



1.66"W x 2.46"L x 0.91"H

- Universal 90-264VAC Input
- High Efficiency
- Improved EMI Performance
- 3000VAC Isolation
- Single, Dual & Triple Outputs
- Full Safety Approvals



Model Number	Output Voltage	Output Amps(max)
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### SINGLE OUTPUT

EFM-0100	3.3 Volts	2.5Amps
EFM-0101	5 Volts	2Amps
EFM-0122	9 Volts	1.1Amps
EFM-0102	12 Volts	0.85Amps
EFM-0103	15 Volts	0.67Amps
EFM-0118	18 Volts	0.55Amps
EFM-0105	24 Volts	0.42Amps

### DUAL OUTPUT

EFM-0106	±12 Volts	±0.42Amps
EFM-0107	±15 Volts	±0.34Amps
EFM-0108	5 / 12Volts	1.3 / 0.6Amps

### TRIPLE OUTPUT

EFM-0109	5/ ±12 Volts	1.8 / ±0.13Amps
EFM-0111	5/ ±15 Volts	1.8/ ±0.13Amps

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

**INPUT SPECIFICATIONS**

Input Voltage Range	90-264 VAC (100-240VAC nom.)
Frequency Range	47-63 Hz
Inrush Current (115/230Vin)	20/40Amps, typ., Cold Start
Leakage Current	<3.5mA @ 264VAC, 50Hz

**OUTPUT SPECIFICATIONS**

Voltage and Current (Note 5)	See Selection Chart
Load Regulation (20%-FL)(Note 6)	Single: $\pm 1\%$ , max.
	Duals: $\pm 3\%$ (EFM-0108: 0.5/3%) Triple: 0.5 / $\pm 0.5\%$
Line Regulation, max. (Note 7)	Single/Duals $\pm 1\%$
	Triple: 0.6 / $\pm 0.2\%$
Cross Regulation, typ. (Note 10)	Duals 2% (EFM-0108: 0.5/3%)
	Triple: NA/ $\pm 0.1\%$
Preset Accuracy, typ. (Note 8)	Single/Duals 1%
	(except EFM-0108: 2 / 5%)
	Triple: 1 / $\pm 5\%$
DC Voltage Adjust (typ)	$\pm 6\%$ of FS (Primary)
Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
Ripple/Noise, max. (Note 1, 9)	Single/Dual: 100mVpk-pk
	Triple: 75 / $\pm 100\text{mVpk-pk}$
Over Voltage Protection	Clamp
Short Circuit Protection (Note 2)	Continuous, self-recovering
Hold Up Time	30 mS, typ @ nom. input
DC Output Power	10 Watts, max

**PHYSICAL SPECIFICATIONS**

Size	1.66" x 2.46" x 0.91"
Construction	Open Frame
Weight	1.6oz (45g)

\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

**GENERAL SPECIFICATIONS**

Isolation (Note 3)	3KVAC Input-Output
Efficiency @ nom. input	Single/Dual 67~75% typ
	Triple 70% typ.
Switching Frequency	100Khz, (fixed, typical)
Safety UL/cUL:	UL60950-1 2nd ed./
	C22.2 60950-1 2nd ed.
UL-EU:	EN60950-1 2nd ed.
CE:	EN60601-1-2
CB:	IEC60950-1 2nd ed.
EMC	EN55011 Class B

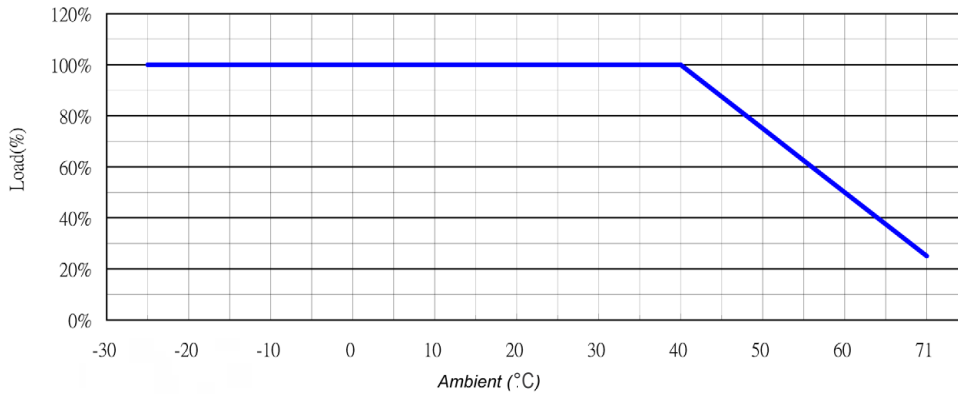
**ENVIRONMENTAL SPECIFICATIONS**

Oper. Temperature (Note 4)	-0 to +40°C (See Derate)
Storage Temperature	-25 to +71°C *
Relative Humidity	0 to + 95%, non-cond *
MTBF (Mil Std 217, 25°C)	270,000 Hrs min.

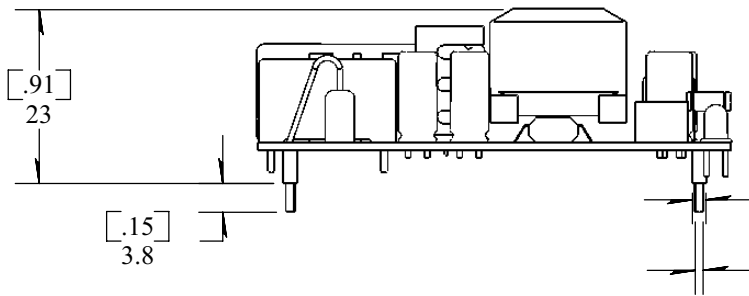
**NOTES**

1. Ripple and Noise depend upon output voltage as specified per particular model.
2. Short Curcuit Protection is self-recovering when overcurrent condition is removed.
3. Isolation for up to 1 minute duration.
4. Specified for free-air convection cooling.
5. Minimum load is NOT required for proper operation. However, auxiliary outputs should be reduced as a function of primary output minimum load or load regulation will be higher.
6. Load regulation measured from 20% to full load.
7. Line regulation measured from 90VAC to 264VAC.
8. Preset accuracy measured at nominal load, 120VAC input.
9. O/P noise measured directly at pins/terminals at nom. load, 0.1uF bypass, pk-pk @20MHz bandwidth.
10. Cross Reg-Duals: Measured at nom. load with the other output varied between 60% and 100% output load.

**OUTPUT DERATING CURVE**

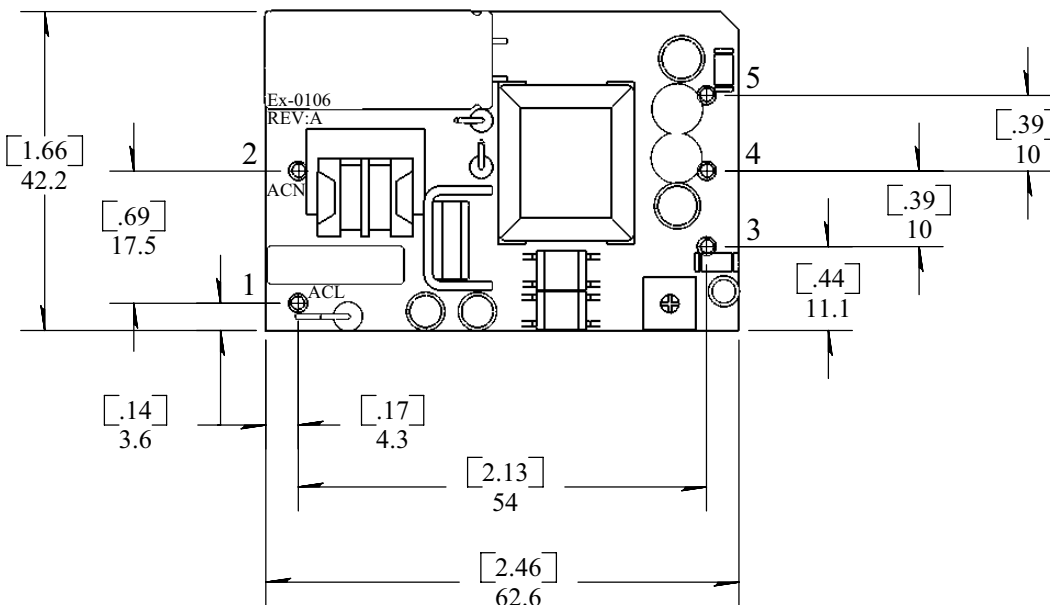


**MECHANICAL DIMENSIONS - SINGLE + DUAL OUTPUTS**



Dimensions are in inches

Pin#	Single	Dual	Dual(0108)
1	ACL	ACL	ACL
2	ACN	ACN	ACN
3	+Vout	+Vout	+12V
4	NC	Com	+5V
5	-Vout	-Vout	Com



**MECHANICAL DIMENSIONS - TRIPLE OUTPUTS**

