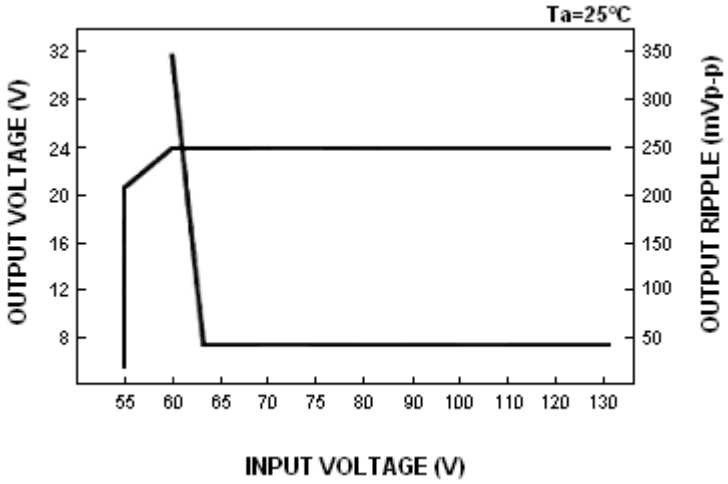
NOTES

1. The DCSD-100 Series is designated as DCSD-100x-y where x can be **B** (19 ~ 36 VDC input voltage), **C** (36 ~ 72 VDC input voltage), or **D** (72 ~ 144 VDC input voltage) and y can be 5, 12, or 24 for output voltage.
2. All parameters are specified at rated input, rated load and 25ºC 70% RH. ambient.
3. Tolerance includes setup tolerance, line regulation, and load regulation.
4. Ripple & noise are measured at 20MHz using a 12" twisted pair terminated with a 0.1uF & 47uF capacitor.
5. Line regulation is measured from low line to high line at rated load.
6. Load regulation is measured from 0% to 100% rated load.

DERATING CURVE

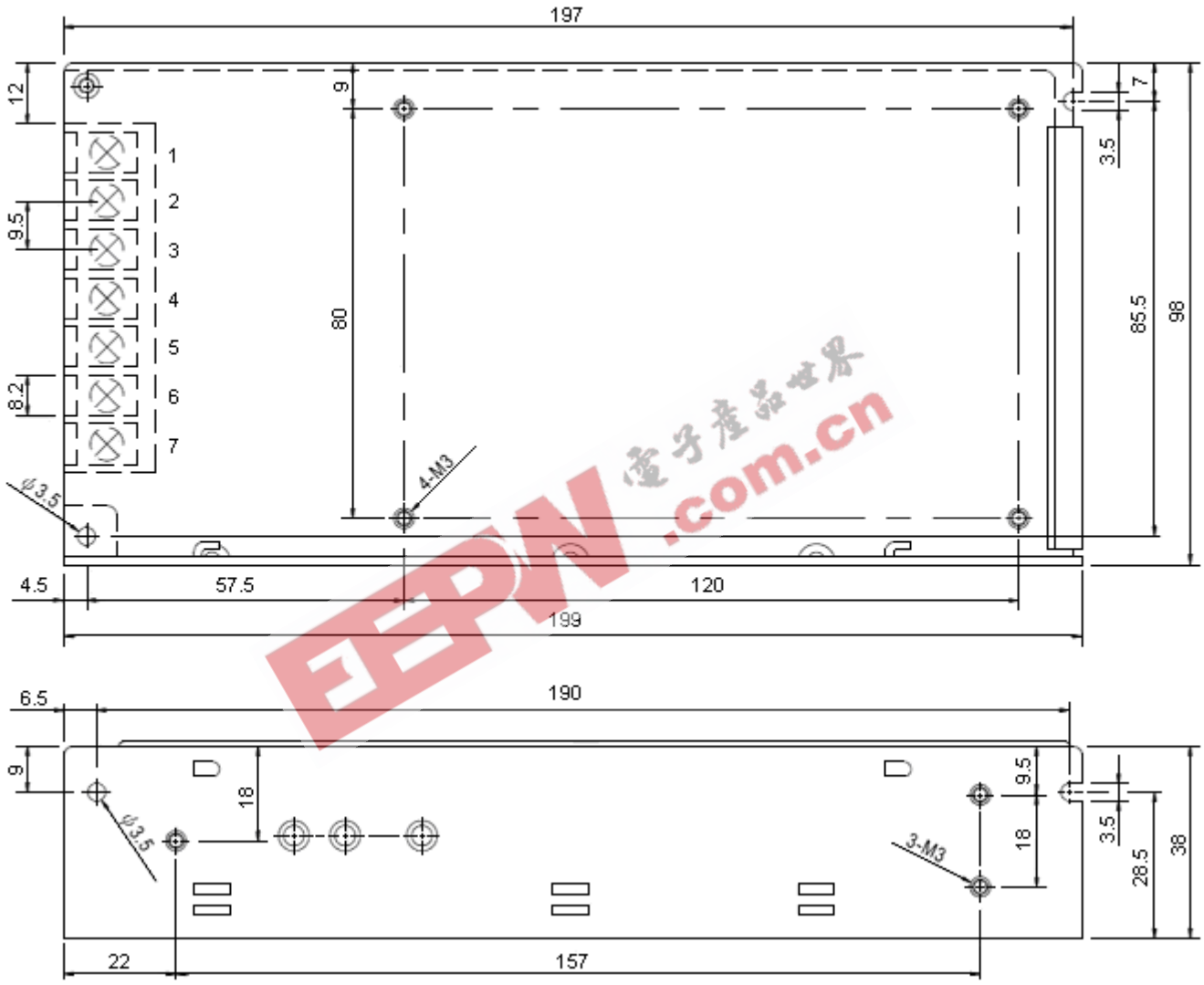


STATIC CHARACTERISTICS (DCSD-100D-24)



MECHANICAL DRAWING

Unit: mm



Terminal Pin No. Assignment			
Pin No.	Assignment	Pin. No	Assignment
1,2	INPUT	4,5	DC OUTPUT (-V)
3	FG	6,7	DC OUTPUT (+V)

DCSD-100B,C	
Pin No.	Assignment
1	DC INPUT (V+)
2	DC INPUT (V-)

DCSD-100D	
Pin No.	Assignment
1,2	AC/DC INPUT