



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



Model Number	Output Voltage	Output Amps FL	Ripple/Noise	Efficiency typ at nom. Input
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SINGLE OUTPUT - PCB Mount

ESMA-5000	3.3 VDC	1.25A	150mV pk-pk	65%
ESMA-5001	5 VDC	1A	150mV pk-pk	67%
ESMA-5022	9 VDC	0.55A	150mV pk-pk	70%
ESMA-5002	12 VDC	0.42A	150mV pk-pk	70%
ESMA-5003	15 VDC	0.33A	150mV pk-pk	72%
ESMA-5018	18 VDC	0.27A	150mV pk-pk	70%
ESMA-5005	24VDC	0.23A	150mV pk-pk	72%

SINGLE OUTPUT - Chassis Mount

ESMC-5000	3.3 VDC	1.25A	150mV pk-pk	65%
ESMC-5001	5 VDC	1A	150mV pk-pk	67%
ESMC-5022	9 VDC	0.55A	150mV pk-pk	70%
ESMC-5002	12 VDC	0.42A	150mV pk-pk	70%
ESMC-5003	15VDC	0.33A	150mV pk-pk	72%
ESMC-5018	18 VDC	0.27A	150mV pk-pk	70%
ESMC-5005	24VDC	0.23A	150mV pk-pk	72%

SINGLE OUTPUT - DIN Rail Mount

ESMC-5000/DRL	3.3 VDC	1.25A	150mV pk-pk	66%
ESMC-5001/DRL	5 VDC	1A	150mV pk-pk	67%
ESMC-5022/DRL	9 VDC	0.55A	150mV pk-pk	70%
ESMC-5002/DRL	12 VDC	0.42A	150mV pk-pk	70%
ESMC-5003/DRL	15VDC	0.33A	150mV pk-pk	72%
ESMC-5018/DRL	18 VDC	0.27A	150mV pk-pk	70%
ESMC-5005/DRL	24VDC	0.23A	150mV pk-pk	72%



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Model Number	Output Voltage	Output Amps FL	Ripple/Noise	Efficiency typ at nom. Input
DUAL OUTPUT - PCB Mount				
EDMA-5006	±12 VDC	±0.21A	±150mV pk-pk	71%
EDMA-5007	±15 VDC	±0.17A	±150mV pk-pk	71%
DUAL OUTPUT - Chassis Mount				
EDMC-5006	±12 VDC	±0.21A	±150mV pk-pk	71%
EDMC-5007	±15 VDC	±0.17A	±150mV pk-pk	71%
DUAL OUTPUT - DIN Rail Mount				
EDMC-5006/DRL	±12 VDC	±0.21A	±150mV pk-pk	71%
EDMC-5007/DRL	±15 VDC	±0.17A	±150mV pk-pk	71%
TRIPLE OUTPUT - PCB Mount				
ETMA-5009	5 ±12 VDC	0.53 ±0.1 A	75 ±100 mV pk-pk	63%
ETMA-5011	5 ±15 VDC	0.41 ±0.1 A	75 ±100 mV pk-pk	61%
TRIPLE OUTPUT - Chassis Mount				
ETMC-5009	5 ±12 VDC	0.53 ±0.1 A	75 ±100 mV pk-pk	63%
ETMC-5011	5 ±15 VDC	0.41 ±0.1 A	75 ±100 mV pk-pk	61%
TRIPLE OUTPUT - DIN Rail Mount				
ETMC-5009/DRL	5 ±12 VDC	0.53 ±0.1 A	75 ±100 mV pk-pk	63%
ETMC-5011/DRL	5 ±15 VDC	0.41 ±0.1 A	75 ±100 mV pk-pk	61%

INPUT SPECIFICATIONS

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

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Load Regulation (Note7)	Single/Duals $\pm 3\%$, Triple: $0.5 / \pm 0.5\%$ (max)
Line Regulation (Note 8)	Single 0.1~1%, typ Duals $\pm 0.3\sim 1\%$, typ Triple: $0.6 / \pm 0.2\%$ (max)
Cross Regulation (Note 11)	Duals 2% Triple NA / $\pm 0.1\%$
Preset Accuracy (Note 9)	Single $\pm 1\%$ Duals: $\pm 1.5\%$ Triples: $1\% / \pm 5\%$
Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
Ripple/Noise (Note 1, 2, 10)	See Selection Chart
Over Voltage Protection	Clamp *
Short Circuit Protection (Note 3)	Continuous, self-recovering *
Hold Up Time	30 mS, typ (Nom. Input, 100% load)

GENERAL SPECIFICATIONS

Isolation (Note 4)	5656VDC Input-Output
Efficiency	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
EMC	EN55011 Class B

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

* 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.

PHYSICAL SPECIFICATIONS

Size PCB Mount	2.29L" x 1.77W" x 0.85H"
Chassis Mount	3.77L" x 2.16W" x 1.0H"
Din Rail	3.77L" x 2.16W" x 1.42H"
Case Material	Rynite, 94V-0 Rated
Construction	Encapsulated. Soft Pot
Weight	
PCB / CHA	4 oz (113g) / 8.5 oz (241g)
Din Rail	11.5 oz (326g)

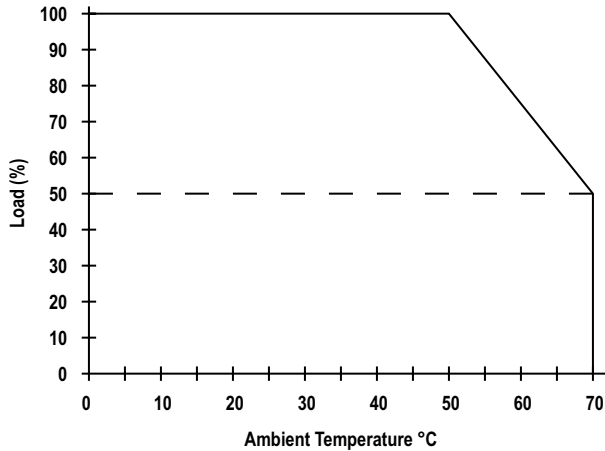
ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature (Note 5)	0 to +50°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

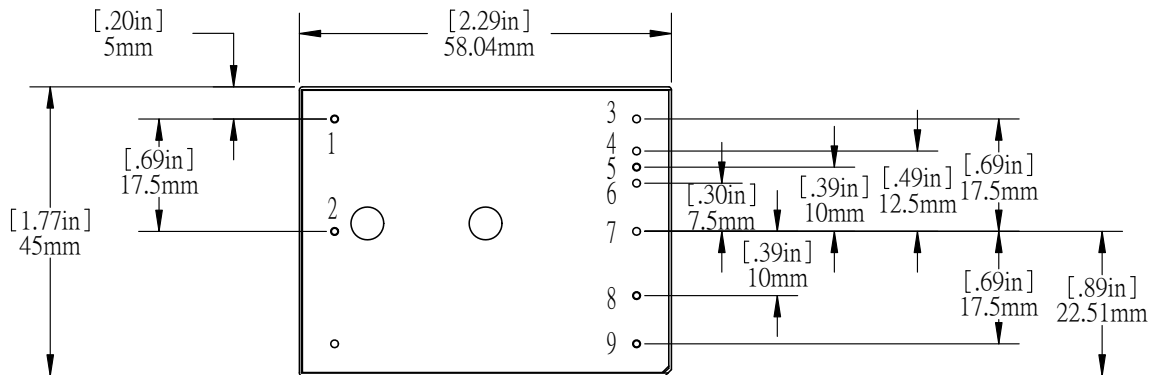
NOTES

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

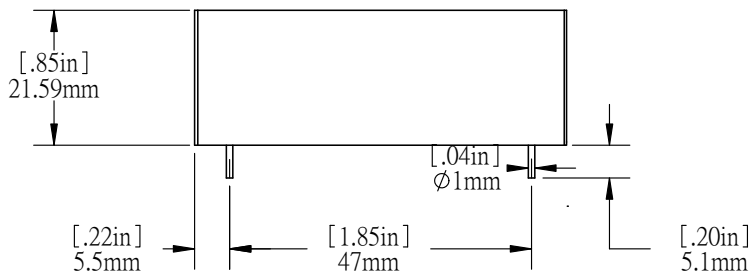
OUTPUT DERATING CURVE



MECHANICAL DIMENSIONS



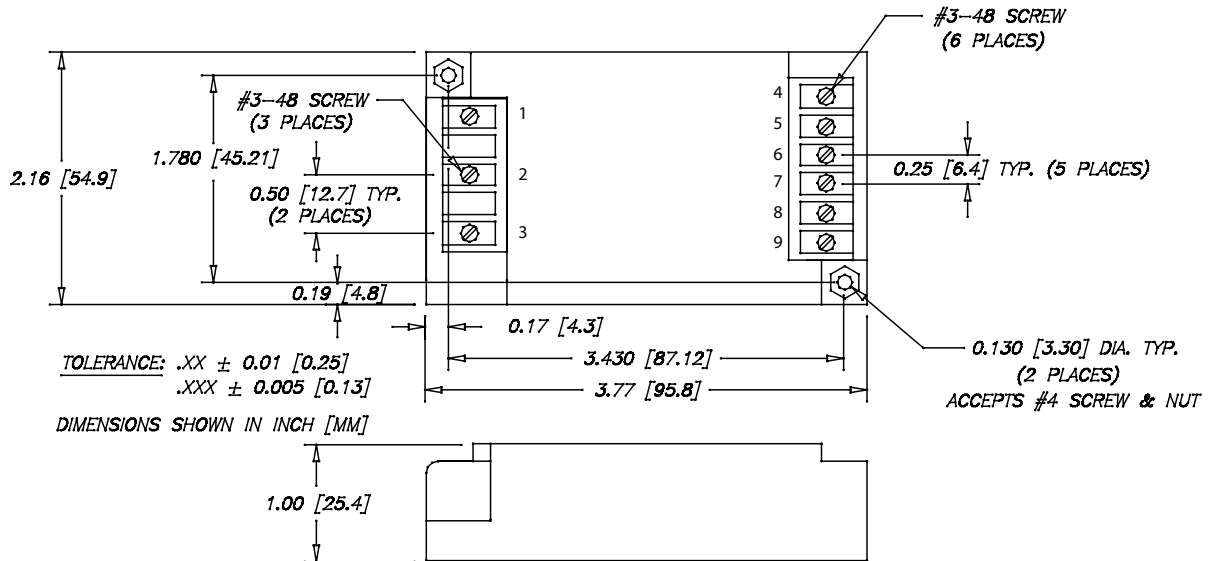
PIN-OUT VIEWED FROM BOTTOM



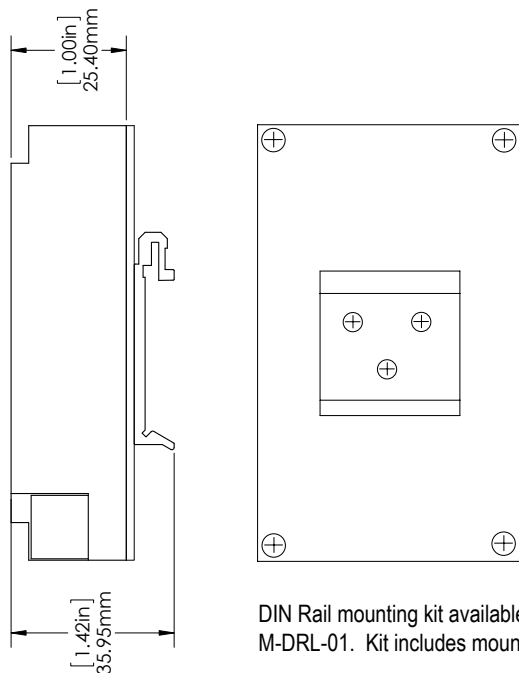
Tolerance : .XX ± 0.508mm [0.02in]
 .XXX ± 0.254mm [0.01in]

Model Type/Pin#	Single	Dual	Triple
1	ACL	ACL	ACL
2	ACN	ACN	ACN
3	No Pin	No Pin	+Vout
4	No Pin	No Pin	Com
5	+Vout	+Vout	No Pin
6	No Pin	No Pin	-Vout
7	No Pin	Com	+5Vout
8	-Vout	-Vout	+5VRTN
9	No Pin	No Pin	No Pin

MECHANICAL DIMENSIONS - CHASSIS MOUNT



MECHANICAL DIMENSIONS - DIN RAIL



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

Model

Type / Pin#	Single	Dual	Triple
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1	ACN	ACN	ACN
2	N/C	N/C	N/C
3	ACL	ACL	ACL
4	N/C	N/C	N/C
5	-Vout	-Vout	+5VRTN
6	-Vout	Com	+5Vout
7	+Vout	Com	-Vout
8	+Vout	+Vout	Com
9	N/C	N/C	+Vout