



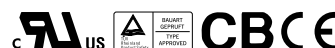
## 100W Single Output Industrial DIN Rail Power Supply

## DR-100 series



### ■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Isolation class II
- LED indicator for power on
- No load power consumption<1W
- 100% full load burn-in test
- 3 years warranty



### SPECIFICATION

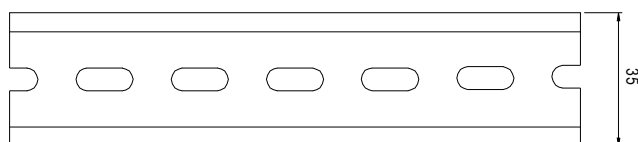
| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DR-100-12                                                                                                                             |  | DR-100-15                        |          | DR-100-24 |          |     |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|----------|-----------|----------|-----|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12V                                                                                                                                   |  | 15V                              |          | 24V       |          |     |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7.5A                                                                                                                                  |  | 6.5A                             |          | 4.2A      |          |     |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0 ~ 7.5A                                                                                                                              |  | 0 ~ 6.5A                         |          | 0 ~ 4.2A  |          |     |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 90W                                                                                                                                   |  | 97.5W                            |          | 100.8W    |          |     |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 120mVp-p                                                                                                                              |  | 120mVp-p                         |          | 150mVp-p  |          |     |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12 ~ 15V                                                                                                                              |  | 15 ~ 18V                         |          | 24 ~ 29V  |          |     |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±2.0%                                                                                                                                 |  | ±1.0%                            |          | ±1.0%     |          |     |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±1.0%                                                                                                                                 |  | ±1.0%                            |          | ±1.0%     |          |     |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±1.0%                                                                                                                                 |  | ±1.0%                            |          | ±1.0%     |          |     |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2700ms, 80ms/230VAC                                                                                                                   |  | 2700ms, 80ms/115VAC at full load |          |           |          |     |
|                                         | HOLD UP TIME (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 50ms/230VAC                                                                                                                           |  | 18ms/115VAC at full load         |          |           |          |     |
| INPUT                                   | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 88 ~ 264VAC      124 ~ 370VDC                                                                                                         |  |                                  |          |           |          |     |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 47 ~ 63Hz                                                                                                                             |  |                                  |          |           |          |     |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 87%                                                                                                                                   |  |                                  | 87%      |           |          | 89% |
|                                         | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3A/115VAC      1.6A/230VAC                                                                                                            |  |                                  |          |           |          |     |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | COLD START 30A/115VAC      45A/230VAC                                                                                                 |  |                                  |          |           |          |     |
| PROTECTION                              | OVERLOAD <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 105 ~ 135% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed |  |                                  |          |           |          |     |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 16 ~ 20V                                                                                                                              |  |                                  | 19 ~ 23V |           | 30 ~ 35V |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Protection type : Shut down o/p voltage, re-power on to recover                                                                       |  |                                  |          |           |          |     |
|                                         | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 90℃ ±15℃(RTH2) detect on heatsink of power transistor<br>Protection type : Shut down o/p voltage, re-power on to recover              |  |                                  |          |           |          |     |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -20 ~ +60℃ (Refer to output load derating curve)                                                                                      |  |                                  |          |           |          |     |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20 ~ 90% RH non-condensing                                                                                                            |  |                                  |          |           |          |     |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -40 ~ +85℃, 10 ~ 95% RH                                                                                                               |  |                                  |          |           |          |     |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±0.03%/℃ (0 ~ 50℃)                                                                                                                    |  |                                  |          |           |          |     |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6                          |  |                                  |          |           |          |     |
| SAFETY & EMC<br><small>(Note 4)</small> | 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 / 25℃ / 70% RH                                                                                            |  |                                  |          |           |          |     |
|                                         | EMI CONDUCTION & RADIATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance to EN61204-3, EN55022 ClassB                                                                                               |  |                                  |          |           |          |     |
|                                         | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 486K hrs min.      MIL-HDBK-217F (25℃)                                                                                                |  |                                  |          |           |          |     |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100*93*56mm (W*H*D)                                                                                                                   |  |                                  |          |           |          |     |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.35Kg; 36pcs/13.6Kg/0.89CUFT                                                                                                         |  |                                  |          |           |          |     |
| 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.<br>5. Harmonic current test @ 90% load.<br>6. Under short circuit or overload >150% conditions, output voltage may shut down for 5 sec. and then go into constant current protection mode. |                                                                                                                                       |  |                                  |          |           |          |     |

## Mechanical Specification

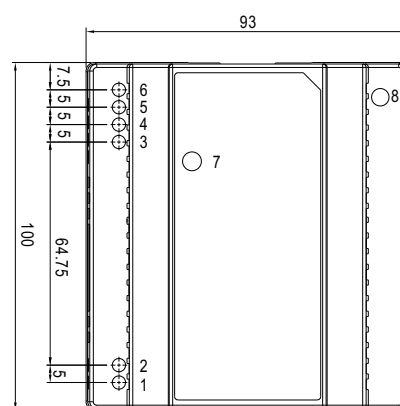
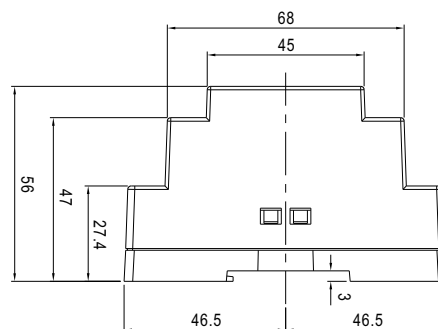
Case No.970A Unit:mm

Terminal Pin No. Assignment

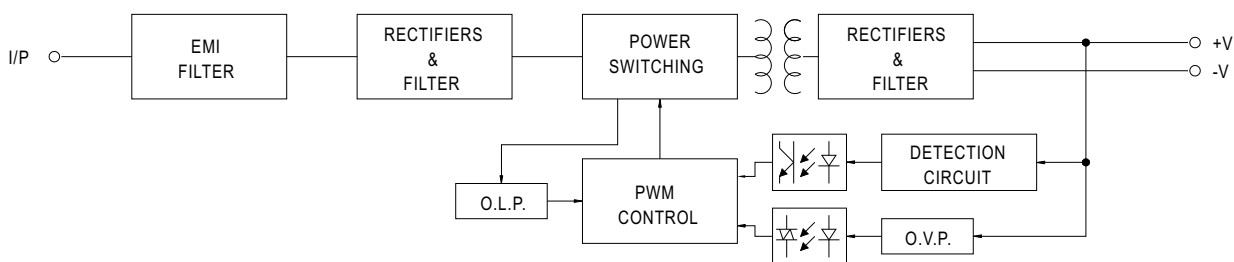
| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1       | AC/L       | 5,6     | -V         |
| 2       | AC/N       | 7       | LED        |
| 3,4     | +V         | 8       | +V ADJ.    |



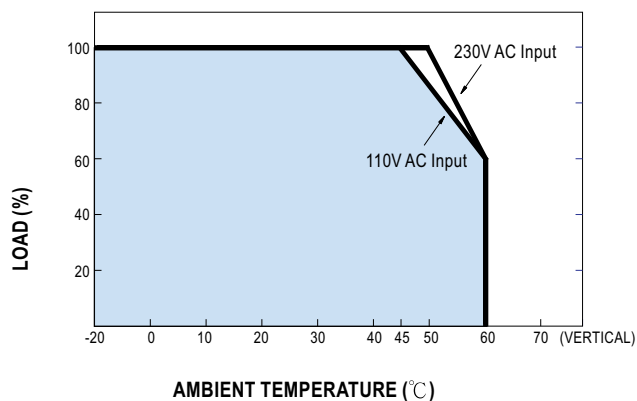
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



## Block Diagram



## Derating Curve VS Ambient Temperature



## Output Derating VS Input Voltage

