



- Single / Dual / Triple Outputs
- Universal 90 to 264VAC Input
- 3.3Volts(DC) to 48Volts(DC) Outputs
- 5656VDC Input to Output Isolation
- PCB and Chassis Mount Packages
- Full Safety Approvals



Model Number	Output Voltage	Output Amps	Output Watts	Load Regulation	Efficiency	Ripple & Noise
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SINGLE OUTPUT - PCB Mount

ESMA-0300	3.3 Volts(DC)	7.5Amps	25W	3% max.	73%, typ.	150mV p-p max.
ESMA-0301	5 Volts(DC)	6Amps	30W	2% max.	78%, typ.	150mV p-p max.
ESMA-0322	9 Volts(DC)	3.33 Amps	30W	1% max.	81%, typ.	150mV p-p max.
ESMA-0302	12 Volts(DC)	2.5Amps	30W	1% max.	83%, typ.	150mV p-p max.
ESMA-0303	15 Volts(DC)	2Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMA-0318	18 Volts(DC)	1.67 Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMA-0305	24 Volts(DC)	1.25Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMA-0312	48 Volts(DC)	0.63Amps	30W	1% max.	85%, typ.	150mV p-p max.

SINGLE OUTPUT - Chassis Mount

ESMC-0300	3.3 Volts(DC)	7.5Amps	25W	3% max.	73%, typ.	150mV p-p max.
ESMC-0301	5 Volts(DC)	6Amps	30W	2% max.	78%, typ.	150mV p-p max.
ESMC-0322	9 Volts(DC)	3.33 Amps	30W	1% max.	81%, typ.	150mV p-p max.
ESMC-0302	12 Volts(DC)	2.5Amps	30W	1% max.	83%, typ.	150mV p-p max.
ESMC-0303	15 Volts(DC)	2Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0318	18 Volts(DC)	1.67 Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0305	24 Volts(DC)	1.25Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0312	48 Volts(DC)	0.63Amps	30W	1% max.	85%, typ.	150mV p-p max.

SINGLE OUTPUT - DIN Rail Mount

ESMC-0300/DRL	3.3 Volts(DC)	7.5Amps	25W	3% max.	73%, typ.	150mV p-p max.
ESMC-0301/DRL	5 Volts(DC)	6Amps	30W	2% max.	78%, typ.	150mV p-p max.
ESMC-0322/DRL	9 Volts(DC)	3.33 Amps	30W	1% max.	81%, typ.	150mV p-p max.
ESMC-0302/DRL	12 Volts(DC)	2.5Amps	30W	1% max.	83%, typ.	150mV p-p max.
ESMC-0303/DRL	15 Volts(DC)	2Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0318/DRL	18 Volts(DC)	1.67 Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0305/DRL	24 Volts(DC)	1.25Amps	30W	1% max.	84%, typ.	150mV p-p max.
ESMC-0312/DRL	48 Volts(DC)	0.63Amps	30W	1% max.	85%, typ.	150mV p-p max.



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Model Number	Output Voltage	Output Amps	Output Watts	Load Regulation	Ripple & Noise	Efficiency
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DUAL OUTPUT - PCB Mount

EDMA-0306	±12 Volts(DC)	±1.25Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMA-0307	±15 Volts(DC)	±1Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMA-0308	+5/12 Volts(DC)	3/1.25Amps	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.

DUAL OUTPUT - Chassis Mount

EDMC-0306	±12 Volts(DC)	±1.25Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMC-0307	±15 Volts(DC)	±1Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMC-0308	+5/12 Volts(DC)	3/1.25Amps	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.

DUAL OUTPUT - DIN Rail Mount

EDMC-0306/DRL	±12 Volts(DC)	±1.25Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMC-0307/DRL	±15 Volts(DC)	±1Amps	30W	±3% max.	±100mV p-p max.	80%, typ.
EDMC-0308/DRL	+5/12 Volts(DC)	3/1.25Amps	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.

TRIPLE OUTPUT - PCB Mount

ETMA-0309	+5,±12 Volts(DC)	3,0.63/0.63Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETMA-0311	+5,±15 Volts(DC)	3,0.5/0.5Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.

TRIPLE OUTPUT - Chassis Mount

ETMC-0309	+5,±12 Volts(DC)	3,0.63/0.63Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETMC-0311	+5,±15 Volts(DC)	3,0.5/0.5Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.

TRIPLE OUTPUT - DIN Rail Mount

ETMC-0309/DRL	+5,±12 Volts(DC)	3,0.63/0.63Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETMC-0311/DRL	+5,±15 Volts(DC)	3,0.5/0.5Amps	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.

30W Ultraminiature Medical Grade Encapsulated Switchers

EMA30 series

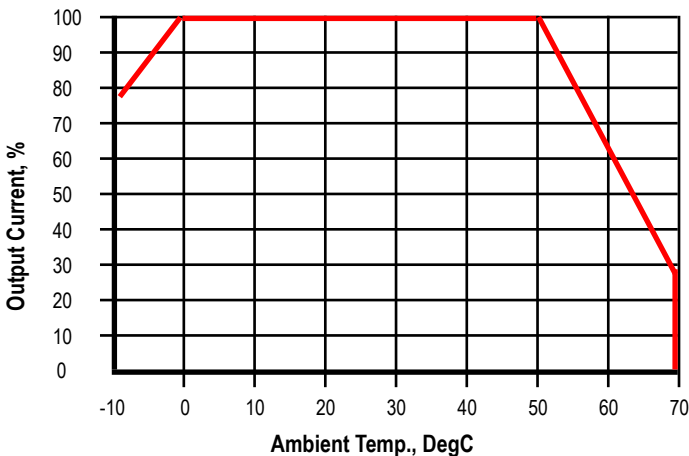
INPUT SPECIFICATIONS

Input Voltage, Nominal	90-264VAC
	Nominal: 100-240VAC
Input Frequency	47-63 Hz, 50-60Hz Nom.
Inrush Current	30A @ 115VAC, typ 60A @ 230VAC, typ
Leakage current	<300uA @264Vac, 50Hz

OUTPUT SPECIFICATIONS

Output Voltage/Current	See Specific Model
Preset Accuracy	Single & Duals: $\pm 1\%$ ($\pm 2 / \pm 5\%$ -0308) Triples: 1%, $\pm 5\%$
Load Regulation	See Specific Model
Line Regulation	Single & Duals: $\pm 1\%$, max. Triples: 0.6%, $\pm 0.2\%$
Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
Ripple/Noise(20Mhz BW)	See Specific Model
Overvoltage Protection	Clamp *
Hold Up Time at nom. Input	20mS, typ
Short Circuit Protection	Latching, Auto Recovery *
Current Limit	>110% Load, Auto-Recovery

DERATE CURVE



GENERAL SPECIFICATIONS

Isolation	5656VDC Input-Output
Switching Frequency	65 Khz, fixed
Efficiency at nom. Input	See Specific Model
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:	EN55022: 2006

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	0 to +50°C FL See Derate * (Free-air Convection)
Relative Humidity	0-95%, Non-Condensing
Storage Temperature	-25 to +71°C *
EMC	EN55022, Class B

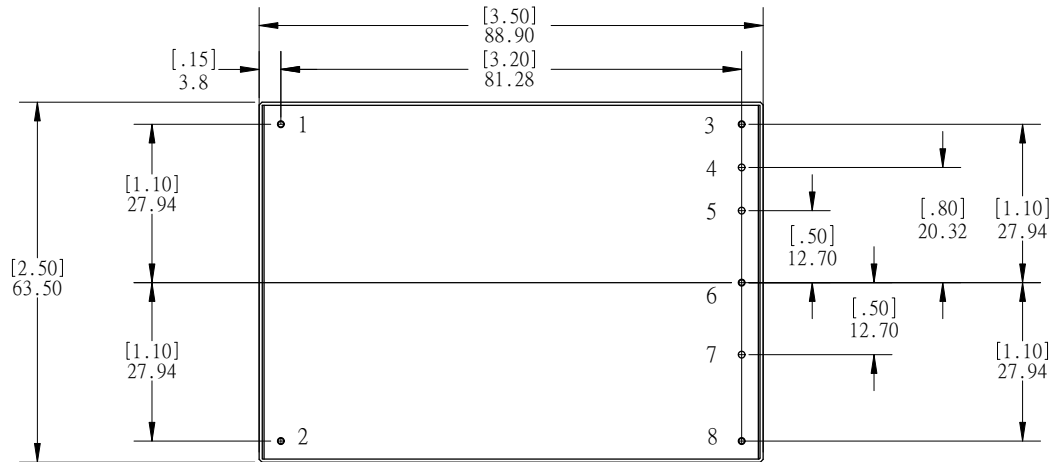
PHYSICAL SPECIFICATIONS

Case Material	Rynite, 94V-0 Rated
Construction	Encapsulated,
Size PCB Mount	Single O/P: 3.5" x 2.5" x 0.98" Multi O/P: 4.06" x 2.5" x 0.98"
Chassis Mount	Single O/P: 4.76" x 2.56" x 1.0" Multi O/P: 5.34" x 2.56" x 1.0"
Weight PCB / CHASSIS Mount	
Singles	10.4 oz (295g) / 13.4 oz (380g)
Duals/Triples	12.0 oz (340g) / 15.2 oz (430g)

All specifications are typical at nominal input, full load, and 25DegC 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.

MECHANICAL DIMENSIONS - PCB MOUNT - SINGLE OUTPUT



PIN - OUT VIEWED FROM BOTTOM

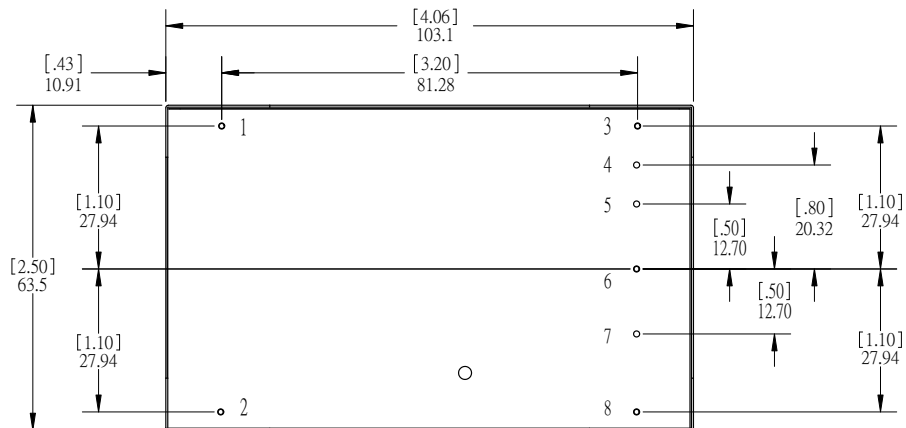


Model Type/Pin#	Single
1	AC HI
2	AC LO
3	No Pin
4	No Pin
5	No Pin
6	-Vout
7	No Pin
8	+Vout

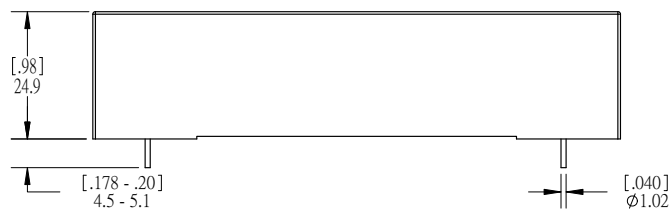
NOTES :

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

MECHANICAL DIMENSIONS - PCB MOUNT - DUAL & TRIPLE OUTPUT



PIN-OUT VIEWED FROM BOTTOM

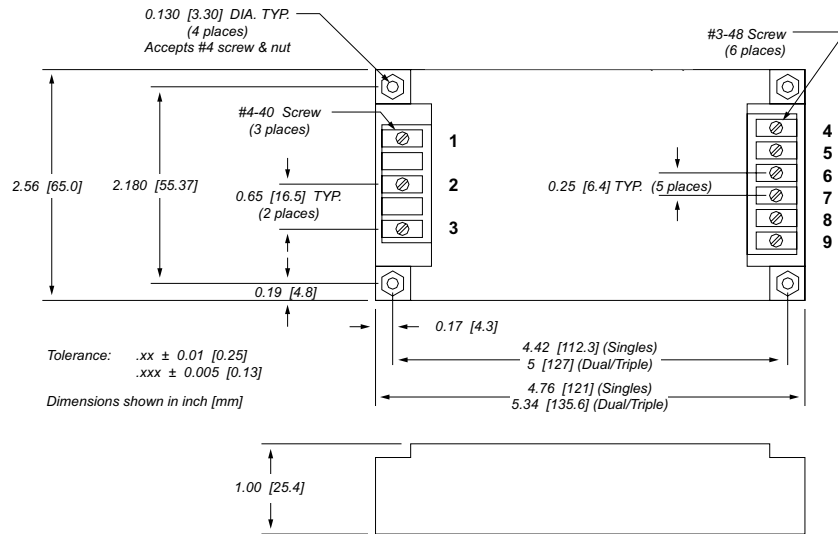


Model Type/Pin#	Dual Matched	Dual (5/12V)	Triple
1	AC HI	AC HI	AC HI
2	AC LO	AC LO	AC LO
3	-Vout	COM	-Vout
4	No Pin	No Pin	No Pin
5	No Pin	No Pin	+5VRTN
6	COM	+5Vout	+/-COM
7	No Pin	No Pin	+5Vout
8	+Vout	+12Vout	+Vout

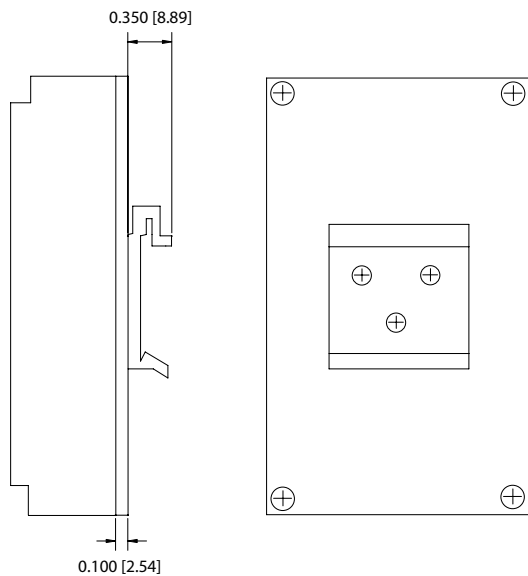
NOTES :

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	Match Dual	Unmatch Dual	Triple
1	AC LO	AC LO	AC LO	AC LO
2	N/C	N/C	N/C	N/C
3	AC HI	AC HI	AC HI	AC HI
4	+Vout	+Vout	+12Vout	+Vout
5	+Vout	Com	+5Vout	+5Vout
6	-Vout	Com	+5Vout	+/- Com
7	-Vout	-Vout	Com	+5V Ret
8	N/C	N/C	Com	-Vout
9	N/C	N/C	N/C	N/C

DIN Rail mounting kit available for Chassis-mount modules.
 - For 30 watt single outputs specify part # M-DRL-30S
 - For 30 watt dual/single outputs specify part # M-DRL-30T
 Kit includes mounting plate, DIN Rail cliip and assembly hardware.