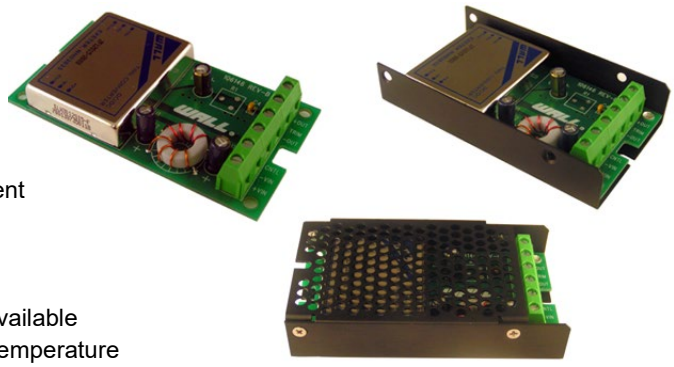
FEATURES

- Output Current up to 1A
- High Efficiency up to 83%
- Fixed Switching Frequency
- Six-Sided Continuous Shield
- 2:1 and 4:1 Wide Input Voltage Range
- ISO9001 Certified Manufacturing Facilities
- Call Factory for More Output Power Options
- Compliant to RoHS EU Directive 2002/95/EC
- Chassis Mount Options: Open Frame, U Channel, and Enclosed Types Available
- Options: Positive Logic and Negative Logic Remote ON/OFF, Industrial Temperature

APPLICATIONS

- Measurement
- Wireless Network
- Telecom/Datacom
- Industry Control System
- Semiconductor Equipment



SPECIFICATIONS: *CMKR / CMKRW Series*

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range
- CMKR: 12V nominal input 9-18VDC
  24V nominal input 18-36VDC
  48V nominal input 36-75VDC
- CMKRW: 24V nominal input 9-36VDC
  48V nominal input 18-75VDC

Input Surge Voltage (100ms max) ..... 12V input ..... 36 VDC
24V input ..... 50 VDC
48V input ..... 100 VDC

Input Reflected Ripple Current (nom. Vin and FL) 20mAp-p

Start Up Time (nom. Vin and constant resistive load) ..... 450ms max.

Remote ON/OFF (Option) (See Note 6)
- (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

Input Current of Remote Control Pin (nominal Vin) ..... -0.5mA ~ +1mA

Remote Off State Input Current (nominal Vin) 2.5mA

OUTPUT SPECIFICATIONS

Output Voltage ..... see table

Voltage Accuracy (nominal Vin and full load) ..... ±1%

Output Current ..... see table

Output Power ..... 6 Watts max.

Line Regulation (LL to HL at FL) ..... ±0.2%

Load Regulation (no load to full load) ..... Single Output ..... ±0.2%

Cross Regulation (Dual) (Asymmetrical load 25% / 100% FL) ..... ±5%

Minimum Load 0%

Ripple/Noise (20 MHz BW) 50mVp-p

Temperature Coefficient ..... ±0.02% / °C max.

Transient Response Recovery Time
- 25% load step change ..... (Single) 200us

PROTECTION SPECIFICATIONS

Over Load Protection (% of full load at nom. input) ..... 170% typ.

Short Circuit Protection. ..... Continuous, automatic recovery

GENERAL SPECIFICATIONS

Efficiency ..... see table

Switching Frequency
- CMKR ..... 300KHz typ.
- CMKRW ..... 200KHz typ.

Isolation Voltage (Input to Output) ..... 1600VDC min.

Isolation Resistance ..... 10^9 ohms min.

Isolation Capacitance ..... 300pF max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature
- Standard ..... -25°C ~ +85°C (with derating)
- "I" suffix (See Note 7) ..... -40°C ~ +85°C (non-derating)
- "I" suffix (CMKRW series) ..... -40°C ~ +85°C (with derating)

Storage Temperature ..... -55°C ~ +105°C

Maximum Case Temperature ..... 100°C

Relative Humidity ..... 5% to 95% RH

Thermal Shock MIL-STD-810F

Vibration ..... 10~55Hz, 10G, 30 minutes along X, Y, and Z

MTBF (See Note 1) ..... 3.145×10^6 hours

PHYSICAL SPECIFICATIONS

Weight ..... Approximately 6oz

Dimensions ..... 4(L) x 2.2(W) x 0.81(H) inches

Potting material of the DC/DC converter ..... Epoxy (UL94-V0)

Shielding of the DC/DC converter ..... six-sided

SAFETY & EMC

Approvals and Standards ..... IEC60950-1, UL60950-1 (See Note 10), EN60950-1

EMI ..... EN55022 ..... Class A

ESD ..... EN61000-4-2 ..... Air ± 8KV ..... Perf. Criteria B
Contact ± 6KV

Radiated Immunity ..... EN61000-4-3 ..... 10V/m Perf. Criteria A

Fast Transient ..... EN61000-4-4 ..... ±2KV Perf. Criteria B

Surge (See Note 9) ..... EN61000-4-5 ..... ±1KV Perf. Criteria B

Conducted Immunity ..... EN61000-4-6 ..... 10 Vrms Perf. Criteria A

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

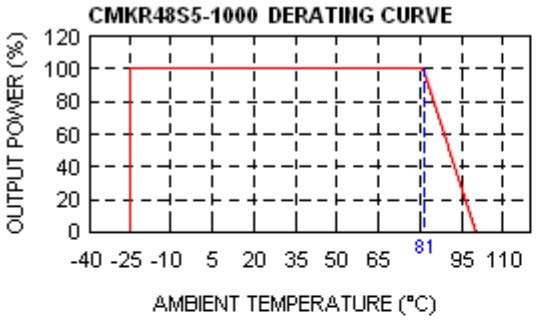
MODEL SELECTION GUIDE

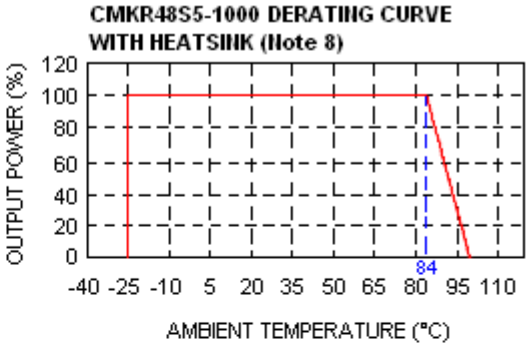
Model Number	Input Range	Output Voltage	Output Current		Output [4] Ripple & Noise	Input Current		Efficiency [4]	Capacitor[5] Load max
			Min. load	Full load		No load [3]	Full load [2]		
CMKR12S33-1000	12 VDC (9 – 18 VDC)	3.3 VDC	0mA	1000mA	50mVp-p	10mA	382mA	76	3700µF
CMKR12S5-1000		5 VDC	0mA	1000mA	50mVp-p	10mA	556mA	79	1700µF
CMKR12S12-470		12 VDC	0mA	470mA	50mVp-p	10mA	610mA	81	290µF
CMKR12S15-400		15 VDC	0mA	400mA	50mVp-p	15mA	658mA	80	188µF
CMKR24S33-1000	24 VDC (18 – 36 VDC)	3.3 VDC	0mA	1000mA	50mVp-p	15mA	199mA	73	3700µF
CMKR24S5-1000		5 VDC	0mA	1000mA	50mVp-p	15mA	282mA	78	1700µF
CMKR24S12-470		12 VDC	0mA	470mA	50mVp-p	10mA	305mA	81	290µF
CMKR24S15-400		15 VDC	0mA	400mA	50mVp-p	20mA	325mA	81	188µF
CMKR48S33-1000	48 VDC (36 – 75 VDC)	3.3 VDC	0mA	1000mA	50mVp-p	5mA	100mA	73	3700µF
CMKR48S5-1000		5 VDC	0mA	1000mA	50mVp-p	10mA	145mA	76	1700µF
CMKR48S12-470		12 VDC	0mA	470mA	50mVp-p	10mA	151mA	82	290µF
CMKR48S15-400		15 VDC	0mA	400mA	50mVp-p	10mA	160mA	82	188µF
CMKRW24S33-1000	24 VDC (9 – 36 VDC)	3.3 VDC	0mA	1000mA	50mVp-p	5mA	188mA	77	3700µF
CMKRW24S5-1000		5 VDC	0mA	1000mA	50mVp-p	5mA	274mA	80	1700µF
CMKRW24S12-470		12 VDC	0mA	470mA	50mVp-p	5mA	301mA	82	290µF
CMKRW24S15-400		15 VDC	0mA	400mA	50mVp-p	5mA	325mA	81	188µF
CMKRW48S33-1000	48 VDC (18 – 75 VDC)	3.3 VDC	0mA	1000mA	50mVp-p	5mA	100mA	73	3700µF
CMKRW48S5-1000		5 VDC	0mA	1000mA	50mVp-p	10mA	145mA	76	1700µF
CMKRW48S12-470		12 VDC	0mA	470mA	50mVp-p	10mA	151mA	82	290µF
CMKRW48S15-400		15 VDC	0mA	400mA	50mVp-p	10mA	163mA	81	188µF

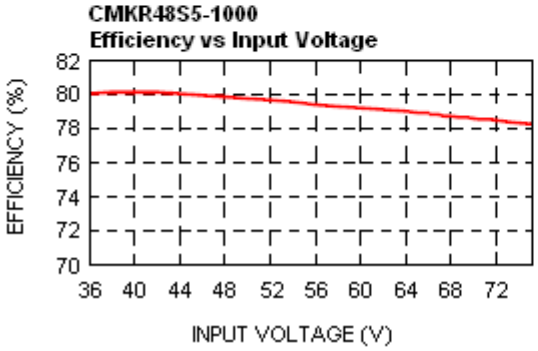
NOTES

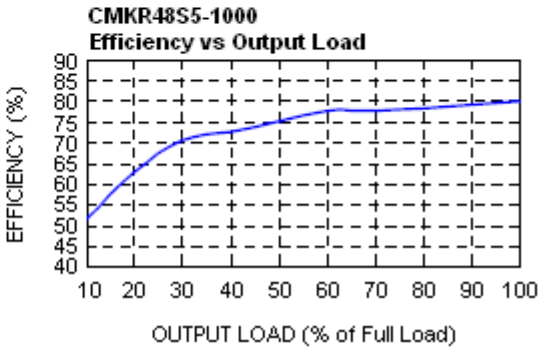
1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40ºC. (Ground fixed and controlled environment)
2. Maximum value at nominal input voltage and full load of standard type.
3. Typical value at nominal input voltage and no load.
4. Typical value at nominal input voltage and full load.
5. Test by minimum Vin and constant resistive load.
6. The ON/OFF control pin voltage is referenced to -Vin.
   To order positive logic ON-OFF control add the suffix “P” (Ex: CMKR48S5-1000P)
   To order negative logic ON-OFF control add the suffix “R” (Ex: CMKR48S5-1000R)
7. The industrial “I” suffix for the 2:1 input version is more efficient; therefore, it can be operated in a more extensive temperature range than “standard” and “I” suffix 4:1 input versions.
   To order industrial temperature range (-40°C ~ +85°C) add the suffix “I” to the part number (Ex: CMKR48S5-1000I)
8. Heat sink is optional, consult factory.
9. Chassis Mount Options: No suffix for open frame, “U” suffix for U Channel, and “E” suffix for Enclosed type.
10. This product is Listed to applicable standards and requirements by UL.

DERATING CURVE & EFFICIENCY GRAPHS



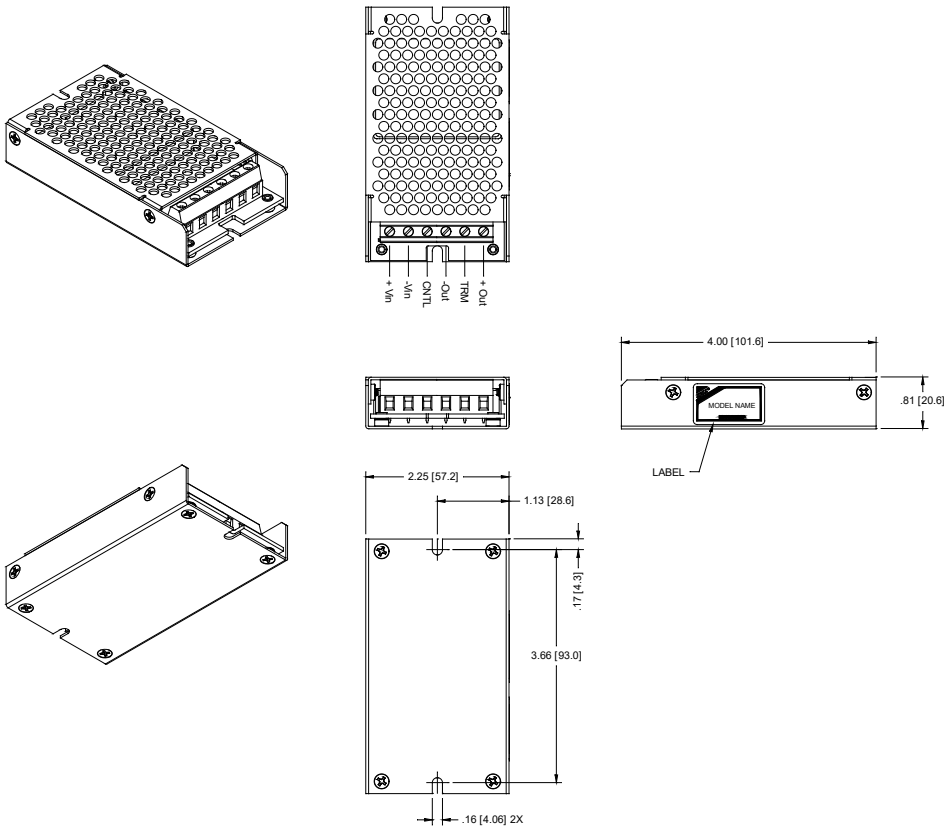






MECHANICAL DRAWING

Unit: inches [mm]



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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