



# PSB-12024 (2 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		Flex9024B
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	5A
	CURRENT RANGE	Refer to Output derating curve
	RATED POWER	120 W
		100 mVp-p
	RIPPLE & NOISE (max)	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	22 V – 27 V
		-0.03
	VOLTAGE TOLERANCE	Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 µF
	CURRENT SHORT CIRCUIT I <sub>cc</sub>	12A
	Max 2 sec.: Hiccup mode Permanent: Continuous mode	
	DISSIPATION POWER LOAD max	11 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 1%
	1 sec. (max)	
SETUP, RISE TIME	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		187 – 264 V AC / 330 – 550V AC by switch
	VOLTAGE RANGE	
	FREQUENCY RANGE	47 – 63 Hz +6%
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (230 – 400 – 500 Vac.)	1.0 – 0.5 – 0.4 A
	INRUSH CURRENT (Typ.)	< 17 A < 5 msec
	INTERNAL FUSE	T 4 A
	EXTERNAL FUSE (recommended)	10 A (MCB curve B)
PROTECTION FUNCTION	LEAKAGE CURRENT	< 1.5 mA @ 500 Vac
		In (60°C) x 1.5 <sup>3</sup> 3 min.; Current max. Overload ≡ 4Vdc (permanent) I <sub>max</sub> =In (60°C) x (1.8 - 2.2)
	OVERLOAD	
		30 – 35 Vdc
	OVER VOLTAGE	
		Yes. Shuts down output and automatically restarts when the temperature inside goes down
	OVER TEMPERATURE	
	1 Hiccup Mode	
	SHORT CIRCUIT PROTECTION	2 Fold Back 3 Restart After Main
	DC OK AKTIV SIGNAL (max.)	20 – 30 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	UL508 approved, IEC/EN 60950, EN 50178, IEC/EN 60950, EN60950-1, PELV EN
	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
		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
	EMS IMMUNITY	
		> 500.000 h
OTHERS	MTBF IEC 61709	
	POLLUTION DEGREE	2
	CONNECTION TERMINAL BLOCK	2.5 mm Screw (24 – 14 AWG)
	DIMENSION	55x110x105 mm ( 2.16x4.33x4.13 in )
	PACKING	0.50 kg ( 1.1 lbs) per 1 pcs
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

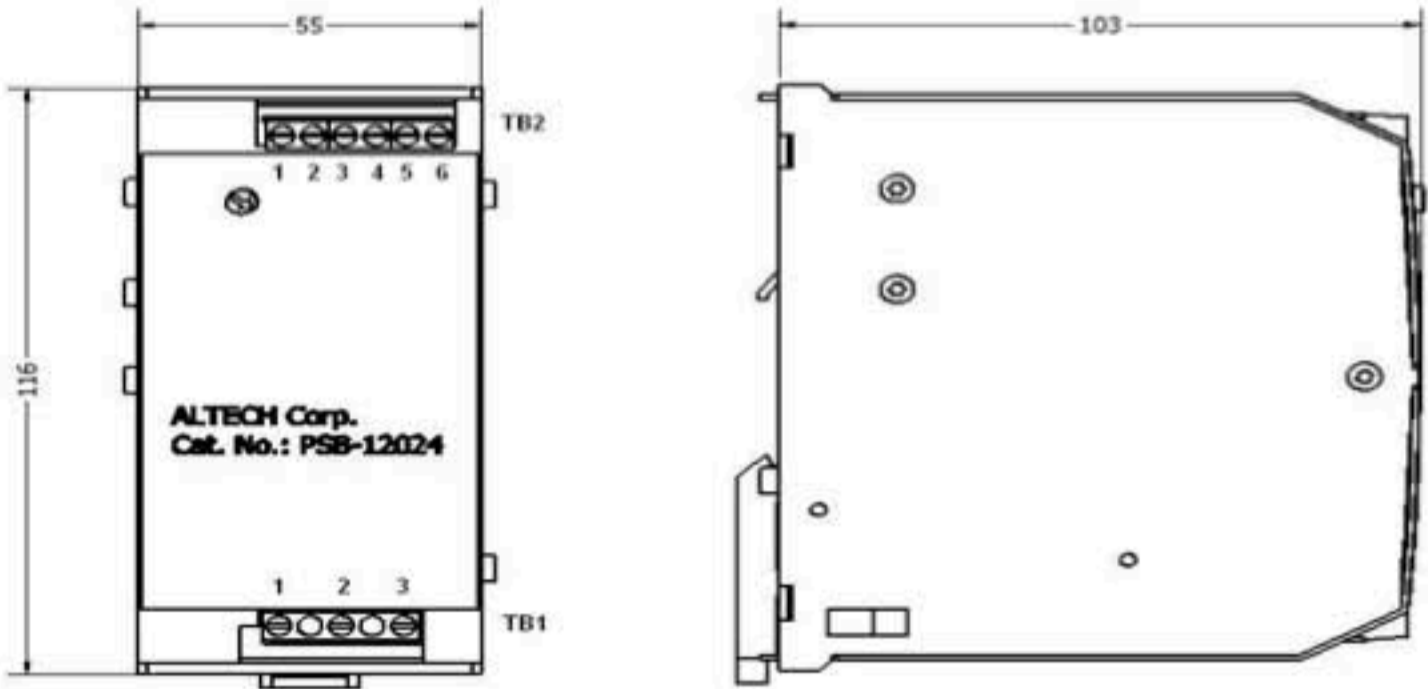
## Mechanical Specifications

Terminal Pin. No Assign. (TB1)

Pin No.	Assignment PSA-12024 (1 phase)	Assignment PSB-12024 (2 phase)
1	N	N/L
2	L	L/L
3	FG	FG

Terminal Pin. No Assign. (TB2)

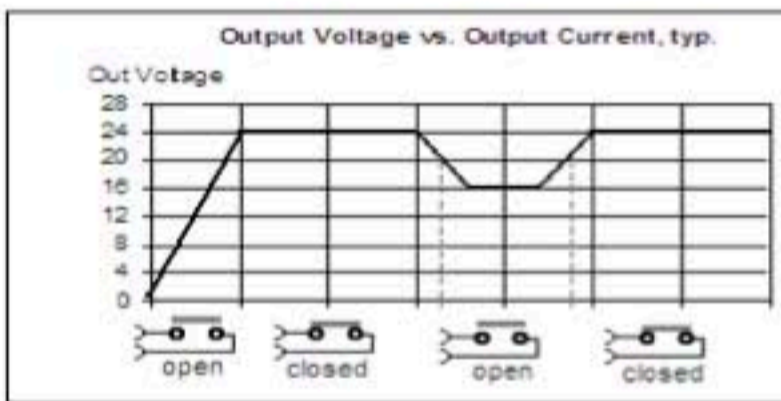
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts



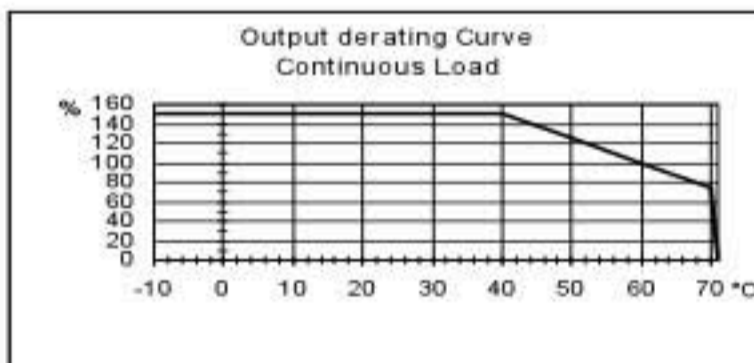
## DC OK Relay Contact

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  $\pm 5\%$ .



## 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 ( $\pm 20\text{mV}$ ) while applying a 1-2 A load to all devices before connecting them in parallel.

