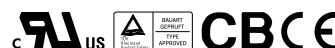




#### ■ Features :

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- Isolation class II
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty



#### SPECIFICATION

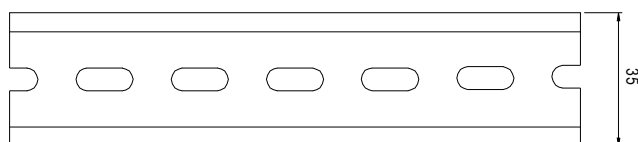
| MODEL                    |                              | DR-60-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DR-60-12     | DR-60-15       | DR-60-24     |
|--------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|--------------|
| OUTPUT                   | DC VOLTAGE                   | 5V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12V          | 15V            | 24V          |
|                          | RATED CURRENT                | 6.5A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.5A         | 4A             | 2.5A         |
|                          | CURRENT RANGE                | 0 ~ 6.5A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0 ~ 4.5A     | 0 ~ 4A         | 0 ~ 2.5A     |
|                          | RATED POWER                  | 32.5W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 54W          | 60W            | 60W          |
|                          | RIPPLE & NOISE (max.) Note.2 | 80mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 120mVp-p     | 120mVp-p       | 150mVp-p     |
|                          | VOLTAGE ADJ. RANGE           | 4.75 ~ 5.5V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 11.1 ~ 13.2V | 13.5 ~ 16.5V   | 21.6 ~ 26.4V |
|                          | VOLTAGE TOLERANCE Note.3     | ±2.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±1.0%        | ±1.0%          | ±1.0%        |
|                          | LINE REGULATION              | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±1.0%        | ±1.0%          | ±1.0%        |
|                          | LOAD REGULATION              | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±1.0%        | ±1.0%          | ±1.0%        |
|                          | SETUP, RISE TIME             | 100ms, 30ms/230VAC      200ms, 30ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                |              |
|                          | HOLD UP TIME (Typ.)          | 100ms/230VAC      23ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                |              |
| INPUT                    | VOLTAGE RANGE                | 88 ~ 264VAC      124 ~ 370VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                |              |
|                          | FREQUENCY RANGE              | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                |              |
|                          | EFFICIENCY (Typ.)            | 76%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 82%          | 83%            | 84%          |
|                          | AC CURRENT (Typ.)            | 1.2A/115VAC      0.8A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                |              |
|                          | INRUSH CURRENT (Typ.)        | COLD START 18A/115VAC      36A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                |              |
| PROTECTION               | OVERLOAD                     | 105 ~ 160% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                           |              |                |              |
|                          | OVER VOLTAGE                 | 5.75 ~ 6.75V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V |
|                          |                              | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                |              |
| ENVIRONMENT              | WORKING TEMP.                | -20 ~ +60°C (Refer to output load derating curve)                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                |              |
|                          | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                |              |
|                          | STORAGE TEMP., HUMIDITY      | -40 ~ +85°C, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                |              |
|                          | TEMP. COEFFICIENT            | ±0.03%/°C (0 ~ 50°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                |              |
|                          | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                |              |
| SAFETY & EMC<br>(Note 4) | SAFETY STANDARDS             | UL60950-1, TUV EN60950-1 approved, Design refer to EN50178                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                |              |
|                          | WITHSTAND VOLTAGE            | I/P-O/P:3KVAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                |              |
|                          | ISOLATION RESISTANCE         | I/P-O/P:100M Ohms/500VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                |              |
|                          | EMI CONDUCTION & RADIATION   | Compliance to EN55011,EN55022 (CISPR22) Class B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                |              |
|                          | HARMONIC CURRENT             | Compliance to EN61000-3-2,-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                |              |
| OTHERS                   | EMS IMMUNITY                 | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A                                                                                                                                                                                                                                                                                                                                                                                                       |              |                |              |
|                          | MTBF                         | 216.2K hrs min.      MIL-HDBK-217F (25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                |              |
|                          | DIMENSION                    | 78*93*56mm (W*H*D)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                |              |
|                          | PACKING                      | 0.3Kg; 48pcs/15.4Kg/1.02CUFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                |              |
| NOTE                     |                              | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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

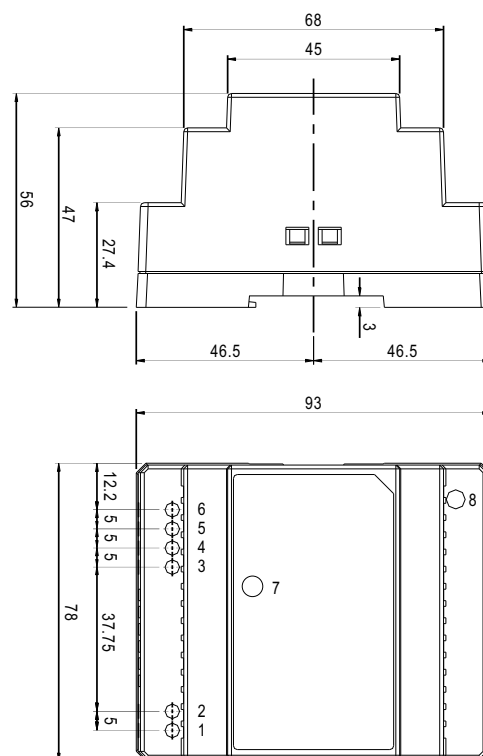
Case No.918B Unit:mm

Terminal Pin No. Assignment

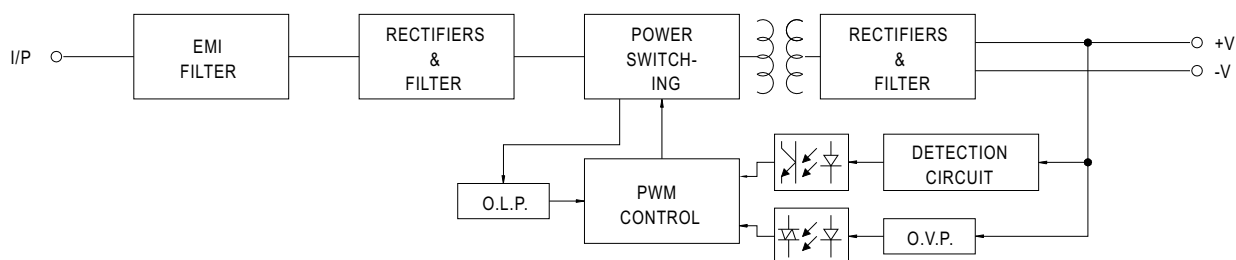
| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1       | AC/N       | 5,6     | -V         |
| 2       | AC/L       | 7       | LED        |
| 3,4     | +V         | 8       | +V ADJ.    |



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



## Block Diagram



## Derating Curve

