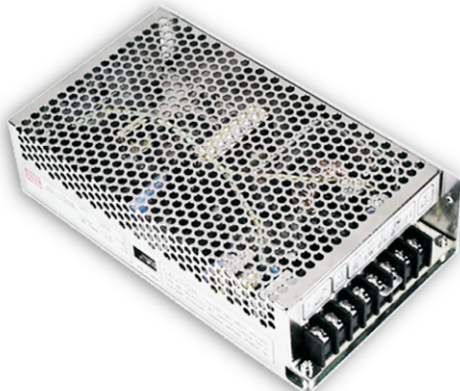




## ■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Battery low and battery polarity protection
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at PFC 67KHz, PWM 134KHz
- 2 years warranty

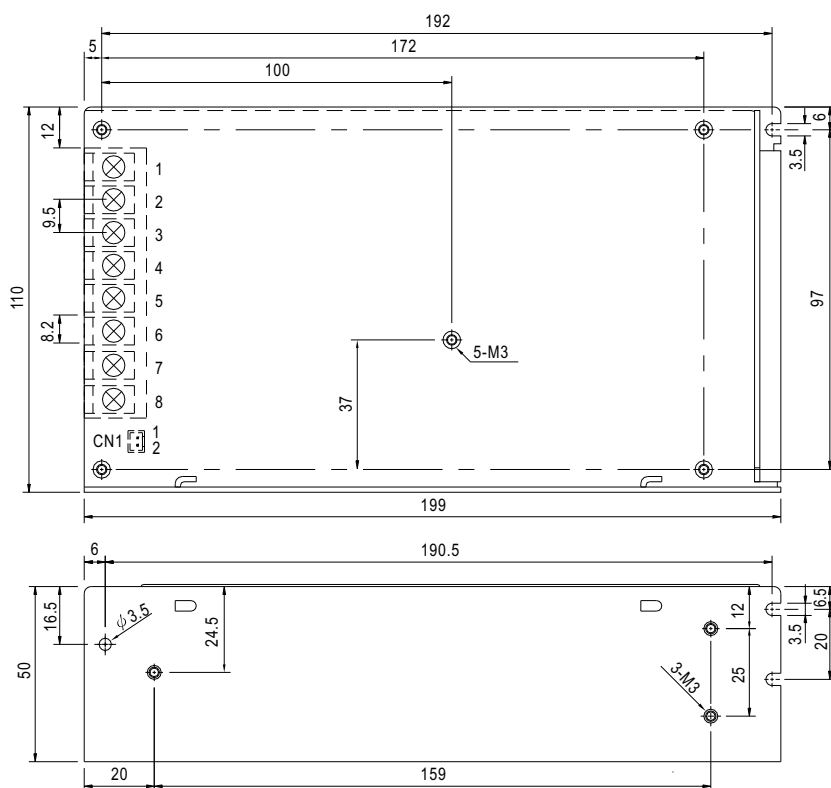


## SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | AD-155A                                                                                                                                                       |          | AD-155B            |          | AD-155C          |          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|----------|------------------|----------|
| OUTPUT                   | OUTPUT NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CH1                                                                                                                                                           | CH2      | CH1                | CH2      | CH1              | CH2      |
|                          | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 13.8V                                                                                                                                                         | 13.3V    | 27.6V              | 27.1V    | 54V              | 53.5V    |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10.5A                                                                                                                                                         | 0.5A     | 5A                 | 0.5A     | 2.7A             | 0.2A     |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0 ~ 11.5A                                                                                                                                                     | 0 ~ 0.5A | 0 ~ 5.5A           | 0 ~ 0.5A | 0 ~ 2.7A         | 0 ~ 0.5A |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 151.55W                                                                                                                                                       |          | 151.55W            |          | 156.5W           |          |
|                          | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 150mVp-p                                                                                                                                                      | -----    | 150mVp-p           | -----    | 240mVp-p         | -----    |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CH1: 12 ~ 14.5V                                                                                                                                               |          | CH1: 24 ~ 29V      |          | CH1: 48 ~ 58V    |          |
|                          | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±2.0%                                                                                                                                                         | -----    | ±1.0%              | -----    | ±1.0%            | -----    |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.5%                                                                                                                                                         | -----    | ±0.5%              | -----    | ±0.5%            | -----    |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.5%                                                                                                                                                         | -----    | ±0.5%              | -----    | ±0.5%            | -----    |
|                          | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1000ms, 90ms/230VAC      2000ms, 90ms/115VAC at full load                                                                                                     |          |                    |          |                  |          |
| HOLD UP TIME (Typ.)      | 24ms/230VAC      20ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                               |          |                    |          |                  |          |
| INPUT                    | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 88 ~ 264VAC      124 ~ 370VDC                                                                                                                                 |          |                    |          |                  |          |
|                          | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 47 ~ 63Hz                                                                                                                                                     |          |                    |          |                  |          |
|                          | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PF>0.92 at full load                                                                                                                                          |          |                    |          |                  |          |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 80%                                                                                                                                                           |          | 84%                |          | 84%              |          |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2.5A/115VAC      1.5A/230VAC                                                                                                                                  |          |                    |          |                  |          |
|                          | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | COLD START 20A/115VAC      40A/230VAC                                                                                                                         |          |                    |          |                  |          |
|                          | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <1mA / 240VAC                                                                                                                                                 |          |                    |          |                  |          |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CH1:105 ~ 135%      CH2:0.51 ~ 0.9A rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is reoved |          |                    |          |                  |          |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | CH1:15.87 ~ 18.63V                                                                                                                                            |          | CH1:31.74 ~ 37.26V |          | CH1:62.1 ~ 72.9V |          |
|                          | BATTERY LOW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10V±0.8V                                                                                                                                                      |          | 19.5V(+1.5V,-1V )  |          | 39V±2V           |          |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Protection type : Shut down o/p voltage, re-power on to recover                                                                                               |          |                    |          |                  |          |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -10 ~ +60℃ (Refer to output load derating curve)                                                                                                              |          |                    |          |                  |          |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20 ~ 90% RH non-condensing                                                                                                                                    |          |                    |          |                  |          |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -20 ~ +85℃, 10 ~ 95% RH                                                                                                                                       |          |                    |          |                  |          |
|                          | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                            |          |                    |          |                  |          |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                  |          |                    |          |                  |          |
| SAFETY & EMC<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | UL60950-1, TUV EN60950-1 approved                                                                                                                             |          |                    |          |                  |          |
|                          | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I/P-O/P:3KVAC    I/P-FG:1.5KVAC    O/P-FG:0.5KVAC                                                                                                             |          |                    |          |                  |          |
|                          | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                     |          |                    |          |                  |          |
|                          | EMI CONDUCTION & RADIATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Compliance to EN55022 (CISPR22) Class B                                                                                                                       |          |                    |          |                  |          |
|                          | HARMONIC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN61000-3-2,-3                                                                                                                                  |          |                    |          |                  |          |
|                          | EMS IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A                                                                   |          |                    |          |                  |          |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 183.3K hrs min.      MIL-HDBK-217F (25℃)                                                                                                                      |          |                    |          |                  |          |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 199*110*50mm (L*W*H)                                                                                                                                          |          |                    |          |                  |          |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.88Kg; 16pcs/15Kg/0.95CUFT                                                                                                                                   |          |                    |          |                  |          |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. |                                                                                                                                                               |          |                    |          |                  |          |

## ■ Mechanical Specification

Case No. 906B Unit:mm



### Terminal Pin No. Assignment

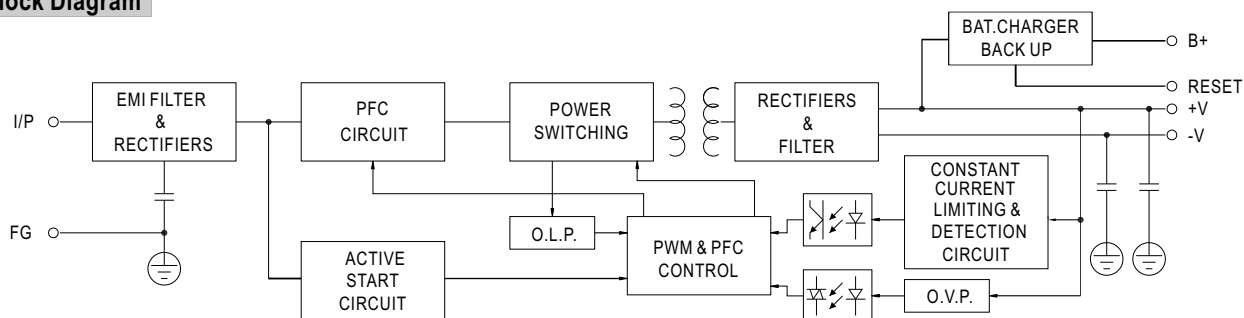
| Pin No. | Assignment | Pin No. | Assignment    |
|---------|------------|---------|---------------|
| 1       | AC/L       | 5       | BAT. +        |
| 2       | AC/N       | 6       | BAT. -/COM    |
| 3       | FG $\perp$ | 7       | DC OUTPUT COM |
| 4       | NC         | 8       | DC OUTPUT +V  |

CN1 Pin No. Assignment :JST B2B-XH or equivalent

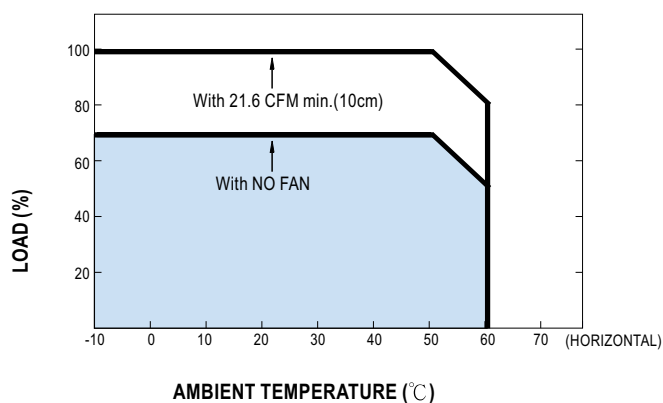
| Pin No. | Assignment | Mating Housing | Terminal          |
|---------|------------|----------------|-------------------|
| 1       | RESET SW   | JST XHP        | JST SXH-001T-P0.6 |
| 2       |            | or equivalent  | or equivalent     |

PFC fosc : 67KHz  
PWM fosc : 134KHz

### ■ Block Diagram



### Derating Curve



### ■ Output Derating VS Input Voltage (A)

