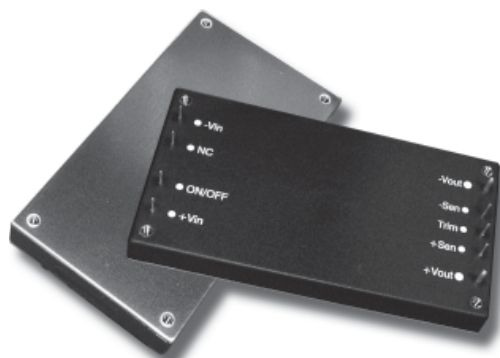


200 Watt

**4.60x2.40 Inch Package X
2:1 Input Range**



- o Efficiency up to 85%
- o 300 kHz Switching Frequency
- o Wide Input Range
- o Regulated Single Output
- o Continuous Short Circuit Protection
- o Full Brick Size Meet Industrial Standard



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF
				NO LOAD	FULL LOAD	
200XRS48W2.5LC	36-75 VDC	2.5 VDC	40 A	25 mA	2.8 A	74
200XRS48W3.3LC		3.3 VDC			3.5 A	79
200XRS48W5LC		5 VDC			5 A	83
200XRS48W12LC		12 VDC	17 A			85
200XRS48W15LC		15 VDC	13.3 A			
200XRS48W24LC		24 VDC	8.33 A			
200XRS48W28LC		28 VDC	7.14 A			
200XRS48W48LC		48 VDC	4.2 A			

SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range	2:1	
Undervoltage lockout	48 Vin power up 48 Vin power down	34 V 32.5 V
Positiv Logic Remote ON/OFF ³⁾	Logic Compatibility Module ON Module OFF	Open Collector Ref. to -Input Open Circuit <0.8 VDC
Input Filter	Pi Type	

OUTPUT SPECIFICATIONS

Voltage Accuracy	±1% max.	
Transient Response: 25% Step Load Change	<500µ sec.	
External Trim Adj. Range	±10%	
Ripple and Noise at 20 MHz BW	2.5V, 3.3V, 5V	40mV RMS, max. 100 mV p-p max.
	12V, 15V	60mV RMS, max. 150mV p-p, max
	24V, 28V, 48V	100 mV / 150 mV / 200 mV RMS, max. 240 mV / 280 mV / 480 mV p-p, max.
Temperature Coefficient	±0.03%/°C	
Short Circuit Protection	Continuous	
Line Regulation ¹⁾	±0.2% max.	
Load Regulation ²⁾	±0.2% max.	
Over Voltage Protection Trip Range, % Vo Nom.	115-140%	
Current Limit	110% ~ 140% Nominal Output	

NOTE:

1. Measured from High Line to Low Line.
2. Measured from Full Load to Zero Load
3. Add Suffix "N" to the Module Number with Negative Logic Remote ON/OFF.

GENERAL SPECIFICATION

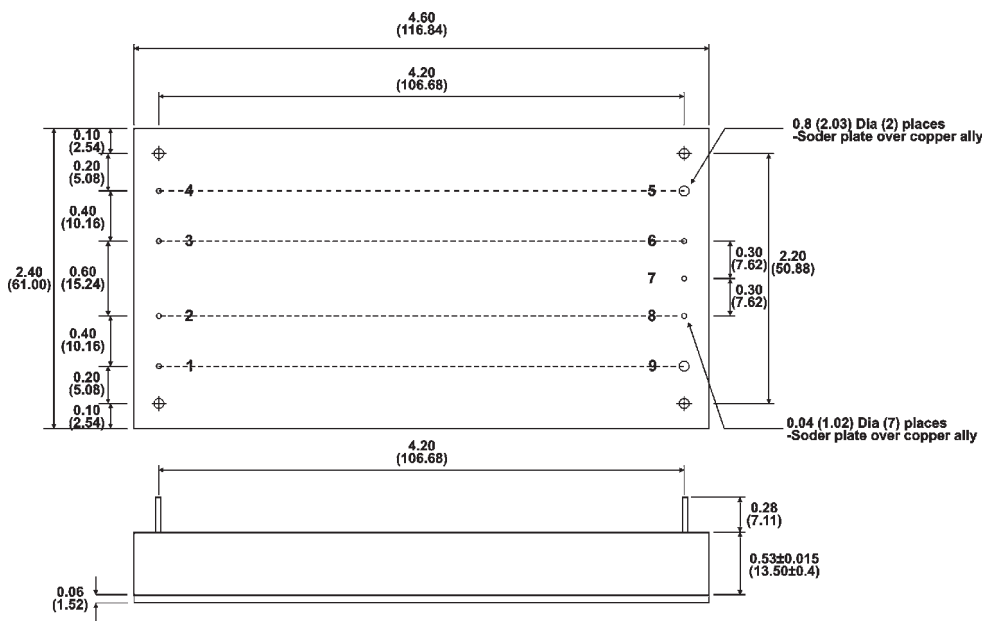
Efficiency	see table	
Isolation Voltage	Input / Output	1500 VDC min.
	Input / Case	1500 VDC min.
	Output / Case	1500 VDC min.
Isolation Resistance	10 MOhms min.	
Switching Frequency	300 kHz	
Operating Case Temperature Range	-40°C to +100°C	
Storage Temperature Range	-40°C to +105°C	
Thermal Shutdown, Case Temp.	+100°C	
Dimensions	4.60 x 2.40 x 0.53 Inches (116.8 x 61.0 x 13.5 mm)	
Case Material	Aluminum Baseplate with Plastic Case	

SPECIFICATIONS

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MECHANICAL SPECIFICATIONS

Case „X“



All Dimensions In Inches (mm)

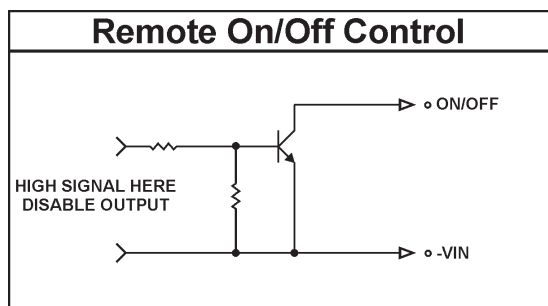
Tolerances	Inches	.xx	±0.02	.xxx	±0.010	Pin	±0.02
	Millimeters	.x	±0.5	.xx	±0.25		±0.5

PIN CONNECTIONS

1	+INPUT
2	REMOTE CONTROL
3	NOT CONNECTED
4	-INPUT
5	-OUTPUT
6	-SENSE
7	TRIM
8	+SENSE
9	+OUTPUT

Application Notes**Remote ON/OFF Control**

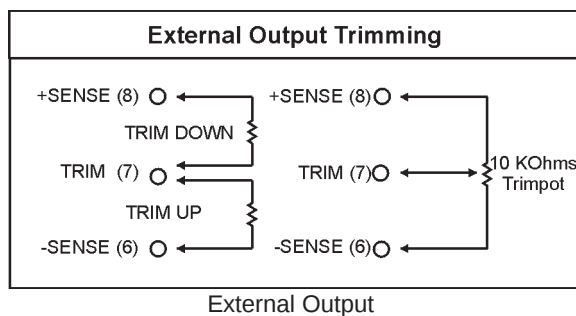
The 200XRS... allows the user to switch the module on and off electronically with remote on/off feature. The 200XRS... is available in "positive logic" or "negative logic" (option).



Logic State (PIN2)	Negative Logic	Positive Logic
Logic Low- Switch Closed	Module on	Module off
Logic High- Switch Open	Module off	Module on

External Output Trimming

Output may optionally be externally trimmed ($\pm 10\%$) with a fixed resistor or an external trimpot as shown.

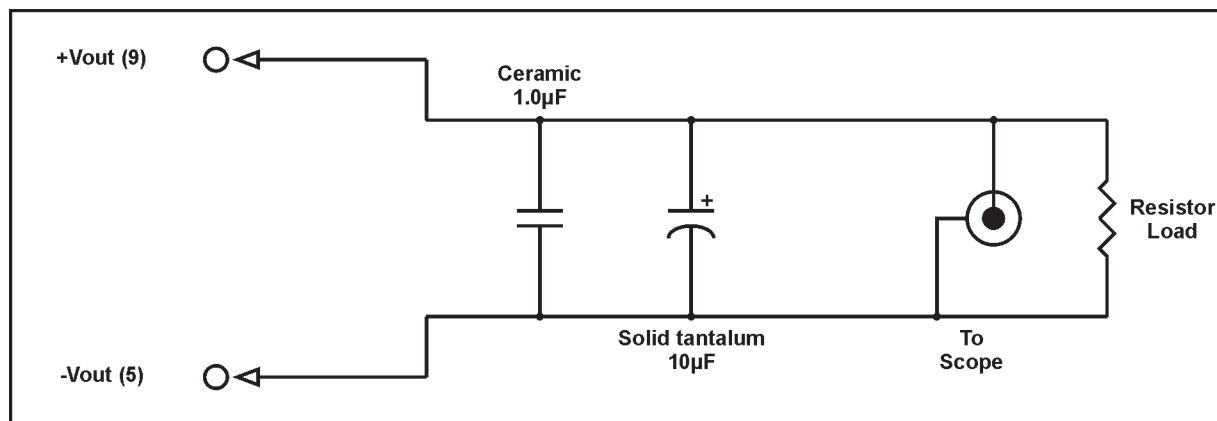


SPECIFICATIONS

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Application Notes**Output Noise**

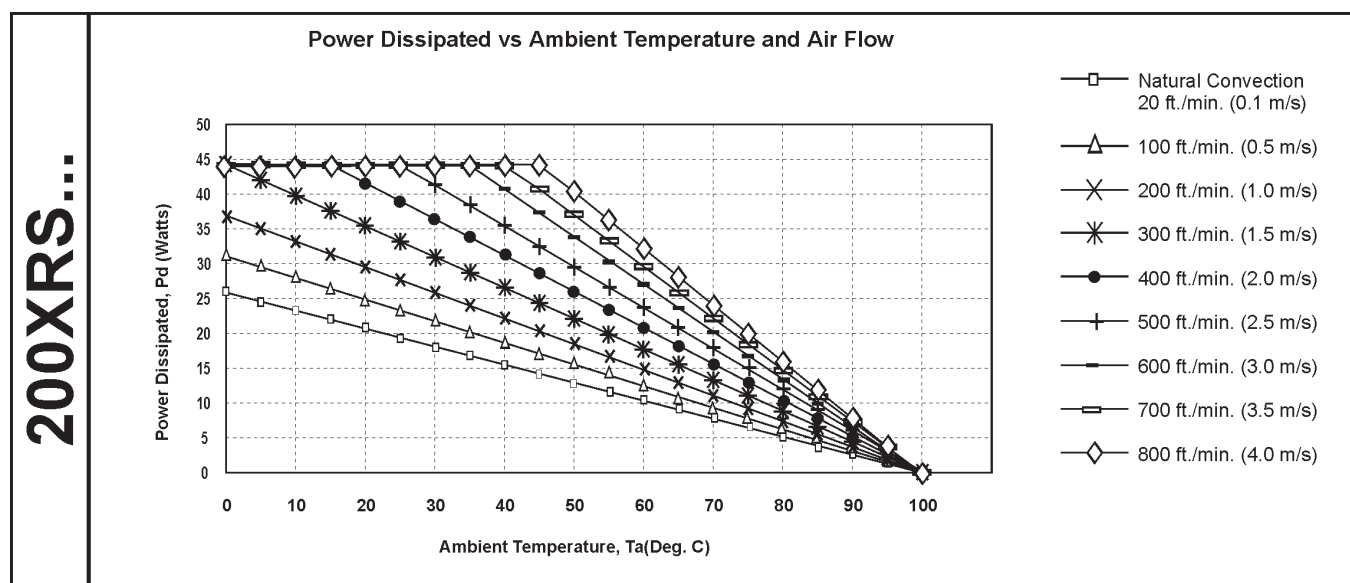
The output noise is measured with 10 μ F tantalum capacitor and 1.0 μ F ceramic capacitor across output.



Output Noise Test Circuit schematic

Derating

The operating case temperature range of 200XRS... series is -40°C to +100°C. When operating the 200XRS... series, proper derating or cooling is needed. The following curve shows the derating of 200XRS... without heat sink; Airflow Along Width (Transverse)



Forced Convection Power Derating with No Heat Sink

SPECIFICATIONS

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Application Notes

Where:

The power dissipation (Pd):

$$P_d = P_i - P_o = P_o (1 - \eta) / \eta$$

The thermal resistance are list below:

Chart of Thermal Resistance vs Air Flow:

AIR FLOW RATE	TYPICAL R _{ca}
Natural Convection 20ft./min. (0.1m/s)	3.82 °C/W
100 ft./min. (0.5m/s)	3.23 °C/W
200 ft./min. (1.0m/s)	2.71 °C/W
300 ft./min. (1.5m/s)	2.28 °C/W
400 ft./min. (2.0m/s)	1.92 °C/W
500 ft./min. (2.5m/s)	1.68 °C/W
600 ft./min. (3.0m/s)	1.50 °C/W
700 ft./min. (3.5m/s)	1.35 °C/W
800 ft./min. (4.0m/s)	1.23 °C/W

The temperature rise (ΔT):

$$\Delta T = P_d * R_{ca}$$

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.