

SINA150 SERIES

N+1 Redundant Power Supply for Industrial Equipment



- Wide Input Voltage 90 to 264 VAC, 47 to 63Hz, 1or2 Phase
- Output Voltage Available From 9VDC Thru 48VDC
- **N+1 Redundant / Hot Swapping Design**
- **Single Unit 150W Output / Fanless Design**
- Power Failure Detector, LED Indicator
- Input Surge Current, Over Voltage, Over Load , and Short Circuit Protection
- Class B Insulation, Anti-Rust Processed PCB
- Active Power Factor Correction, Internal EMI filter

5 Year Limited Warranty

(Compliant with UL60950-1, EN60950-1, CSA, CE, RoHS)

Single Output

Part Number	Output Voltage	Max. Output Current	Load Regulation	Maximum Output Power
SINA150-S05	12 VDC	12.5 A	±5%	150W
SINA150-S08	24 VDC	6.25 A	±3%	150W
SINA150-S09	30 VDC	5.00 A	±2%	150W
SINA150-S10	36 VDC	4.17 A	±2%	150W
SINA150-S11	48 VDC	3.13 A	±2%	150W

Electrical Characteristics

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Input Voltage	Operating Voltage	90		260	VAC
Input Frequency		47		63	Hz
Power Factor Correction	Io=Full load, Vin=90~260VAC	0.95	0.97	1.00	
Output Power Range	Vin= 90 to 264 VA C	0		150	W
Input Current (Low Line)	Io=Full load, Vin=115 VAC			2.0	A
Input Current (High Line)	Io=Full load, Vin= 230 VAC			0.8	A
Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC		48	54	A
High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC		58	60	A
Efficiency	Io=Full Load, Vin=230VAC	82	88	90	%
Line Regulation	Io=Full Load		0.5	1	%
Load Regulation	Vin=230VAC	2		5	%
Over Voltage Protection		112		132	%
Over Current Protection		110		150	%
Transient Response	Io=Full Load to Half Load, Vin=100VAC			4	mS
Hold-Up Time	Io=Full Load, Vin=110VAC		100		mS
Start Up Time	Io=Full Load, Vin=100VAC	0.3	1	2	S
Ripple & Noise (Peak to Peak)	Full Load, Vin=90VAC / 47uF capacitor / 20MHz			1	%
Safety Ground Leakage Current	Io= Full Load, Vin=240VAC/60Hz			0.5	mA
Temperature Coefficient	All output	-0.04		0.04	%/°C

Conditions

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature	Relative Humidity: 10 ~ 95%	-10		70	°C
Storage Temperature	Relative Humidity: 5 ~ 95%	-40		85	°C
MTBF : Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.1			M Hrs
De-rate linearly from 100% load at 50°C to 50% load at 70°C					

Approvals and Compliance

Parameter	Test Conditions	Min.	Unit
Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242	VDC
Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2121	VDC
Isolation Resistance	Test Voltage = 2100VDC	50	MΩ
EMI requirements for CISPR-11	Vin=220VAC	B	CLASS
EMI requirements for FCC PART-18	Vin=110VAC	B	CLASS
Safety Certification	(Certification s will be applied upon request)	n/a	n/a
Environmental Compliance	RoHS	n/a	n/a
Safety, EMI, and EMC Compliance	<p>Safety:</p> <ul style="list-style-type: none"> ● UL and C-UL based on U.L.60950-1 and C.S.A C22.2 ● EN60950 standards. ● CE declaration of conformity. ● IEC 60950 with C.B. Certificate <p>EMC/EMI:</p> <ul style="list-style-type: none"> ● IEC61000-6-4, CISPR 11 Class A(150kHz to 30MHz)jF79dB V QP, 66dB V AV (150kHz to 500kHz)jA73dB V QP, 60dB V AV(500kHz to 5MHz)jA73dB V QP, 60dB V AV(5MHz to 30MHz) ● IEC61000-6-4, CISPR 11 Class A(30MHz to 1GHz)jF30dB V/m QP, at 30cm (30MHz to 230MHz)jA37dB V/m QP, at 30cm(230MHz to 1GHz) ● IEC61000-4-13 (16Hz ~ 2.4kHz) ● IEC61000-4-16 (15Hz ~ 150kHz) <p>Electromagnetic Immunity of Power Unit:</p> <ul style="list-style-type: none"> ● EN55024. Inside the EN55024 there are the compliance to following standard. ● EN61000-3-2.EN61000-3-3. ● IEC 61000-4-2 ● IEC 61000-4-3jF140dB V /m(26MHz to 1GHz); ● IEC 61000-4-4jF 4Kv (Power line), 2kV (Signal line) ● IEC 61000-4-5jF 4Kv (Power line), 2Kv (Signal line) ● IEC 61000-4-6jF140dB V (150kHz to 80MHz) ● IEC 61000-4-8; (50 & 60Hz) ● IEC 61000-4-9; (50Hz to 50kHz) ● IEC 61000-4-10; (100kHz to 1MHz) ● IEC 61000-4-11. ● IEC 61000-4-11jF (Ring Wave)jF 4Kv (Power line), 2Kv (Signal line) 		