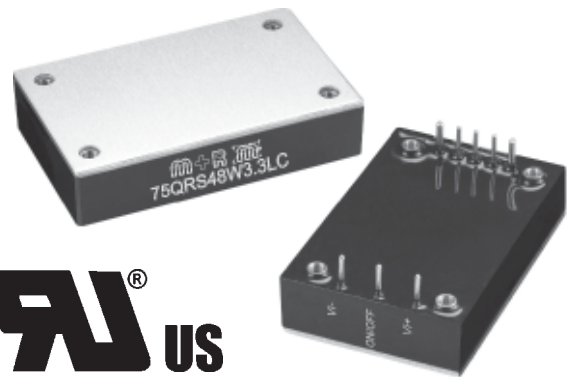


50 to 75 Watt 1.45x2.28 Inch Package Q 2:1 Input Range



- o Efficiency up to 90%
- o 300 kHz Switching Frequency
- o Wide Input Range
- o Regulated Single Output
- o Continuous Short Circuit Protection
- o Industrial Standard Quarter-Brick Package
- o Current Limit



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF
				NO LOAD	FULL LOAD	
75QRS24W1.8LC	18-36 VDC	1.8 VDC	0.5-25 A	60 mA	2259 mA	83
75QRS24W2.5LC		2.5 VDC			3064 mA	85
75QRS24W3.3LC		3.3 VDC	0.5-20 A	70 mA	3125 mA	88
75QRS24W5LC		5 VDC	0.5-15 A	80 mA	3472 mA	90
75QRS48W1.8LC	36-75 VDC	1.8 VDC	0.5-25 A	50 mA	1116 mA	84
75QRS48W2.5LC		2.5 VDC			1514 mA	86
75QRS48W3.3LC		3.3 VDC	0.5-20 A		1563 mA	88
75QRS48W5LC		5 VDC	0.5-15 A	80 mA	1736 mA	90

SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range		2:1
Undervoltage lockout	24 Vin power up	17 V
	24 Vin Power down	15.5 V
	48 Vin power up	34 V
	48 Vin power down	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	Error Band		±5% Vout
75%-100% Step Load Change	Recover Time		<500 µsec.
External Trim Adj. Range	±10%		
Ripple and Noise at 20 MHz BW	40 mV RMS max.		
	100 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 lo min. tp lo max.

3. Add Suffix "R" to the Model Number with Negative Logic Remote ON/OFF.

GENERAL SPECIFICATION

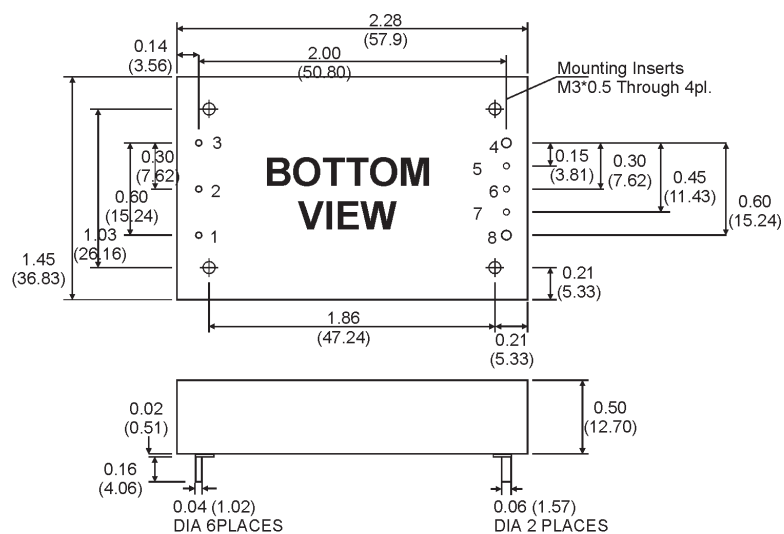
Efficiency	see table		
Isolation Voltage	Input/Output		1500 VDC min.
	Input/Case		1500 VDC min.
	Output/Case		1500 VDC min.
Isolation Resistance	10 MOhms min.		
Switching Frequency	300 kHz		
Operating Case Temperature Range	-40°C to +100°C		
Storage Temperature Range	-40°C to +105°C		
Thermal Shutdown, Case Temp.	+100°C		
Dimensions	1.45x2.28x0.50 Inches (36.8x57.9x12.7 mm)		
Case Material	Aluminum Baseplate with Plastic Case		
Suffix "PCB"	Open Frame		

SPECIFICATIONS

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

MECHANICAL SPECIFICATIONS

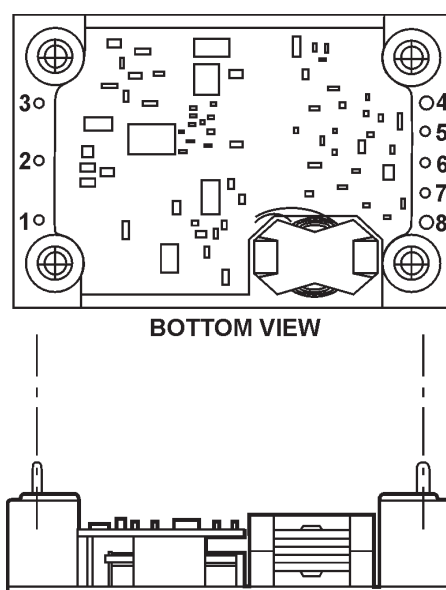
Case „Q"



All Dimensions in Inches (mm).
Tolerance .xx=±0.02, .xxx=±0.010 Inches
(.x=±0.5, .xx=±0.25 mm)

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

Open Frame „Q"



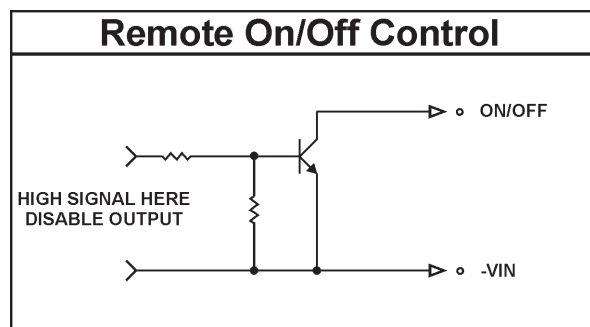
PIN CONNECTIONS	
1	+INPUT
2	REMOTE CONTROL
3	-INPUT
4	-OUTPUT
5	-SENSE
6	TRIM
7	+SENSE
8	+OUTPUT

SPECIFICATIONS

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

APPLICATION NOTES**Remote ON/OFF Control**

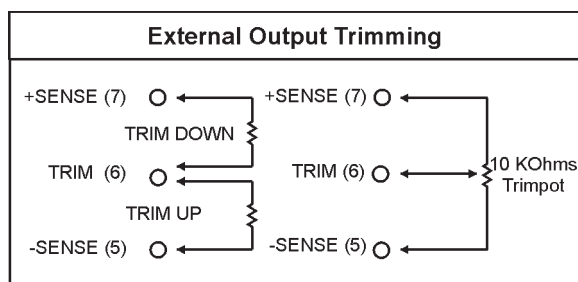
The 75QRS allows the user to switch the module on and off electronically by remote on/off feature. The 75QRS is available in "positive logic" or "negative logic" (option).



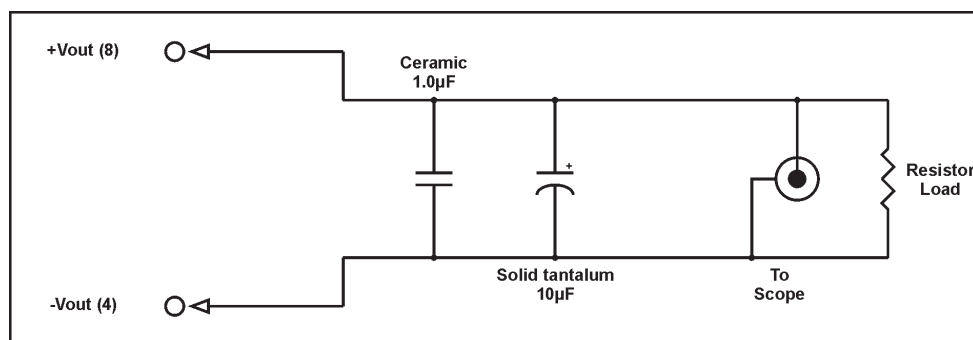
Logic State (PIN2)	Negative Logic	Positive Logic
Logic Low-Switch Closed	Module on	Module off
Logic High-Switch Open	Module off	Module on

External Output Trimming

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

**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

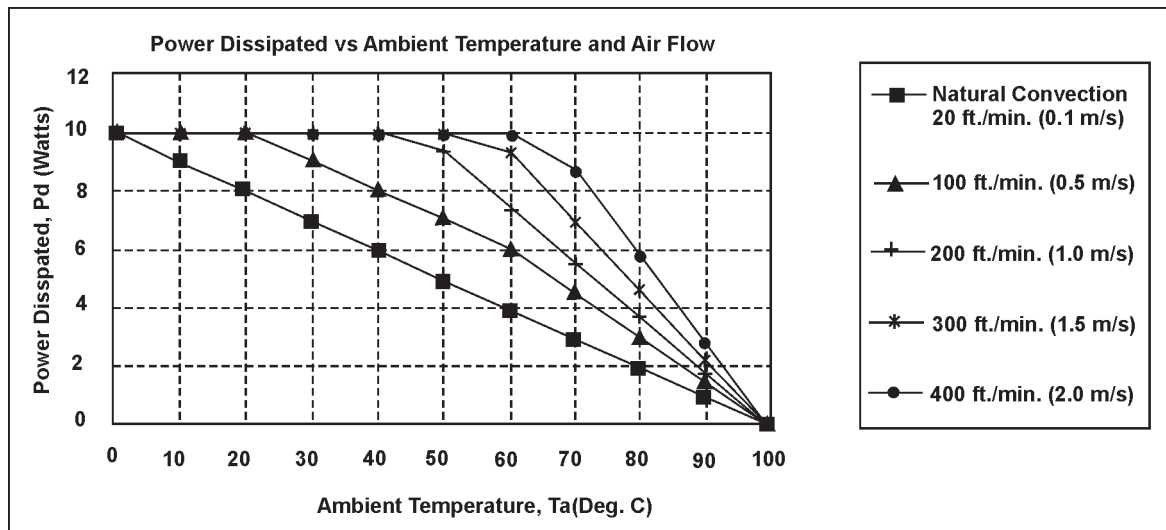
SPECIFICATIONS

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

APPLICATION NOTES**Derating**

The operating case temperature range of 75QRS... series is -40°C to +100°C. When operating the 75QRS..., proper derating or cooling is needed.

The following curve is the derating of 75QRS... without heat sink.



Forced Convection Power Dearting without Heat sink.

Where:

The power dissipation (Pd):

$$Pd = Pi - Po = Po (1 - \eta) / \eta$$

The thermal resistances are list below:

Chart of Thermal Resistance vs Air Flow:

AIR FLOW RATE	TYPICAL Rca
Natural Convection 20 ft./min. (0.1 m/s)	10.1°C/W
100 ft./min. (0.5 m/s)	8.0°C/W
200 ft./min. (1.0 m/s)	5.4°C/W
300 ft./min. (1.5 m/s)	4.4°C/W
400 ft./min. (2.0 m/s)	3.4°C/W

The temperature rise (ΔT):

$$\Delta T = \Delta Pd * Rca$$

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.