

# 100 Watt

# 2.28x2.40 Inch Package M

## 4:1 Input Range

## High Efficiency



- o Efficiency up to 93%
- o Wide Input Range
- o Regulated Single Output
- o Continuous Short Circuit Protection
- o Half Brick Size, Six-Sided Shield Metal Case
- o Over Temperature/Voltage/Current Protection
- o No Tantalum Capacitor Inside
- o CE Mark Meets 2004/108/EC
- o Safety Meets UL60950-1, EN60950-1, IEC60950-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT MAX.	INPUT CURRENT		%EFF		CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD	1)	2)	
100MERS24X3.3LC	9-36 VDC	3.3 VDC	25 A	200 mA	3.94 A	85.5	87	25000 µF
100MERS24X5LC		5 VDC	20 A	150 mA	4.66 A	88.5	89.5	20000 µF
100MERS24X12LC		12 VDC	8.4 A	200 mA	4.62 A	90	90.5	8400 µF
100MERS24X15LC		15 VDC	6.7 A			89.5	90.5	6700 µF
100MERS24X24LC		24 VDC	4.2 A	100 mA	4.76 A	88.5	89	4200 µF <sup>3)</sup>
100MERS24X48LC		48 VDC	2.1 A			89.5	88.5	2100 µF <sup>3)</sup>
100MERS48X3.3LC	18-75 VDC	3.3 VDC	25 A	130 mA	1.96 A	87.5	88	25000 µF
100MERS48X5LC		5 VDC	20 A		2.28 A	91.5	92	20000 µF
100MERS48X12LC		12 VDC	8.4 A	100 mA	2.26 A	92.5	93	8400 µF
100MERS48X15LC		15 VDC	6.7 A			91.5	92.5	6700 µF
100MERS48X24LC		24 VDC	4.2 A		2.32 A	91	91	4200 µF <sup>3)</sup>
100MERS48X48LC		48 VDC	2.1 A			91.5	90.5	2100 µF <sup>3)</sup>

NOTE

1. Measured at 12 VDC for 100MERS24X--LC, 24 VDC for 100MERS48X--LC.
2. Measured at Nominal Input Voltage.
3. Require a 10 µF Aluminum Capacitor connected between +Vout and -Vout for 24 & 48 Vout Models.

**SPECIFICATIONS**

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

<b>INPUT SPECIFICATIONS</b>		
Input Voltage Range		4:1
Input Surge Voltage (100 ms max.)	24 V 48 V	50 VDC max. 100 VDC max.
Under Voltage lockout	24 Vin power up 24 Vin power down 48 Vin power up 48 Vin power down	8.8 V 8 V 17 V 16 V
Positiv Logic Remote ON/OFF <sup>1)</sup>	Logic Compatibility Module ON Module OFF	Open Collector Ref. to -Input >3.5 VDC to 75 VDC or Open Circuit <1.2 VDC
Input Filter		Pi Type

<b>OUTPUT SPECIFICATIONS</b>		
Voltage Accuracy		±1.5% max.
Transient Response	25% Step Load Change	<500µ sec.
External Trim Adj. Range		±10%
Ripple and Noise at 20 MHz BW <sup>2)</sup>	3.3V, 5V	40 mV RMS 100 mV p-p max.
	12V, 15V	60 mV RMS 120 mV p-p max.
	24 V	100 mV RMS 240 mV p-p max.
	48 V	200 mV RMS 480 mV p-p max.
Temperature Coefficient		±0.03%/°C
Short Circuit Protection		Continuous
Line Regulation <sup>3)</sup>		±0.2% max.
Load Regulation <sup>4)</sup>		±0.2% max.
Over Voltage Protection trip Range, % Vo nom.		115-140%
Current Limit		110% ~ 140% Nominal Output
Start Up Time		10 mS

**NOTE:**

- Add Suffix "R" to the Module Number with Negative Logic Remote ON/OFF.  
Module ON.....<1.2 VDC  
Module OFF.....>3.5 VDC to 75 VDC or Open Circuit
- Output Ripple & 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.

**SPECIFICATIONS**

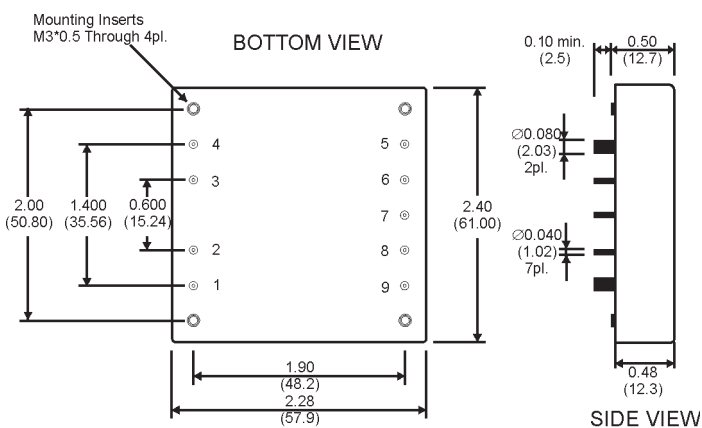
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**GENERAL SPECIFICATION**

Efficiency		see table
Isolation Voltage	Input / Output	1500 VDC min.
	Input / Case	1500 VDC min.
	Output/Case	1500 VDC min.
Isolation Resistance		10 MOhms min.
Isolation Capacitance		1000 pF
Switching Frequency		250 kHz
Operating Case Temperature		-40°C to +105°C
Storage Temperature		-55°C to +105°C
Thermal Shutdown (Case Temperature)		+110°C
Humidity		95% RH max. Non Condensing
MTBF (MIL-STD-217F, GB, 25°C, Full Load)	5 V	750 khrs
	Others	880 khrs
Dimensions		2.28x2.4x0.5 Inches (57.9x61.0x12.7 mm)
Case Material		Aluminum with Non-Conductive Base
Weight		95 g

**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)

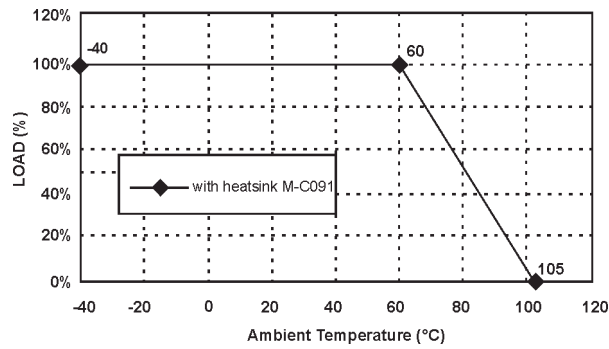
PIN CONNECTIONS	
1	+INPUT
2	REMOTE CONTROL
3	CASE
4	-INPUT
5	-OUTPUT
6	-SENSE
7	TRIM
8	+SENSE
9	+OUTPUT

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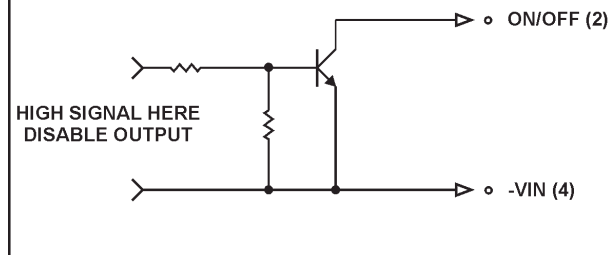
**DIAGRAMS**

**Derating Curve**

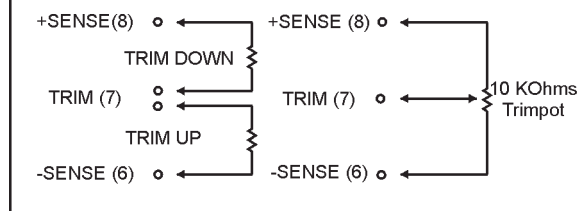


**APPLICATION NOTE**

**Remote On/Off Control**



**External Output Trimming**



**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.