

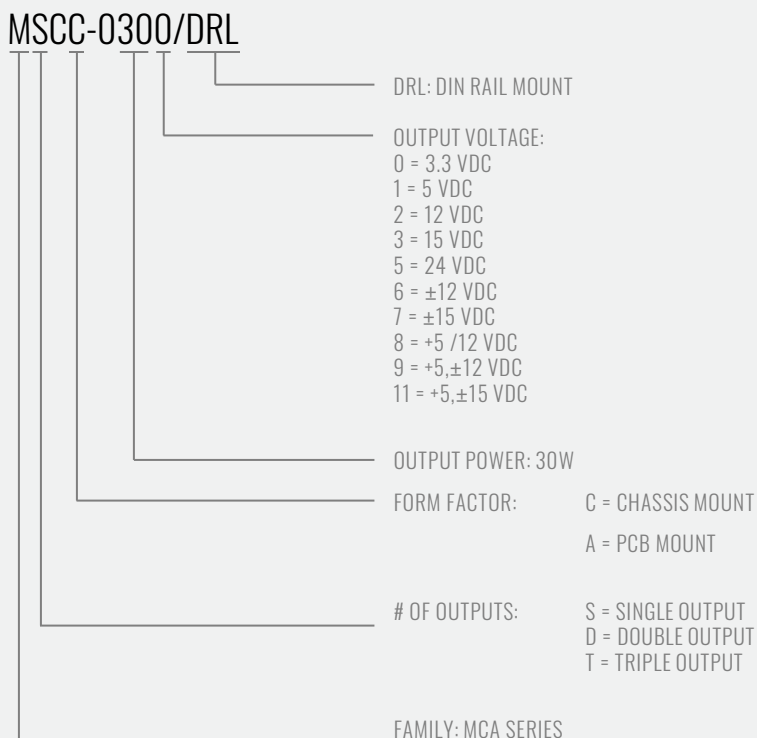
MCA30

30W ULTRAMINIATURE MODULAR SWITCHING POWER SUPPLIES

The MCA-30 series is a line of 30W ultraminiature modular switching power supplies designed for exceptional performance, efficiency, and reliability. Available in single, dual, and triple output configurations, they feature a universal 90 to 264VAC input for global use. The output voltage ranges from 3.3VDC to 24VDC. With 3,000 input-to-output isolation, they ensure safety against electrical surges. Available in PCB and chassis mount packages, they offer versatile installation options. The MCA-30 series also has full safety approvals, ensuring compliance with international standards.



HOW TO ORDER



FEATURES

INPUT VOLTAGE

90-264 VAC (100-240 VAC, nom.)

INPUT FREQUENCY

47-440Hz, 50-60Hz nom.

OPERATING TEMPERATURE

0 to +50°C(FL) See Derate* (Free-air Convection)

SAFETY APPROVALS

UL/cUL: UL60950-1 2nd ed./ C22.2 60950-1 2nd ed.
UL-EU: EN60950-1 2nd ed.
CE: EN60601-1-2
CB: IEC60950-1 2nd ed.

INPUT-OUTPUT ISOLATION

3000VAC

OUTPUT-GROUND ISOLATION

1000VAC

INPUT-GROUND ISOLATION

2500VAC

OPERATING FREQUENCY

140 kHz, typ., fixed

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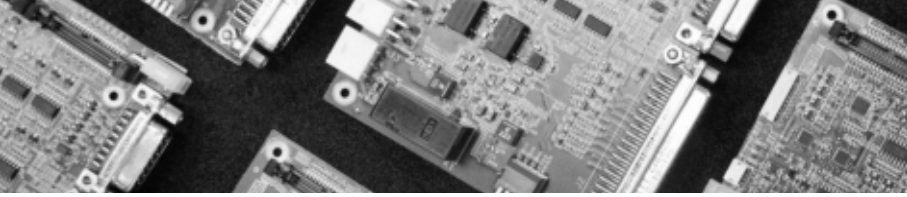
30W ULTRAMINIATURE MODULAR SWITCHING POWER SUPPLIES

PARAMETERS

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Input Voltage	90-264VAC (100-240VAC, nom.)
Input Frequency	47-440Hz, 50-60Hz Nom.
Inrush Current (100V / 200V)	Cold Start, 20A / 40A, typ
Leakage Current	<3.5mA at 264V _{in} , 50Hz
Output Voltage/Current	See Model Selection Chart
Initial Accuracy	±1%, adjustable
Voltage Adjust	±6%, typ
Load/Line Regulation (Note 3)	±0.3%, typ
Cross Regulation (Note 11)	±0.3%, typ
Temperature Coefficient	±0.03%/°C
Ripple/Noise (Note 2)	150mV Pk-Pk, typ
Over Voltage Protection	Clamp, 130-150%*
Hold Up Time	30mS, typ
Short Circuit Protection	Continuous, self-recovering*
Current Limit	130% typ, Self-Reset Foldback
*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.	
Oper. Temperature	0 to +50°C FL See Derate* (Free-air Convection)
Relative Humidity (Note 5)	0-95%, Non-Condensing
Storage Temperature	-25 to +71°C *
MTBF, Single/Multi O/P (Note 9)	180,000 / 110,000 Hrs Mil Std 217, 25C
Case Material	Rynite, 94V-0 Rated
Construction	Encapsulated, Soft Pot
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"
Size 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	Singles: 10.4 oz (295g) / 13.4 oz (380g) Duals/Triples: 12.1 oz (343g) / 15.4 oz (437g)
On/Off Control	Open Collector Logic "1"/Open=ON Logic "0"/GND=OFF
Input-Output Isolation	3000VAC
Output-Ground Isolation	1000VAC
Input-Ground Isolation	2500VAC
Operating Frequency	140 KHz, typ., fixed
Efficiency	75-80%, typ (3.3V: 70%typ.)
Safety UL/cUL:	UL60950-1 2 nd ed. C22.2 60950-1 2 nd ed. EN60601-1 3 rd ed.
EMI:	EN55011 Class B

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



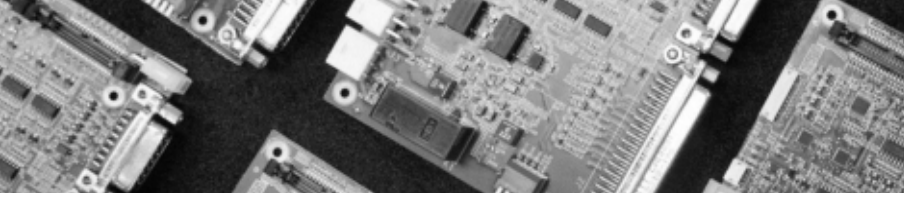
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MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS	OUTPUT WATTS
SINGLE OUTPUT - PCB Mount			
MSCA-0300	3.3VDC	7.5	25W
MSCA-0301	5VDC	6	30W
MSCA-0302	12VDC	2.5	30W
MSCA-0303	15VDC	2	30W
MSCA-0305	24VDC	1.25	30W
SINGLE OUTPUT - Chassis Mount			
MSCC-0300	3.3VDC	7.5	25W
MSCC-0301	5VDC	6	30W
MSCC-0302	12VDC	2.5	30W
MSCC-0303	15VDC	2	30W
MSCC-0305	24VDC	1.25	30W
SINGLE OUTPUT - DIN Rail Mount			
MSCC-0300/DRL	3.3VDC	7.5	25W
MSCC-0301/DRL	5VDC	6	30W
MSCC-0302/DRL	12VDC	2.5	30W
MSCC-0303/DRL	15VDC	2	30W
MSCC-0305/DRL	24VDC	1.25	30W
DUAL OUTPUT - PCB Mount			
MDCA-0306	±12VDC	±1.25	30W
MDCA-0307	±15VDC	±1	30W
MDCA-0308	+5/12VDC	3/1.25	30W
DUAL OUTPUT - Chassis Mount			
MDCC-0306	±12VDC	±1.25	30W
MDCC-0307	±15VDC	±1	30W
MDCC-0308	+5/12VDC	3/1.25	30W
DUAL OUTPUT - DIN Rail Mount			
MDCC-0306/DRL	±12VDC	±1.25	30W
MDCC-0307/DRL	±15VDC	±1	30W
MDCC-0308/DRL	+5/12VDC	3/1.25	30W
TRIPLE OUTPUT - PCB Mount			
MTCA-0309	+5, ±12VDC	3,0.63/0.63	30W
MTCA-0311	+5, ±15VDC	3,0.5/0.5	30W
TRIPLE OUTPUT - Chassis Mount			
MTCC-0309	+5, ±12VDC	3,0.63/0.63	30W
MTCC-0311	+5, ±15VDC	3,0.5/0.5	30W
TRIPLE OUTPUT - DIN Rail Mount			
MTCC-0309/DRL	+5, ±12VDC	3,0.63/0.63	30W
MTCC-0311/DRL	+5, ±15VDC	3,0.5/0.5	30W

These Specifications are subject to change at any time without prior notification

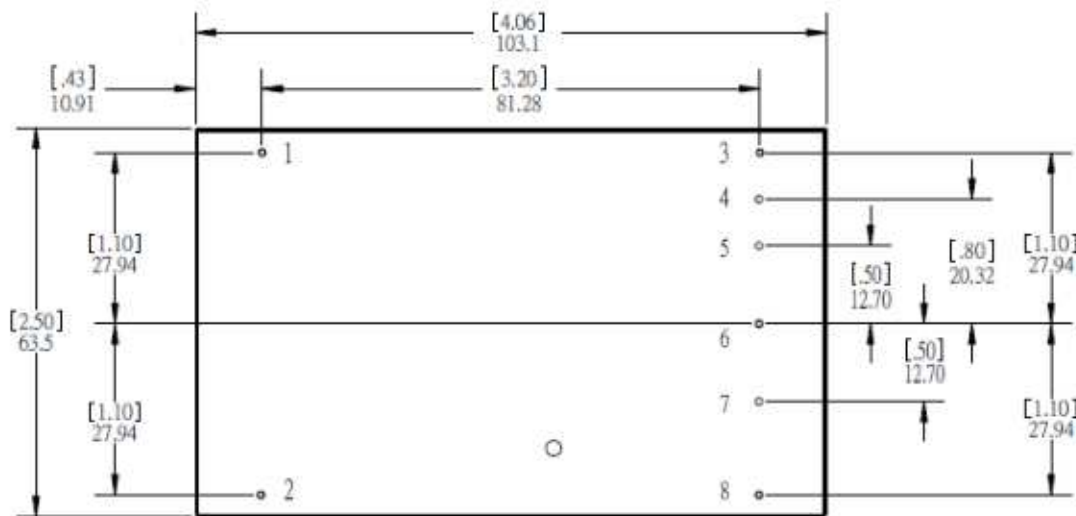
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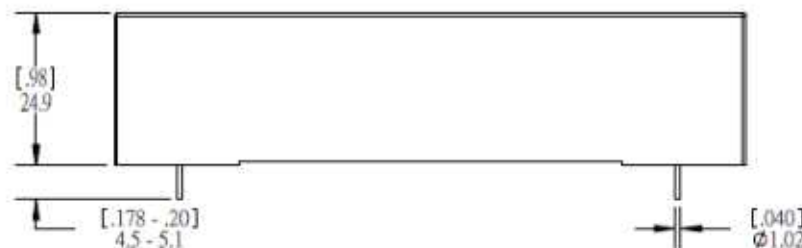
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MECHANICAL DIMENSION - PCB MOUNT - DUAL & TRIPLE OUTPUT



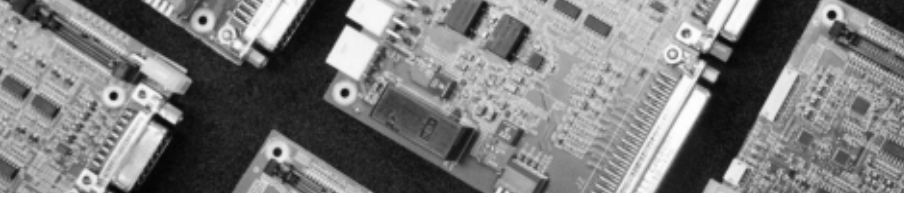
PIN-OUT VIEWED FROM BOTTOM



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 :

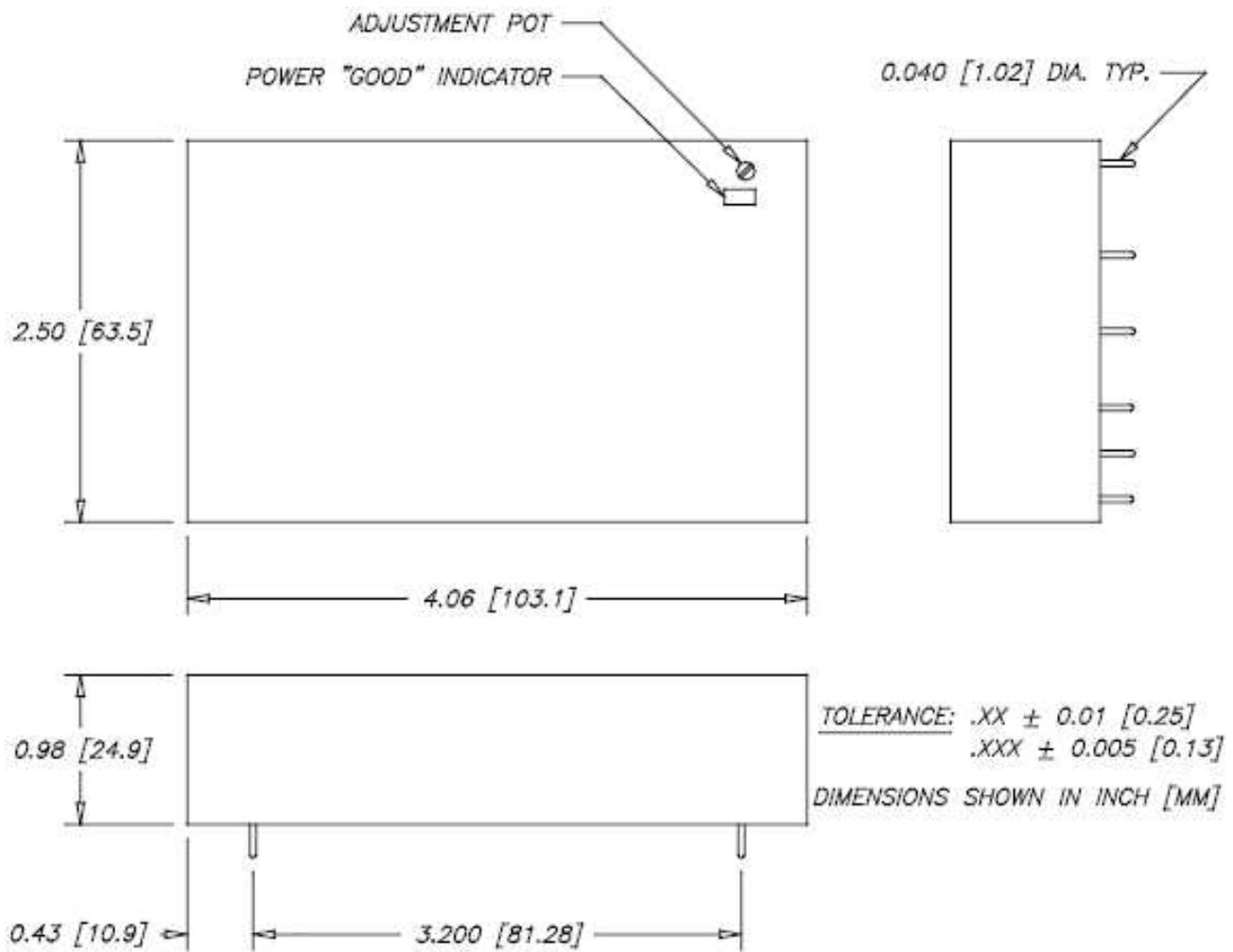
1. All dimension in mm [inch] .
2. tolerance : XX±0.254 [0.01] .
XXX±0.13[0.005].

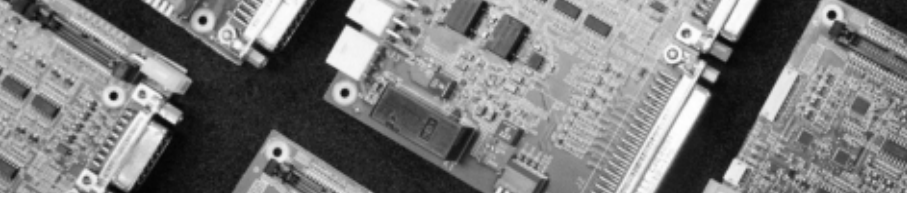


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MECHANICAL DIMENSION - PCB MOUNT - DUAL & TRIPLE OUTPUT

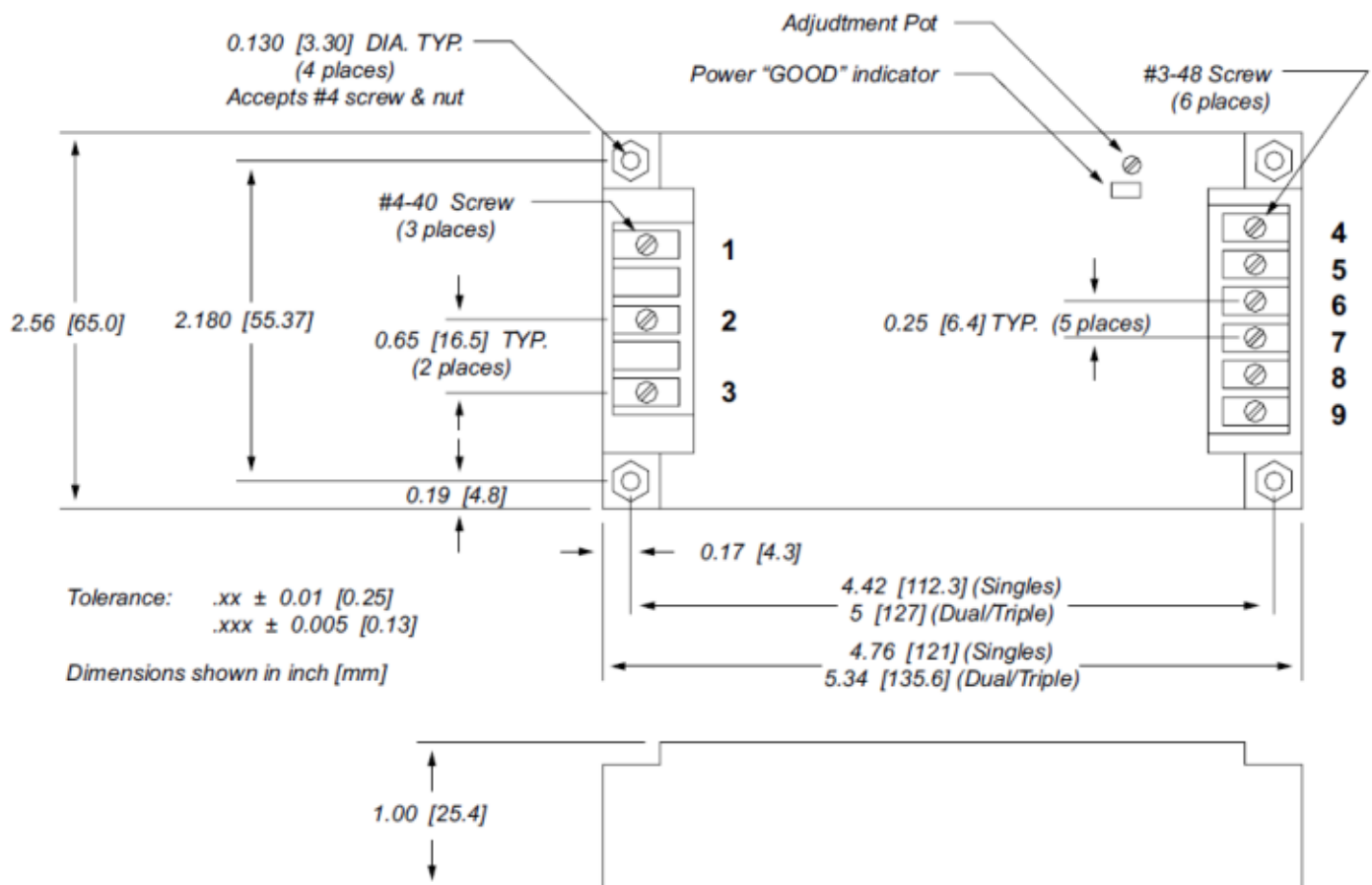


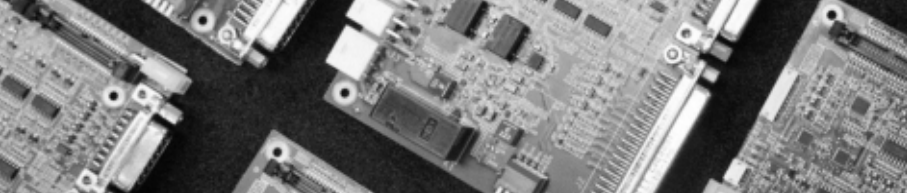


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MECHANICAL DIMENSION - CHASSIS MOUNT

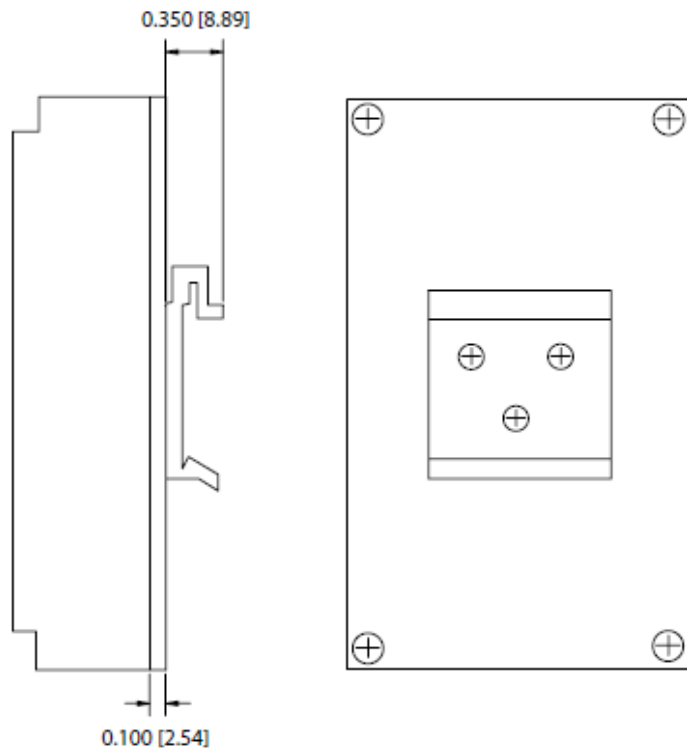




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MECHANICAL DIMENSION - DIN RAIL



Model Type / Pin#	Single	Match Dual	Unmatch Dual	Triple
1	AC LO	AC LO	AC LO	AC LO
2	GND	GND	GND	GND
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	Ctrl	Ctrl	Ctrl	Ctrl

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.

PERFORMANCE CURVES

