350W Power Supply with Battery Charger (UPS Function) **220SUPS**

**Features:**

+Universal AC input / Full range
Optional active PFC function
+3 Stage battery Charger for Optional
Protection: Short circuit / Overload / Over Voltage
Battery low protection / Battery reverse polarity
Protection by internal fuse
On/Off control Fan, Charging Fan
+Optional Relay contact signal output for AC OK and Battery Low
Cooling by free air convection
100% full load burn-in test
2 years warranty

**Applications:**

Security systems
Emergency Lighting system
Alarm system
UPS system
Central monitoring system
Access systems

**350-220SUPS** series is a 350W AC/DC security power supply, allowing the universal input range between 170VAC and 264VAC and incorporating optional PFC function. In addition to primary output, there is a charger output, with the smaller rated current, that provides the backup power supply application the security access system require.
**350-220SUPS** delivers an efficiency up to 90%; It can operate with air convection under -20°C through +70°C. This series is designed with thorough alarm features, can adding AC OK and battery low signaling; Morever, the relay contact is provided to facilitate users system designs. 220SUPS is availble in the PCB type or the enclosed type with L-Bracket and cover.

**12VDC: 350-220S13UPS**
**24VDC: 350-220S27UPS**
**48VDC: 350-220S53UPS**

Unit 304, 3rd floor, No. 2224, Sarve-Saee Tower, Valiasr Ave, Tehran, Iran P.O.Box: 1433894565
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| MODEL | | **220SUPS13** | | **220SUPS27** | | **220SUPS53** | |
|---|---|---|---|---|---|---|---|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH1 | CH2 | CH1 | CH2 |
| | DC VOLTAGE | 13.6V | 13.6V | 27.2V | 27.2V | 54V | 54V |
| | RATED CURRENT | 18A | 8A | 8A | 4A | 4.5A | 2A |
| | CURRENT RANGE | 0~25A | ------ | 0~12A | ------ | 0~6.5A | ------ |
| | RATED POWER | 350W | | 350W | | 350W | |
| | RIPPLE & NOISE(max.) Note2 | 150mVp-p | ------ | 150mVp-p | ------ | 150mVp-p | ------ |
| | VOLTAGE ADJ. RANGE | CH1 : 12~15V | | CH1 : 24~29V | | CH1 : 47~59V | |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ------ | ±1.0% | ------ | ±1.0% | ------ |
| | LINE REGULATION | ±0.5% | ------ | ±0.5% | ------ | ±0.5% | ------ |
| | LOAD REGULATION | ±0.5% | ------ | ±0.5% | ------ | ±0.5% | ------ |
| | SETUP,RISE TIME Note.4 | 2000ms, 30ms/230VAC2000ms at full Load | | | | | |
| | HOLD UP TIME | 40ms/230VAC at full Load | | | | | |
| INPUT | VOLTAGE RANGE | 175~265VAC | | | | | |
| | FREQUENCY RANGE | 47~63Hz | | | | | |
| | POWER FACTOR (Typ.) | OTPIONAL --- PF≥0.9/230VAC at full Load --- Without PFC circuit PF≥0.65/230VAC at full Load | | | | | |
| | EFFICIENCY (Typ.) | 84% | | 86% | | 87% | |
| | AC CURRENT (Typ.) | 2.5A/115VAC 1.5A/230VAC | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 35A/115VAC 70A/230AC | | | | | |
| | LEAKAGE CURRENT | ≤1mA/240VAC | | | | | |
| PROTECTION | OVERLOAD | 105~150% rated output power | | | | | |
| | | Protection type: Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | CH1 :14.49~18.63 | | CH1 :28.98~37.26 | | CH1 :64.49~70.63 | |
| | | Protection type: Shut down o/p voltage , re-power on to recover | | | | | |
| | BATTERY CUT OFF | 10±0.5 | | 20±0.5 | | 40±0.5 | |
| ALARM FUNCTION | AC OK Note.5 | OTPIONAL Relay contact output, ON : AC Okay ; OFF : AC Fail ; Max Rating : 30V-1A | | | | | |
| | BATTERY LOW° | OTPIONAL Relay contact output, OFF : Battery OK ; ON : Battery low ; Max Rating : 30V-1A | | | | | |
| | | Batt low voltage: <11V | | Batt low voltage: <22V | | Batt low voltage: <44V | |
| ENVIRONMENT | WORKING TEMP. | -20~+70°C REFER TO DERATING CURVE | | | | | |
| | WORKING HUMIDITY | 20~90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -20~+85°C , 10~90% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03% /°C (0~45°C) on CH1 Output | | | | | |
| | VIBRATION | 10~500Hz 2G 10min./ 1cycle, 60min each along X,Y,Z | | | | | |
| SAFETY & EMC (NOTE4) | SAFETY STANDARD | UL60950-1, TUV EN60950-1, EAC TP TC 004 approved | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P : 3KVAC I/P-FG : 2.0KVAC O/P-FG : 0.5KVAC | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG , O/P-FG : 100MΩ / 500VDC / 25°C / 70%RH | | | | | |
| | EMC EMISSION | Compliance EN55032 (CISPR32) Class B, EN61000-3-2, -3, EAC TP TC 020 | | | | | |
| | EMC IMMUNITY | Compliance EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A | | | | | |
| OTHERS | MTBF | 257K hrs. min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 215*115*50mm | | | | | |
| | PACKING | 1.07Kg; 12pcs/13.5Kg/0.92CUFT | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temp<br>2. Ripple & noise are measured at 20MHz of bandwidth by using 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor<br>3. Tolerance: includes set up tolerance. Line regulation and load regulation.<br>4. Length of set up time is measured at first cold start. Tuning ON/OFF the power supply may lead to increase of the set up time.,<br>5. Please refer to suggested application<br>6. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, Please refer to EMI testing of components power supplier<br>7. The ambient temp derating of 3.5°C/1000m with fan lessmodel and 5°C/1000m with fan model for operating altitude higher than 2000m. | | | | | | |

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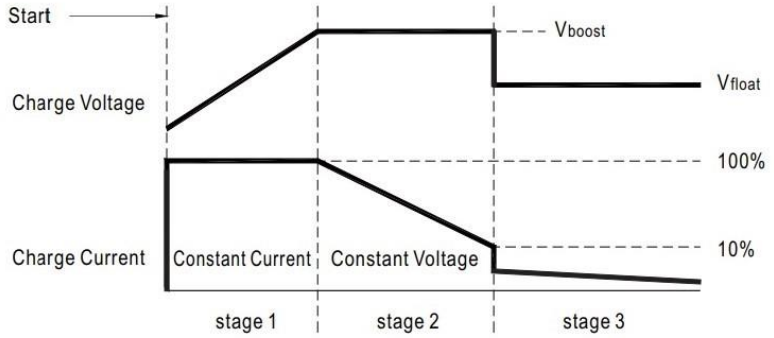
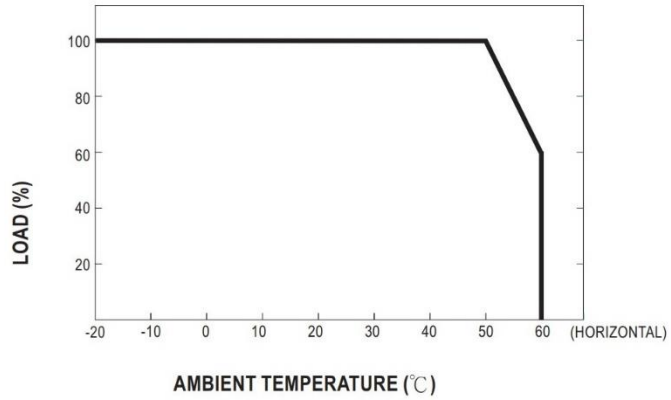
## ■ Charging Curve

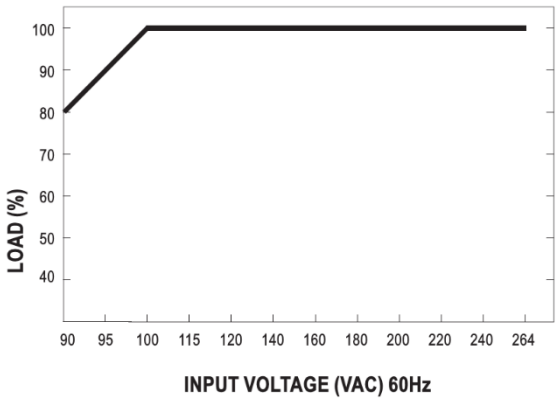



| 3 stage charging curve for OPTINAL UPS POWER SUPPLY | | | |
|---|---|---|---|
| **State** | **350-220S13UPS-C** | **350-220S27UPS-C** | **350-220S53UPS-C** |
| **Constant Current** | **8.0Amp** | **6.0Amp** | **3.0Amp** |
| **Vboost** | **14.4V** | **28. 8V** | **57.6V** |
| **Vfloat** | **13.6V** | **27.2V** | **54.4V** |

## ■ Derating Curve




## ■ Output Derating VS Input Voltage

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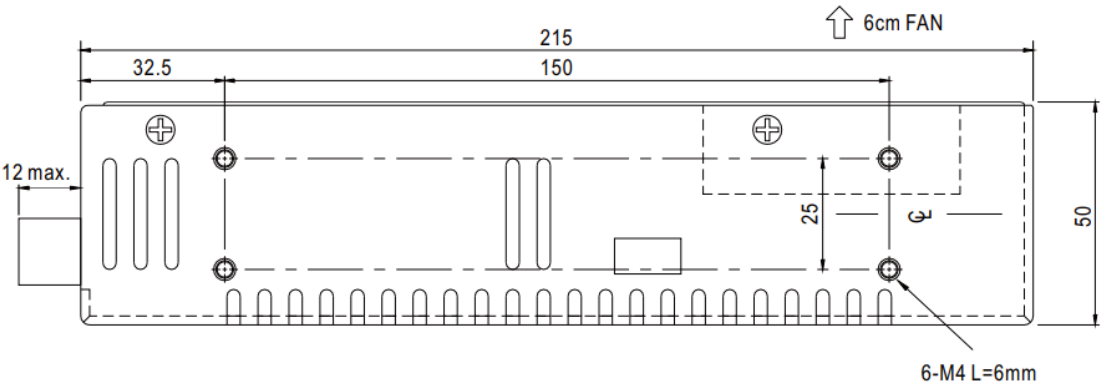
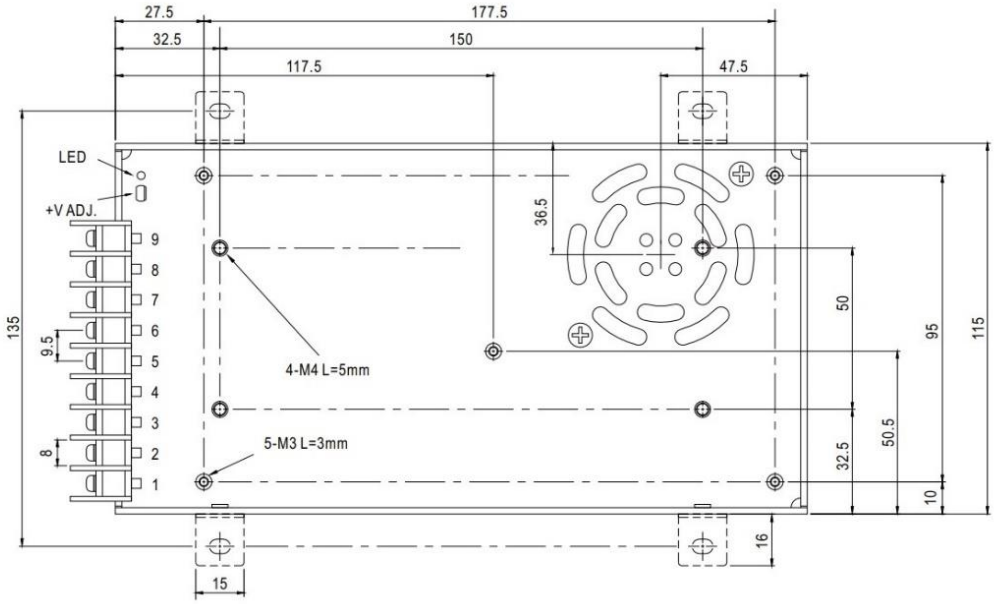
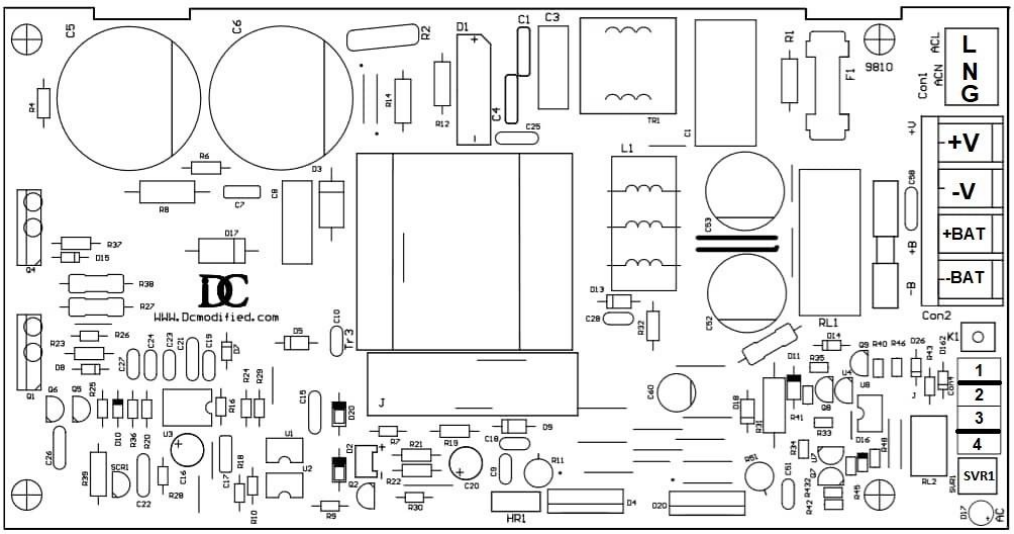



## ■ Mechanical Specification

Case No. 912C Unit:mm

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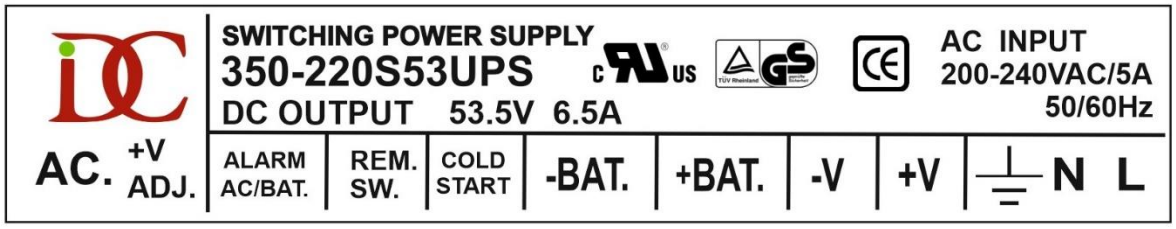


**ترمینال باطری در حالت عادی و برای حفاظت در برابر اتصال نادرست فاقد ولتاژخروجی بوده و به محض اتصال باطری مدار متصل خواهد شد**

| | |
|---|---|
| L | ترمینال اتصال برق شهر / اتصال مربوط به فاز برق شهر |
| N | ترمینال اتصال برق شهر / اتصال مربوط به نول برق شهر |
| ⏚(G) | ترمینال اتصال به زمین / ارت دستگاه |
| +V | ترمینال خروجی ولتاژ مثبت منبع تغذیه به ورودی مثبت مصرف کننده اصلی |
| -V | ترمینال خروجی ولتاژ منفی منبع تغذیه به ورودی منفی مصرف کننده اصلی |
| +BAT | ترمینال اتصال به قطب مثبت باطری |
| -BAT | ترمینال اتصال به قطب منفی باطری |
| COLD START | فشردن سوئیچ استارت مجدد منبع تغذیه در صورت تعویض باطری در نبود برق AC |
| REM. SW. PINS(1&2) | ترمینال های شماره ۱ و ۲ :کنترل از خارج دستگاه اعمال میشود. ، اگر اتصال کوتاه شود، دستگاه به حالت استند بای میرود / و اگر اتصال باز باشد دستگاه به طور عادی به کار خود ادامه خواهد داد. |
| ALARM AC/BAT. PINS(3&4) | ترمینال های شماره ۳ و ٤ :وضعیت عملکرد دستگاه ، وقتی منبع تغذیه به برق شهر متصل است و ولتاژ ورودی AC در بازه استاندارد ایران قرار دارد اتصال باز است و در صورت نبود برق شهر و استفاده از باطری اتصال بسته میشود |
| SVR1 ADJ. | پتانسیومتر (ولوم) تک دور برای تنظیم ولتاژ خروجی منبع تغذیه به میزان ده درصد |

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