

ECA30

30W ULTRAMINIATURE ENCAPSULATED SWITCHING POWER SUPPLIES

The ECA-30 series is a compact 30W encapsulated switching power supply with Single, Dual, and Triple Output options, meeting diverse power needs. It supports a universal input range of 90 to 264VAC for global compatibility. Offering output voltages from 3.3VDC to 48VDC, it suits various applications with precise voltage delivery. Its 4242VDC input-to-output isolation enhances safety and reliability. The series also supports installation flexibility with PCB and chassis mount configurations, accommodating different design and space requirements.



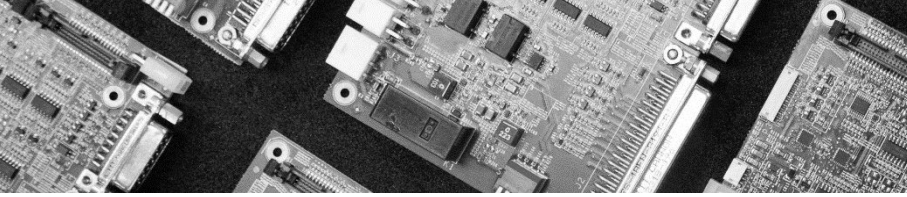
HOW TO ORDER

ESCC-0300/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: 30W
- 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 +50°C (See Derate*)
- SAFETY APPROVALS**
UL/cUL: UL60950-1 2nd ed./
C22.2 60950-1 2nd ed.
CB: IEC60950-1 2nd ed.
EMC: EN55022 Class B
- Improved EMI Performance**
- ISOLATION**
Input-Output: 4242 VDC
- EFFICIENCY**
See model selection chart



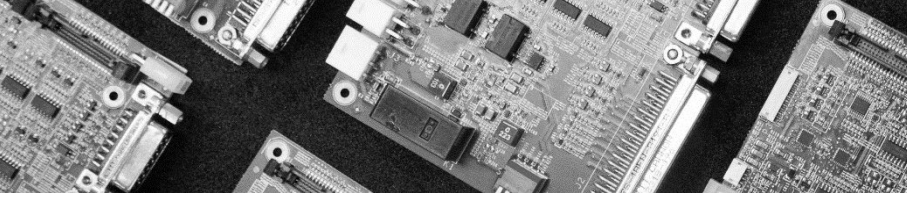
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PARAMETERS

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Input Voltage	90-264 VAC (100-240 VAC, nom.)
Frequency Range	47-63 Hz, 50-60 Hz Nom.
Inrush Current	30A@115VAC, typ 60A@230VAC, typ
Leakage Current	<3.5mA@264 VAC, 50 Hz
Output Voltag/Current	See Specified 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 Specified Model
Over Voltage Protection	Clamp*
Hold Up Time at nom. Input	20mS, typ
Short Circuit Protection	Latching, Auto Recovery*
Current Limit	>110% Load, Auto-Recovery
* 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	4242 VDC Input-Output
Efficiency typ @ nom Input	See Selection Chart
Switching Frequency	65 Khz, (fixed, typical)
Safety UL/cUL:	UL60950-1 2 nd ed./ C22.2 60950-1 2 nd ed.
CB:	IEC60950-1 2 nd ed.
EMC:	EN55022, Class B
Oper. Temperature	0 to +50°C FL (See Derate*) (Free-air Convection)
Relative Humidity	0-95%, Non-Condensing
Storage Temperature	-25 to 71°C*
Case Material	Rynite, 94V-0 Rated
Construction	Encapsulated
Size	PSB 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"



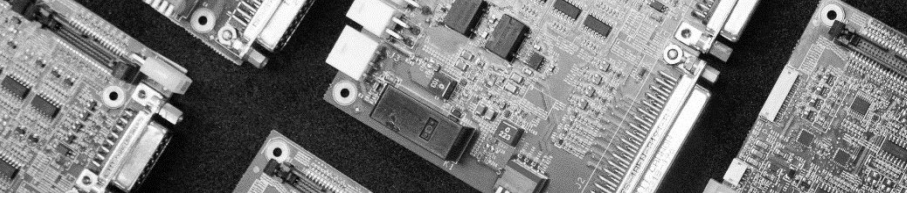
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PARAMETERS	ECA30
Weight	PCB/Chassis Mount Singles: 10.4oz (295g) / 13.4oz (380g) Duals/Triples: 12.0oz (340g) / 15.2oz (430g)
Case Material	Rynite, 94V-0 Rated

- 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 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.

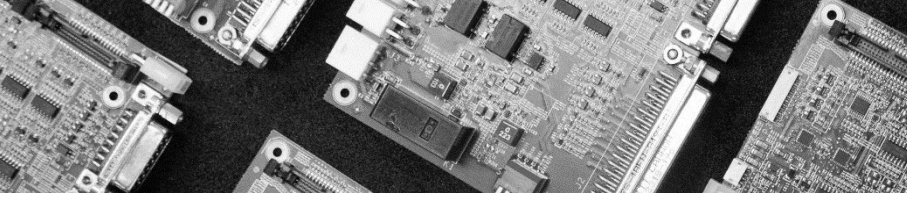
All specifications are typical at nominal input, full load, and 25°C unless other wise noted.



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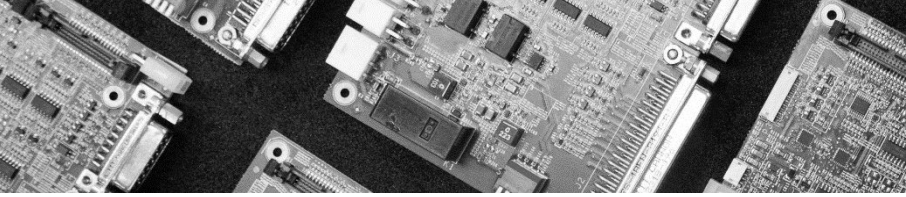
MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS	OUTPUT WATTS	LOAD REGULATION	EFFICIENCY	RIPPLE & NOISE
SINGLE OUTPUT – PCB Mount						
ESCA-0300	3.3VDC	7.5A	25W	3% max.	73%, typ.	150mV p-p max.
ESCA-0301	5VDC	6A	30W	2% max.	78%, typ.	150mV p-p max.
ESCA-0322	9VDC	3.33A	30W	1% max.	81%, typ.	150mV p-p max.
ESCA-0302	12VDC	2.5A	30W	1% max.	83%, typ.	150mV p-p max.
ESCA-0303	15VDC	2A	30W	1% max.	84%, typ.	150mV p-p max.
ESCA-0318	18VDC	1.67A	30W	1% max.	84%, typ.	150mV p-p max.
ESCA-0305	24VDC	1.25A	30W	1% max.	84%, typ.	150mV p-p max.
ESCA-0312	48VDC	0.63A	30W	1% max.	85%, typ.	150mV p-p max.
SINGLE OUTPUT – Chassis Mount						
ESCC-0300	3.3VDC	7.5A	25W	3% max.	73%, typ.	150mV p-p max.
ESCC-0301	5VDC	6A	30W	2% max.	78%, typ.	150mV p-p max.
ESCC-0322	9VDC	3.33A	30W	1% max.	81%, typ.	150mV p-p max.
ESCC-0302	12VDC	2.5A	30W	1% max.	83%, typ.	150mV p-p max.
ESCC-0303	15VDC	2A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0318	18VDC	1.67A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0305	24VDC	1.25A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0312	48VDC	0.63A	30W	1% max.	85%, typ.	150mV p-p max.
SINGLE OUTPUT – DIN Rail Mount						
ESCC-0300/DRL	3.3VDC	7.5A	25W	3% max.	73%, typ.	150mV p-p max.
ESCC-0301/DRL	5VDC	6A	30W	2% max.	78%, typ.	150mV p-p max.
ESCC-0322/DRL	9VDC	3.33A	30W	1% max.	81%, typ.	150mV p-p max.
ESCC-0302/DRL	12VDC	2.5A	30W	1% max.	83%, typ.	150mV p-p max.
ESCC-0303/DRL	15VDC	2A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0318/DRL	18VDC	1.67A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0305/DRL	24VDC	1.25A	30W	1% max.	84%, typ.	150mV p-p max.
ESCC-0312/DRL	48VDC	0.63A	30W	1% max.	85%, typ.	150mV p-p max.



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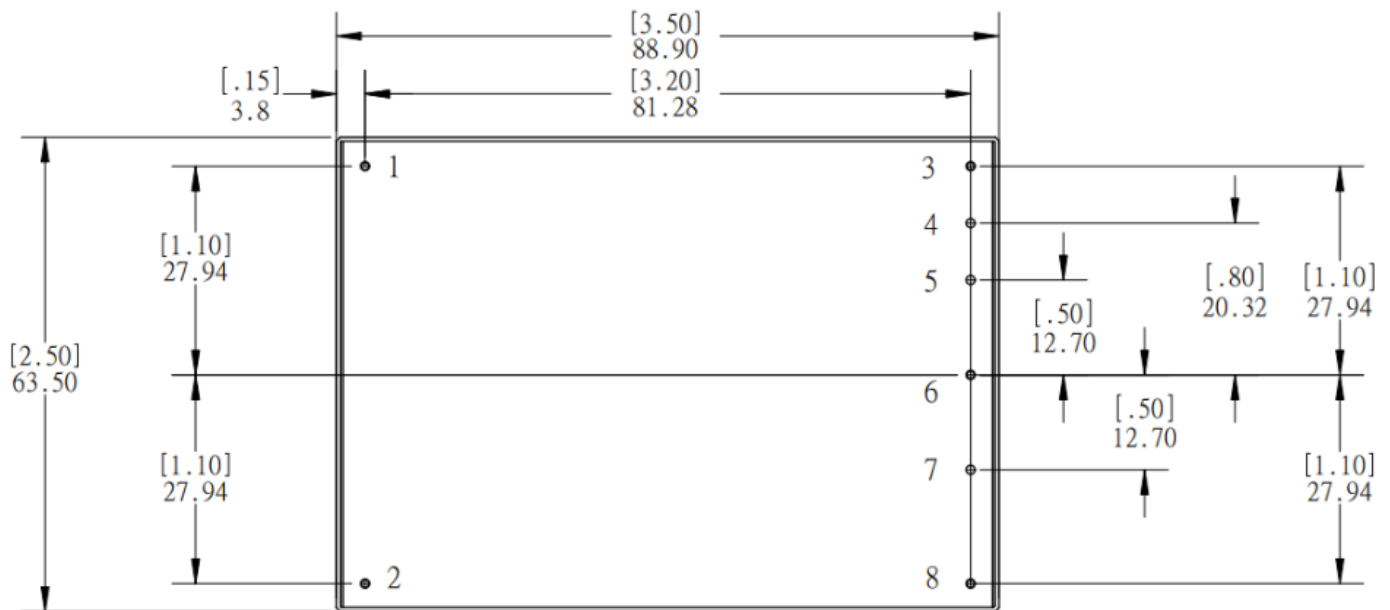
MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS	OUTPUT WATTS	LOAD REGULATION	RIPPLE & NOISE	EFFICIENCY
DUAL OUTPUT - PCB Mount						
EDCA-0306	±12 VDC	±1.25A	30W	±3% max.	±100mV p-p max.	80%, typ.
EDCA-0307	±15 VDC	±1A	30W	±3% max.	±100mV p-p max.	80%, typ.
EDCA-0308	+5/12 VDC	3 / 1.25A	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.
DUAL OUTPUT - Chassis Mount						
EDCC-0306	±12 VDC	±1.25A	30W	±3% max.	±100mV p-p max.	80%, typ.
EDCC-0307	±15 VDC	±1A	30W	±3% max.	±100mV p-p max.	80%, typ.
EDCC-0308	+5/12 VDC	3 / 1.25A	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.
DUAL OUTPUT - DIN Rail Mount						
ESCC-0306/DRL	±12 VDC	±1.25A	30W	±3% max.	±100mV p-p max.	80%, typ.
ESCC-0307/DRL	±15 VDC	±1A	30W	±3% max.	±100mV p-p max.	80%, typ.
ESCC-0308/DRL	+5/12 VDC	3 / 1.25A	30W	±2 / ±4% max.	±150mV p-p max.	74%, typ.
TRIPLE OUTPUT - PCB Mount						
ETCA-0309	+5, ±12 VDC	3, 0.63 / 0.63A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETCA-0311	+5, ±15 VDC	3, 0.5 / 0.5A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.
TRIPLE OUTPUT - Chassis Mount						
ETCC-0309	+5, ±12 VDC	3, 0.63 / 0.63A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETCC-0311	+5, ±15 VDC	3, 0.5 / 0.5A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.
TRIPLE OUTPUT - DIN Rail Mount						
ETCC-0309/DRL	+5, ±12 VDC	3, 0.63 / 0.63A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	71%, typ.
ETCC-0311/DRL	+5, ±15 VDC	3, 0.5 / 0.5A	30W	0.6 / ±0.5% max.	100, ±75mV p-p max.	74%, typ.



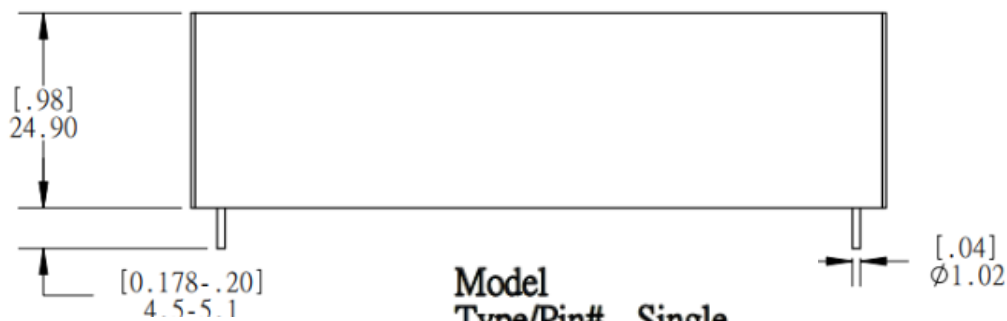
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MECHANICAL DIMENSION- SINGLE OUTPUT- PCB MOUNT

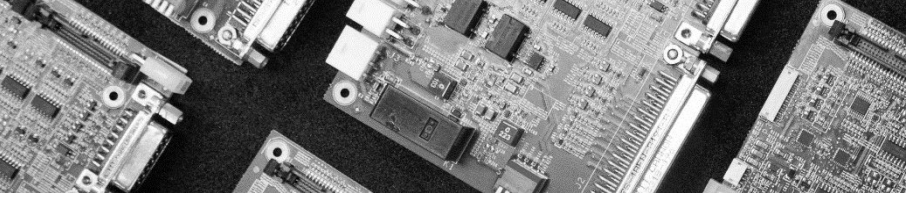


PIN - OUT VIEWED FROM BOTTOM



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

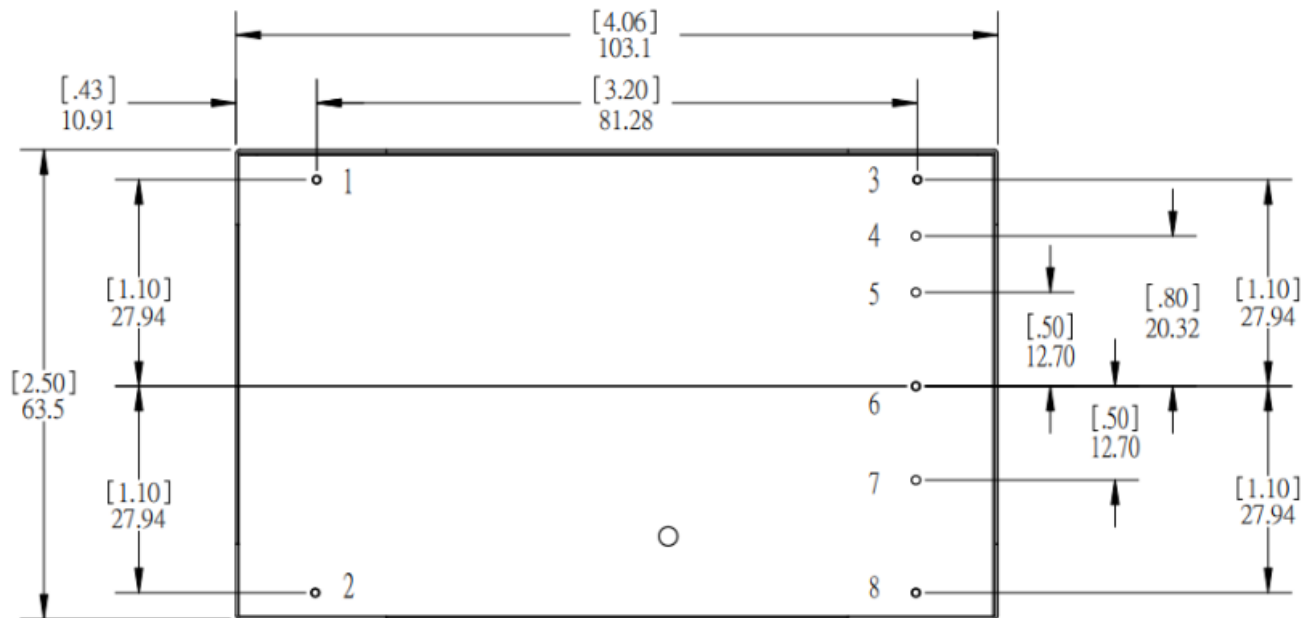
1. All dimension in mm [inch] .
2. tolerance : .XX±0.254 [0.01] .
.XXX±0.13[0.005].



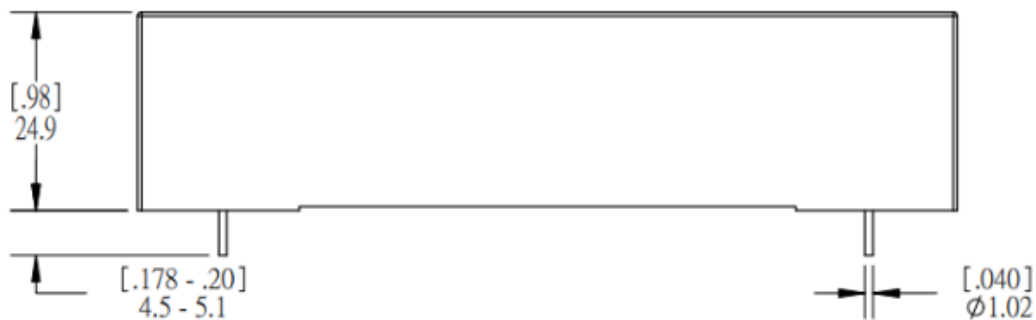
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MECHANICAL DIMENSION- DUAL & TRIPLE OUTPUT- PCB MOUNT

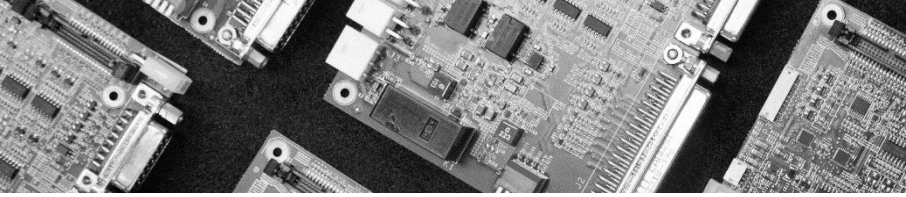


PIN - OUT VIEWED FROM BOTTOM



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

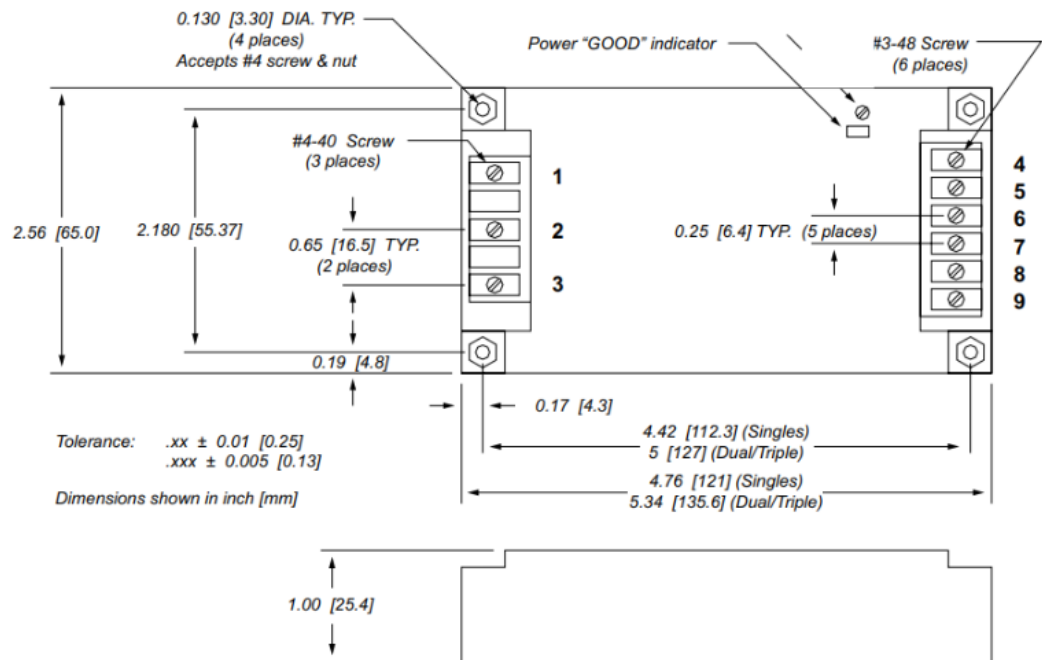
1. All dimension in mm [inch] .
2. tolerance : .XX±0.254 [0.01] .
.XXX±0.13[0.005].



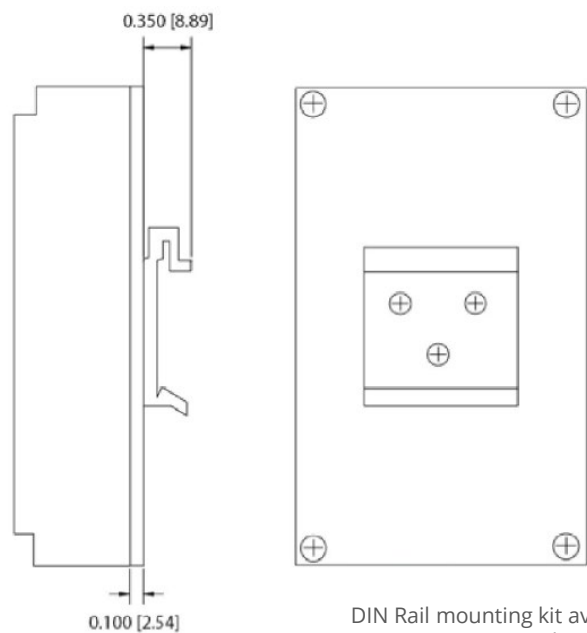
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MECHANICAL DIMENSION- CHASSIS MOUNT



MECHANICAL DIMENSION- 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 clip and assembly hardware.