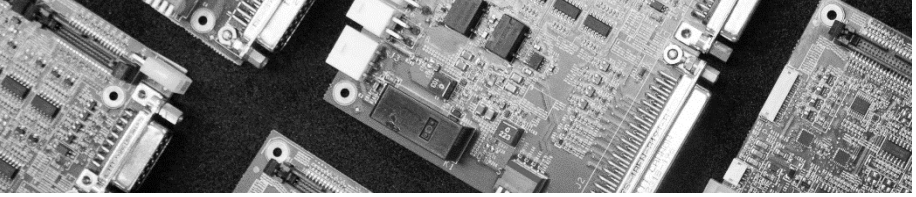


ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

The ECA-15 series features efficient, compact switching power supplies with a 15-watt output and a universal input range of 90 to 264 volts AC, suitable for global use. Notable for its strong electromagnetic interference (EMI) performance, it minimizes disruption to nearby electronics. It also offers 4242 volts DC electrical isolation, enhancing safety. The series includes single, dual, and triple output models, allowing for flexible power distribution in various applications.

HOW TO ORDER

ESCC-1500/DRL

- DRL: DIN RAIL MOUNT
- OUTPUT VOLTAGE:
  - 0 = 3.3 VDC
  - 1 = 5 VDC
  - 2 = 12 VDC
  - 3 = 15 VDC
  - 5 = 24 VDC
  - 6 = ±12 VDC
  - 7 = ±15 VDC
  - 8 = 5/12 VDC
  - 9 = +5±12 VDC
  - 11 = +5±15 VDC
  - 18 = 18 VDC
  - 22 = 9 VDC
- OUTPUT POWER: 15W
- FORM FACTOR: C = CHASSIS MOUNT, A = PCB MOUNT
- # OF OUTPUTS: S = SINGLE OUTPUT, D = DOUBLE OUTPUT, T = TRIPLE OUTPUT
- FAMILY: ECA SERIES

FEATURES

INPUT VOLTAGE
90-264VAC (100-240VAC Nominal)

FREQUENCY RANGE
47-63 Hz

OPERATING TEMPERATURE
0 to +40°C (See Derate*)

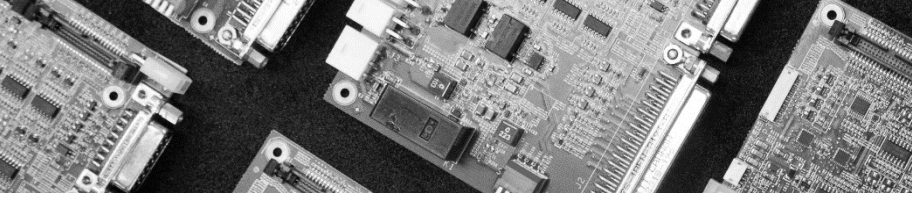
SAFETY APPROVALS

UL/cUL:	UL60950-1 2nd ed./ C22.2 60950-1 2nd ed.
CB:	IEC60950-1 2nd ed.
EMC:	EN55011 Class B

Improved EMI Performance

ISOLATION
Input-Output: 4242VDC I/P - O/P

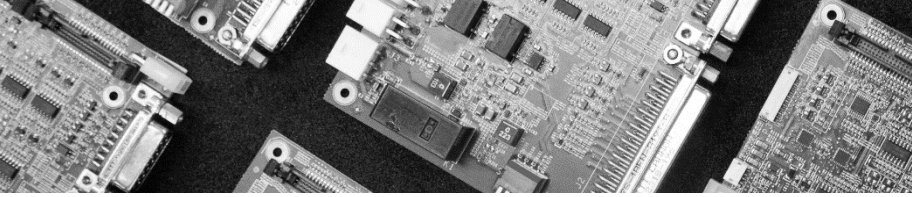
EFFICIENCY
See model selection chart



ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

PARAMETERS	ECA15
Input Voltage	90-264 VAC (100-240 VAC, nom.)
Frequency Range	47-63 Hz
Inrush Current	20A@115V, 40A@230V Input*
Leakage Current	<3.5mA@264 VAC, 50 Hz
Voltage 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 (Note 8)	Single/Duals: ±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/Duals: 1% (EFM-1508: 2/5%) Triple: 1/±0.5%
Over Voltage Protection	Clamp*
Short Circuit Protection (Note 3)	Continuous, Self-Recovering*
Hold Up Time	20 mS, typ @ 115 VAC
** 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.*	
Isolation (Note 4)*	4242 VDC Input-Output
Efficiency typ @ nom Input	See Selection Chart
Switching Frequency	100 Khz, (fixed, typical)
Safety UL/cUL:	UL60950-1 2nd ed./ C22.2 60950-1 2nd ed.
CB:	IEC60950-1 2nd ed.
EMI:	EN55011 Class B
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, 94 V-0 Rated
Construction	Encapsulated, Soft Pot
Weight	PCB Mount: 5.6oz (159g) Chassis Mount: 8.9oz (252g) Din Rail: 12oz (340g)



ECA15

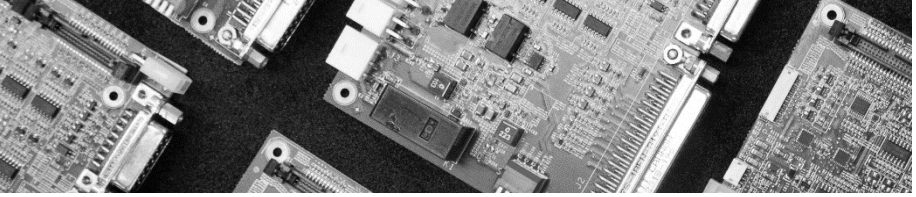
15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

PARAMETERS	ECA15
Oper. Temperature	0 to + 40ºC (See Derate)
Storage Temperature	-25 to 71ºC *
Relative Humidity	0 to + 95%, non-cond*
MTBF	(Mil Std 217, 25ºC) 270,000 Hrs
Temperature Coefficient	±0.03%/ºC

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 par particular model.*
3. *Short Circuit Protection is self-recovering when overcurrent condition is removed.*
4. *Isolation for up to 1 minute 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 90 VAC to 264 VAC.*
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.: Measured output (5V for Triples) at nominal load with the other output(s) varied between 60% to 100% load.*
12. *100% Production Tested.*

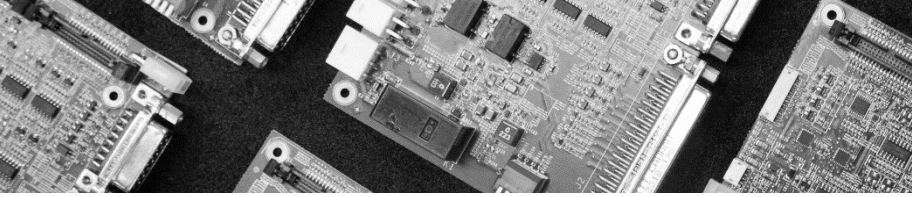
All specifications are typical at nominal input, full load, and 25ºC unless other wise noted.



ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS FL	RIPPLE/NOISE	EFFICIENCY
SINGLE OUTPUT – PCB Mount				
ESCA-1500	3.3VDC	3.5A	100mV pk-pk	67%
ESCA-1501	5VDC	3A	150mV pk-pk	72%
ESCA-1522	9VDC	1.66A	100mV pk-pk	73%
ESCA-1502	12VDC	1.25A	100mV pk-pk	75%
ESCA-1503	15VDC	1A	100mV pk-pk	76%
ESCA-1518	18VDC	0.83A	150mV pk-pk	75%
ESCA-1505	24VDC	0.63A	150mV pk-pk	77%
SINGLE OUTPUT – Chassis Mount				
ESCC-1500	3.3VDC	3.5A	100mV pk-pk	67%
ESCC-1501	5VDC	3A	150mV pk-pk	72%
ESCC-1522	9VDC	1.66A	100mV pk-pk	73%
ESCC-1502	12VDC	1.25A	100mV pk-pk	75%
ESCC-1503	15VDC	1A	100mV pk-pk	76%
ESCC-1518	18VDC	0.83A	150mV pk-pk	75%
ESCC-1505	24VDC	0.63A	150mV pk-pk	77%
SINGLE OUTPUT – DIN Rail Mount				
ESCC-1500/DRL	3.3VDC	3.5A	100mV pk-pk	67%
ESCC-1501/DRL	5VDC	3A	150mV pk-pk	72%
ESCC-1522/DRL	9VDC	1.66A	100mV pk-pk	73%
ESCC-1502/DRL	12VDC	1.25A	100mV pk-pk	75%
ESCC-1503/DRL	15VDC	1A	100mV pk-pk	76%
ESCC-1518/DRL	18VDC	0.83A	150mV pk-pk	75%
ESCC-1505/DRL	24VDC	0.63A	150mV pk-pk	77%

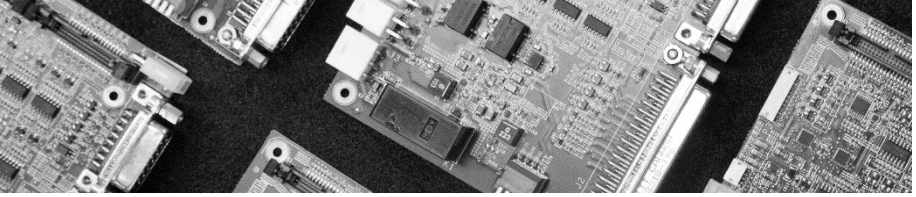


ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS FL	RIPPLE/NOISE	EFFICIENCY TYP AT NOM. INPUT
DUAL OUTPUT – PCB Mount				
EDCA-1506	±12VDC	±0.63A	±150mV pk-pk	74%
EDCA-1507	±15VDC	±0.5A	±150mV pk-pk	74%
EDCA-1508	5/12VDC	1.5/0.65A	±100mV pk-pk	72%
DUAL OUTPUT – Chassis Mount				
EDCC-1506	±12VDC	±0.63A	±150mV pk-pk	74%
EDCC-1507	±15VDC	±0.5A	±150mV pk-pk	74%
EDCC-1508	5/12VDC	1.5/0.65A	±100mV pk-pk	72%
DUAL OUTPUT – DIN Rail Mount				
EDCC-1506/DRL	±12VDC	±0.63A	±150mV pk-pk	74%
EDCC-1507/DRL	±15VDC	±0.5A	±150mV pk-pk	74%
EDCC-1508/DRL	5/12VDC	1.5/0.65A	±100mV pk-pk	72%
TRIPLE OUTPUT – PCB Mount				
ETCA-1509	5 ±12VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%
ETCA-1511	5 ±15VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%
TRIPLE OUTPUT – Chassis Mount				
ETCC-1509	5 ±12VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%
ETCC-1511	5 ±15VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%
TRIPLE OUTPUT – DIN Rail Mount				
ETCC-1509/DRL	5 ±12VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%
ETCC-1511/DRL	5 ±15VDC	2.5 ±0.1A / 2.8 ±0.13A	75 ±50 mV pk-pk	68%

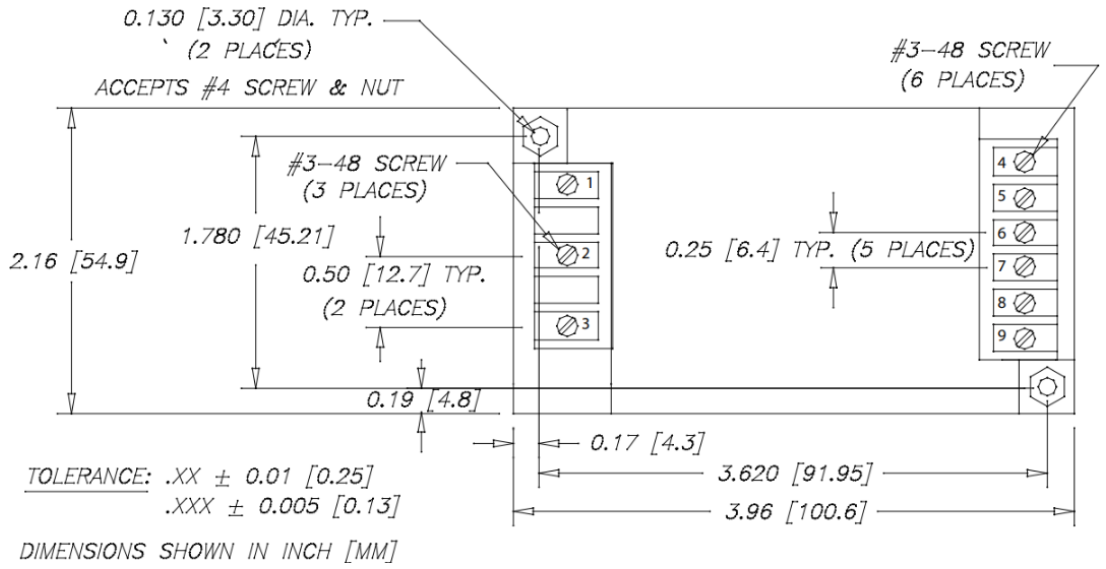
These Specifications are subject to change at any time without prior notification
All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted
**These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long-term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.*



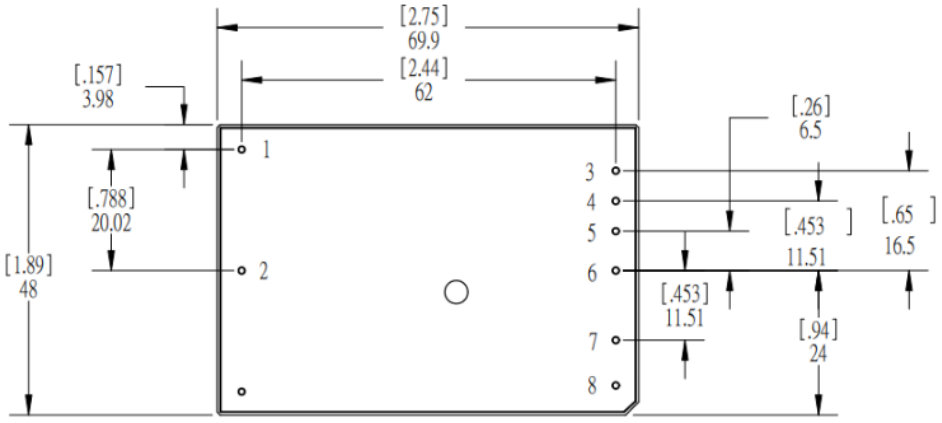
ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

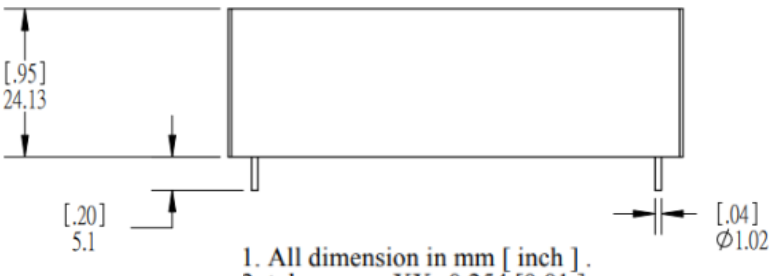
MECHANICAL DIMENSION- CHASSIS MOUNT



MECHANICAL DIMENSION

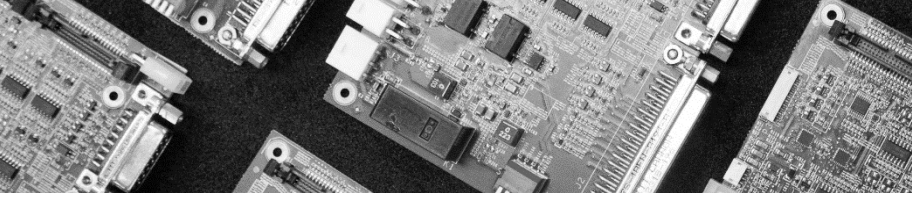


PIN-OUT VIEWED FROM BOTTOM



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

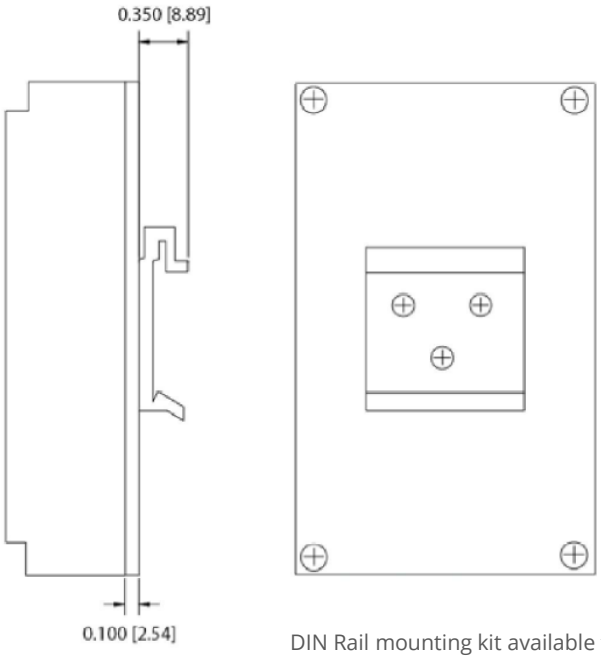
Model Type/Pin#	Single	Dual	Dual(1508)	Triple
1	ACL	ACL	ACL	ACL
2	ACN	ACN	ACN	ACN
3	No Pin	No Pin	No Pin	+Vout
4	+Vout	+Vout	+12V	COM
5	No Pin	No Pin	No Pin	-Vout
6	No Pin	COM	+5Vout	+5Vout
7	-Vout	-Vout	COM	+5VRTN
8	No Pin	No Pin	No Pin	No Pin



ECA15

15W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

MECHANICAL DIMENSION- 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 specifies part # M-DRL-01. Kit includes mounting plate, DIN Rail clip, and assembly hardware.

DERATE CURVE