



■ Features :

- Three-Phase 340 ~ 550VAC wide range input (Dual phase operation possible)
- Width only 110mm
- Built-in active PFC function compliance to EN61000-3-2
- High efficiency 94.5% and low power 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
- UL508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Current sharing up to 3840W(3+1)
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

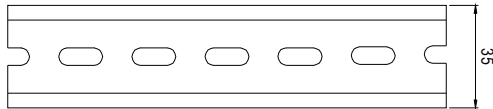
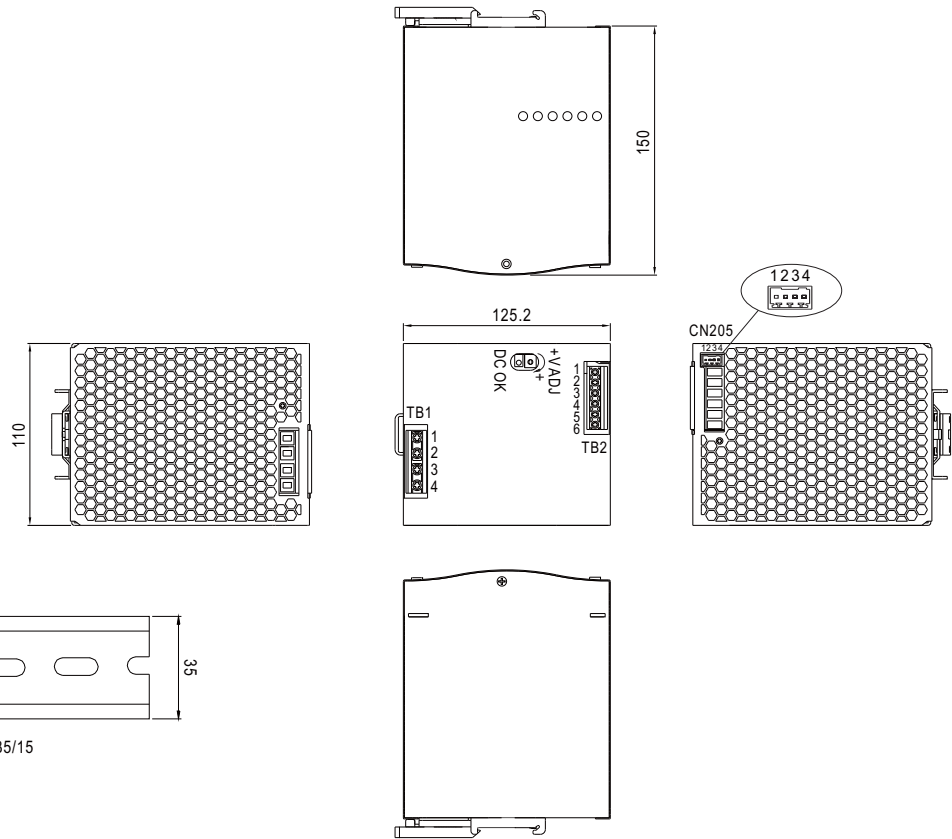


SPECIFICATION

| MODEL | TDR-960-24 | TDR-960-48 | |
|-----------------------|---|--|----------|
| OUTPUT | DC VOLTAGE | 24V | 48V |
| | RATED CURRENT | 40A | 20A |
| | CURRENT RANGE | 0 ~ 40A | 0 ~ 20A |
| | RATED POWER | 960W | 960W |
| | RIPPLE & NOISE (max.) Note.2 | 180mVp-p | 250mVp-p |
| | VOLTAGE ADJ. RANGE | 24 ~ 28V | 48 ~ 55V |
| | VOLTAGE TOLERANCE Note.3 | ± 1.0% | ± 1.0% |
| | LINE REGULATION | ± 0.5% | ± 0.5% |
| | LOAD REGULATION | ± 1.0% | ± 1.0% |
| | SETUP, RISE TIME | 1000ms, 100ms/400VAC 800ms, 100ms/500VAC at full load | |
| HOLD UP TIME (Typ.) | 12ms / 400VAC 14ms / 500VAC at full load | | |
| INPUT | VOLTAGE RANGE Note.4 | Three-Phase 340 ~ 550VAC (Dual phase operation possible) 480 ~ 780VDC | |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | POWER FACTOR (Typ.) | PF ≥ 0.88/400VAC PF ≥ 0.86/500VAC at full load | |
| | EFFICIENCY (Typ.) | 94% | 94.5% |
| | AC CURRENT (Typ.) | 2A/400VAC 1.4A/500VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 60A | |
| | LEAKAGE CURRENT | <3.5mA / 530VAC | |
| PROTECTION | OVERLOAD | 105 ~ 130% rated output power Protection type : Constant current limiting, unit will shut down after 3 sec. ,re-power on to recover | |
| | OVER VOLTAGE | 29 ~ 33V | 56 ~ 65V |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | |
| FUNCTION | DC OK REALY CONTACT RATINGS (max.) | 60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load | |
| | CURRENT SHARING | Please refer to function manual | |
| ENVIRONMENT | WORKING TEMP. Note.5 | -30 ~ +70°C (Refer to "Derating Curve") | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH non-condensing | |
| | TEMP. COEFFICIENT | ± 0.03%/°C (0 ~ 50°C) | |
| | VIBRATION | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6 | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL508, AS/NZS62368.1, EAC TP TC 004 approved, IEC62368-1 CB approved by SIQ; Meet BS EN/EN62368-1 | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020 | |
| OTHERS | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN61204-3, heavy industry level, criteria A, EAC TP TC 020 | |
| | MTBF | 59.4K hrs min. MIL-HDBK-217F (25°C) | |
| | DIMENSION | 110*125.2*150mm (W*H*D) | |
| | PACKING | 2.47Kg ; 6pcs/15.8Kg/1.47CUFT | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.</p> <p>5. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</p> <p>6. 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.</p> <p>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | |

Mechanical Specification

Case No.214A Unit:mm



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

Terminal Pin No. Assignment (TB1)

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

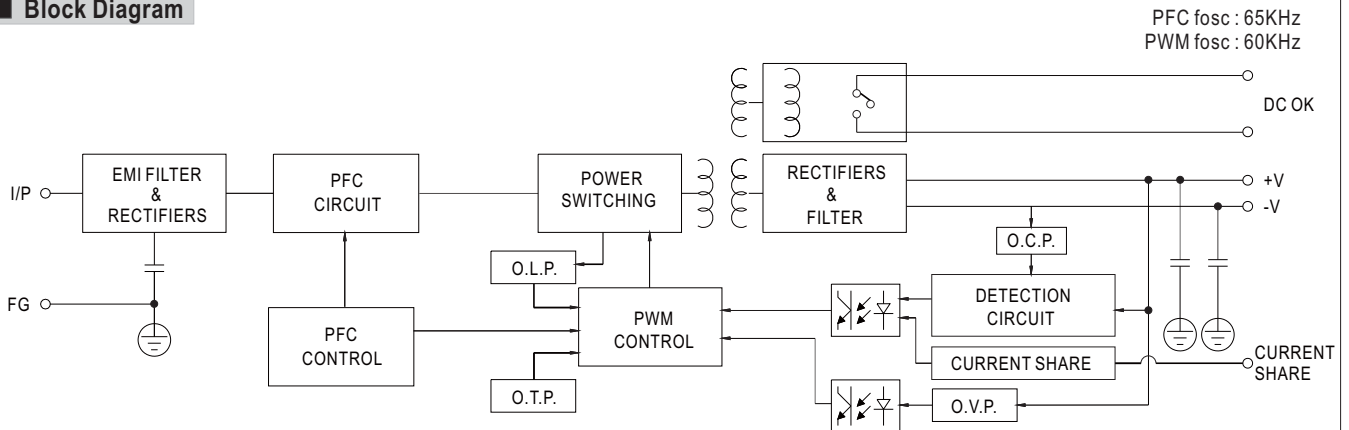
Terminal Pin No. Assignment (TB2)

| Pin No. | Assignment |
|---------|--------------|
| 1,2,3 | DC OUTPUT +V |
| 4,5,6 | DC OUTPUT -V |

Control Pin (CN205) : DINKLE ECH250R-04P or equivalent

| Pin No. | Assignment | Mating Housing | Wire Diameter |
|---------|---------------------|--|---------------------------------------|
| 1 | P-(Current Share) | DINKLE ESC250V-04P or equivalent (including in the single package) | 0.081~0.517mm ² (28~20AWG) |
| 2 | P+(Current Share) | | |
| 3,4 | DC OK Relay Contact | | |

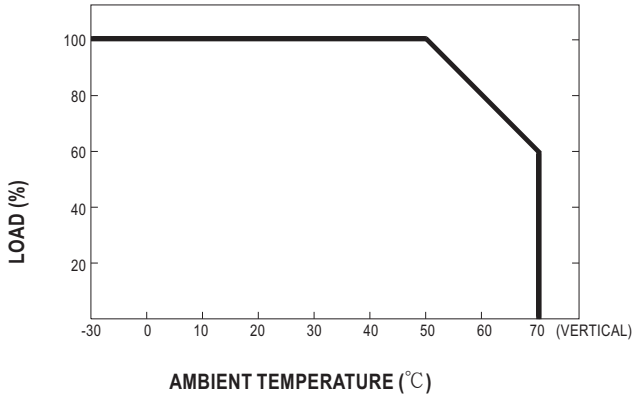
Block Diagram



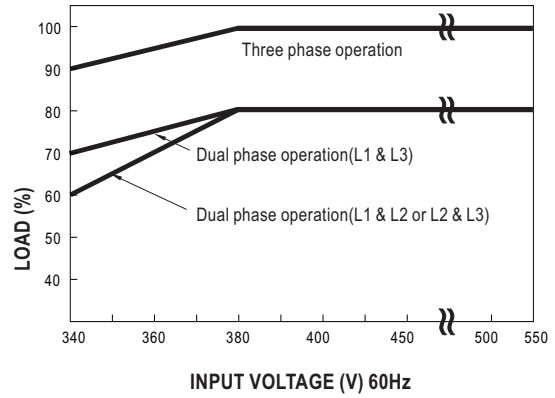
DC OK Relay Contact

| | |
|------------------------|--------------------------|
| Contact Close | PSU turns on / DC OK. |
| Contact Open | PSU turns off / DC Fail. |
| Contact Ratings (max.) | 30V/1A resistive load. |

Derating Curve



Output derating VS input voltage



Function Manual

1. Current sharing

- (1) Parallel operation is available by connecting the units shown as below (P+,P- are connected mutually in parallel).
- (2) Difference of output voltages among parallel units should be less than 0.2V.
- (3) The total output current must not exceed the value determined by the following equation (Output current at parallel operation)=(The rated current per unit) x (Number of unit) x 0.9.
- (4) In parallel operation 4 units is the maximum, please consult the manufacture for other applications.
- (5) The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
- (6) When in parallel operation, the minimum output load should be greater than 5% of total output load.
(Min. load >5% rated current per unit x number of unit)
- (7) In parallel connection, maybe only one unit (master) operate if the total output load is less than 5% of rated load condition.
The other PSUs (slaves) may go into standby mode and their output LEDs & relays will not turn on.
- (8) Some minor noise may be heard at light load condition under parallel operation.
This is a normal phenomenon and the performance of the PSU will not be influenced.

