

150 Watt

2.4x2.28 Inch Package M

3:1 Input Range

Railway System



- o High Efficiency up to 92.5%
- o Regulated Single Output
- o Remote ON/OFF
- o Over Temperature Protection
- o Over Voltage/Current Protection
- o Continuous Short Circuit Protection
- o Half-Brick Size meet Industrial Standard
- o CE Mark meets 2004/108/EC
- o UL60950-1 Approval
- o Meet EN50155 with External Circuits



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT MAX.	INPUT CURRENT		%EFF	CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD		
150MRS110R5LC	66-160 VDC	5 VDC	30 A	40 mA	1474 mA	92.5	10000 µF
150MRS110R12LC		12 VDC	12.5 A				5600 µF
150MRS110R24LC		24 VDC	6.5 A	60 mA	1541 mA	92	2200 µF

NOTE:
Nominal Input Voltage 110 VDC.

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS			
Input Voltage Range	110 V		66-160V
Input Surge Voltage (100 ms max.)			180 VDC max.
Undervoltage lockout	Vin power up		62 V
	Vin power down		56 V
Positive Logic Remote ON/OFF	Logic Compatibility	Open Collector Ref. to -Input	
	Module ON	>3.5 VDC to 75 VDC or Open Circuit	
	Module OFF	<1.8 VDC	
Input Filter			Pi Type

OUTPUT SPECIFICATIONS			
Voltage Accuracy			±1.5% max.
Transient Response	25% Step Load Change		
	Error Band		±5% Vout
	Recover Time		<200 µ sec.
External Trim Adj. Range			±10%
	5V		40 mV RMS max. 100 mV p-p max.
Ripple and Noise at 20 MHz BW ¹⁾	12V		60 mV RMS max. 150 mV p-p max.
	24 V		100 mV RMS max. 240 mV p-p max.
Temperature Coefficient			±0.03%/°C
Short Circuit Protection			Continuous
Line Regulation ²⁾			±0.2% max.
Load Regulation ³⁾			±0.2% max.
Over Voltage Protection trip Range, % Vo nom.			115-140%
Current Limit			110% ~ 180% Nominal Output
Start up Time			45 ms

NOTE:

- Output Ripple and Noise measured with 10 µF tantalum and 1 µF ceramic capacitor across output.
- Measured from High Line to Low Line.
- Measured from Full Load to Zero Load.
- Add Suffix "R" to the Model Number with Negative Logic Remote ON/OFF.
Module ON...<1.8 VDC
Module OFF...>3.5 VDC to 75 VDC or Open Circuit
- Clear Mounting Insert (3.2 mm DIA) on Request.
- An external input capacitor 220 µF for all models are recommended to reduce input ripple voltage.

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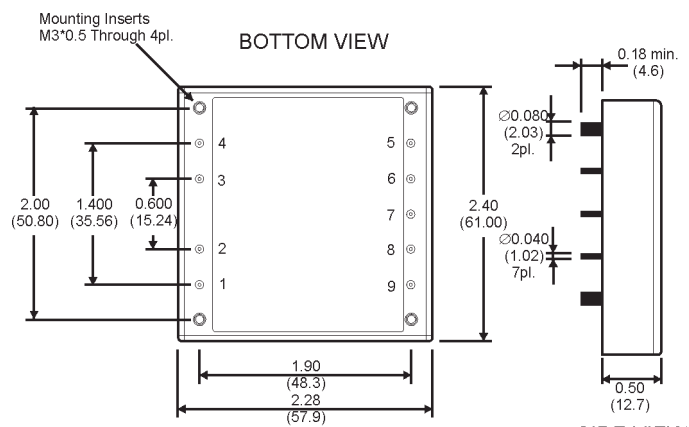
GENERAL SPECIFICATION		
Efficiency		see table
Isolation Voltage	Input / Output	2250 VDC min.
	Input / Case	2250 VDC min.
	Output / Case	1500 VDC min.
Isolation Resistance		10 MOhms min.
Isolation Capacitance		1000 pF
Switching Frequency		200 kHz
Operating Case Temperature		-40°C to +100°C
Storage Temperature		-55°C to +105°C
Thermal Shutdown (Case Temperature)		+105°C
Humidity		95% RH max. Non Condensing
MTBF (MIL-HDBK-217F) GB, 25°C, Full Load		TBD hrs
Safety		meets UL60950-1 2nd (Basic insulation)
EMC*		meet EN50155 (EN50121-3-2) with external filter
Schock/Vibration		meet EN50155 (EN61373)
Environmental		meet EN50155 (EN60068-2-1)
Dimensions		2.28x2.40x0.50 Inches (57.9x61.0x12.7 mm)
Case Material		Aluminum Baseplate with Plastic Case
Weight		90 g

*) Design meet EN50155 and RIA12 refer to Application Note

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MECHANICAL SPECIFICATIONS

Case „M“



PIN CONNECTIONS	
1	+INPUT
2	REMOTE CONTROL
3	CASE
4	-INPUT
5	-OUTPUT
6	-SENSE
7	TRIM
8	+SENSE
9	+OUTPUT

All Dimensions in Inches (mm).
Tolerance: x.xx=±0.02, x.xxx=±0.010 Inches
(x.x=±0.5, x.xx=±0.250 mm)

DIAGRAMS

