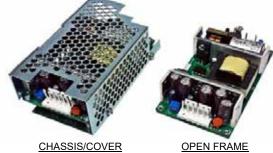


# **25 WATTS** SINGLE/MULTI OUTPUT AC-DC

## FEATURES:

- Compact 2.25" x 4.00" x .96" Size IEC 60601-1 3rd ed. Medical Cert.
- IEC 60950-1 2<sup>nd</sup> ed. ITE Certification • 2 Year Warranty • IEC 60601-1-2 4th ed. EMC
- Universal 85-264V Input
- Single, Dual or Triple Outputs
- 0-70°C Operating Temperature
- Class B Emissions per EN55011/32 • RoHS Compliant
- Optional Chassis/Cover



OPEN FRAME

## SAFETY SPECIFICATIONS

MODEL LISTING				
CE	Low Voltage Directive RoHS Directive (Recast)	(2014/35/EU of February 2014) (2011/65/EU of June 2011)		
	TUV	EN 60950-1/A2:2013, 2 <sup>nd</sup> Edition EN 60601-1:2006/A1:2013		
c 🔁 us	UL Recognition Mark for Canada File E137708/E140259	CAN/CSA-C22.2 No. 60950-1-07, 2 <sup>nd</sup> Edition CAN/CSA-C22.2 No. 60601-1:2014		
		CB Reports/Certificates (including all National and Group Deviations) IEC 60950-1/A2:2013, 2 <sup>nd</sup> Edition IEC 60601-1:2005/A1:2012		
c 🔁 us	Underwriters Laboratories File E137708/E140259	UL 60950-1:2007, 2 <sup>nd</sup> Edition AAMI/ANSI ES60601-1:2005/(R) 2012		

MODEL NO.	OUTPUT 1	OUTPUT 2	OUTPUT 3
SRP-25-3001	+5V/3A	+12V/1.5A	-12V/0.5A
SRP-25-3002	+5V/3A	+15V/1.5A	-15V/0.5A
SRP-25-3003	3.3V/2.5A	6V/2A	5V/1A
SRP-25-2001	+5V/3A	+24V/1A	
SRP-25-2002	+5V/3A	+12V/1.5A	
SRP-25-2003	+5V/3A	-5V/2A	
SRP-25-2004	+12V/1.5A	-12V/1.5A	
SRP-25-2005	+15V/1.5A	-15V/1.5A	
SRP-25-1001	3.3V/6A		
SRP-25-1002	5V/5A		
SRP-25-1003	12V/2.08A		
SRP-25-1004	15V/1.67A		
SRP-25-1005	24V/1.04A		
SRP-25-1006	48V/0.52A		

#### ORDERING INFORMATION

Consult factory for alternate output configurations. Consult factory for positive, negative or floating outputs. Please specify the following optional features when ordering:

CH - Chassis CO - Cover

I/O - Isolated Outputs TS - Terminal Strip

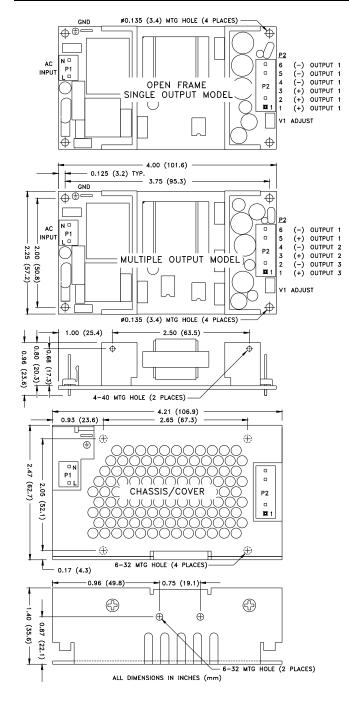
		0 F
	SRP-	25
OUT	PUT SPECIF	
Total Output Power(1) (See Derating Chart)	25W (20W, 100 <sup>-</sup>	
Output Voltage Centering	Output 1:	$\pm 0.25\%$ (All outputs
	Output 2: Output 3:	± 5.0% at 50% load) ± 2.0%
Output Voltage Adjust Range	Output 3:	<u> </u>
Load Regulation	Output 1:	0.5% (0-100% load change)
5	Output 2:	5.0% (10-100% load change)
	Output 2: (2003)	
	Output 3:	1.0% (0-100% load change)
Source Regulation Cross Regulation	Outputs 1 – 3: Output 2:	0.5% 5.0% (Output 1 load
Closs Regulation	Output 2: Output 3:	2.0% varied 50-100%)
Output Noise	Outputs 1-3	1.0%
Turn on Overshoot	None	
Transient Response	Outputs 1 – 3	
Voltage Deviation	5.0%	
Recovery Time	1ms	
Load Change Output Overvoltage	50% to 100% Output 1:	110% to 150%
Protection (optional)	Juiput I.	11070 (0 10070
Output Overcurrent Protection	Output 3:	110% Min.
Output Overpower Protection	Outputs 1 & 2:	110% Min.
		/off, auto recovery
Hold Up Time		Output, 120V Input
Start Up Time	1 Second	
		SATIONS
Protection Class Source Voltage	I 85 – 264 Volts A	C
Frequency Range	47 – 63 Hz	6
Source Current	47 00112	
True RMS	0.8A at 85V Inpu	t
Peak Inrush	30 A	
Efficiency	0.66 - 0.72 (Vari	
		ECIFICATIONS
Ambient Operating	0°C to + 70°C	war Dating Chart
Temperature Range Ambient Storage Temp. Range	- 40°C to + 85°C	ower Rating Chart
Temperature Coefficient	Outputs 1 – 3:	0.02%/°C
	RAL SPECI	
Means of Protection		IOATIONO
Primary to Secondary	2MOPP (Means	of Patient Protection)
Primary to Ground	1MOPP (Means	of Patient Protection) (1MOOP-Singles)
Secondary to Ground	Operational Insu	ation(Consult factory for 1MOOP or 1MOP
Dielectric Strength(8, 9)		
Reinforced Insulation		ary to Secondary
Reinforced Insulation Basic Insulation	2121 VDC, Prim	ary to Ground
Reinforced Insulation Basic Insulation Operational Insulation	2121 VDC, Prim	
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current	2121 VDC, Prim 707 VDC, Seco	ary to Ground ndary to Ground
Reinforced Insulation Basic Insulation Operational Insulation	2121 VDC, Prim	ary to Ground ndary to Ground )00µA SFC
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current	2121 VDC, Prim 707 VDC, Seco <300µA NC, <10 <100µA NC, <50	ary to Ground ndary to Ground )00µA SFC
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Wean-Time Between Failures	2121 VDC, Prim 707 VDC, Secc <300μA NC, <10 <100μA NC, <50 100,000 Hours r 0.30 Lbs. Op	arý to Ground Indary to Ground 100µA SFC 10µA SFC nin., MIL-HDBK-217F, 25° C, GB en Frame
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight	2121 VDC, Prim 707 VDC, Secc <300μA NC, <10 <100μA NC, <50 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Chi	arý to Ground Indary to Ground )00µA SFC )0µA SFC ini., MIL-HDBK-217F, 25° C, GB an Frame assis and Cover
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION	2121 VDC, Prim 707 VDC, Secc <300μA NC, <11 <100μA NC, <50 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch: <b>S (IEC 60601-1-</b>	arý to Ground Indary to Ground )00µA SFC )0µA SFC nin., MIL-HDBK-217F, 25° C, GB en Frame assis and Cover 2:2014, 4 <sup>TH</sup> ed./IEC 61000-6-2:2005
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <50 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch. S (IEC 60601-1- EN 61000-4-2	arý to Ground Indary to Ground )00µA SFC )0µA SFC nin., MIL-HDBK-217F, 25° C, GB en Frame assis and Cover 2:2014, 4 <sup>TH</sup> ed./IEC 61000-6-2:2005 ±8KV contact / ±15KV air discharge
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <50 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch. S (IEC 60601-1- EN 61000-4-2 EN 61000-4-3	arý to Ground Indary to Ground 100µA SFC 10µA SF
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Wean-Time Between Failures Weight EIMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <50 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch. S (IEC 60601-1- EN 61000-4-2 EN 61000-4-3 EN 61000-4-4	arý to Ground indary to Ground )00µA SFC )0µA SFC )0µA SFC inin., MIL-HDBK-217F, 25° C, GB en Frame assis and Cover <b>2:2014, 4<sup>TH</sup> ed./IEC 61000-6-2:2005</b> <b>2:2014, 4<sup>TH</sup> ed./IEC 61000-6-2:2005</b> <b>3:2014, 4</b> <b>3:2014, 5</b> <b>3:2014, 4</b> <b>3:2014, 4</b> <b>3:2014, 5</b> <b>3:2014, 5</b> <b>3</b>
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity	2121 VDC, Prim 707 VDC, Secc <300μA NC, <11 <100μA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch S (IEC 60601-1- EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5	arý to Ground indary to Ground 00μA SFC 0μA SFC in., MIL-HDBK-217F, 25° C, GB en Frame assis and Cover 2:2014, 4 <sup>TH</sup> ed.//IEC 61000-6-2:2005 ±8KV contact /±15KV air discharge 80MHz-2.7GHz, 10V/m, 80% AM ±2 KV, 5KHz/100KHz ±2 KV line to earth /±1 KV line to line
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch S (IEC 60601-11 EN 61000-4-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-5 EN 61000-4-5	arý to Ground indary to Ground 000μA SFC 00μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-2 EN 61000-4-3 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8	arý to Ground indary to Ground 100μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch S (IEC 60601-11 EN 61000-4-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-5 EN 61000-4-5	arý to Ground indary to Ground 100μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity	2121 VDC, Prim 707 VDC, Secc <300μA NC, <11 <100μA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-2 EN 61000-4-3 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8	arý to Ground indary to Ground 100μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EMCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity	2121 VDC, Prim 707 VDC, Secc <300μA NC, <11 <100μA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-2 EN 61000-4-3 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8	arý to Ground indary to Ground 000μA SFC 00μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 10μA SFC 1004006 15KV contact / ±15KV air discharge 15KV contact / ±15KV
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity Voltage Dips	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-8 EN 61000-4-11 EN 61000-4-11	arý to Ground indary to Ground 000μA SFC 00μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity Voltage Dips	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-3 EN 61000-4-3 EN 61000-4-5 EN 61000-4-8 EN 61000-4-8 EN 61000-4-11 EN 61000-4-11 EN 61000-4-11 EN 55011/32	arý to Ground indary to Ground 100μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight EINCSPECIFICATION Electrostatic Discharge Radiated Electromagnetic Field Electrical Fast Transients/Bursts Surge Immunity Conducted Immunity Magnetic Field Immunity Voltage Dips	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 (100µA NC, <51 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-8 EN 61000-4-11 EN 61000-4-11 EN 61000-4-11 EN 55011/32 EN 55011/32	arý to Ground indary to Ground 100μA SFC 10μA SFC 1
Reinforced Insulation Basic Insulation Operational Insulation Leakage Current Earth Leakage Touch Current Mean-Time Between Failures Weight	2121 VDC, Prim 707 VDC, Secc <300µA NC, <11 <100µA NC, <51 100,000 Hours r 0.30 Lbs. Op 0.62 Lbs. Ch <b>S (IEC 60601-1</b> EN 61000-4-3 EN 61000-4-3 EN 61000-4-5 EN 61000-4-8 EN 61000-4-8 EN 61000-4-11 EN 61000-4-11 EN 61000-4-11 EN 55011/32	arý to Ground indary to Ground 100μA SFC 10μA SFC 1

All specifications are maximum at 25  $^{\circ}\text{C}/25\text{W}$  unless otherwise stated, may vary by model and are subject to change without notice.

# *,* www.trcelectronics.com/ipd



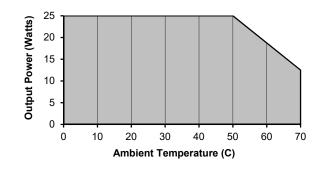
### **SRP-25 SERIES MECHANICAL SPECIFICATIONS**



### APPLICATIONS INFORMATION

- Each output can deliver its rated current but Total Output Power must not exceed 25W.
   Generally, adequate cooling is provided when semiconductor case temperatures do not
- exceed 70°C rise and transformer temperature does not exceed 60°C rise at any specified ambient temperature.
- Sufficient area must be provided around power supply to allow natural movement of air to develop in convection-cooled applications.
- This product is intended for use as a professionally-installed component within information technology, industrial, and medical equipment and is not intended for stand-alone operation.
- 5. A minimum load of 10% is required on Output 1 to ensure proper regulation of remaining outputs.
- This product includes only one fuse in the input circuit. In consideration of Clause 8.11.5 of IEC 60601-1:2005, a second fuse may be required in neutral conductor of the end product.
- Peak-to-Peak Output Ripple and Noise is measured directly at the output terminals of the power supply, without the use of the probe ground lead or retractable tip (tip-and-barrel method), 20 MHz bandwidth.
- 8. This product was type-tested and safety-certified using the dielectric strength test voltages listed in Table 6 of IEC 60601-1:2005. In consideration of Clause 8.8.3, care must be taken to insure the voltage applied to a reinforced insulation does not overstress different types and levels of insulation. Primary and secondary-to-ground capacitors may need to be disconnected prior to performing a dielectric strength test on the power supply or the end product. It is highly recommended that the DC test voltages listed in DVB.1, Annex DVB of UL 60601-1 1<sup>st</sup> Edition are not exceeded during a production-line dielectric strength test of the assembled end product. Please consult factory for further information.
- This power supply has been safety-approved and final-tested using a DC dielectric strength test. Please consult factory before performing an AC dielectric strength test.
- Maximum screw penetration into bottom chassis mounting holes is 0.100 inches. Maximum screw penetration into side chassis mounting holes is 0.250 inches.
- To comply with emissions specifications, all four mounting hole pads must be electrically connected to a common metal chassis. Chassis/Cover option is recommended. Refer to Operating Instructions for additional information.
- 12. Common RF shielding precautions may need to be taken to assure emissions compliance. Refer to Operating Instructions for additional information.

### MAXIMUM OUTPUT POWER vs. AMBIENT TEMPERATURE



CONNECTOR SPECIFICATIONS				
P1	AC Input	0.156 friction lock header mates with Molex 09-50-3031 or equivalent crimp terminal housing with Molex 08-50-0189 or equivalent crimp terminal.		
P2	DC Output	0.156 friction lock header mates with Molex 09-50-3061 or equivalent crimp terminal housing with Molex 08-50-0189 or equivalent crimp terminal.		
G	Ground	0.187 quick disconnect terminal.		