



■ 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		PSU024-1000S3X4BBD1A	PSU048-1000S3X4BBD1A	PSU072-1000S3X4BBD1A
OUTPUT	DC VOLTAGE	24V	48V	72V
	RATED CURRENT	40A	20A	12A
	CURRENT RANGE	0 ~ 40A	0 ~ 20A	0 ~ 12A
	RATED POWER	960W	960W	864W
	RIPPLE & NOISE (max.) Note.1	120mVp-p	250mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V	70 ~ 90V
	VOLTAGE TOLERANCE Note.2	± 1.0%	± 1.0%	± 1.0%
	LINE REGULATION	± 0.5%	± 0.5%	± 0.5%
	LOAD REGULATION	± 1.0%	± 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%		
	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 Protection type : Shut down o/p voltage, re-power on to recover		
	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 approved, EAC TP TC 004, IEC60950-1 CB approved by SIQ		
	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 EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3, EAC TP TC 020		
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), 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		

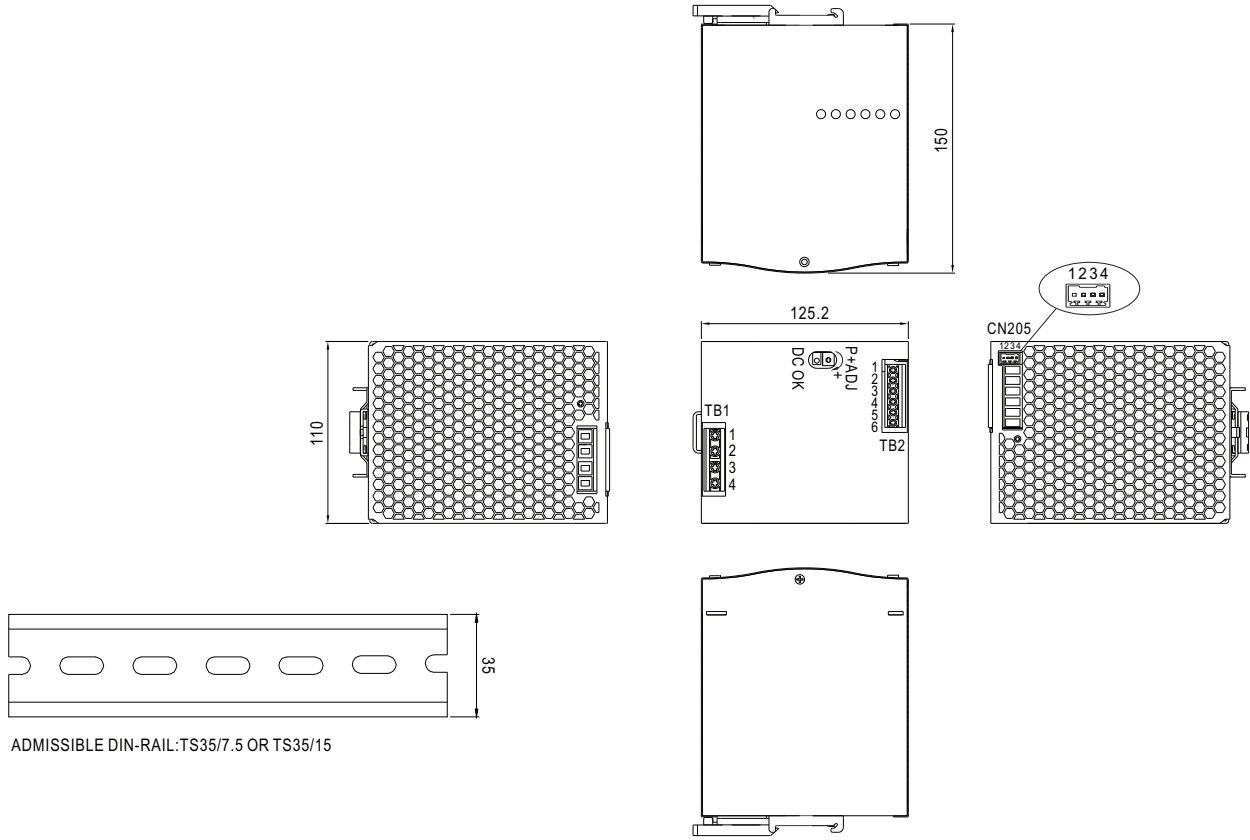
NOTE

1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Dual phase operation is allowed under certain derating to output load.
Please refer to derating curves for details.
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.
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.
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).



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

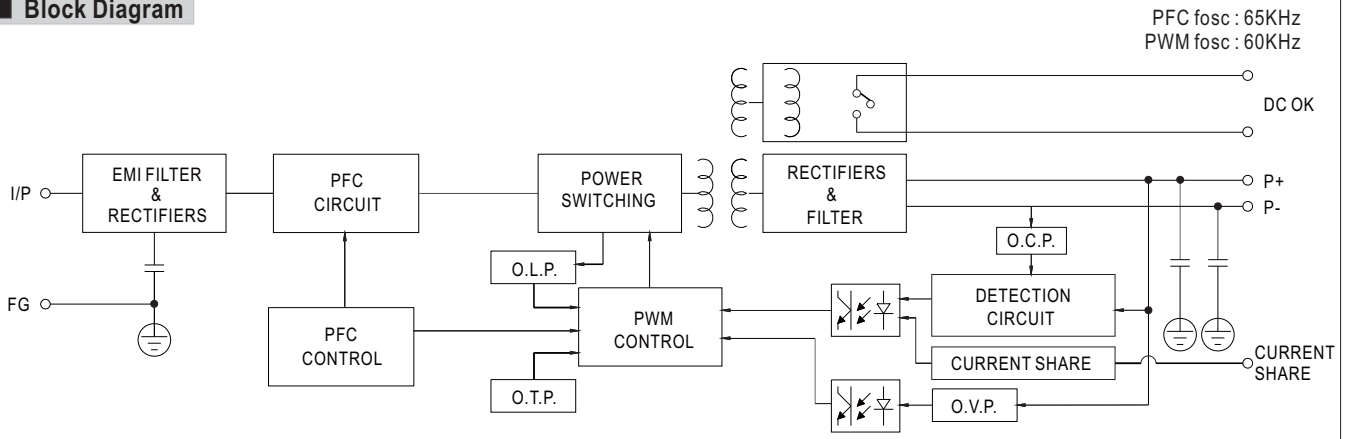
Terminal Pin No. Assignment (TB2)

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

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

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

Block Diagram



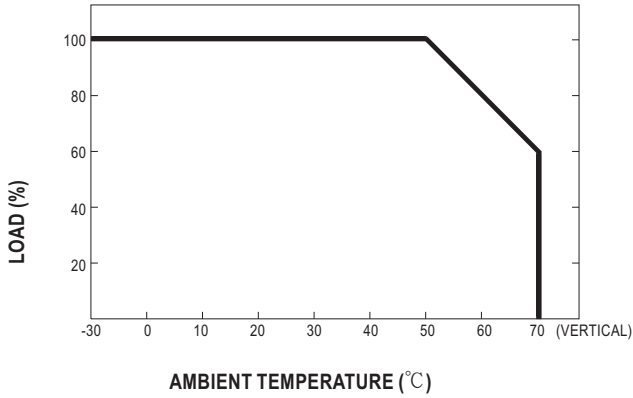
PFC fosc : 65KHz
PWM fosc : 60KHz

DC OK Relay Contact

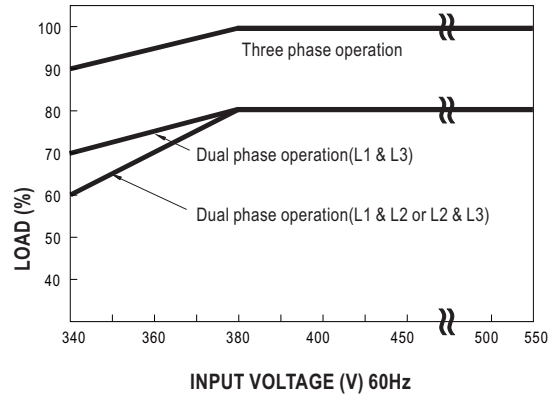
Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.



■ Derating Curve



■ Output derating VS input voltage



■ Function Manual

1. Current sharing

- (1) Parallel operation is available by connecting the units shown as below (C+,C- 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.

