

100 Watt

2.4x2.28 Inch Package M



3:1 Input Range

Railway System

- o High Efficiency up to 89%
- 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 2014/30/EC
- o Designed to meet UL60950-1, EN50155
- o LVD Approval



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT MAX.	INPUT CURRENT		%EFF	CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD		
100MRS110R12LC	66-160VDC	12 VDC	8.3 A	5 mA	1050 mA	86.5	8300 μ F
100MRS110R15LC		15 VDC	6.7 A		1040 mA	87.5	4170 μ F
100MRS110R24LC		24 VDC	4.17 A		1020 mA	89	1500 μ F
100MRS110R48LC		48 VDC	2.08 A				

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 Vin power down	62 V 56 V
Positive Logic Remote ON/OFF	Logic Compatibility Module ON Module OFF	Open Collector Ref. to -Input Open Circuit 0 to <1.8 VDC
Input Filter		Pi Type

OUTPUT SPECIFICATIONS

Voltage Accuracy		±1.5% max.
Transient Response	25% Step Load Change	<500 µ sec.
External Trim Adj. Range		±10%
Ripple and Noise at 20 MHz BW ¹⁾	12, 15 V	60 mV RMS max. 150 mV p-p max.
	24 V	100 mV RMS max. 240 mV p-p max.
	48 V	200 mV RMS max. 480 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% ~ 160% Nominal Output
Start up Time		120 ms

NOTE:

1. Output Ripple and Noise measured with 10 µF tantalum and 1 µF ceramic capacitor across output.(48 V: 1 µF ceramic cap. only!)
2. Measured from High Line to Low Line.
3. Measured from Full Load to Zero Load.
4. An external input capacitor 47 µF for all models are recommended to reduce input ripple voltage.
5. Require a 47 µF aluminum capacitor connected between +Vout and - Vout for 48 Vout models.

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GENERAL SPECIFICATION		
Efficiency		see table
Isolation Voltage	Input / Output	3000 VDC min.
	Input / Case	1500 VDC min.
	Output / Case	500 VDC min.
Isolation Resistance		10 ⁹ Ohms min.
Isolation Capacitance		500 pF
Switching Frequency		250 kHz
Operating Case Temperature Range		-40°C to +100°C
Storage Temperature Range		-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)		TB.D.
Safety		meet UL60950-1
EMC ¹⁾		EN50155 (EN50121-3-2) with external filter
Shock/Vibration		EN50155 (EN61373)
Environmental		meet EN50155 (EN60068-2-1)
Dimensions		2.28 x 2.40 x 0.50 Inches (57.9 x 61.0 x 12.7 mm)
Case Material		Aluminum Base Plate with Plastic Case
Weight		95 g

NOTE:

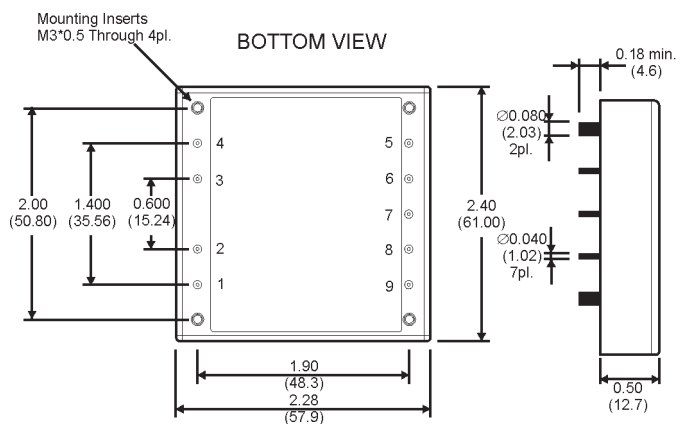
1. Design to meet EN50155 and RIA12 refer to application note.

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MECHANICAL SPECIFICATIONS

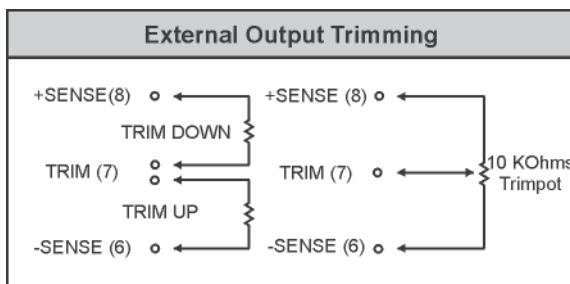
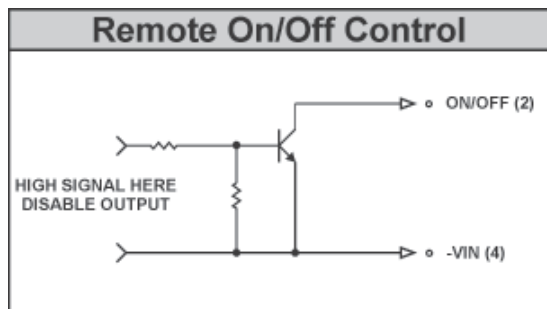
Case „M“



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

PIN CONNECTIONS	
1	+INPUT
2	ON/OFF
3	CONNECTED
4	-INPUT
5	-OUTPUT
6	-SENSE
7	TRIM
8	+SENSE
9	+OUTPUT

DIAGRAMS



NOTICE:
 The information in this document has been carefully checked. However, no responsibility is assumed for inaccuracies!
 Specifications can be changed without notice. The latest and most complete information can be found on our website.