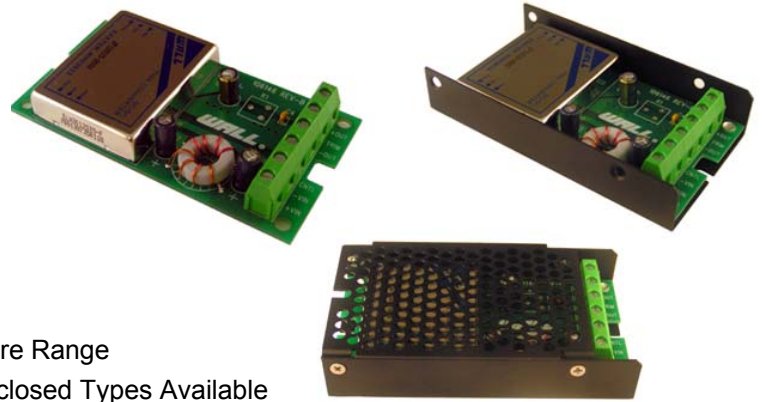


FEATURES

- 10 Watts Output Power
- High Efficiency up to 86%
- Fixed Switching Frequency
- Six-Sided Continuous Shield
- 2:1 Wide Input Voltage Range
- International Safety Standard Approval
- **Call Factory for More Output Power Options**
- Options: Add suffix “-I” for Extended Operating Temperature Range
- Chassis Mount Options: Open Frame, U Channel, and Enclosed Types Available



SPECIFICATIONS: CMJR Series

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range	5V nominal input	4.5 - 9VDC
	12V nominal input	9 - 18VDC
	24V nominal input	18 - 36VDC
	48V nominal input	36 - 75VDC
Input Surge Voltage (100ms max)	5V input	15VDC
	12V input	36VDC
	24V input	50VDC
	48V input	100VDC
Input Reflected Ripple Current.....		30mA _{p-p}
(nominal Vin and full load)		
Start Up Time (nominal Vin and constant resistive load)		20ms typ.
Remote ON/OFF (Option) (See Note 2)		
(Positive Logic).....	DC-DC ON	Open or 3.5V < Vr < 12V
	DC-DC OFF	Short or 0V < Vr < 1.2V
(Negative Logic)	DC-DC ON.....	Short or 0V < Vr < 1.2V
	DC-DC OFF	Open or 3.5V < Vr < 12V
Remote Off Input Current (nominal Vin)		20mA

OUTPUT SPECIFICATIONS

Output Voltage	see table
Voltage Accuracy (nominal Vin and full load)	±1%
Output Current	see table
Output Power	10 watts max.
Line Regulation (LL to HL at FL).....	±0.2%
Load Regulation (10% - 100 % FL).....	±0.5%
Minimum Load (See Note 1)	10% of full load
Ripple/Noise (20 MHz BW)	50mV _{p-p}
Temperature Coefficient	±0.02% / °C max.
Transient Response Recovery Time (25% load step)	250us

PROTECTION SPECIFICATIONS

Over Voltage Protection.....	3.3V output	3.9V
(zener diode clamp)	5V output	6.2V
	12V output	15V
	15V output	18V
Over Load Protection (% of full load at nominal input).....		150% max.
Short Circuit Protection.		Hiccup, automatic recovery

GENERAL SPECIFICATIONS

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

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (See derating curves)	
Standard	-25°C ~ +85°C (with derating)
"I" (See Note 4).....	-40°C ~ +85°C (no derating)
	(except for 5V input models)
Storage Temperature	-55°C ~ +105°C
Maximum Case Temperature	100°C
Relative Humidity.....	5% to 95% RH
Thermal Shock	MIL-STD-810D
Vibration	10~55Hz, 10G, 30 minutes along X, Y, and Z
MTBF (See Note 3)	1.976 x 10 ⁶ hours

PHYSICAL SPECIFICATIONS

Potting material of the DC/DC Converter	Epoxy (UL94-V0)
Shielding of the DC/DC Converter.....	six-sided
Weight	Approximately 6oz
Dimensions.....	4.00(L) x 2.25(W) x 0.81(H) inches

SAFETY & EMC

Approvals and Standards	IEC60950-1, UL60950-1, EN60950-1	
		(except for 5V input models)
Conducted Emissions.....	EN55022	Class A
Radiated Emissions.....	EN55022	Class A
	EN55022	Class B
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

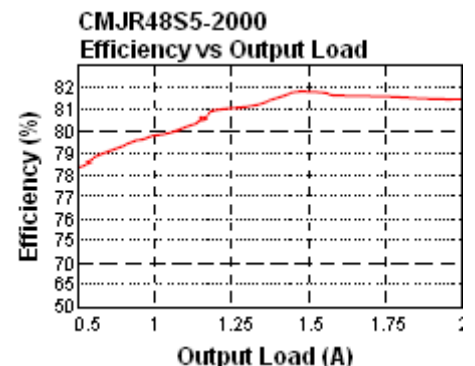
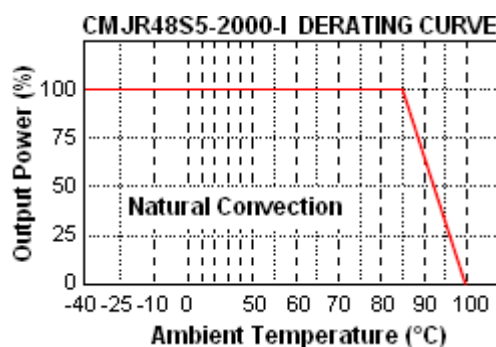
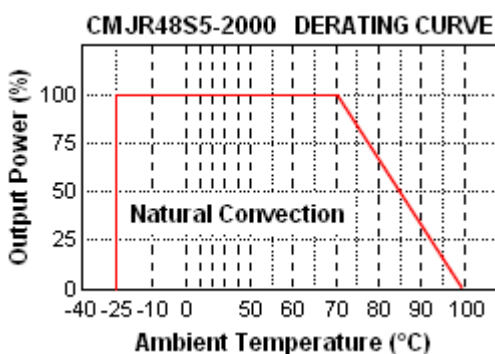
OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Range	Output Voltage	Output Current	Output Ripple & Noise	Input Current ⁽⁶⁾	Efficiency ⁽⁷⁾	Capacitor ⁽⁸⁾ Load max
CMJR5S5-2000	5 VDC (4.5 – 9 VDC)	5 VDC	2000mA	50mVp-p	2500mA	79%	7900µF
CMJR5S12-830		12 VDC	830mA	50mVp-p	2350mA	82%	2200µF
CMJR5S15-660		15 VDC	670mA	50mVp-p	2348mA	82%	1470µF
CMJR12S33-2000	12 VDC (9 – 18 VDC)	3.3 VDC	2000mA	50mVp-p	724mA	80%	6800µF
CMJR12S5-2000		5 VDC	2000mA	50mVp-p	1082mA	81%	4700µF
CMJR12S12-830		12 VDC	830mA	50mVp-p	1037mA	84%	690µF
CMJR12S15-660		15 VDC	670mA	50mVp-p	1046mA	84%	470µF
CMJR24S33-2000	24 VDC (18 – 36 VDC)	3.3 VDC	2000mA	50mVp-p	362mA	80%	6800µF
CMJR24S5-2000		5 VDC	2000mA	50mVp-p	534mA	82%	4700µF
CMJR24S12-830		12 VDC	830mA	50mVp-p	519mA	84%	690µF
CMJR24S15-660		15 VDC	670mA	50mVp-p	523mA	84%	470µF
CMJR48S33-2000	48 VDC (36 – 75 VDC)	3.3 VDC	2000mA	50mVp-p	181mA	80%	6800µF
CMJR48S5-2000		5 VDC	2000mA	50mVp-p	260mA	84%	4700µF
CMJR48S12-830		12 VDC	830mA	50mVp-p	253mA	86%	690µF
CMJR48S15-660		15 VDC	670mA	50mVp-p	252mA	87%	470µF

NOTES

1. The CMJR Series requires a minimum 10% loading on the output to maintain specified regulation. Operation under no load condition will not damage these devices, however, they may not meet all listed specifications.
2. The ON/OFF control pin voltage is referenced to –Vin. To order negative logic On/Off control add the suffix “-R” (Ex: CMJR5S5-2000-R).
3. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment).
4. “I” Version is more efficient; therefore, it can be operated over a more extensive temperature range than the standard version. Please add the suffix “-I” for industrial grade temperature range models.
5. Heat sink is optional, please consult factory for ordering details.
6. Maximum value at nominal input voltage and full load of standard type.
7. Typical value at nominal input voltage and no load.
8. Tested at minimum Vin and constant resistive load.
9. Chassis Mount Options: No suffix for open frame, “U” suffix for U Channel, and “E” suffix for Enclosed type.

DERATING CURVES



MECHANICAL DRAWING

Unit: inches [mm]

