



# 120W Single Output Industrial DIN RAIL Power Supply

# DR-120 series



### ■ Features :

- AC input range selectable by switch
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 55KHz

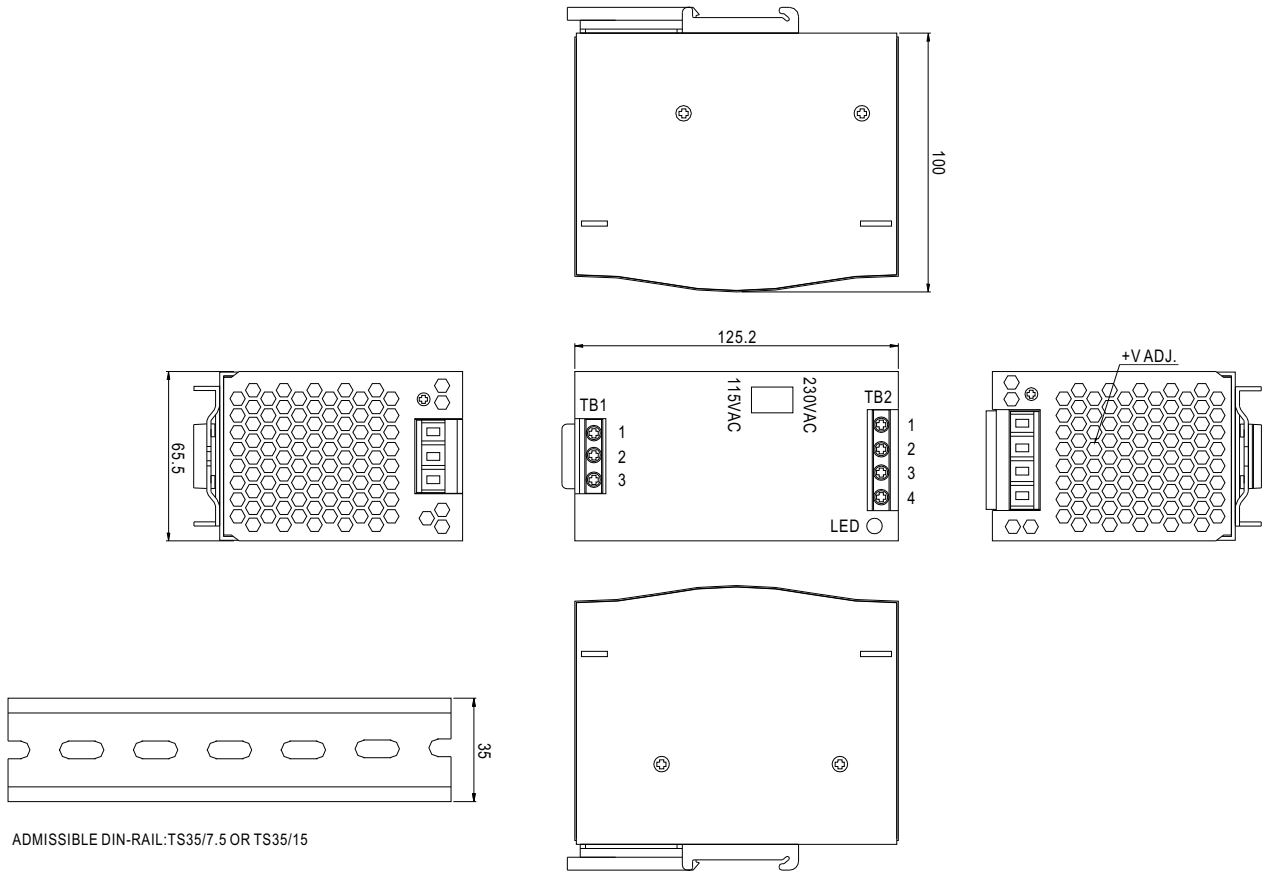


### SPECIFICATION

| MODEL                 | DR-120-12   | DR-120-24   | DR-120-48        |                  |
|-----------------------|---|---|------------------|------------------|
| OUTPUT                | DC VOLTAGE  | 12V   | 24V              | 48V              |
|                       | RATED CURRENT   | 10A   | 5A               | 2.5A             |
|                       | CURRENT RANGE   | 0 ~ 10A   | 0 ~ 5A           | 0 ~ 2.5A         |
|                       | RATED POWER   | 120W  | 120W             | 120W             |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 80mVp-p          | 100mVp-p         |
|                       | VOLTAGE ADJ. RANGE  | 12 ~ 14V  | 24 ~ 28V         | 48 ~ 53V         |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%   | ±1.0%            | ±1.0%            |
|                       | LINE REGULATION   | ±0.5%   | ±0.5%            | ±0.5%            |
|                       | LOAD REGULATION   | ±1.0%   | ±1.0%            | ±1.0%            |
|                       | SETUP, RISE TIME  | 500ms, 70ms/230VAC    500ms, 70ms/115VAC at full load   |                  |                  |
| HOLD TIME (Typ.)      | 36ms/230VAC    32ms/115VAC at full load   |   |                  |                  |
| INPUT                 | VOLTAGE RANGE   | 88 ~ 132VAC/176 ~ 264VAC by switch  |                  | 248 ~ 370VDC     |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz   |                  |                  |
|                       | EFFICIENCY (Typ.)   | 80%   | 84%              | 85%              |
|                       | AC CURRENT (Typ.)   | 2.6A/115VAC    1.6A/230VAC  |                  |                  |
|                       | INRUSH CURRENT (Typ.)   | COLD START 20A/115VAC    40A/230VAC   |                  |                  |
| LEAKAGE CURRENT       | <3.5mA / 240VAC   |   |                  |                  |
| PROTECTION            | OVER LOAD   | 105 ~ 150% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed |                  |                  |
|                       | OVER VOLTAGE  | 15 ~ 16.5V  | 29 ~ 33V         | 58 ~ 65V         |
|                       | OVER TEMPERATURE  | 85°C ±5°C (TSW1)  | 90°C ±5°C (TSW1) | 90°C ±5°C (TSW1) |
|                       | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   |   |                  |                  |
| ENVIRONMENT           | WORKING TEMP.   | -10 ~ +60°C (Refer to output load derating curve)   |                  |                  |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |                  |                  |
|                       | STORAGE TEMP., HUMIDITY   | -20 ~ +85°C, 10 ~ 95% RH  |                  |                  |
|                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)  |                  |                  |
| VIBRATION             | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |   |                  |                  |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL508, 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  |                  |                  |
|                       | EMI CONDUCTION & RADIATION  | Compliance to EN55011, 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, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A                   |                  |                  |
| OTHERS                | MTBF  | 136.8Khrs min.    MIL-HDBK-217F (25°C)  |                  |                  |
|                       | DIMENSION   | 65.5*125.2*100mm (W*H*D)  |                  |                  |
|                       | PACKING   | 0.79Kg; 20pcs/16.5Kg/1.1CUFT  |                  |                  |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> </ol> |   |                  |                  |

Case No. 921A Unit:mm

**Mechanical Specification**



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

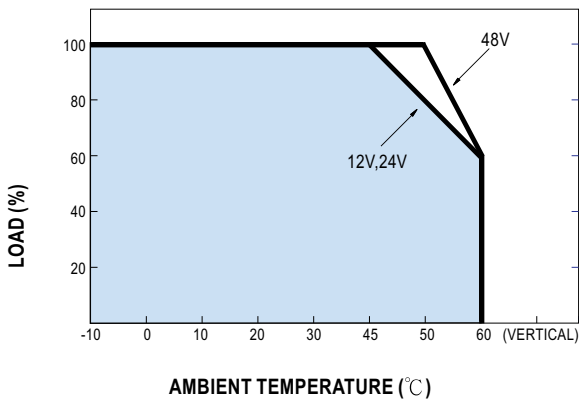
Terminal Pin. No Assignment (TB1)

| Pin No. | Assignment |
|---------|------------|
| 1       | FG ⊕       |
| 2       | AC/N       |
| 3       | AC/L       |

Terminal Pin. No Assignment (TB2)

| Pin No. | Assignment   |
|---------|--------------|
| 1,2     | DC OUTPUT +V |
| 3,4     | DC OUTPUT -V |

**Output Derating**



**Static Characteristics (24V)**

