PSA-180xx series (1 Phase)

Specifications

Features:

- Multiple overload/ short circuit protection modes
- Efficiency above 91%
- Small size
- DIN rail mountable
- Cooling by free air convection
- UL508 (industrial control equipment) approved
- EN60950-1
- Built-in DC OK relay contact
- 3 year warranty

MODEL		PSA-18012 (only on request)	PSA-18024	PSA-18048 (only on request)
OUTPUT	DC VOLTAGE	12 V	24 V	48 V
	RATED CURRENT	14 A	7.5 A	3.75 A
	CURRENT RANGE	Refer to Output derating curve		
	RATED POWER	180 W	180 W	180 W
	RIPPLE & NOISE (max)	100 mVp-p	100 mVp-p	100 mVp-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 (DC)	10 V – 14 V	22 V – 27 V	41 V – 55 V
	VOLTAGE TOLERANCE	-0.03	-0.03	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.		
	START UP WITH STRONG LOAD	≤ 50,000 µF		
	CURRENT SHORT CIRCUIT Icc Max 2 sec.: Hiccup mode Permanent: Continuous mode	20 A	16 A	17
	DISSIPATION POWER LOAD mas	17 W	17 W	17 W
	LINE REGULATION	± 0.5%	± 0.5%	± 0.5%
	LOAD REGULATION	± 1%	± 1%	± 1%
	SETUP, RISE TIME	1 sec. (max)		
		Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.		
	HOLD UP TIME (Typ.)	Typ. 20 msec		
INPUT	VOLTAGE RANGE	90 – 135V AC / 180 – 264V AC by switch		
	FREQUENCY RANGE	47 – 63 Hz +-6%		
	EFFICIENCY (Typ.)	>91 %		
	AC CURRENT (115 – 230 Vac.)	2.8 – 1.3 A		
	INRUSH CURRENT (Typ.)	< 11 A < 5 msec		
	INTERNAL FUSE	T 4 A		
	EXTERNAL FUSE (recommended)	10 A (MCB curve B)		
	LEAKAGE CURRENT	< 1.5 mA @ 230 Vac		
PROTECTION	OVERLOAD	In (60°C) x 1.5 ³ 3 min.;		
		Current max. Overload ≅ 4Vdc (permanent) Imax=In (60°C) x (1.8 - 2.2)		
	OVER VOLTAGE	14 – 17 Vdc	30 – 35 Vdc	50 – 55 Vdc
	OVER TEMPERATURE	Yes. Shuts down output and automatically restarts when the temperature inside goes down		
	SHORT CIRCUIT PROTECTION	1 Hiccup Mode		
		2 Fold Back		
		3 Restart After Main		
FUNCTION	DC OK AKTIV SIGNAL (max.)	10 – 14 Vdc	20 – 30 Vdc	40 – 55 Vdc
ENVIRONMENT	WORKING TEMP.	-25 up to +70 °C		
		(>60° derating 2.5% °C)		
	HUMIDITY	95 % at 25°C, no condensation		
	STORAGE TEMP	-40 up to +85 °C		
	TEMP. COEFFICIENT	± 0.03% / C° (0 – 60 °C)		
	VIBRATION	In according to IEC60068-2-6		
SAFETY & EMC	SAFETY STANDARDS	NOT UL-APPROVED	UL508 approved	NOT UL-APPROVED
		IEC/EN 60950, EN 50178, IEC/EN 60950, EN60950-1, PELV EN 60204-1		
	WITHSTAND VOLTAGE	I/P-O/P: 3k VAC I/P-FG: 1.6k VAC O/P-FG: 500 VAC		
	PROTECTION CLASS (EN/IEC 60529)	IP 20		
	ISOLATION RESISTANCE	100 MΩ (min) @ 500 Vdc		
	EMI CONDUCTION & RADIATION	EN61000-6-4		
	HARMONIC CURRENT	EN61000-3-2		
	EMS IMMUNITY	EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5,		
		EN 61000-4-6, EN61000-6-2, EN61000-6-4,		
		The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that is still meets EMC directives.		
OTHERS	MTBF IEC 61709	> 500.000 h		
	POLLUTION DEGREE	2		
	CONNECTION TERMINAL BLOCK	2.5 mm Screw (24 – 14 AWG)		
	DIMENSION	55x110x105 mm (2.16x4.33x4.13 in)		
	PACKING	0.60 kg (1.3 lbs) per 1 pcs		
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.		

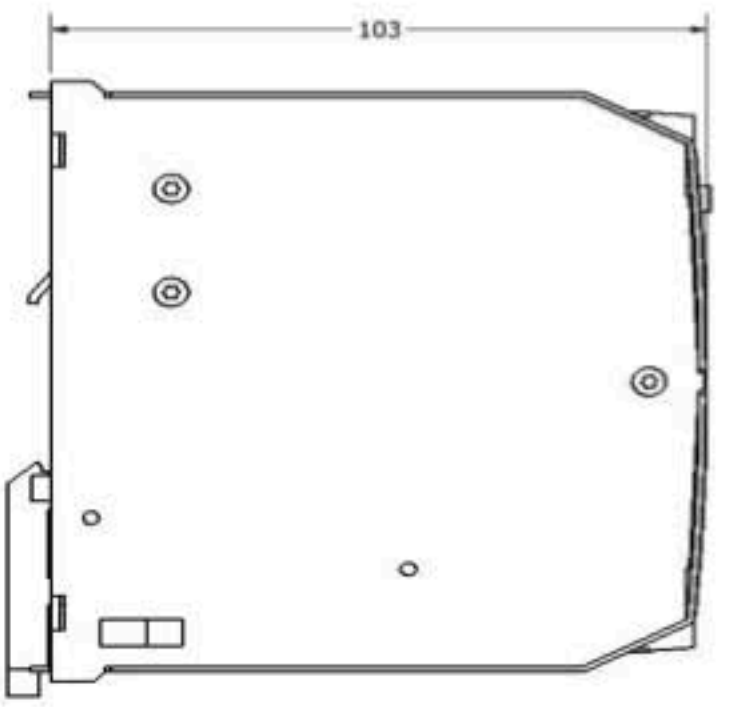
Mechanical Specifications

Terminal Pin. No Assign. (TB1)

Pin No.	Assignment PSA-18024 (1 phase)
1	N
2	L
3	FG ⏚

Terminal Pin. No Assign. (TB2)

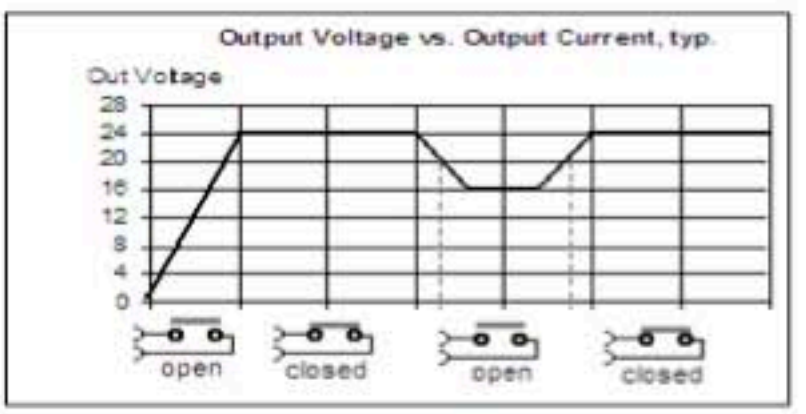
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts



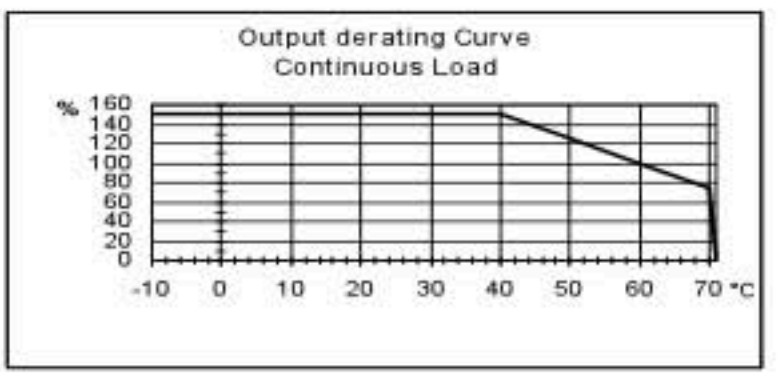
DC OK Relay Contact

Outputs are used for preventive function monitoring of the power supply. An electrically isolated signal contact is available.

The signal contact closes when the output power is OK and opens when the output voltage falls below 20Vdc ±5%.



Output Derating Curve



Parallel Connection

A parallel connection with the same model power supply can be set up to increase the output power.

The output has to be adjusted approximately to the same value (± 20mV) while applying a 1-2 A load to all devices before connecting them in parallel.