

Input Ranges :

9-75 VDC

Output Output:

Single Output

5.0V - 24V

Dual Output

5.0V/12V, 5.0V/24V

12V/12V, 15V/15V

Triple Output

5.0V / ±12V,

5.0V / ±15V,

12V / ±05V,

Quad Output

±5.0V / ±12V,

±5.0V / ±15V



Output Power:

50 - 150 W

FEATURES

General:

- Output Power to 100 Watts
- Wide Input Range : 10-75Vdc
- 2:1 & 3:1 Input Voltage Range
- High Conversion Efficiency > 84%
- Line & Load Regulation to ±1.0%
- Fixed Operating Frequency
- Output Over-Load Protection
- Output Over-Voltage Protection
- Output Trim or Sense Functions
- Remote Sense
- Remote On/Off
- Safety: UL File# 149006

Isolation:

- Isolation Voltage > 500V

APPLICATIONS

- Distributed Power Systems
- Workstations
- Computer Equipment
- Communications Equipment

The **R** series DC-DC converters feature high power density, high efficiency and excellent line & load regulation. Using innovative design technique, state-of-the-art Current Mode PWM control, and Surface Mount packaging & manufacturing technology, the R series provides up to 100 watts of well regulated power in a encapsulated 3.5" x 5.5" x 0.90" metal case with six-sided EMI/RFI shielding. Automatic feed forward compensation, pulse-by-pulse current limiting, and output short circuit protection are standard for all models.

These converters are designed for wide input range telecommunications, industrial and instrument applications. The wide input range (2:1 & 3:1) is ideal for battery or unregulated input applications.

No external components are needed for normal operation. Low ESR capacitors are used to minimize the conductive noise. This package is ideal for all I/O board system and distributed DC power configurations.

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1. Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause performance degradation, adversely effect longterm reliability, and cause permanent damage to the device.

Parameter	Conditions / Description	Min	Max	Units
Input Voltage				
Continuous	12	-0.3	20	Vdc
	24	-0.3	38	Vdc
	48	-0.3	78	Vdc
	30	-0.3	32	Vdc
	60	-0.3	62	Vdc
Transient (100mSec.)	12	-0.3	22	Vdc
	24	-0.3	40	Vdc
	48	-0.3	80	Vdc
	30	-0.3	34	Vdc
	60	-0.3	64	Vdc
Operating Temperature	All models, base plate temperature	-40	+95	°C
Storage Temperature	Ambient	-55	+105	°C
Isolation Voltage	Input to Output		+700	Vdc

2. Input Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
Input Voltage					
Voltage Range (Continuous)	12	9	12	18	Vdc
	24	18	24	36	Vdc
	48	36	48	75	Vdc
	30	10	24	30	Vdc
	60	18	48	60	Vdc

3. Enable (On-Off Control)

Parameter	Conditions / Description	Min	Nom	Max	Units
Enable Pin					
Open Circuit Voltage			5		Vdc
Source Current				1	mA
Positive Logic	Standard				
On-Control	Logic High or Floating	5.0		18	Vdc
Off-Control		-0.5		1.8	Vdc
Negative Logic	Not Available				

* Enable pin can be left floating if not used.

4. Output Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
Voltage Accuracy	Please see table				%
Output Current	Please see table				Adc
Over Voltage Protection	Not available				Vdc
Line Regulation				±1.0	%Vout
Load Regulation				±1.0	%Vout
Transient Respoonse	50% ± 25% step load change		400		µSec.
Ripple & Noise	Please see table				mVp-p
Switching Frequency			100		KHz

5. Output Trim

Parameter	Conditions / Description	Min	Nom	Max	Units
Negative Trim	Standard				
Trim Up	Trim Pin to (-)Vout or (-)Sense			10	%Vdc
Trim Down	Trim Pin to (+)Vout or (+)Sense	10			%Vdc
Positive Trim	Not Available				

* Trim pin can be left floating if not used

6. Environmental and Mechanical Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
Operating Temperature	PCB Temperature	-25		+85	°C
Storage Temperature		-55		+105	°C
Thermal Impedance	Free Convection		4.0		°C/Watt
Temperature Coefficient				±0.02	%/°C
Shock	Halfsine wave, 3 axes	50			g
Sinusoidal Vibration	GR-63-CORE, Section 5.4.2	1			g
Humidity	Relative Humidity, Non-Condensing	20		95	%R.H.
Case Material	Black Coated Metal				
Weight			1.1 (312)		Oz (g)
MTBF (calculated)	Bellcore TR-NWT-000332 method 1 - parts count	0.5			MHrs

7. Isolation Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
Isolation Voltage					
Input to Output		500			Vdc
I/O to Case		500			Vdc
Isolation Resistance	Input to Output	10			MΩ
Isolation Capacitance	Input to Output		3		nF

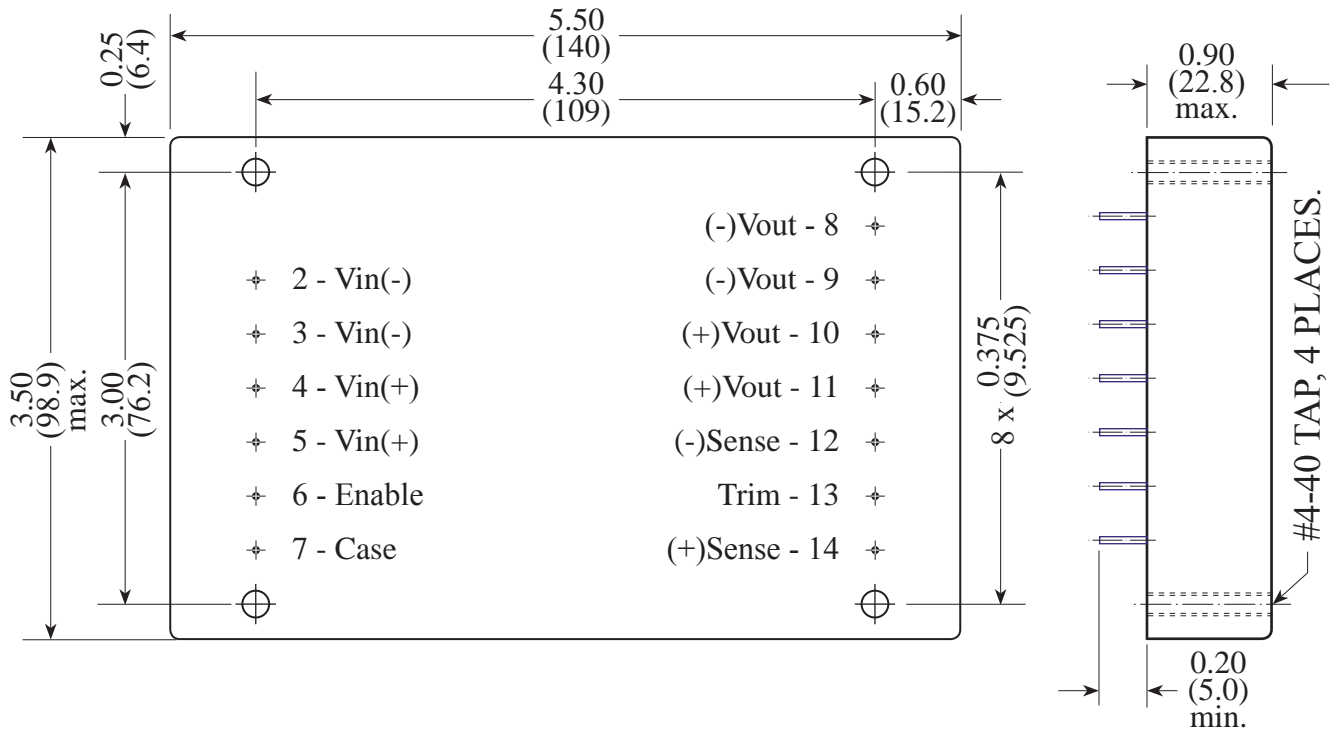
INPUT		OUTPUT							EFF. (typ.)	MODEL NO.	
Nominal (Range)	Max. Output Power	Voltage (V)			Current (A)		Ripple & Noise				Over Load Protection
		Set Point	Min.*	Max.*	Min.	Max.	Peak-Peak	R.M.S.			
12 (9 - 18)	50W	5.00	4.90	5.10	1.0	10.0	75mV	15mV	Pulse by Pulse Current Limiting	80%	R50S1205
	100W				2.0	20.0	75mV	15mV		80%	R100S1205
	60W	12.0	11.88	12.12	0.5	5.0	100mV	25mV		82%	R60S1212
	100W				0.84	8.4	100mV	25mV		82%	R100S1212
	60W	15.0	14.85	15.15	0.4	4.0	120mV	30mV		82%	R60S1215
	100W				0.6	6.7	120mV	30mV		82%	R100S1215
	60W	24.0	23.76	24.24	0.25	2.5	200mV	40mV		84%	R60S1224
	100W				0.42	4.2	200mV	40mV		84%	R100S1224
100W	0.63				6.3	200mV	40mV	84%	R150S1224		
150W	0.63				6.3	200mV	40mV	84%	R150S1224		
24 (18 - 36)	50W	5.00	4.90	5.10	1.0	10.0	75mV	15mV	Pulse by Pulse Current Limiting	82%	R50S2405
	100W				2.0	20.0	75mV	15mV		82%	R100S2405
	60W	12.0	11.88	12.12	0.5	5.0	100mV	25mV		84%	R60S2412
	100W				0.84	8.4	100mV	25mV		84%	R100S2412
	60W	15.0	14.85	15.15	0.4	4.0	120mV	30mV		84%	R60S2415
	100W				0.6	6.7	120mV	30mV		84%	R100S2415
	60W	24.0	23.76	24.24	0.25	2.5	200mV	40mV		85%	R60S2424
	100W				0.42	4.2	200mV	40mV		85%	R100S2424
100W	0.63				6.3	200mV	40mV	85%	R150S2424		
150W	0.63				6.3	200mV	40mV	85%	R150S2424		
48 (36 - 75)	50W	5.00	4.90	5.10	1.0	10.0	75mV	15mV	Pulse by Pulse Current Limiting	82%	R50S4805
	100W				2.0	20.0	75mV	15mV		82%	R100S4805
	60W	12.0	11.88	12.12	0.5	5.0	100mV	25mV		84%	R60S4812
	100W				0.84	8.4	100mV	25mV		84%	R100S4812
	60W	15.0	14.85	15.15	0.4	4.0	120mV	30mV		84%	R60S4815
	100W				0.6	6.7	120mV	30mV		84%	R100S4815
	60W	24.0	23.76	24.24	0.25	2.5	200mV	40mV		85%	R60S4824
	100W				0.42	4.2	200mV	40mV		85%	R100S4824
100W	0.63				6.3	200mV	40mV	85%	R150S4824		
150W	0.63				6.3	200mV	40mV	85%	R150S4824		
30 (10 - 30)	50W	5.00	4.90	5.10	1.0	10.0	75mV	15mV	Pulse by Pulse Current Limiting	80%	R50S3005
	60W	12.0	11.88	12.12	0.5	5.0	100mV	25mV		82%	R60S3012
	60W	15.0	14.85	15.15	0.4	4.0	120mV	30mV		82%	R60S2415
	60W	24.0	23.76	24.24	0.25	2.5	200mV	40mV		84%	R60S3024
60 (20 - 60)	50W	5.00	4.90	5.10	1.0	10.0	75mV	15mV	Pulse by Pulse Current Limiting	80%	R50S6005
	60W	12.0	11.88	12.12	0.5	5.0	100mV	25mV		82%	R60S6012
	60W	15.0	14.85	15.15	0.4	4.0	120mV	30mV		82%	R60S6015
	60W	24.0	23.76	24.24	0.25	2.5	200mV	40mV		84%	R60S6024

* Combined Line & Load Regulation.

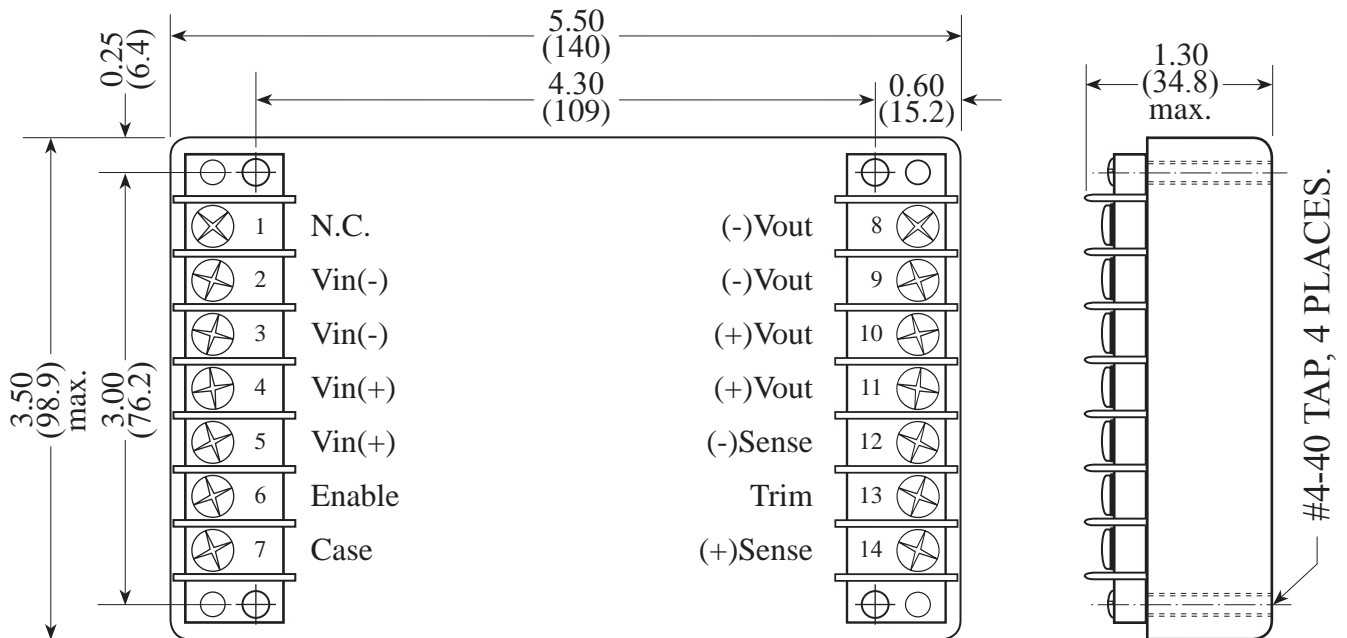
Product Numbering System & Selection Guide

R	50	S	24	05	TS
Series No.	Output Power	No Output	Input Voltage	Output Voltage	Options
R	50 : 55W	S : Single	12 : 10-20V	03 : 3.3V	HS: Heat Sink
	100 : 100W		24 : 18-36V	05 : 5.0V	TS: Terminal Strips
	150 : 150W		48 : 36-75V	12 : 12V	
			30 : 10-30V	15 : 15V	
			60 : 20-60V	24 : 24V	

PC Board Mount



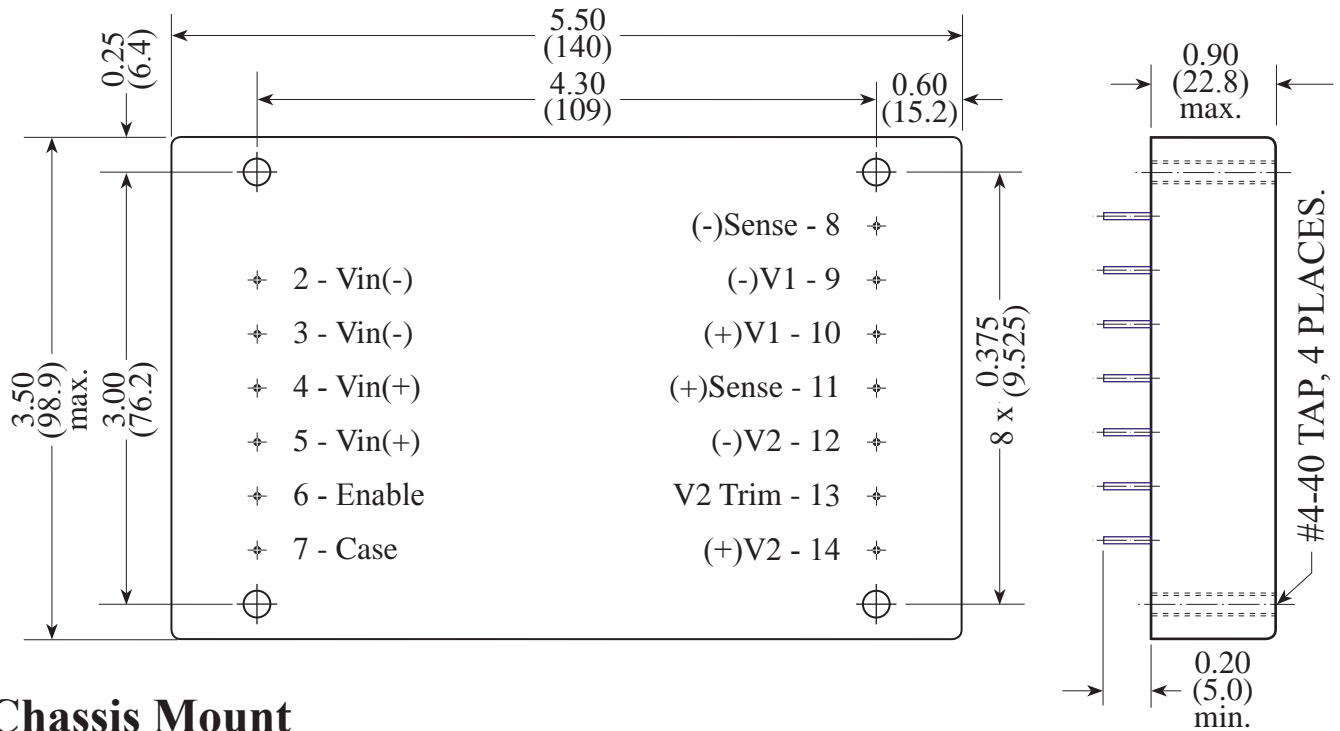
Chassis Mount



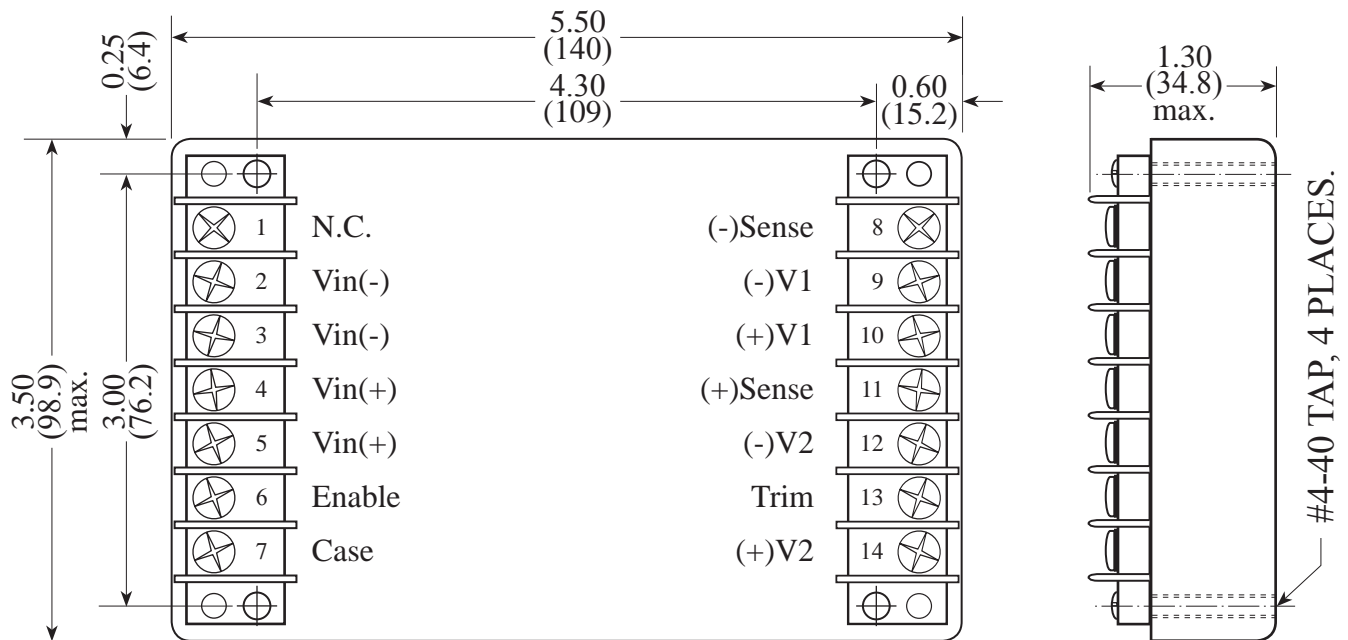
INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.
Nominal (Range)	Max Output Power	Voltage (V)					Current (A)			Ripple & Noise					
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.					
12 (10-20)	55W	5.0V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	82%	R55D1205-12
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			82%	R100D1205-12
	100W	5.0V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			82%	R55D1205-24
		12V	V2	12.00	11.90	12.10	I2	0.4	4.2	100mV	25mV			82%	R100D1205-24
	55W	5V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			84%	R60D1212-12
		24V	V2	24.00	23.80	24.20	I2	0.12	1.25	200mV	40mV			84%	R60D1215-15
	100W	5V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R55D2405-12
		24V	V2	24.00	23.80	24.20	I2	0.21	2.1	200mV	40mV			84%	R100D2405-12
	60W	12V	V1	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			84%	R55D2405-24
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			84%	R100D2405-24
	60W	15V	V1	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV			86%	R60D2412-12
		15V	V2	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV			86%	R60D2415-15
24 (18-36)	55W	5.0V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			84%	R55D4805-12
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			84%	R100D4805-12
	100W	5.0V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R55D4805-24
		12V	V2	12.00	11.90	12.10	I2	0.4	4.2	100mV	25mV			84%	R100D4805-24
	55W	5V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			84%	R55D4805-12
		24V	V2	24.00	23.80	24.20	I2	0.12	1.25	200mV	40mV			84%	R100D4805-24
	100W	5V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			86%	R60D2412-12
		24V	V2	24.00	23.80	24.20	I2	0.21	2.1	200mV	40mV			86%	R60D2415-15
	60W	12V	V1	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			84%	R55D4805-12
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			84%	R100D4805-12
	60W	15V	V1	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV			84%	R55D4805-24
		15V	V2	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV			84%	R100D4805-24
48 (36-75)	55W	5.0V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	86%	R60D4812-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	86%	R60D4815-15		
	100W	5.0V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV	80%	R55D3005-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	81%	R55D3005-24		
	55W	5V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	82%	R60D3012-12		
		24V	V2	24.00	23.80	24.20	I2	0.12	1.25	200mV	50mV	82%	R60D3015-15		
	100W	5V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV	82%	R55D6005-12		
		24V	V2	24.00	23.80	24.20	I2	0.12	1.25	200mV	40mV	82%	R55D6005-24		
	60W	12V	V1	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	R60D6012-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	R60D6015-15		
	60W	15V	V1	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV				
		15V	V2	15.00	14.85	15.15	I2	0.20	2.0	120mV	30mV				

* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

PC Board Mount



Chassis Mount



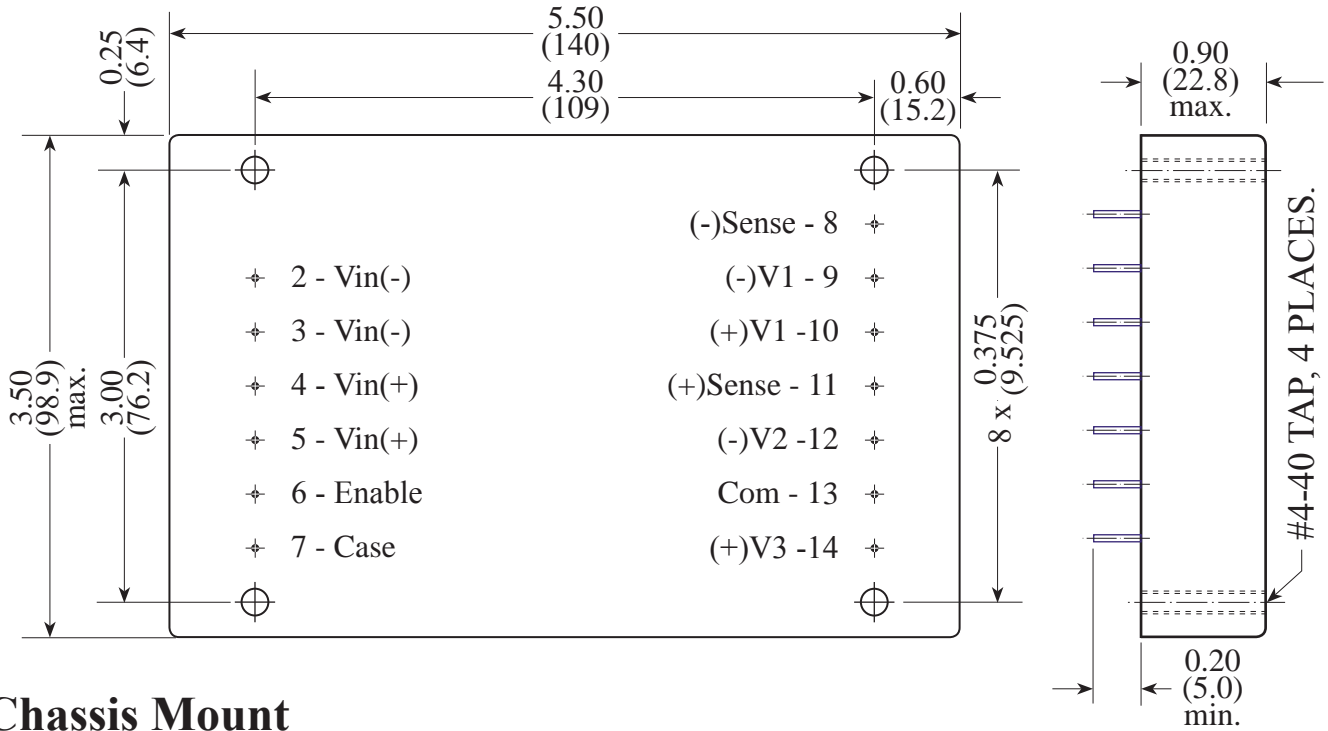
Product Numbering System & Selection Guide

R	55	D	24	05	-	12	TS
Series No.	Output Power	No Output	Input Voltage	Output Voltage		Dual Positive Output only	Option
R	55 : 55W 100 : 100W	D : Dual	12 : 10-20V 24 : 18-36V 48 : 36-75V 30 : 10-30V 60 : 20-60V	05 : ±5V 12 : ±12V 15 : ±15V		12 : +5V & +12V 24 : +5V & +24V	HS : Heat Sink TS : Terminal Strips

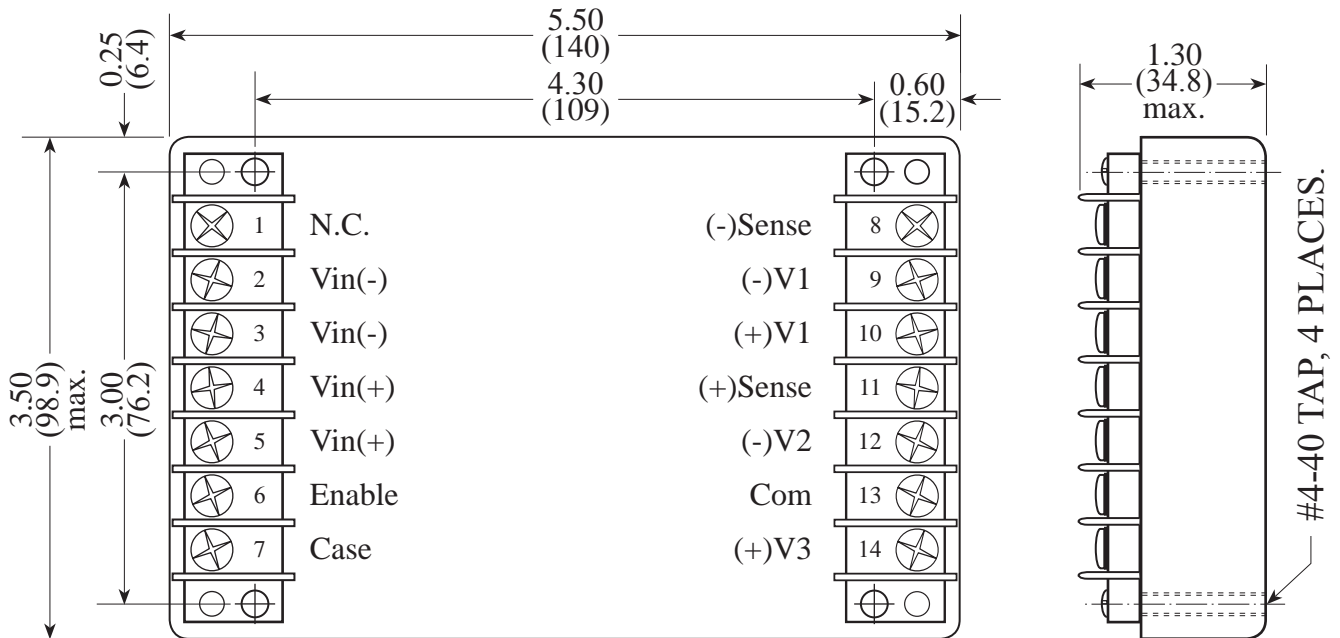
INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.
Nominal (Range)	Max Output Power	Voltage (V)				Current (A)			Ripple & Noise						
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.					
12 (10-20)	55W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	82%	R55T1205-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.12	+1.25	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.12	-1.25	100mV	25mV				
	100W	5.0V ±12V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			82%	R100T1205-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.2	+2.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.2	-2.0	100mV	25mV				
	55W	5.0V ±15V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			82%	R55T1205-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	100mV	30mV				
	100W	5.0V ±15V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			82%	R100T1205-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.2	+1.6	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.2	-1.6	100mV	30mV				
55W	12V ±5V	V1	12.00	11.88	12.12	I2	0.25	2.5	100mV	25mV	82%	R55T1212-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.25	+2.5	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.25	-2.5	120mV	15mV					
100W	12V ±5V	V1	12.00	11.88	12.12	I2	0.5	5.0	100mV	25mV	82%	R100T1212-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.4	+4.0	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.4	-4.0	120mV	15mV					
24 (18-36)	55W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	84%	R55T2405-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.12	+1.25	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.12	-1.25	100mV	25mV				
	100W	5.0V ±12V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R100T2405-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.2	+2.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.2	-2.0	100mV	25mV				
	55W	5.0V ±15V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			84%	R55T2405-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	100mV	30mV				
	100W	5.0V ±15V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R100T2405-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.2	+1.6	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.2	-1.6	100mV	30mV				
55W	12V ±5V	V1	12.00	11.88	12.12	I2	0.25	2.5	100mV	25mV	84%	R55T2412-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.25	+2.5	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.25	-2.5	120mV	15mV					
100W	12V ±5V	V1	12.00	11.88	12.12	I2	0.5	5.0	100mV	25mV	84%	R100T2412-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.4	+4.0	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.4	-4.0	120mV	15mV					
48 (36-75)	55W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	84%	R55T1205-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.12	+1.25	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.12	-1.25	100mV	25mV				
	100W	5.0V ±12V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R100T4805-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.2	+2.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.2	-2.0	100mV	25mV				
	55W	5.0V ±15V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			84%	R55T4805-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	100mV	30mV				
	100W	5.0V ±15V	V1	5.00	4.90	5.10	I1	1.0	10.0	75mV	15mV			84%	R100T4805-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.2	+1.6	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.2	-1.6	100mV	30mV				
55W	12V ±5V	V1	12.00	11.88	12.12	I2	0.25	2.5	100mV	25mV	84%	R55T4812-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.25	+2.5	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.25	-2.5	120mV	15mV					
100W	12V ±5V	V1	12.00	11.88	12.12	I2	0.5	5.0	100mV	25mV	84%	R100T4812-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.4	+4.0	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.4	-4.0	120mV	15mV					
30 (10-30)	55W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	80%	R55T3005-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.12	+1.25	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.12	-1.25	100mV	25mV				
	55W	5.0V ±15V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			80%	R55T3005-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	100mV	30mV				
55W	12V ±5V	V1	12.00	11.88	12.12	I2	0.25	2.5	100mV	25mV	80%	R55T3012-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.25	+2.5	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.25	-2.5	120mV	15mV					
60 (20-60)	55W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	82%	R55T6005-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.12	+1.25	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.12	-1.25	100mV	25mV				
	55W	5.0V ±15V	V1	5.00	4.90	5.10	I1	0.5	5.0	75mV	15mV			82%	R55T6005-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	100mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	100mV	30mV				
55W	12V ±5V	V1	12.00	11.88	12.12	I2	0.25	2.5	100mV	25mV	82%	R55T6012-05			
		+V3	+5.00	+4.90	+5.10	+I2	+0.25	+2.5	120mV	15mV					
		-V2	-5.00	-4.85	-5.15	-I2	-0.25	-2.5	120mV	15mV					

* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

PC Board Mount



Chassis Mount



Product Numbering System & Selection Guide

Series No.	Output Power	No Output	Input Voltage	Output Voltage	Dual Positive Output only	Option
R	55	T	24	05	12	TS
R	55 : 55W 100 : 100W	T : Triple	12 : 10-20V 24 : 18-36V 48 : 36-75V 30 : 10-30V 60 : 20-60V	05 : 5.0V 12 : 12V	5 : ±5.0V 12 : ±12V 15 : ±15V	HS : Heat Sink TS : Terminal Strips

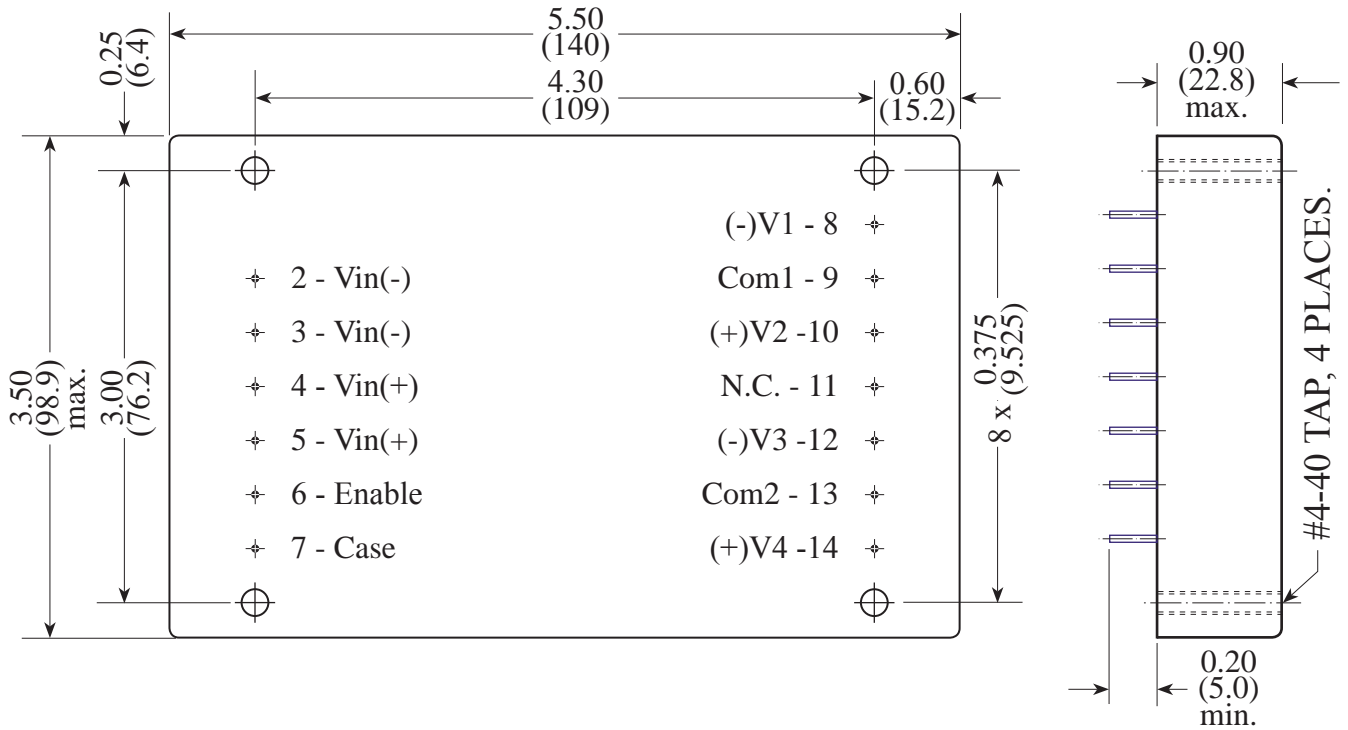
INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.
Nominal (Range)	Max Output Power	Voltage (V)				Current (A)			Ripple & Noise						
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.					
12 (9-18)	60W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV	Pulse by Pulse Current Limiting	Not Available	82%	R60Q1205-12
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-12.00	-11.76	-12.24	-12	-0.12	-1.25	100mV	25mV				
			+V4	+12.00	+11.88	+12.12	-12	+0.12	+1.25	100mV	25mV				
	60W	±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-15.00	-14.70	-15.30	-12	-0.10	-1.0	120mV	30mV				
			+V4	+15.00	+14.85	+15.15	-12	+0.10	+1.0	120mV	30mV				
24 (18-36)	60W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-12.00	-11.76	-12.24	-12	-0.12	-1.25	100mV	25mV				
			+V4	+12.00	+11.88	+12.12	-12	+0.12	+1.25	100mV	25mV				
	60W	±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-15.00	-14.70	-15.30	-12	-0.10	-1.0	120mV	30mV				
			+V4	+15.00	+14.85	+15.15	-12	+0.10	+1.0	120mV	30mV				
48 (36-75)	60W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-12.00	-11.76	-12.24	-12	-0.12	-1.25	100mV	25mV				
			+V4	+12.00	+11.88	+12.12	-12	+0.12	+1.25	100mV	25mV				
	60W	±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-15.00	-14.70	-15.30	-12	-0.10	-1.0	120mV	30mV				
			+V4	+15.00	+14.85	+15.15	-12	+0.10	+1.0	120mV	30mV				
30 (10-30)	60W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-12.00	-11.76	-12.24	-12	-0.12	-1.25	100mV	25mV				
			+V4	+12.00	+11.88	+12.12	-12	+0.12	+1.25	100mV	25mV				
	60W	±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-15.00	-14.70	-15.30	-12	-0.10	-1.0	120mV	30mV				
			+V4	+15.00	+14.85	+15.15	-12	+0.10	+1.0	120mV	30mV				
60 (20-60)	60W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-12.00	-11.76	-12.24	-12	-0.12	-1.25	100mV	25mV				
			+V4	+12.00	+11.88	+12.12	-12	+0.12	+1.25	100mV	25mV				
	60W	±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV				
			+V2	+5.00	+4.90	+5.10	+12	+0.5	+5.0	75mV	15mV				
			-V3	-15.00	-14.70	-15.30	-12	-0.10	-1.0	120mV	30mV				
			+V4	+15.00	+14.85	+15.15	-12	+0.10	+1.0	120mV	30mV				

* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

Product Numbering System & Selection Guide

R	60	Q	24	05	-	12	TS
Series No.	Output Power	No Output	Input Voltage	Output Voltage	Dual Positive Output only		Option
R	60 : 60W	Q : Quad	12 : 9-18V 24 : 18-36V 48 : 36-75V 30 : 10-30V 60 : 20-60V	05 : ±5V	12 : ±12V 15 : ±15V		HS : Heat Sink TS : Terminal Strips

PC Board Mount



Chassis Mount

