



PSW-120 Series Specifications



Features:

- Single and two phase wide input range 180 ~ 550VAC
- Protections: Short Circuit / Overload / Over Voltage / Overtemperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- DIN rail mountable
- UL508 (industrial control equipment) approved
- EN61000-6-2 (EN50082-2) industrial immunity level
- 100% full load burn-in test
- Built-in DC OK relay contact
- 3 year warranty

OUTPUT

Cat. No.

PSW-12012

PSW-12024

PSW-12048

DC VOLTAGE
RATED CURRENT
CURRENT RANGE
RATED POWER
RIPPLE & NOISE (max)

12V
10A
0 ~ 10A
120W
120mVp-p

24V
5A
0 ~ 5A
120W
120mVp-p

48V
2.5A
0 ~ 2.5A
120W
150mVp-p

Ripple & noise are measured at 20MHz of bandwidth by using a 12 twisted pair-wire terminated with a 0.1µF & 47µF parallel capacitor.

VOLTAGE ADJ. RANGE
VOLTAGE TOLERANCE

12 ~ 15V
±1.5%

24 ~ 29V
±1.0%

48 ~ 58V
±1.0%

Tolerance: includes set up tolerance, line regulation and load regulation.

LINE REGULATION
LOAD REGULATION
SETUP, RISE HOLD UP TIME

±0.5%
±0.5%
2000ms, 70ms, 50ms / 400VAC

±0.5%
±0.5%
2000ms, 70ms, 10ms / 230VAC at full load

±0.5%
±0.5%

Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quick may lead to increase of the set up time.

VOLTAGE RANGE
FREQUENCY RANGE
EFFICIENCY (Typ.)
AC CURRENT
INRUSH CURRENT (Typ.)
LEAKAGE CURRENT

180 ~ 550VAC
47 ~ 63Hz
89.5% / 400V
0.55A / 400VAC 1.2A / 230VAC
COLD START 50A
≤ 3.5 mA / 530VAC

254 ~ 780VDC

91% / 400V

92% / 400V

PROTECTION

OVERLOAD

105 ~ 130% rated output power

Protection type: Constant current limiting, recovers automatically after fault condition is removed

OVERVOLTAGE

16 ~ 18V

31 ~ 37V

60 ~ 67V

Protection type: Shut down overvoltage, re-power on to recover

OVERTEMPERATURE

105°C ± 5°C (12V), 110°C ± 5°C (24V) (TSW1) detect on heat sink of power switch transistor;
100°C ± 5°C (48V) (TSW1) detect on heat sink of power diode

Protection type: Shut down overvoltage, re-power automatically after temperature goes down

DC OK SIGNAL

Relay contact rating (max.): 30V / 1A resistive

ENVIRONMENT

WORKING TEMP.
WORKING HUMIDITY
STORAGE TEMP., HUMIDITY
TEMP. COEFFICIENT
VIBRATION

-25 ~ +70°C (Refer to output load derating curve)
20 ~ 90% RH non-condensing
-40 ~ +85°C, 10 ~ 95% RH
±0.03% / °C (0 ~ 50°C)
10 ~ 500Hz, 2G 10min./1cycle, 60 min. each long X,Y, Z axes Mounting clip: Compliance to IEC60068-2-6

SAFETY & EMC

SAFETY STANDARDS

UL508 approved
IEC60950-1 compliant

WITHSTAND VOLTAGE

I/P-O/P: 3KVAC I/P-FG: 1.5KVAC 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)

EMI CONDUCTION & RADIATION

Compliance to EN55011 (CISPR11), EN55022 (CISPR22), EN61204-3 Class B

EMS IMMUNITY

Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204; EN61204-3; EN61000-6-2; (EN50082-2), heavy industry level; criteria A,

The power supply is considered a component which will installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

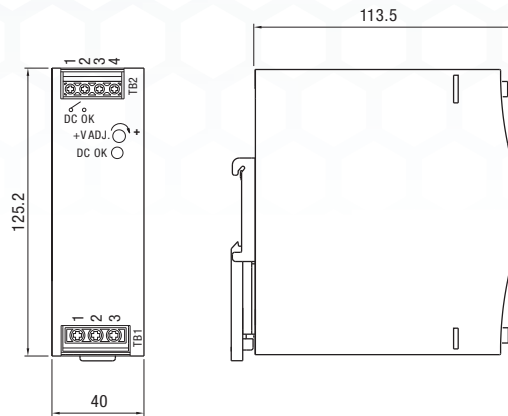
OTHERS

MTBF
DIMENSION
PACKING

268K hrs min. MIL-HDBK-217K (25°C)
40x125.2x113.5mm (WxHxD)
0.65Kg; 20pcs / 14Kg / 1.16CUFT

All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



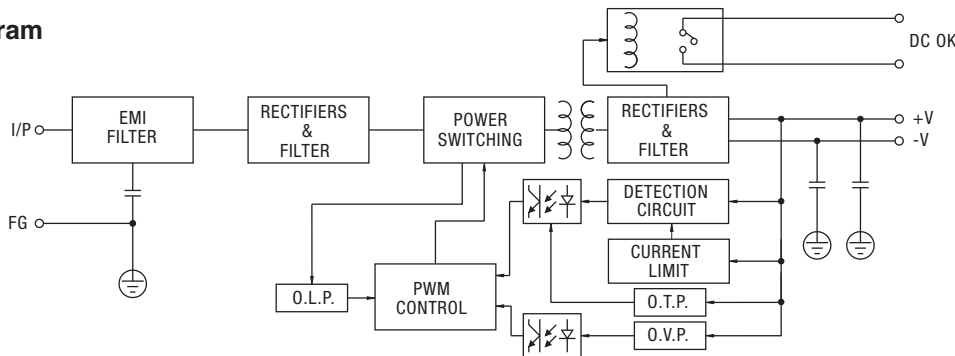
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG \oplus
2	AC/L2
3	AC/L1

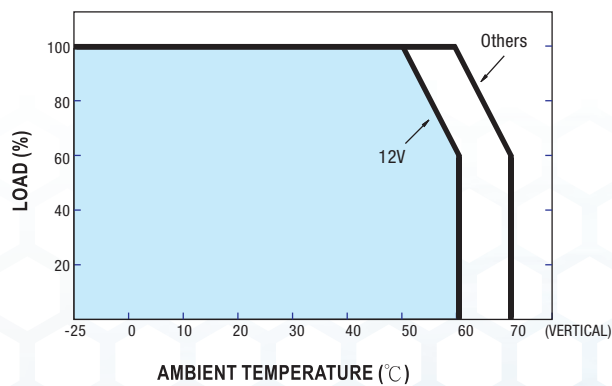
Terminal Pin No. Assignment (TB2)

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

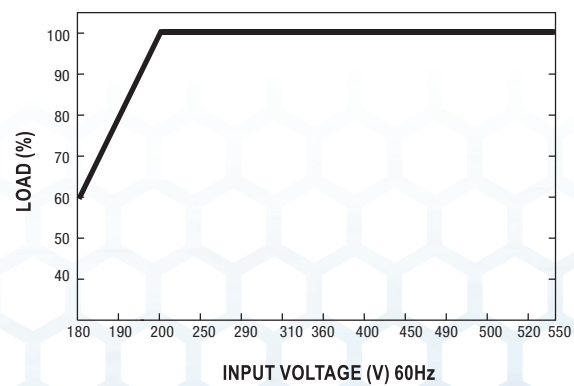
Block Diagram



Derating Curve



Static Characteristics



Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.