



- Universal 90-264VAC Input
- High Efficiency
- Improved EMI Performance
- 5656VDC Isolation
- Single, Dual and Triple Outputs



Model Number	Output Voltage	Output Amps FL	Ripple/Noise	Efficiency
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### SINGLE OUTPUT - PCB Mount

ESMA-1500	3.3 VDC	3.5A	100mV pk-pk	67%
ESMA-1501	5 VDC	3A	150mV pk-pk	72%
ESMA-1522	9 VDC	1.66A	100mV pk-pk	73%
ESMA-1502	12 VDC	1.25A	100mV pk-pk	75%
ESMA-1503	15 VDC	1A	100mV pk-pk	76%
ESMA-1518	18 VDC	0.83A	150mV pk-pk	75%
ESMA-1505	24VDC	0.63A	150mV pk-pk	77%

### SINGLE OUTPUT - Chassis Mount

ESMC-1500	3.3 VDC	3.5A	100mV pk-pk	67%
ESMC-1501	5 VDC	3A	150mV pk-pk	72%
ESMC-1522	9 VDC	1.66A	100mV pk-pk	73%
ESMC-1502	12 VDC	1.25A	100mV pk-pk	75%
ESMC-1503	15VDC	1A	100mV pk-pk	76%
ESMC-1518	18 VDC	0.83A	150mV pk-pk	75%
ESMC-1505	24VDC	0.63A	150mV pk-pk	77%

### SINGLE OUTPUT - DIN Rail Mount

ESMC-1500/DRL	3.3 VDC	3.5A	100mV pk-pk	67%
ESMC-1501/DRL	5 VDC	3A	150mV pk-pk	72%
ESMC-1522/DRL	9 VDC	1.66A	100mV pk-pk	73%
ESMC-1502/DRL	12 VDC	1.25A	100mV pk-pk	75%
ESMC-1503/DRL	15VDC	1A	100mV pk-pk	76%
ESMC-1518/DRL	18 VDC	0.83A	150mV pk-pk	75%
ESMC-1505/DRL	24VDC	0.63A	150mV pk-pk	77%



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Model Number	Output Voltage	Output Amps FL	Ripple/Noise	Efficiency
<b>DUAL OUTPUT - PCB Mount</b>				
EDMA-1506	±12 VDC	±0.63A	±150 mV pk-pk	74%
EDMA-1507	±15 VDC	±0.5A	±150 mV pk-pk	74%
EDMA-1508	5/12 VDC	1.5/0.65A	±100 mV pk-pk	72%
<b>DUAL OUTPUT - Chassis Mount</b>				
EDMC-1506	±12 VDC	±0.63A	±150 mV pk-pk	74%
EDMC-1507	±15 VDC	±0.5A	±150 mV pk-pk	74%
EDMC-1508	5/12 VDC	1.5/0.65A	±100 mV pk-pk	72%
<b>DUAL OUTPUT - DIN Rail Mount</b>				
EDMC-1506/DRL	±12 VDC	±0.63A	±150 mV pk-pk	74%
EDMC-1507/DRL	±15 VDC	±0.5A	±150 mV pk-pk	74%
EDMC-1508/DRL	5/12 VDC	1.5/0.65A	±100 mV pk-pk	72%
<b>TRIPLE OUTPUT - PCB Mount</b>				
ETMA-1509	5 ±12 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%
ETMA-1511	5 ±15 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%
<b>TRIPLE OUTPUT - Chassis Mount</b>				
ETMC-1509	5 ±12 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%
ETMC-1511	5 ±15 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%
<b>TRIPLE OUTPUT - DIN Rail Mount</b>				
ETMC-1509/DRL	5 ±12 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%
ETMC-1511/DRL	5 ±15 VDC	2.5 ±0.1 A / 2.8 ±0.13 A	75±50 mV pk-pk	68%

**INPUT SPECIFICATIONS**

Input Voltage Range	90-264 VAC (100-240VAC, nom.)
Frequency Range	47-63 Hz
Inrush Current, typ:	20A@115VAC; 40A@230VAC
Leakage current	<300UA @264Vac,50Hz

**OUTPUT SPECIFICATIONS**

Voltage and Current	See Selection Chart
Load Regulation (Note 6,7)	
Single:	±1%, max.
Duals:	±3% (EDCx-1508: 1/5%)
Triple:	0.6/ ±0.5%
Line Regulation (typ) (Note 8)	
Single/Dual:	±1%
Triple:	0.6/ ±0.2%
Cross Regulation (Note 11)	
Duals:	3% (EDCx-1508: 1/5%)
Triple:	NA/ ±0.5% (Note 11)
Preset Accuracy (Note 9)	
Single/Dual:	1% (EFM-1508: 2/5%)
Triple:	1/±5%
Over Voltage Protection	Clamp
Short Circuit Protection (Note 3)	Continuous, self-recovering
Hold Up Time	20 mS, typ @ 115Vac

**GENERAL SPECIFICATIONS**

Isolation (Note 4)	5656VDC I/P-O/P
Efficiency typ @ nom Input	See Selection Chart
Switching Frequency	100Khz, (fixed, typical)
Safety	UL/cUL: ANSI/AAMI ES60601-1 3rd ed. CSA C22.2 No. 60601-1 3rd ed.
	UL-EU: EN60601-1 3rd ed.
	CB: IEC60601-1 3rd ed.
	CE: EN60601-1-2
	CB: IEC60950-1 2nd ed.
EMI	EN55011 Class B

**PHYSICAL SPECIFICATIONS**

Size	PCB Mount	2.75L" x 1.89W" x 0.95H"
	Chassis Mount	3.96L" x 2.16W" x 1.0H"
	Din Rail	3.96L" x 2.16W" x 1.35H"
Case Material		Rynite, 94V-0 Rated
Construction		Encapsulated. Soft Pot
Weight	PCB Mount	5.6oz(159g)
	Chassis Mount	8.9oz(252g)
	Din Rail	12oz(340g)

**ENVIRONMENTAL SPECIFICATIONS**

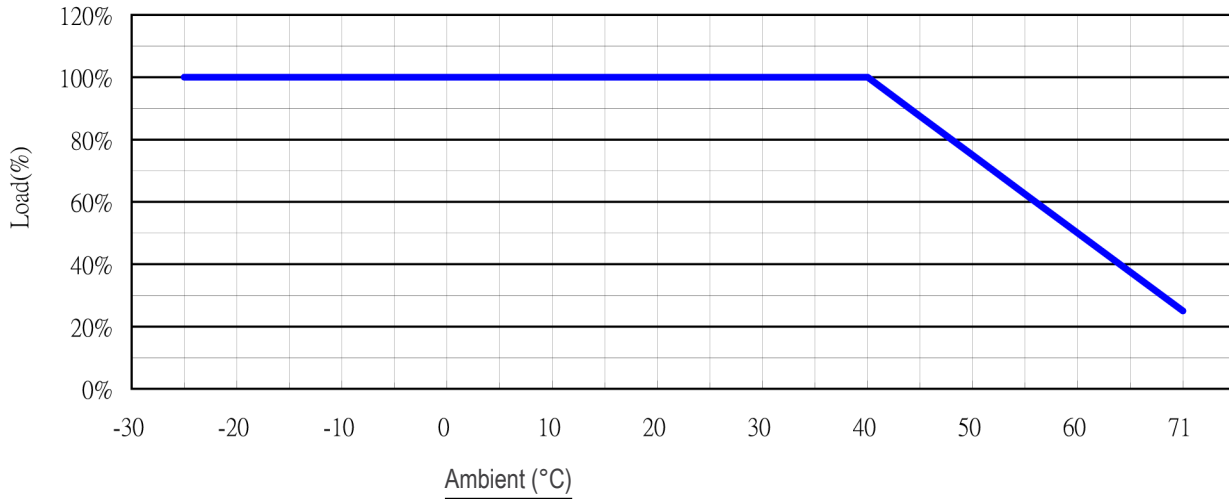
Oper. Temperature (Note 5)	0 to +40°C (See Derate)
Storage Temperature	-25 to +71°C
Relative Humidity	0 to + 95%, non-cond
MTBF	(Mil Std 217, 25°C) 270,000 Hrs
Temperature Coefficient	±0.03%/°C

**NOTE**

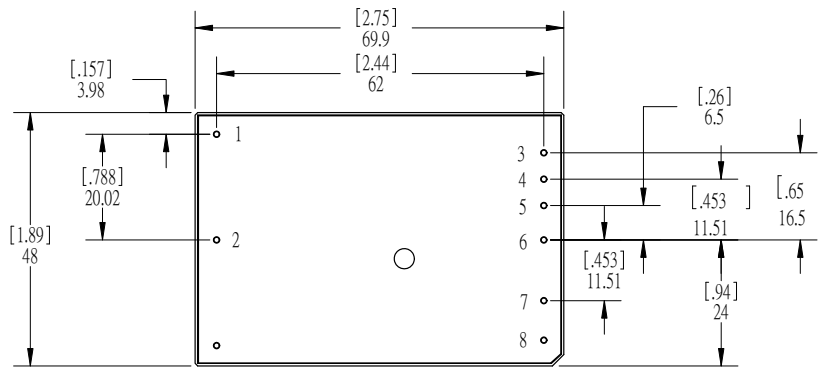
1. All measurements should be made directly at the terminals of the power supply.
2. Ripple and Noise depend upon output voltage as specified per particular model.
3. Short Circuit Protection is self-recovering when overcurrent condition is removed.
4. Isolation for up to 1minute duration.
5. Specified for free-air convection cooling.
6. Required minimum load 0.05A for output regulation.
7. Load regulation measured from 20% to FL.
8. Line regulation measured from 90VAC 264VAC.
9. Preset accuracy measured at nominal load, 120 VAC input.
10. O/P noise measured directly at pins/terminals at nom. load, 0.1uF bypass, pk-pk @20MHz bandwidth.
11. Cross Reg-Triples: Measured at nom. load with the 5V output varied between 60% and 100% load.
12. 100% Production Tested.

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

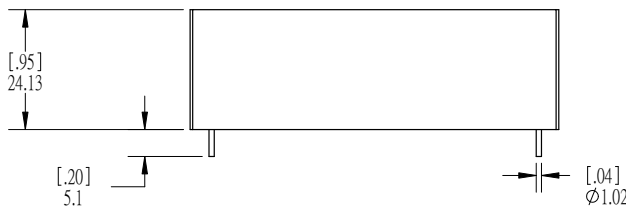
**OUTPUT DERATING CURVE**



**MECHANICAL DIMENSIONS**



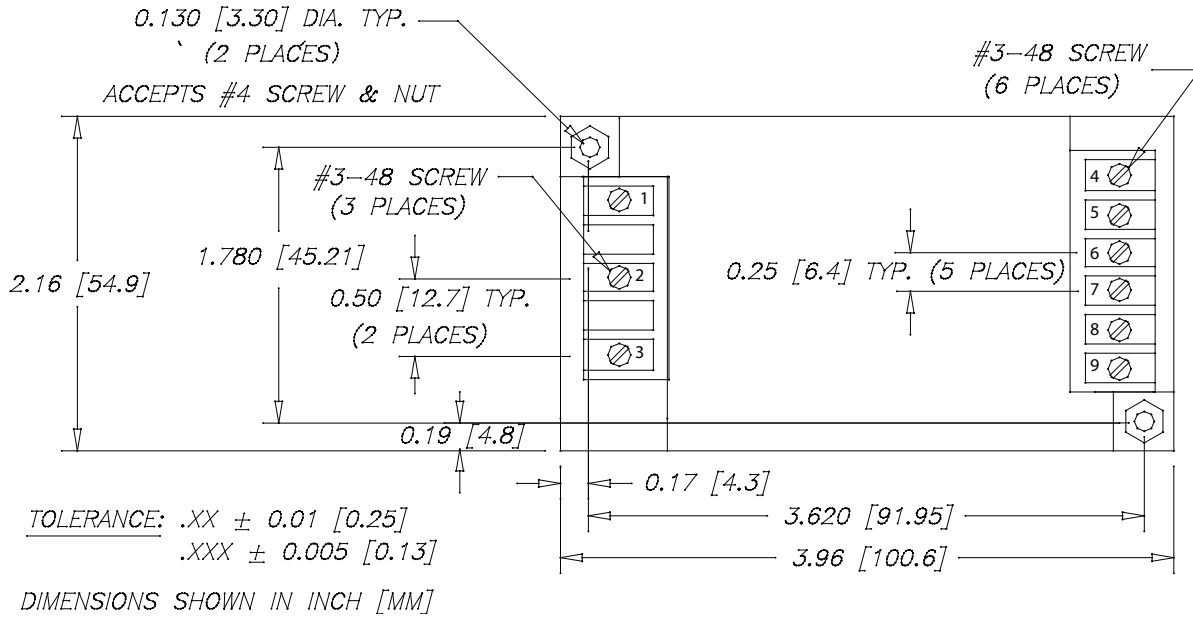
PIN - OUT VIEWED FROM BOTTOM



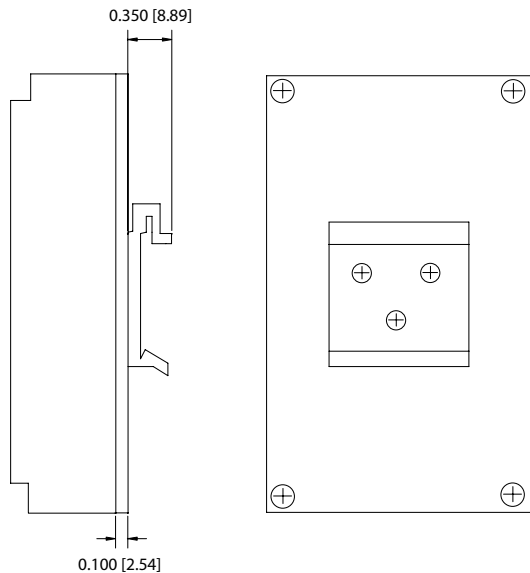
Model Type/Pin#	Single	Dual	Dual(1508)	Triple
1	ACL	ACL	ACL	ACL
2	ACN	ACN	ACN	ACN
3	No Pin	No Pin	No Pin	+Vout
4	+Vout	+Vout	+12V	COM
5	No Pin	No Pin	No Pin	-Vout
6	No Pin	COM	+5Vout	+5Vout
7	-Vout	-Vout	COM	+5VRTN
8	No Pin	No Pin	No Pin	No Pin

NOTES :  
1. All dimension in mm [ inch ].  
2. tolerance : .XX±0.254 [0.01 ].  
.XXX±0.13[0.005].

**MECHANICAL DIMENSIONS - CHASSIS MOUNT**



**MECHANICAL DIMENSIONS - DIN RAIL**



**Model**

Type / Pin#	Single	Dual	Dual (1508)	Triple
1	ACN	ACN	ACN	ACN
2	N/C	N/C	N/C	N/C
3	ACL	ACL	ACL	ACL
4	N/C	N/C	N/C	N/C
5	-Vout	-Vout	Com	+5RTN
6	-Vout	Com	Com	+5Vout
7	+Vout	Com	+5V	-Vout
8	+Vout	+Vout	+12V	Com
9	N/C	N/C	N/C	+Vout

DIN Rail mounting kit available for Chassis-mount modules, specify part # M-DRL-01. Kit includes mounting plate, DIN Rail clip and assembly hardware.