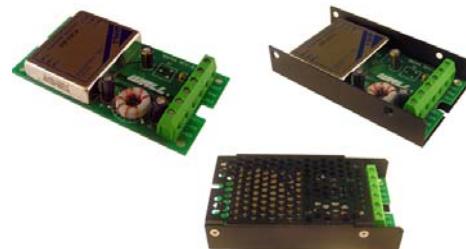


FEATURES

- High Efficiency up to 90%
- Fixed Switching Frequency
- Six-Sided Continuous Shield
- 2:1 Wide Input Voltage Range
- International Safety Standard Approval
- **Call Factory for More Output Power Options**
- Chassis Mount Options: Open Frame, U Channel, and Enclosed Types Available



UL E155800
TUV
CB
CE MARK



SPECIFICATIONS: CMDB Series

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range	12V nominal input	9-18VDC
	24V nominal input	18-36VDC
	48V nominal input	36-75VDC
Under Voltage Lockout		
12V nominal input.....	DC-DC ON.....	9VDC
	DC-DC OFF	8VDC
24V nominal input.....	DC-DC ON.....	17.8VDC
	DC-DC OFF	16VDC
48V nominal input.....	DC-DC ON.....	36VDC
	DC-DC OFF	34VDC
Input Voltage Variation.....	dv/dt	5V/ms max
	(Complies with ETS300 132 part 4.4)	
Input Surge Voltage (100ms max)	12V input	36VDC
	24V input	50VDC
	48V input	100VDC
Input Reflected Ripple Current (nominal Vin and FL)	40mA _{p-p}	
Start Up Time (nominal Vin and constant resistive load)		
Power Up.....	25ms typ.	
Remote ON/OFF	25ms typ.	
Remote ON/OFF (See Note 1)		
DC-DC ON	Open or 3.5V < Vr < 12V	
DC-DC OFF.....	Short or 0V < Vr < 1.2V	
Remote Off Input Current (nominal Vin)	2.5mA	

OUTPUT SPECIFICATIONS

Output Voltage	see table
Voltage Accuracy (nom Vin and full load)	±1%
Voltage Adjustability (See Note 1)	±10%
Output Current	see table
Output Power	40 watts max.
Line Regulation (LL to HL at FL).....	±0.5%
Load Regulation (10% to 100% FL).....	±0.5%
Minimum Load	0%
Ripple/Noise (20MHz BW)	see table
Transient Response Recovery Time (25% load step change).....	250us

PROTECTION SPECIFICATIONS

Over Voltage Protection	1.5V Output	3.9V
(Zener diode clamp)	1.8V Output	3.9V
	2.5V Output	3.9V
	3.3V Output	3.9V
	5V Output	6.2V
	12V Output	15V
	15V Output	18V
Over Load Protection (% of FL at nominal input).....	150% max.	
Short Circuit Protection	Hiccup, automatic recovery	
Over Temperature Protection	115°C typ.	

GENERAL SPECIFICATIONS

Efficiency	see table
Switching Frequency	300KHz typ.
Isolation Voltage	
Input to Output.....	1600VDC min.
Input to Case	1600VDC min.
Output to Case.....	1600VDC min.
Isolation Resistance	10 ⁹ ohms min.
Isolation Capacitance	1000pF max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°C to +85°C (with derating)
Storage Temperature	-55°C ~ +105°C
Maximum Case Temperature	+100°C
Relative Humidity.....	5% to 95% RH
Temperature Coefficient	±0.02% / °C max.
Thermal Impedance (See Note 6)	
Natural Convection	9.2°C / Watt
Heat-Sink with 20LFM	7.6°C/Watt
Heat-Sink with 500LFM	2.8°C/Watt
Thermal Shock	MIL-STD-810D
Vibration	10~55Hz, 10G, 30 minutes along X, Y, and Z
MTBF (See Note 2)	1.398 x 10 ⁶ hrs

PHYSICAL SPECIFICATIONS

Potting material of the DC/DC Converter	Epoxy (UL94-V0)
Shielding of the DC/DC Converter.....	six – sided
Weight	Approximately 7 oz.
Dimensions.....	4.00(L) x 2.25(W) x 0.81(H) inches

SAFETY & EMC

Approvals and Standards	IEC60950-1, UL60950-1, EN60950-1	
Conducted Emissions.....	EN55022	Class A
Radiated Emissions.....	EN55022	Class A
ESD	EN61000-4-2.....	Perf. Criteria B
Radiated Immunity.....	EN61000-4-3.....	Perf. Criteria A
Fast Transient.....	EN61000-4-4.....	Perf. Criteria B
Surge.....	EN61000-4-5.....	Perf. Criteria B
Conducted Immunity	EN61000-4-6.....	Perf. Criteria A

Due to advances in technology, specifications subject to change without notice



Wall Industries, Inc.

Rev. B

CMDB Series
40 Watt Single Output
2:1 Input Voltage Range
Chassis Mount DC/DC Converter

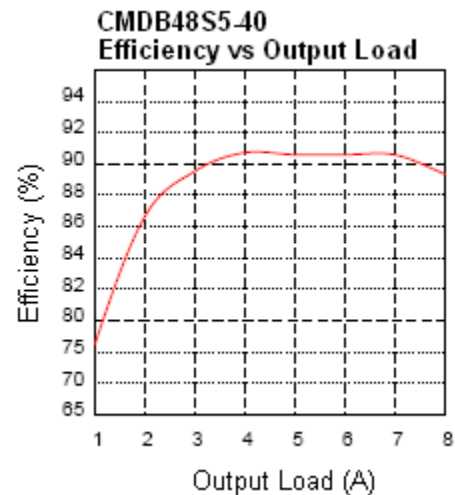
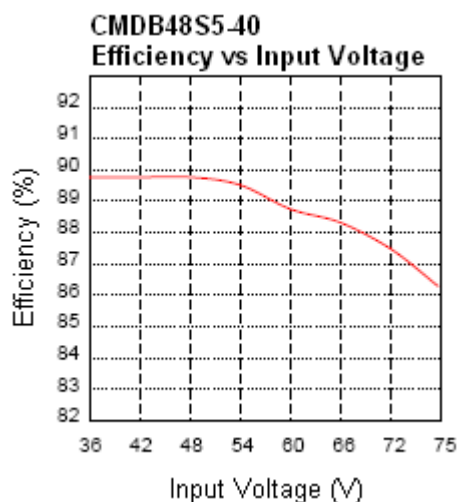
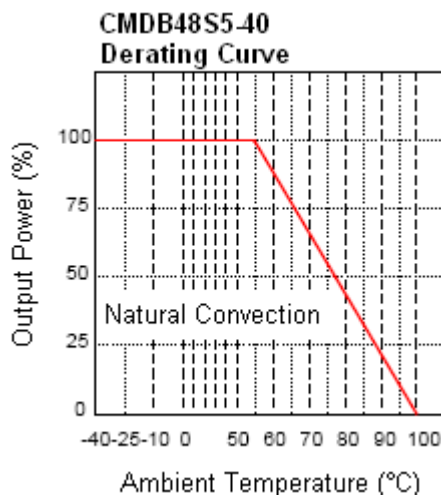
OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Range	Output Voltage	Output Current	Output Ripple & Noise	Input Current ⁽⁴⁾	Efficiency ⁽⁵⁾	Max Capacitive Load ⁽⁶⁾
CMDB12S1.5-12	12VDC (9 – 18 VDC)	1.5 VDC	8000mA	50mVp-p	1250mA	84%	45000μF
CMDB12S1.8-14		1.8 VDC	8000mA	50mVp-p	1538mA	82%	37700μF
CMDB12S2.5-20		2.5 VDC	8000mA	50mVp-p	2083mA	84%	27000μF
CMDB12S3.3-26		3.3 VDC	8000mA	50mVp-p	2683mA	86%	21000μF
CMDB12S5-40		5 VDC	8000mA	50mVp-p	4065mA	86%	13600μF
CMDB12S12-40		12 VDC	3333mA	75mVp-p	4065mA	86%	2360μF
CMDB12S15-40		15 VDC	2666mA	75mVp-p	4015mA	87%	1510μF
CMDB24S1.5-12	24VDC (18 – 36 VDC)	1.5 VDC	8000mA	50mVp-p	649mA	81%	45000μF
CMDB24S1.8-14		1.8 VDC	8000mA	50mVp-p	759mA	83%	37700μF
CMDB24S2.5-20		2.5 VDC	8000mA	50mVp-p	1016mA	86%	27000μF
CMDB24S3.3-26		3.3 VDC	8000mA	50mVp-p	1325mA	87%	21000μF
CMDB24S5-40		5 VDC	8000mA	50mVp-p	1961mA	89%	13600μF
CMDB24S12-40		12 VDC	3333mA	75mVp-p	2048mA	88%	2360μF
CMDB24S15-40		15 VDC	2666mA	75mVp-p	1985mA	89%	1510μF
CMDB48S1.5-12	48VDC (36 – 75 VDC)	1.5 VDC	8000mA	50mVp-p	321mA	82%	45000μF
CMDB48S1.8-14		1.8 VDC	8000mA	50mVp-p	375mA	84%	37700μF
CMDB48S2.5-20		2.5 VDC	8000mA	50mVp-p	508mA	86%	27000μF
CMDB48S3.3-26		3.3 VDC	8000mA	50mVp-p	655mA	88%	21000μF
CMDB48S5-40		5 VDC	8000mA	50mVp-p	969mA	90%	13600μF
CMDB48S12-40		12 VDC	3333mA	75mVp-p	1000mA	89%	2360μF
CMDB48S15-40		15 VDC	2666mA	75mVp-p	992mA	89%	1510μF

NOTES

1. The ON/OFF control pin voltage is referenced to the negative input.
2. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment).
3. Heat sink is optional. Please call factory for ordering details.
4. Maximum value at nominal input voltage and full load.
5. Typical value at nominal input voltage and full load.
6. Test at minimum Vin and constant resistive load.
7. Chassis Mount Options: No suffix for open frame, "U" suffix for U Channel, and "E" suffix for Enclosed type.

DERATING CURVES & EFFICIENCY GRAPHS



MECHANICAL DRAWING

Unit: inches [mm]

