# 480W Three Phase Industrial DIN RAIL Power Supply DRT-480 series




## Features :

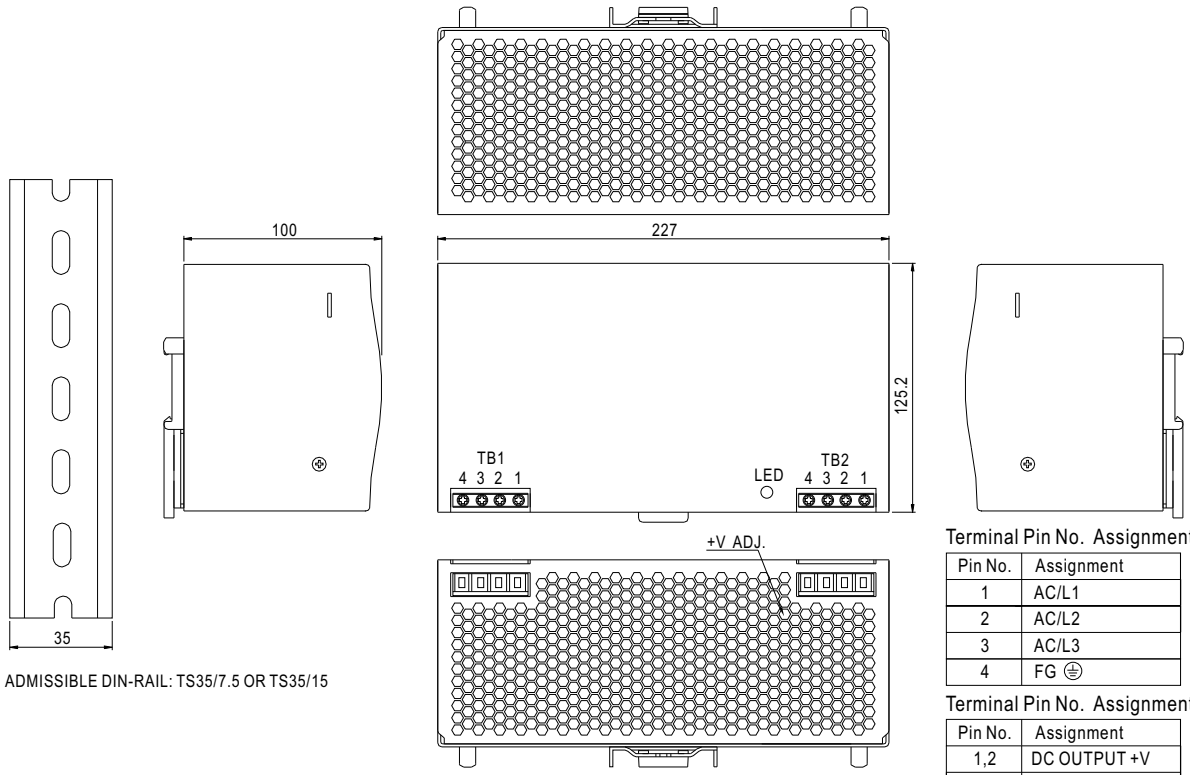
- Three-Phase AC 340 ~ 550V wide range input
- High efficiency 89% and low dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty

## SPECIFICATION

| MODEL | | DRT-480-24 | DRT-480-48 |
|---|---|---|---|
| OUTPUT | DC VOLTAGE | 24V | 48V |
| | RATED CURRENT | 20A | 10A |
| | CURRENT RANGE | 0 ~ 20A | 0 ~ 10A |
| | RATED POWER | 480W | 480W |
| | RIPPLE & NOISE (max.) Note.2 | 80mVp-p | 80mVp-p |
| | VOLTAGE ADJ. RANGE | 24 ~ 28V | 48 ~ 55V |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 1200ms, 40ms/400VAC 800ms, 40ms/500VAC at full load | |
| | HOLD UP TIME (Typ.) | 16ms/400VAC 35ms/500VAC at full load | |
| INPUT | VOLTAGE RANGE Note.5 | Three-Phase 340 ~ 550VAC (Dual phase operation possible) | 480 ~ 780VDC |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | EFFICIENCY (Typ.) | 89% | 90% |
| | AC CURRENT (Typ.) | 1.7A/400VAC 1.3A/500VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 50A | |
| | LEAKAGE CURRENT | <3.5mA / 530VAC | |
| PROTECTION | OVERLOAD | 105 ~ 150% rated output power | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | |
| | OVER VOLTAGE | 30 ~ 36V | 59 ~ 66V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | |
| | OVER TEMPERATURE | 110℃±5℃ (TSW) detect on heatsink of power switch | |
| | | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +70℃ (Refer to "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 (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 / 25℃/ 70% RH | |
| | EMC EMISSION | Compliance to EN55011 (CISPR11), EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3 | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN61000-6-2 (EN50082-2), heavy industry level, criteria A | |
| OTHERS | MTBF | 91.1Khrs min. MIL-HDBK-217F (25℃) | |
| | DIMENSION | 227*125.2*100mm (W*H*D) | |
| | PACKING | 2.5Kg; 6pcs/16Kg/1.75CUFT | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 400VAC 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. Dual phase operation: derating of 20% is required. | | |

## ■ Mechanical Specification

Case No.930A Unit:mm




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

Terminal Pin No. Assignment (TB1)

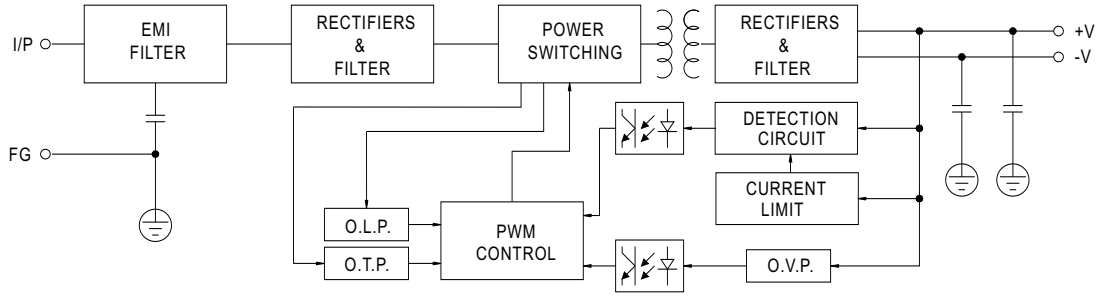
| Pin No. | Assignment |
|---|---|
| 1 | AC/L1 |
| 2 | AC/L2 |
| 3 | AC/L3 |
| 4 | FG ⏚ |

Terminal Pin No. Assignment (TB2)

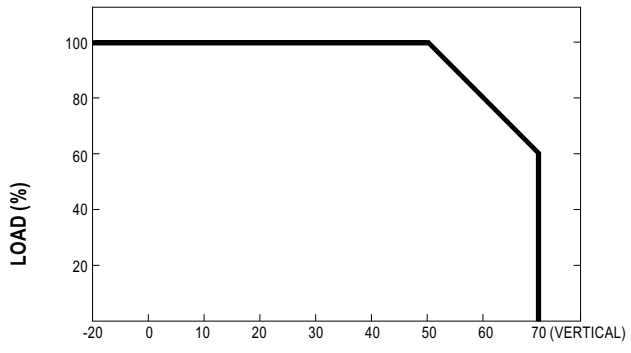
| Pin No. | Assignment |
|---|---|
| 1,2 | DC OUTPUT +V |
| 3,4 | DC OUTPUT -V |

## ■ Block Diagram

fosc : 70KHz

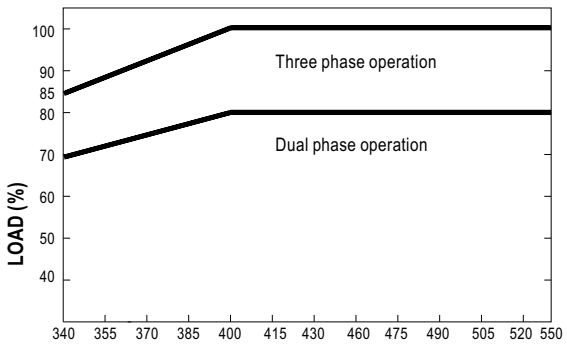



## ■ Derating Curve




AMBIENT TEMPERATURE (℃)

## ■ Static Characteristics




INPUT VOLTAGE (VAC) 60Hz