



# 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%

±0.5%  
±0.5%

±0.5%  
±0.5%

2000ms, 70ms, 50ms / 400VAC 2000ms, 70ms, 10ms / 230VAC at full load

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  
ISOLATION RESISTANCE  
EMI CONDUCTION & RADIATION  
EMS IMMUNITY

I/P-O/P: 3KVAC I/P-FG: 1.5KVAC O/P-FG: 0.5KVAC O/P-DC OK: 0.5KVAC  
I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC (25°C; 70% RH)  
Compliance to EN55011 (CISPR11), EN55022 (CISPR22), EN61204-3 Class B  
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.

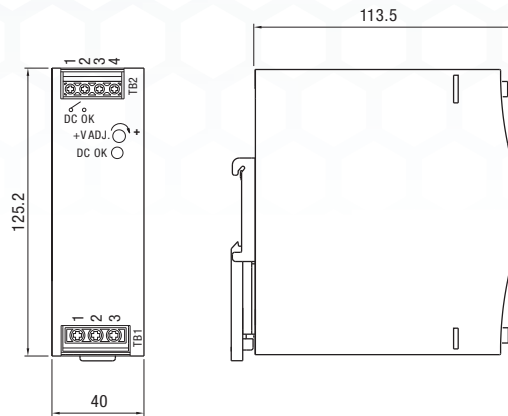
## OTHERS

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



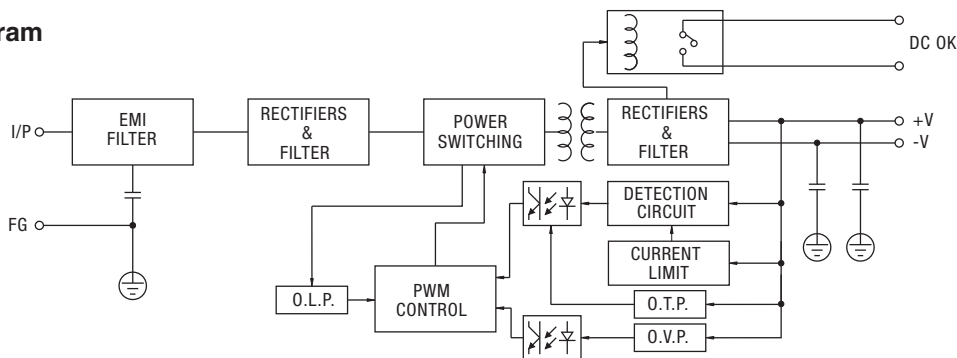
Terminal Pin No. Assignment (TB1)

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

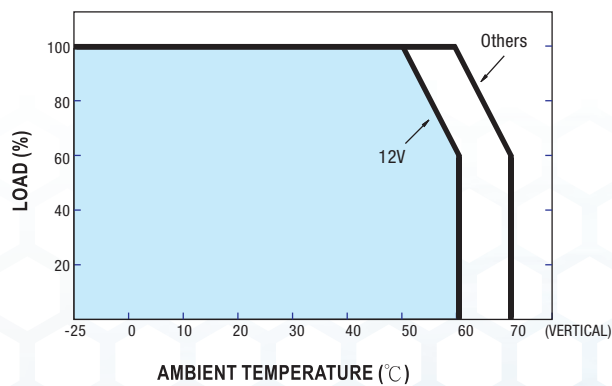
Terminal Pin No. Assignment (TB2)

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

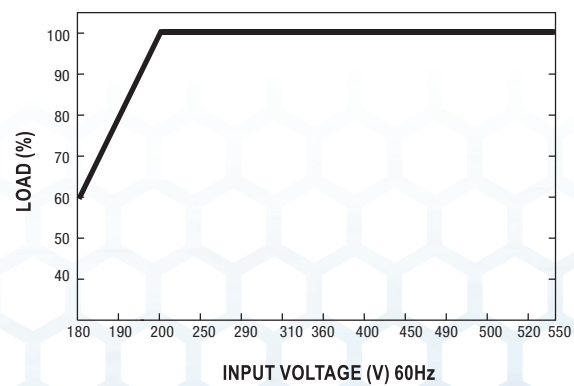
## Block Diagram



## Derating Curve



## Static Characteristics



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

# Mouser Electronics

Authorized Distributor

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