



10W Ultraminiature Encapsulated Switching Power Supplies

ECA10 series



- Universal 90-264VAC Input
- High Efficiency
- Improved EMI Performance
- 4242VDC Isolation
- Single , Dual and Triple Outputs
- UL60950-1, EN60950-1 & IEC60950-1



Model Number	Output Voltage	Output Amps FL (peak)	Ripple/Noise	Efficiency
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SINGLE OUTPUT - PCB Mount

ESCA-0100	3.3 VDC	2.5A (3.3A)	165mV pk-pk	62%
ESCA-0101	5 VDC	2A (2.6A)	100mV pk-pk	72%
ESCA-0122	9 VDC	1.1A (1.5A)	90mV pk-pk	72%
ESCA-0102	12 VDC	0.85A (1.2A)	120mV pk-pk	75%
ESCA-0103	15 VDC	0.67A (0.9A)	150mV pk-pk	76%
ESCA-0118	18 VDC	0.55 (0.83A)	180mV pk-pk	77%
ESCA-0105	24VDC	0.42A (0.6A)	240mV pk-pk	78%

SINGLE OUTPUT - Chassis Mount

ESCC-0100	3.3 VDC	2.5A (3.3A)	165mV pk-pk	62%
ESCC-0101	5 VDC	2A (2.6A)	100mV pk-pk	72%
ESCC-0122	9 VDC	1.1A (1.5A)	90mV pk-pk	72%
ESCC-0102	12 VDC	0.85A (1.2A)	120mV pk-pk	75%
ESCC-0103	15VDC	0.67A (0.9A)	150mV pk-pk	76%
ESCC-0118	18 VDC	0.55 (0.83A)	180mV pk-pk	77%
ESCC-0105	24VDC	0.42A (0.6A)	240mV pk-pk	78%

SINGLE OUTPUT - DIN Rail Mount

ESCC-0100/DRL	3.3 VDC	2.5A (3.3A)	165mV pk-pk	62%
ESCC-0101/DRL	5 VDC	2A (2.6A)	100mV pk-pk	72%
ESCC-0122/DRL	9 VDC	1.1A (1.5A)	90mV pk-pk	72%
ESCC-0102/DRL	12 VDC	0.85A (1.2A)	120mV pk-pk	75%
ESCC-0103/DRL	15VDC	0.67A (0.9A)	150mV pk-pk	76%
ESCC-0118/DRL	18 VDC	0.55 (0.83A)	180mV pk-pk	77%
ESCC-0105/DRL	24VDC	0.42A (0.6A)	240mV pk-pk	78%

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ASTRODYNE USA: 1-800-823-8082
ASTRODYNE PACIFIC: 886-2-26983458



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Model Number	Output Voltage	Output Amps FL (peak)	Ripple/Noise	Efficiency
DUAL OUTPUT - PCB Mount				
EDCA-0106	±12 VDC	±0.42A (±0.6A)	±100 mV pk-pk	73%
EDCA-0107	±15 VDC	±0.34A (±0.45A)	±100 mV pk-pk	74%
EDCA-0108	5/12 VDC	1/0.42A (1.3/0.6A)	±100 mV pk-pk	75%
DUAL OUTPUT - Chassis Mount				
EDCC-0106	±12 VDC	±0.42A (±0.6A)	±100 mV pk-pk	73%
EDCC-0107	±15 VDC	±0.34A (±0.45A)	±100 mV pk-pk	74%
EDCC-0108	5/12 VDC	1/0.42A (1.3/0.6A)	±100 mV pk-pk	75%
DUAL OUTPUT - DIN Rail Mount				
EDCC-0106/DRL	±12 VDC	±0.42A (±0.6A)	±100 mV pk-pk	73%
EDCC-0107/DRL	±15 VDC	±0.34A (±0.45A)	±100 mV pk-pk	74%
EDCC-0108/DRL	5/12 VDC	1/0.42A (1.3/0.6A)	±100 mV pk-pk	75%
TRIPLE OUTPUT - PCB Mount				
ETCA-0109	5 ±12 VDC	1.5 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%
ETCA-0111	5 ±15 VDC	1.4 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%
TRIPLE OUTPUT - Chassis Mount				
ETCC-0109	5 ±12 VDC	1.5 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%
ETCC-0111	5 ±15 VDC	1.4 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%
TRIPLE OUTPUT - DIN Rail Mount				
ETCC-0109/DRL	5 ±12 VDC	1.5 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%
ETCC-0111/DRL	5 ±15 VDC	1.4 ±0.1 A / 1.8 ±0.13 A	50 ±75 mV pk-pk	70%



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INPUT SPECIFICATIONS

Input Voltage Range	90-264 VAC
Frequency Range	47-63 Hz
Inrush Current, typ:	20A@115V, 40A@230V Input *

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Load Regulation (Note7)	Singles/Duals $\pm 3\%$, Triple: $0.5 / \pm 0.5\%$ (max)
Line Regulation (Note 8)	Singles $0.1 \sim 1\%$, 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)	1%
Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
Ripple/Noise (Note 1, 2, 10)	See Selection Chart
Over Voltage Protection	Clamp*
Over Temp. Protection	Latching, recover after cooling and power is restored*
Short Circuit Protection (Note 3)	Indefinite*
Hold Up Time	30 mS, typ (Nom. Input, 100% load)

GENERAL SPECIFICATIONS

Isolation (Note 4)*	4242VDC Input-Output 3535VDC I/P-Ground 1414VDC O/P-Ground
Efficiency	See Selection Chart
Switching Frequency	100Khz, (fixed, typical)
Safety	UL60950-1, EN60950-1
EMC	EN55022

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.

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

PHYSICAL SPECIFICATIONS

Size	PCB Mount	2.56L" x 1.77W" x 0.83H"
	Chassis Mount	3.77L" x 2.16W" x 1.0H"
	Din Rail	3.77L" x 2.16W" x 1.35H"
	Case Material	Rynite, 94V-0 Rated
Construction		Encapsulated. Soft Pot
Weight		
	PCB / CHA	4 oz (112g) / 8.5 oz (238g)
	Din Rail	11.5 oz (326g)

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature (Note 5)	0 to $+50^{\circ}\text{C}$ (See Derate)
Storage Temperature	-25 to $+71^{\circ}\text{C}$ *
Relative Humidity	0 to $+95\%$, non-cond *
EMC / EMI	FCC/A, VDE 0871/A, CISPRB
MTBF	(Mil Std 217, 25°C) 180,000 Hrs

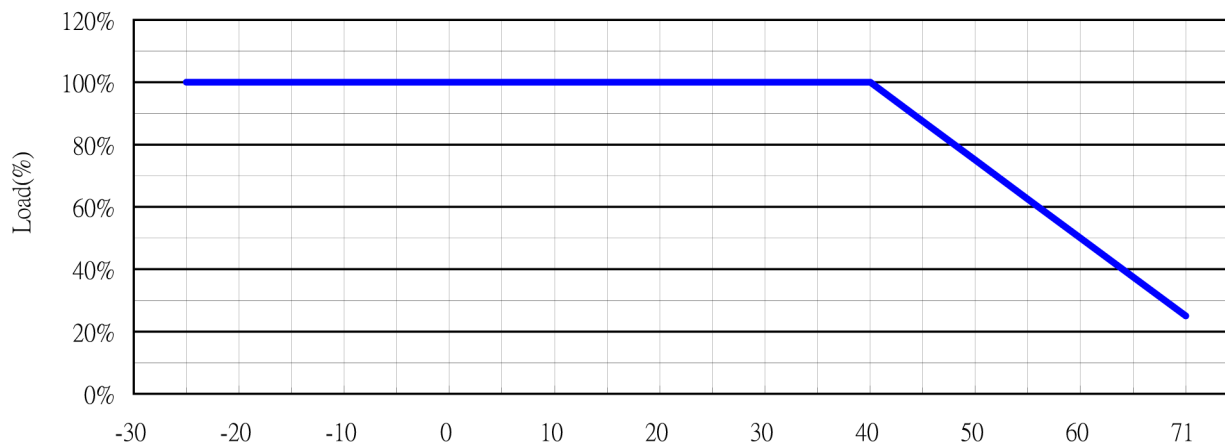
NOTES

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. 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.
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% of nom. load.
12. 100% Production Tested.

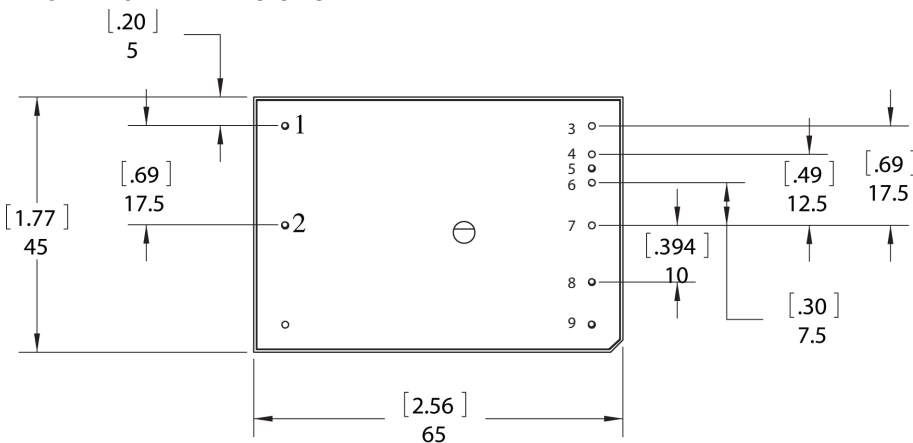
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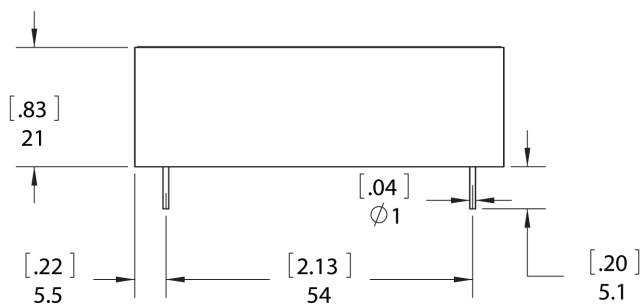
OUTPUT DERATING CURVE



MECHANICAL DIMENSIONS

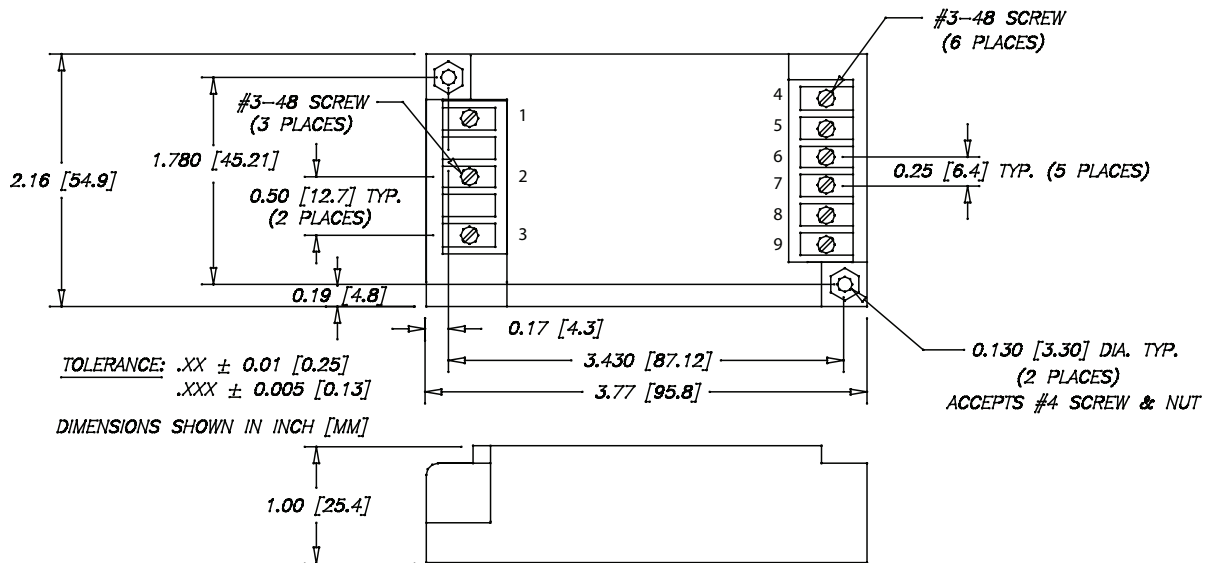


PIN-OUT VIEWED FROM BOTTOM



Model Type / Pin#	Single	Dual	Dual (0108)	Triple
1	ACL	ACL	ACL	ACL
2	ACN	ACN	ACN	ACN
3	No Pin	No Pin	No Pin	+Vout
4	No Pin	No Pin	No Pin	Com
5	+Vout	+Vout	+12V	No Pin
6	No Pin	No Pin	No Pin	-Vout
7	No Pin	Com	+5Vout	+5Vout
8	-Vout	-Vout	Com	+5VRTN
9	No Pin	No Pin	No Pin	No Pin

MECHANICAL DIMENSIONS - CHASSIS MOUNT



MECHANICAL DIMENSIONS - DIN RAIL



Model Type / Pin#	Single	Dual	Dual (0108)	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	+5VRTN
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.