

# SDX-650-G96 Series

650W 96VDC Input ATX Power Supply



150 x 140 x 86 mm  
5.90 x 5.51 x 3.39 inch



## Features:

- \* Input and output isolation
- \* High efficiency and reliability
- \* Soft start function, low inrush current
- \* Input reverse polarity protection
- \* 3.3V & 5V VRM design
- \* -5V output option
- \* Over voltage, over current, over load & short circuit protection
- \* With power good signal & PS-ON signal output
- \* 100% full load burn-in test
- \* Meet Intel ATX 2.01 / ATX 2.31 / ATX 12V
- \* LVD approved
- \* 3 years warranty

## Specification:

INPUT	Voltage	72V~144V (Typical 96V)						
	Current	<11A @ 80V DC input						
	Protection	Ceramic Fuse 15A/250V						
OUTPUT	Voltage	5V	3.3V	12V1	12V2	-5V	-12V	5Vsb
	Min Load	0A	0A	1A	0A	0A	0A	0A
	Max Load	23A	23A	22A	22A	0.5A	1A	3A
	Output Tolerance ②	±3%	±5%	±3%	±3%	±5%	±10%	±5%
	Ripple Noise MAX. ③	70mV	70mV	150mV	150mV	100mV	150mV	70mV
	Efficiency (TYP.)	83%						
	Output MAX.	3.3V & 5V max 145W, -5V & -12V max 12W, total output max 650W						
PROTECTION	Over Voltage	5.7V~6.5V	3.7V~4.1V	13.1V~14.5V		----	----	----
		Shutdown, it needs re-power on to recover						
	Over current (MAX)	28A	28A	27A	27A	----	----	----
	OverLoad & ShortCircuit	When power supply over 105%~ 150% max load or short circuit acted, power supply will be shutdown and latch off, recover after re-start up.						
ELEC. CHAR.	Rise time	<20mS						
	Power good signal	Power ON within 100---500ms, high level TTL Signal release.						
ENVIRONMENT	Temperature ④	Operating: -20 ~ 70°C ; De-rating: 50 ~ 70°C : 2.5%/°C ; Storage: -40~+85°C						
	Humidity	Operating: 20% ~ 90% (non condensing) RH; Storage: 10% ~ 95% RH (non condensing)						
SAFETY	Withstand voltage	I/P-O/P:4.0KVDC, I/P-FG:2.5KVDC, 1minute						
	Isolation resistance	I/P-O/P, I/P-FG, > 100MΩ/500VDC at 25°C / 70% RH						
	Safety standard	IEC 62368-1 : 2014(Second Edition) and/or EN 62368-1 : 2014+A11 : 2017						
EMC	EMI	EN 55032 CLASS A 、 FCC CFR 47 PART 15 CLASS A						
	EMS	EN 55035 : EN 61000-4-2,3,4,5,6,8						
OTHERS	Cooling	Forced airflow cooling with DC fan						
	M.T.B.F.	106 K hours						
	Dimension	150 x 140 x 86 mm (W*L*H)						
	Packing	N.W.: 1.8 Kg / 1pc; 6 pcs/ 2.03 CUFT / 1 CTN						

NOTE	①	All measurements which not mentioned are based on 96VDC input, <b>output Max</b> at ambient 25°C / 70%RH.
	②	Output tolerance included set up voltage, line regulation and load regulation. The regulation is measured between 20%-100% <b>max load</b> of each output, Total output must under <b>output Max</b> .
	③	Ripple & noise are measured at 10~50°C condition and 20MHz of bandwidth by using a 10" ~15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.
	④	The operating temperature shall follow the de-rating curve in spec
	⑤	The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.

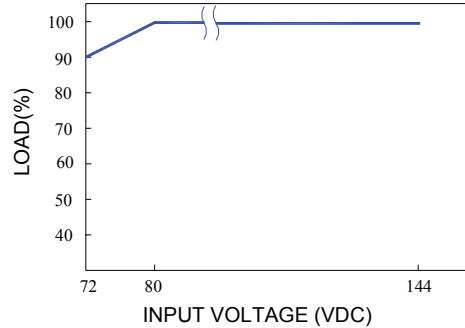
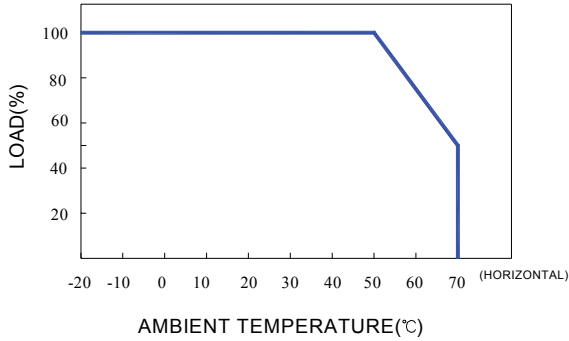
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## De-rating Curve :

## Output De-rating Vs Input Voltage



## Dimension:

(Unit: mm)

### OPTION

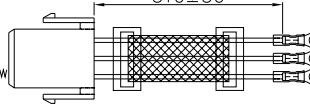
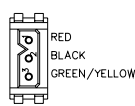
35-254-643R

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The voltage drop was caused by wire loss ;

Test under full load and typical condition of specification

35-254-643R

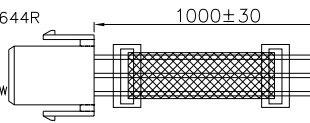
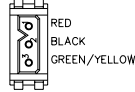


FOR SDX-450-G24 FULL LOAD 25°C VOLTAGE DROP < 0.4V

FOR SDX-550-G48 FULL LOAD 25°C VOLTAGE DROP < 0.2V

FOR SDX-650-G96 FULL LOAD 25°C VOLTAGE DROP < 0.1V

35-254-644R



FOR SDX-550-G48 FULL LOAD 25°C VOLTAGE DROP < 0.25V

FOR SDX-650-G96 FULL LOAD 25°C VOLTAGE DROP < 0.15V

