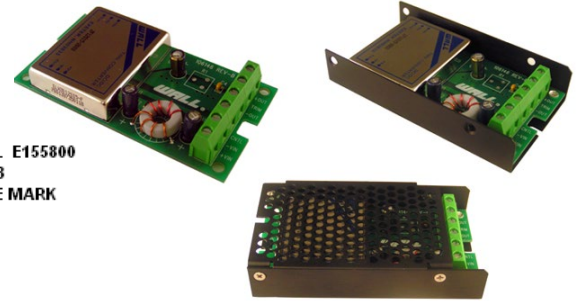


## FEATURES

- Output Current up to 8A
- High Efficiency up to 88%
- Fixed Switching Frequency
- Six-Sided Continuous Shield
- 4:1 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



## SPECIFICATIONS: CMZFW Series

All specifications apply @ 25°C ambient unless otherwise noted

### INPUT SPECIFICATIONS

Input Voltage Range.....	24V nominal input.....	10-40VDC
	48V nominal input.....	18-75VDC
Under Voltage Lockout		
24VDC input.....	DC-DC ON.....	10VDC
	DC-DC OFF.....	16VDC
48VDC input.....	DC-DC ON.....	18VDC
	DC-DC OFF.....	16VDC
Input Voltage Variation .....	dv/dt.....	5V/ms max.
	(Complies with ETS300 132 part 4.4)	
Input Surge Voltage (100ms max).....	24V input.....	50VDC
	48V input.....	100VDC
Input Reflected Ripple Current (nominal Vin and full load).....		20mA <sub>p-p</sub>
Start Up Time (nominal Vin and constant resistive load)		
Power Up.....		10ms typ.
Remote ON/OFF .....		10ms typ.
Remote ON/OFF (See Note 1)		
(Positive Logic).....	DC-DC ON.....	Open or 3V < Vr < 12V
	DC-DC OFF.....	Short or 0V < Vr < 1.2V
Remote Off Input Current (nominal Vin) .....		3mA

### OUTPUT SPECIFICATIONS

Output Voltage .....	see table
Voltage Accuracy (nominal Vin and full load).....	±1%
Voltage Adjustability.....	±10%
Output Current .....	see table
Output Power .....	30 watts max.
Line Regulation (LL to HL at FL).....	±0.5%
Load Regulation (10% to 100% FL).....	±0.5%
Minimum Load.....	0%
Ripple/Noise (20 MHz BW).....	see table
(measured with a 104pF/50V MLCC)	
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 full load 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 <sup>9</sup> 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 (non-condensing).....	5% to 95% RH
Temperature Coefficient.....	±0.02% / °C max.
Thermal Impedance (See Note 3)	
Natural Convection.....	10°C / Watt
Natural Convection with Heat-Sink .....	8.24°C/Watt
Thermal Shock.....	MIL-STD-810D
Vibration.....	10~55Hz, 10G, 30 minutes along X, Y, and Z
MTBF (See Note 2).....	1.315 x 10 <sup>6</sup> hrs

### PHYSICAL SPECIFICATIONS

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

### SAFETY & EMC

Approvals and Standards.....	IEC60950-1, UL60950-1 (See Note 8), 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*

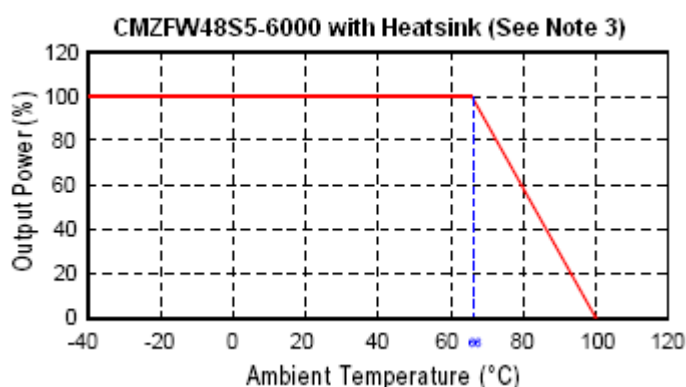
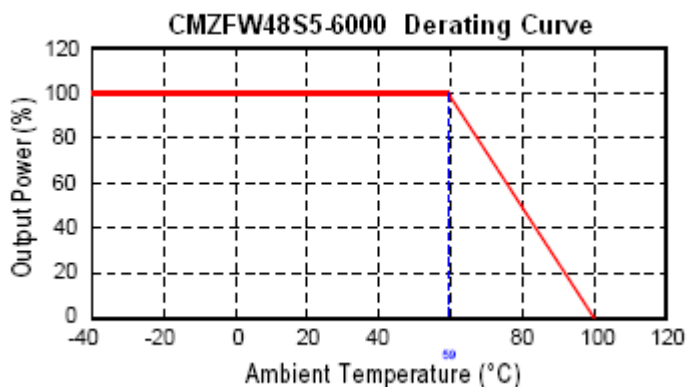
**OUTPUT VOLTAGE / CURRENT RATING CHART**

Model Number	Input Voltage	Output Voltage	Output Current	Input Current <sup>(4)</sup>	Ripple & Noise	Efficiency <sup>(5)</sup> (Typ)	Max Capacitive Load <sup>(6)</sup>
CMZFW24S1.5-8000	24 VDC (10 ~ 40 VDC)	1.5 VDC	8000 mA	658 mA	60mVp-p	80%	65000µF
CMZFW24S1.8-8000		1.8 VDC	8000 mA	759 mA	60mVp-p	83%	65000µF
CMZFW24S2.5-8000		2.5 VDC	8000 mA	1029 mA	60mVp-p	85%	33000µF
CMZFW24S3.3-6000		3.3 VDC	6000 mA	994 mA	60mVp-p	87%	195000µF
CMZFW24S5-6000		5 VDC	6000 mA	1506 mA	75mVp-p	87%	10200µF
CMZFW24S12-2500		12 VDC	2500 mA	1506 mA	100mVp-p	87%	3300µF
CMZFW24S15-2000		15 VDC	2000 mA	1488 mA	100mVp-p	88%	1100µF
CMZFW48S1.5-8000	48 VDC (18 ~ 75 VDC)	1.5 VDC	8000 mA	329 mA	60mVp-p	80%	65000µF
CMZFW48S1.8-8000		1.8 VDC	8000 mA	380 mA	60mVp-p	83%	65000µF
CMZFW48S2.5-8000		2.5 VDC	8000 mA	508 mA	60mVp-p	86%	33000µF
CMZFW48S3.3-6000		3.3 VDC	6000 mA	497 mA	60mVp-p	87%	195000µF
CMZFW48S5-6000		5 VDC	6000 mA	744 mA	75mVp-p	88%	10200µF
CMZFW48S12-2500		12 VDC	2500 mA	753 mA	100mVp-p	87%	3300µF
CMZFW48S15-2000		15 VDC	2000 mA	744 mA	100mVp-p	88%	1100µF

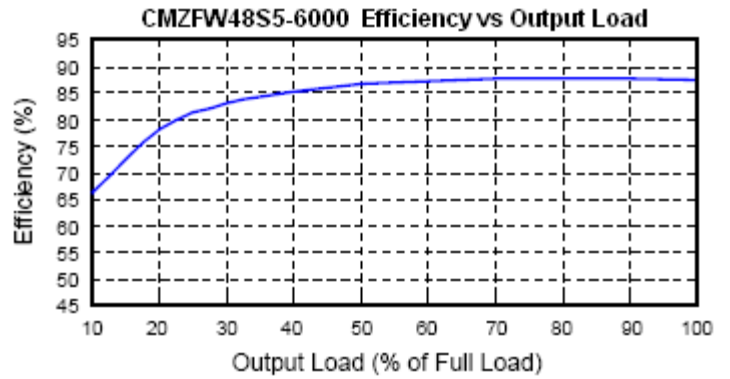
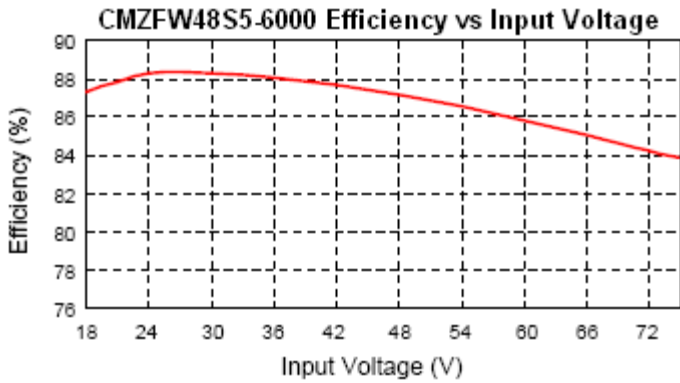
**NOTES**

- ON/OFF control function: There are positive logic (standard) and negative logic (option). The pin voltage is referenced to negative input. To order negative logic ON/OFF control add the suffix-R.
- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment).
- Heat sink is optional. Please call factory for ordering details.
- Maximum value at nominal input voltage and full load.
- Typical value at nominal input voltage and full load
- Test by minimum Vin and constant resistive load.
- Chassis Mount Options: No suffix for open frame, "U" suffix for U Channel, and "E" suffix for Enclosed type.
- This product is Listed to applicable standards and requirements by UL.

**DERATING CURVES**

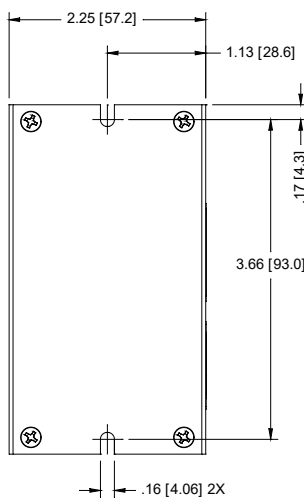
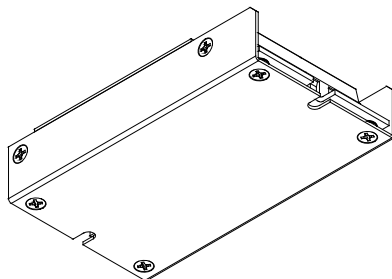
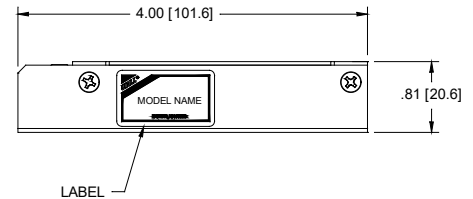
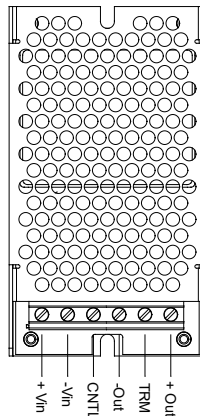
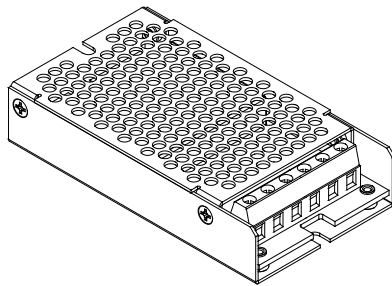


**EFFICIENCY GRAPHS**



**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: 2015 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.

Contact **Wall Industries** for further information:

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