Astrodyne

15W Ultraminiature Encapsulated Switching Power Supplies

ECA-15 series



- Universal 90-264VAC Input
- High Efficiency
- Improved EMI Performance
- 3000V Isolation
- Single and Dual Outputs

Model Number	Output Voltage	Output Amps(max)	(pk)
SINGLE OUTPUT - PCB Mount			
ESCA-1500	3.3 VDC	3.5A	3.8A
ESCA-1501	5 VDC	3A	3.6A
ESCA-1522	9 VDC	1.66A	1.9A
ESCA-1502	12 VDC	1.25A	1.5A
ESCA-1503	15VDC	1A	1.25A
ESCA-1505	24VDC	0.63A	0.75A
SINGLE OUTPUT - Chassis Mount			
ESCC-1500	3.3 VDC	3.5A	3.8A
ESCC-1501	5 VDC	3A	3.6A
ESCC-1522	9 VDC	1.66A	1.9A
ESCC-1502	12 VDC	1.25A	1.5A
ESCC-1503	15VDC	1A	1.25A
ESCC-1505	24VDC	0.63A	0.75A
SINGLE OUTPUT - DIN Rail Mount			
ESCC-1500/DRL	3.3 VDC	3.5A	3.8A
ESCC-1501/DRL	5 VDC	3A	3.6A
ESCC-1522/DRL	9 VDC	1.66A	1.9A
ESCC-1502/DRL	12 VDC	1.25A	1.5A
ESCC-1503/DRL	15VDC	1A	1.25A
ESCC-1505/DRL	24VDC	0.63A	0.75A
DUAL OUTPUT - PCB Mount			
EDCA-1506	+/-12VDC	+/-0.63A	+/-0.8A
EDCA-1507	+/-15VDC	+/-0.5A	+/-0.65A
DUAL OUTPUT - Chassis Mount			
EDCC-1506	+/-12VDC	+/-0.63A	+/-0.8A
EDCC-1507	+/-15VDC	+/-0.5A	+/-0.65A
DUAL OUTPUT - DIN Rail Mount			
EDCC-1506/DRL	+/-12VDC	+/-0.63A	+/-0.8A
EDCC-1507/DRL	+/-15VDC	+/-0.5A	+/-0.65A

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ASTRODYNE USA: 1-800-823-8082
ASTRODYNE PACIFIC: 886-2-26983458
ASTRODYNE EUROPE: 353 51 561060

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15W Ultraminiature Medical Grade Encapsulated Switchers

ECA-15 series



- Universal 90-264VAC Input
- High Efficiency
- Improved EMI Performance
- 4000V Isolation
- Single and Dual Outputs

Model Number	Output Voltage	Output Amps(max)	(pk)
SINGLE OUTPUT - PCB Mount			
ESMA-1500	3.3 VDC	3.5A	3.8A
ESMA-1501	5 VDC	3A	3.6A
ESMA-1522	9 VDC	1.66A	1.9A
ESMA-1502	12 VDC	1.25A	1.5A
ESMA-1503	15VDC	1A	1.25A
ESMA-1505	24VDC	0.63A	0.75A
SINGLE OUTPUT - Chassis Mount			
ESMC-1500	3.3 VDC	3.5A	3.8A
ESMC-1501	5 VDC	3A	3.6A
ESMC-1522	9 VDC	1.66A	1.9A
ESMC-1502	12 VDC	1.25A	1.5A
ESMC-1503	15VDC	1A	1.25A
ESMC-1505	24VDC	0.63A	0.75A
SINGLE OUTPUT - DIN Rail Mount			
ESMC-1500/DRL	3.3 VDC	3.5A	3.8A
ESMC-1501/DRL	5 VDC	3A	3.6A
ESMC-1522/DRL	9 VDC	1.66A	1.9A
ESMC-1502/DRL	12 VDC	1.25A	1.5A
ESMC-1503/DRL	15VDC	1A	1.25A
ESMC-1505/DRL	24VDC	0.63A	0.75A
DUAL OUTPUT - PCB Mount			
EDMA-1506	+/-12VDC	+/-0.63A	+/-0.8A
EDMA-1507	+/-15VDC	+/-0.5A	+/-0.65A
DUAL OUTPUT - Chassis Mount			
EDMC-1506	+/-12VDC	+/-0.63A	+/-0.8A
EDMC-1507	+/-15VDC	+/-0.5A	+/-0.65A
DUAL OUTPUT - DIN Rail Mount			
EDMC-1506/DRL	+/-12VDC	+/-0.63A	+/-0.8A
EDMC-1507/DRL	+/-15VDC	+/-0.5A	+/-0.65A

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ECA-15 series

INPUT SPECIFICATIONS

Input Voltage Range	90-264 VAC
Frequency Range	47-63 Hz
Inrush Current, typ:	20A@100V, 40A@200V Input *

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Load Regulation (20%-FL)	Singles: +/- 3%, Duals: +/- 3%
Line Regulation	Singles +/- 0.1~1%, typ
	Duals +/- 0.3~1%, typ
Cross Regulation (Duals)	2%
Preset Accuracy	1%
DC Voltage Adjust (typ)	+/- 10% of FS (Primary)
Temperature Coefficient	+/-0.03%/°C
Ripple/Noise	100mV Pk-Pk, typ
Over Voltage Protection	Clamp, 130-150% *
Over Temp. Protection	Latching, Cool and Repower
Short Circuit Protection	Continuous, self-recovering
Hold Up Time	20 mS, typ

GENERAL SPECIFICATIONS

Input-Out Isolation		3KVAC, (4KVAC Medical)
I/P-Ground		2500VAC
O/P-Ground		1000VAC
Efficiency		75%~78%, typ
Switching Frequency		100Khz, (fixed, typical)
Safety		
	Commercial	UL/EN60950-1, IEC60950
	Medical	UL/EN60601-1, IEC60601

PHYSICAL SPECIFICATIONS

Size	PCB Mount	2.75L" x 1.89W" x 0.93H"
	Chassis Mount	3.96L" x 2.16W" x 1.0H"
Case Material		Rynite, 94V-0 Rated
Construction		Encapsulated. Soft Pot
Weight PCB / CHA		5.6 oz (158g) / 8.9 oz (250g)

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature		0 to +70°C (See Derate)
Storage Temperature		-25 to +71°C *
Relative Humidity		0 to + 95%, non-cond *
EMC / EMI		FCC/A, VDE 0871/A , CISPRB
MTBF	(Mil Std 217, 25°C)	559,000 Hrs

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

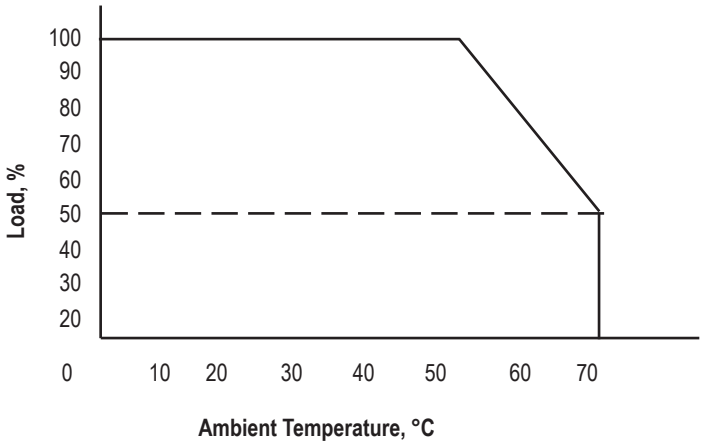
* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranteed nor implied.

Astrodyne products are not authorized or warranteed for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

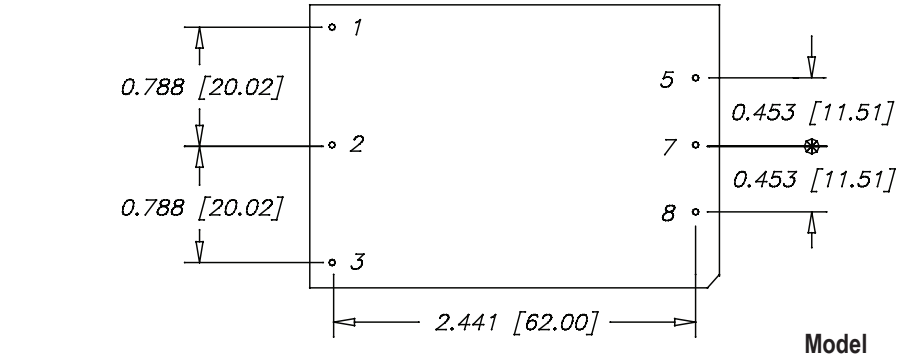
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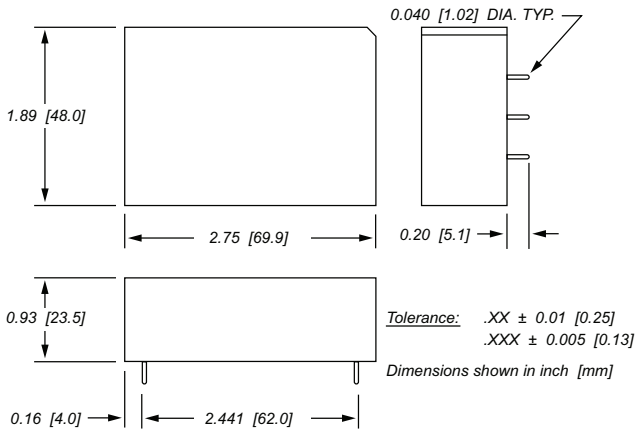
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OUTPUT DERATING CURVE



MECHANICAL DIMENSIONS





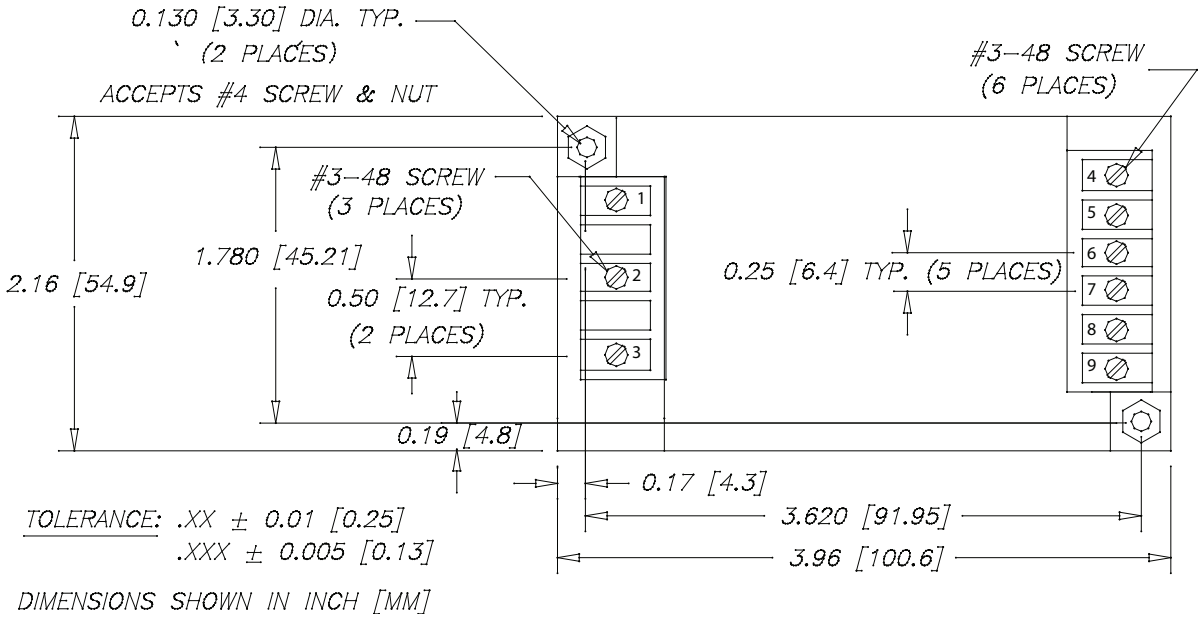
Model Type / Pin#	Single	Dual
1	AC HI	AC HI
2	AC LO	AC LO
3	GND	GND
5	+ Vout	+ Vout
7	No Pin	Out Com
8	- Vout	- Vout

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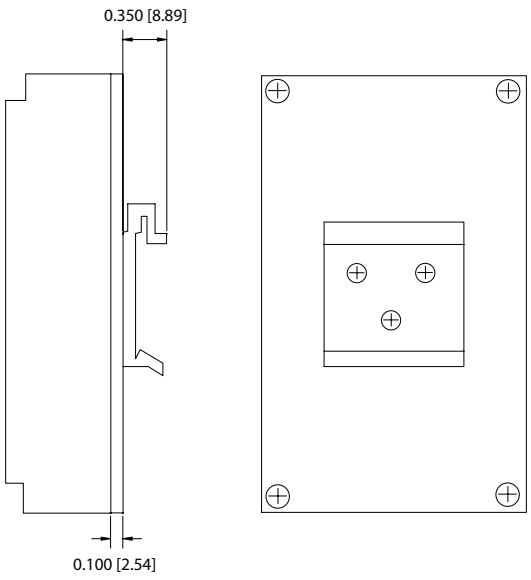
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ECA-15 series

MECHANICAL DIMENSIONS - CHASSIS MOUNT



MECHANICAL DIMENSIONS - DIN RAIL



Model Type / Pin#	Single	Dual
1	AC LO	AC LO
2	GND	GND
3	AC HI	AC HI
4	N/C	N/C
5	-Vout	-Vout
6	-Vout	Com
7	+Vout	Com
8	+Vout	+Vout
9	N/C	N/C

DIN Rail mounting kit available for Chassis-mount modules, specify part # M-DRL-15. Kit includes mounting plate, DIN Rail cliip and assembly hardware.