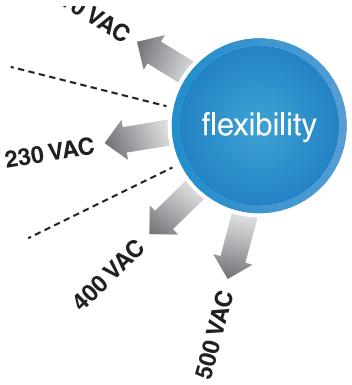
FLEX Power Single Phase 24V DC Power Supplies

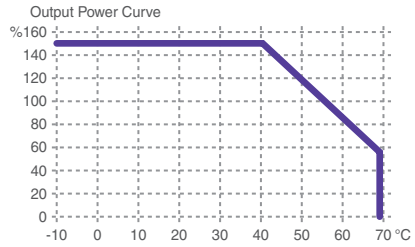


More flexibility in input voltage

The FLEX line of power supplies are suitable to a wide range of input voltage. With a single type it is therefore possible to meet the requirements of more applications and consequently improve design activity and stock management.

More Power: *Power Boost*

As an example, PSA-18024 is a 24Vdc power supply that features a continuous duty current of 7.5A at 110°C and 5A at 60°C and a Power Boost of 150%, equivalent to 7.5A, for at least 3 min. This features allows the use of a smaller size unit to power demanding loads such as motors, solenoid valves, lamps and other loads with transient overload behavior which would otherwise require an oversize power supply.



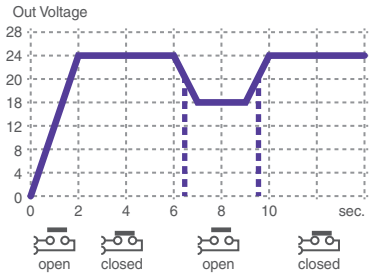
More flexibility in input voltage

As an example, PSA-18024 can be the right solution for two design cases in very different temperature conditions:

1) 7.5A, 24Vdc in continuous duty at 40°C.
2) 5A, 24Vdc in continuous duty at 60°C +Power Boost 7,5A for at least 3 min.

Power Good relay for monitoring the output voltage level

Output voltage is continuously monitored. The units 24 VDC output are equipped with Power Good relay. The NO contact triggers any time the output voltage level goes below 20Vdc (24 Vdc output). This feature is particularly useful in redundant applications.



Applications in compliance with EN 60204-1 standard

The FLEX Power units comply with the requirement of EN60204-1 standard that an overload of 50% over the nominal current be withstand by the power supply for at least 1 hour to allow the tripping of magneto-thermic switches on the output. These features allows the implementation of “Control of commands and Emergency stops” by means of industrial PCs, PLC, remote I/O, etc. required by the standard.

FLEX Power Single Phase 24V DC Power Supplies

Hiccup Mode Automatic Restart

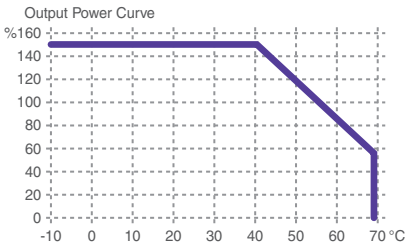
This is the default factory setting of all FLEX Power units. In case of shortcircuit or overloading, the output current is interrupted. The device tries again to re-establish output voltage and normal condition about every 2 second till the problem is cleared.

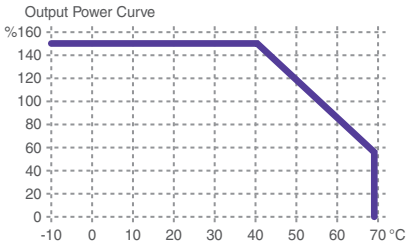
Manual Reset Mode Restart by Operator

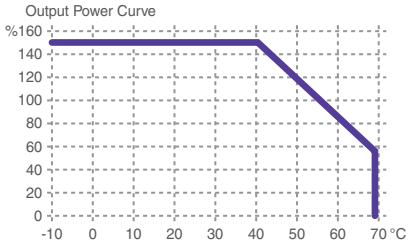
In case of short-circuit or overload, the output current is interrupted. In order to restart the output it is necessary to switch-off the input circuit for about 1 minute. This protection mode is particularly suggested in applications where safety procedures require that reset be carried out only by an authorized person.

Continuous Output mode

In case of short-circuit or overload, the output current is kept at high values with near zero voltage. In case of short circuit the current can reach up to 3 times the rated current at 60°C. This protection mode is used to meet the requirements of demanding loads such as motors, solenoid valves, lamps, PLC with highly capacitive input circuits and other loads with marked transient overload behavior.







Jumper settings


HICCUP MODE


MANUAL RESET


CONTINUOUS OUT MODE

Output circuits protected by magneto-thermic circuit breakers

Standard output circuit breakers can be triggered quickly and reliably with FLEX technology, which allows three times the nominal current at 60°C. Defective current paths are selectively disconnected, the defect is limited and the important parts of the system remain in operation. This together with the 50% overload capacity in compliance with EN60204-1 allows to safely manage any overload and short circuit condition.

Reduced dimensions and snap-on DIN rail bracket

The higher performances obtained with the FLEX Power line, allow almost half dimensions as conventional technology and higher performances. An example is the PSA-12024 (120V) with maximum current is 12A. In permanent duty at 40°C it can deliver 5A at 24Vdc. All FLEX units feature the new DIN rail mounting bracket, easy to use and safe against heavy loading and vibrations.

Easy Parallel connection

With FLEX technology it is easy to double capacity. The units PSA-360, PSB-360, PSA-600 and PSB-600 can be easily connected in parallel without needing high precision instruments. Follow instructions supplied with each unit.

FLEX Power Single Phase 24V DC Power Supplies

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

120W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSA-12024	1	24V DC 5A	±3%	≤80 mVp-p	≥91%	

180W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSA-18024	1	24V DC 7.5A	±3%	≤80 mVp-p	≥91%	

12V DC and 48V DC output on request.

360W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSA-36024	1	24V DC 14A	±3%	≤80 mVp-p	≥91%	

12V DC and 48V DC output on request.

600W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSA-60024	1	24V DC 25A	±3%	≤80 mVp-p	≥92%	

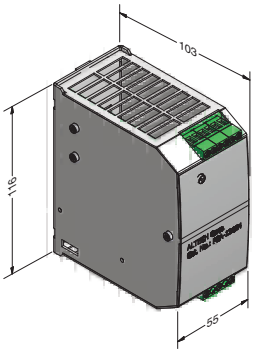
48V DC output on request.

**Other output voltages on request.

For the latest on Altech Power Supply specifications please visit www.altechcorp.com/power.

SPECIFICATIONS

PSA-12024 Series



Terminal Pin. No Assignment (TB1)

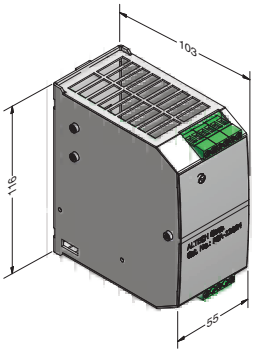
Pin No.	Assignment PSA-12024 (1 phase)
1	N/AC
2	L/AC
3	FG ⏚

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment PSA-12024 (1 phase)
1/2	DC OUTPUT -V
3/4	DC OUTPUT +V
5/6	Relay Contact

Nominal Input Data: 115VAC/1.8A - 230VAC/0.9A (selectable by switch)
Connection: screw terminal blocks for wires 0.2-2.5mm² / AWG 24-14
Size (WxHxD): 55x116x103 mm (2.17x4.57x4.06 inches)
Packaging: 1/box; 0.5kg (1.1 lbs)

PSA-18024 Series



Terminal Pin. No Assignment (TB1)

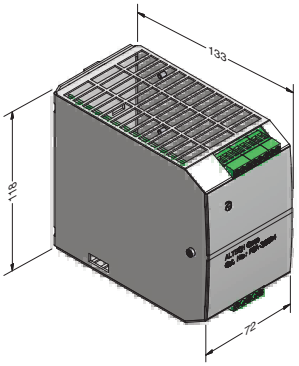
Pin No.	Assignment PSA-18024 (1 phase)
1	N/AC
2	L/AC
3	FG ⏚

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment PSA-18024 (1 phase)
1/2	DC OUTPUT -V
3/4	DC OUTPUT +V
5/6	Relay Contact

Nominal Input Data: 115VAC/2.8A - 230VAC/1.3A (selectable by switch)
Connection: screw terminal blocks for wires 0.2-2.5mm² / AWG 24-14
Size (WxHxD): 55x116x103 mm (2.17x4.57x4.06 inches)
Packaging: 1/box; 0.6kg (1.32 lbs)

PSA-36024 Series



Terminal Pin. No Assignment (TB1)

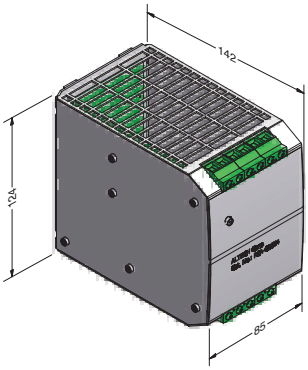
Pin No.	Assignment PSA-36024 (1 phase)
1	N/AC
2	L/AC
3	FG ⏚

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment PSA-36024 (1 phase)
1/2/3	DC OUTPUT -V
4/5/6	DC OUTPUT +V
7/8	Relay Contact

Nominal Input Data: 115VAC/3.3A - 230VAC/2.2A (selectable by switch)
Connection: screw terminal blocks for wires 0.2-2.5mm² / AWG 24-14
Size (WxHxD): 72x118x133 mm (2.83x4.49x5.24 inches)
Packaging: 1/box; 0.72kg (1.59 lbs)

PSA-60024 Series



Terminal Pin. No Assignment (TB1)

Pin No.	Assignment PSA-60024 (1 phase)
1	N/AC
2	L/AC
3	Jumper 115V AC
4	Jumper 115V AC
5	FG ⏚

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment PSA-60024 (1 phase)
1/2	DC OUTPUT -V
3/4	DC OUTPUT +V
5/6	Relay Contact

Nominal Input Data: 115VAC/8.0A - 230VAC/4.2A (selectable by switch)
Connection: screw terminal blocks for wires up to 4mm² / 11AWG (solid), 6mm² / 10AWG (stranded)
Size (WxHxD): 85x120x142 mm (3.35x4.72x5.59inches)
Packaging: 1/box; 1.0kg (2.2 lbs)

PSA-120 Series (1 Phase)

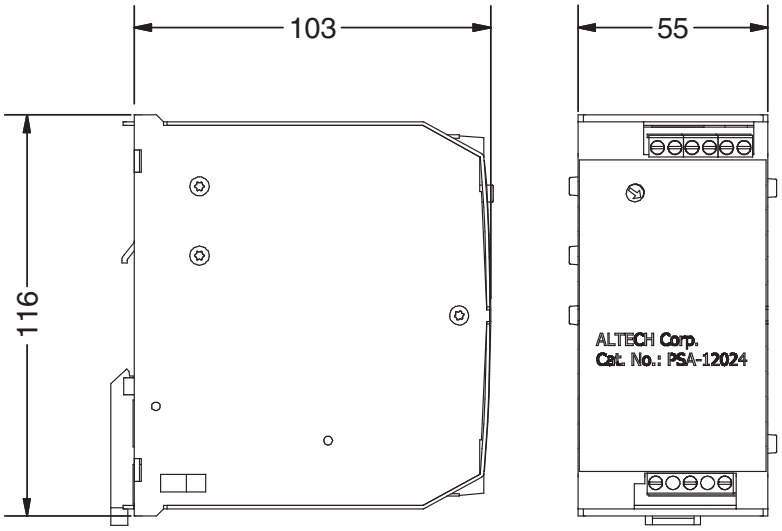
Specifications

Features:

- Multiple overload/ short circuit protection modes
- Efficiency above 91%
- Small size
- DIN rail mountable
- Cooling by free air convection
- UL 508 (industrial control equipment) approved
- EN60950-1
- Built-in DC OK relay circuit
- 3 year warranty

	Cat. No.	PSA-12024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	5A
	CURRENT RANGE	0-5A
	RATED POWER	120 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.3% Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	SHORT CIRCUIT CURRENT Icc	12A Max 2 sec.: Hiccup mode Permanent: Continuous mode
	DISSIPATION POWER LOAD max	11 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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.)	20 msec
INPUT	VOLTAGE RANGE	90 ~ 135V AC / 180 ~ 264V AC switch select
	FREQUENCY RANGE	47 ~ 63 Hz
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (115 - 230V)	1.8 - 0.9V AC
	INRUSH CURRENT (Typ.)	< 11 A ≤ 5 msec
	INTERNAL FUSE	4A (T)
	EXTERNAL FUSE (recommended)	10 A (MCB curve B)
	LEAKAGE CURRENT	< 1.5 mA @ 230 V AC
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	30 ~ 35 VDC
	OVER TEMPERATURE	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 - Selectable
ENVIRONMENT	WORKING TEMP.	-25 up to +70 °C
	HUMIDITY	95 % at 25°C, no condensation
	STORAGE TEMP	-40 up to +85 °C
	TEMP. COEFFICIENT	± 0.03% / C° (0 ~ 60 °C)
	MOUNTING	In according to IEC60068-2-6
SAFETY & EMC	SAFETY STANDARDS	UL508 Listed, 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	IP 20 (EN/IEC 60529)
	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, 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.
OTHERS	MTBF IEC 61709	> 500.000 h
	DC OK AKTIV SIGNAL (max.)	20 ~ 30 VDC
	POLLUTION DEGREE	2
	CONNECTION TERMINAL BLOCK	2.5 mm Screw terminal (24 ~ 14 AWG)
	DIMENSION	55x110x105 mm (2.16x4.33x4.13 in)
	PACKING	0.50 kg (1.1 lbs) each
		All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

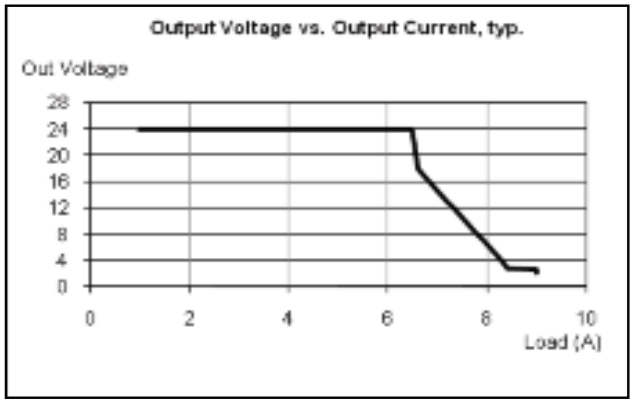
Pin No.	Assignment (1 phase)
1	N / AC
2	L / AC
2	FG⏚

TB2 Terminal Pin. No Assignment

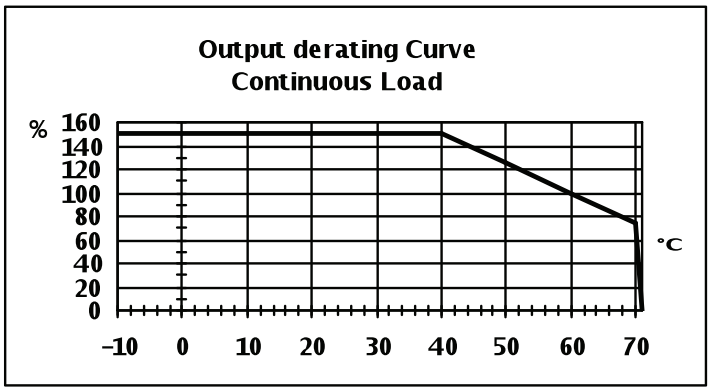
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts

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



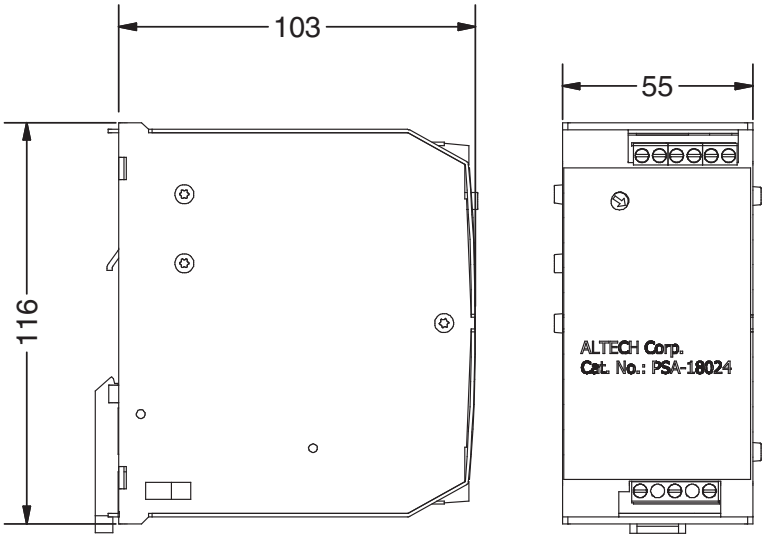
Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.

PSA-180 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

	Cat. No.	PSA-18024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	7.5 A
	CURRENT RANGE	0-7.5A
	RATED POWER	180 W
	RIPPLE & NOISE (max)	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
	VOLTAGE TOLERANCE	-0.03 Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	SHORT CIRCUIT CURRENT Icc	16 A Max 2 sec.: Hiccup mode Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	17 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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 switch select
	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	4A (T)
	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	30 – 35 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 - Selectable
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	WORKING TEMP.	-25 up to +70 °C
	HUMIDITY	95 % at 25°C, no condensation
	STORAGE TEMP	-40 up to +85 °C
	TEMP. COEFFICIENT	± 0.03% / C° (0 ~ 60 °C)
	MOUNTING	In according to IEC60068-2-6
SAFETY & EMC	SAFETY STANDARDS	UL508 Listed 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	IP 20 (EN/IEC 60529)
	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 it still meets EMC directives.
OTHERS	MTBF IEC 61709	> 500.000 h
	POLLUTION DEGREE	2
	CONNECTION TERMINAL BLOCK	2.5 mm Screw terminal (24 ~ 14 AWG)
	DIMENSION	55x110x105 mm (2.16x4.33x4.13 in)
	PACKING	0.60 kg (1.3 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

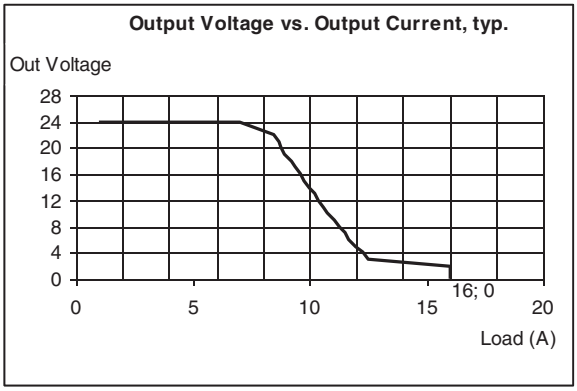
Pin No.	Assignment (1 phase)
1	N / AC
2	L / AC
3	FG⏚

TB1 Terminal Pin. No Assignment

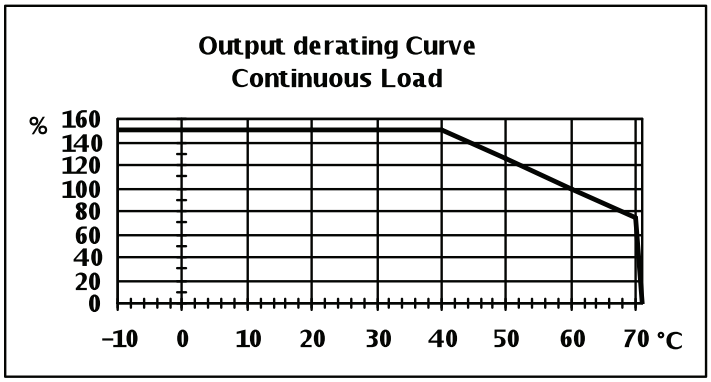
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts

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



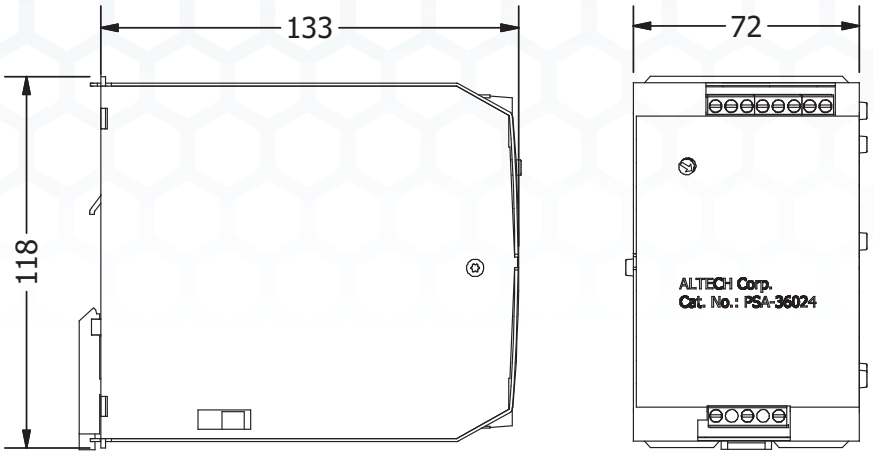
Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.

PSA-360 Series (1 Phase)
Specifications

Features:
- Multiple overload/ short circuit protection modes
- Efficiency above 91%
- **Easy parallel connection for more power**
- 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

	Cat. No.	PSA-36024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	14 A
	CURRENT RANGE	0 ~ 14 A
	RATED POWER	336 W
	RIPPLE & NOISE (max)	80 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)	22 ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	SHORT CIRCUIT CURRENT Icc	30 A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	28 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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 switch select
	FREQUENCY RANGE	47 ~ 63 Hz
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (115 – 230 Vac.)	3.3 ~ 2.2 A
	INRUSH CURRENT (Typ.)	< 16 A < 5 msec
	INTERNAL FUSE	6.3 A (T)
	EXTERNAL FUSE (recommended)	16 A (MCB curve B)
PROTECTION	LEAKAGE CURRENT	< 1.5 mA @ 230 Vac
	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
ENVIRONMENT	SHORT CIRCUIT PROTECTION	1 Hiccup Mode / 2 Fold Back / 3 Restart After Main - Selectable
	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	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)
SAFETY & EMC	MOUNTING	In according to IEC60068-2-6
	SAFETY STANDARDS	UL508 Listed
		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	IP 20 (EN/IEC 60529)
	ISOLATION RESISTANCE	100 MΩ (min) @ 500 Vdc
	EMI CONDUCTION & RADIATION	EN61000-6-4
	HARMONIC CURRENT	
	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 it still meets EMC directives.
OTHERS	MTBF IEC 61709	> 500.000 h
	POLLUTION DEGREE	2
	CONNECTION TERMINAL BLOCK	2.5 mm Screw terminal (24 ~ 14 AWG)
	DIMENSION	72x115x135 mm (2.8x4.5x5.3 in)
	PACKING	0.65 kg (1.4 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

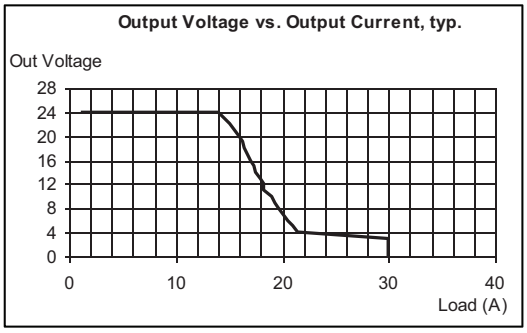
Pin No.	Assignment (1 phase)
1	N
2	L
	FG ⏚

TB1 Terminal Pin. No Assignment

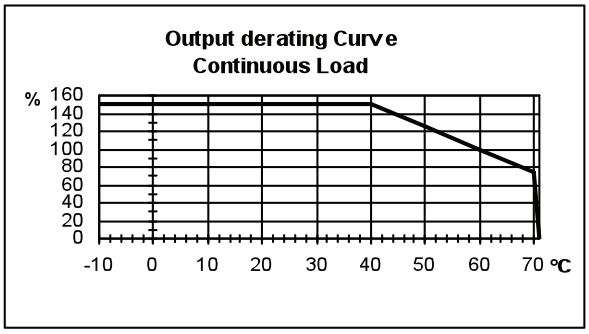
Pin No.	Assignment
1,2,3	DC output -V
4,5,6	DC output +V
7,8	DC OK relay contacts

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%.

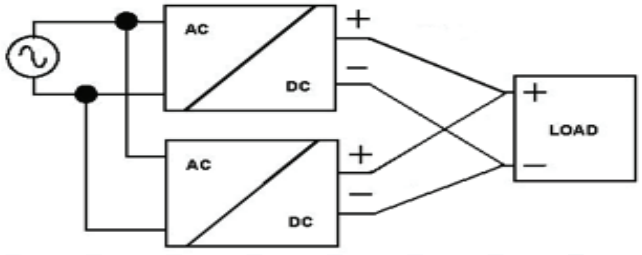


Output Derating Curve



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. In PSA-360xx, for more power, the position of the Easy Parallel jumper needs to be changed to enable a parallel connection. In this mode up to 4 power supplies can be put together in parallel.



Easy Parallel conenction
OFF (factory selection)

Easy Parallel
ON

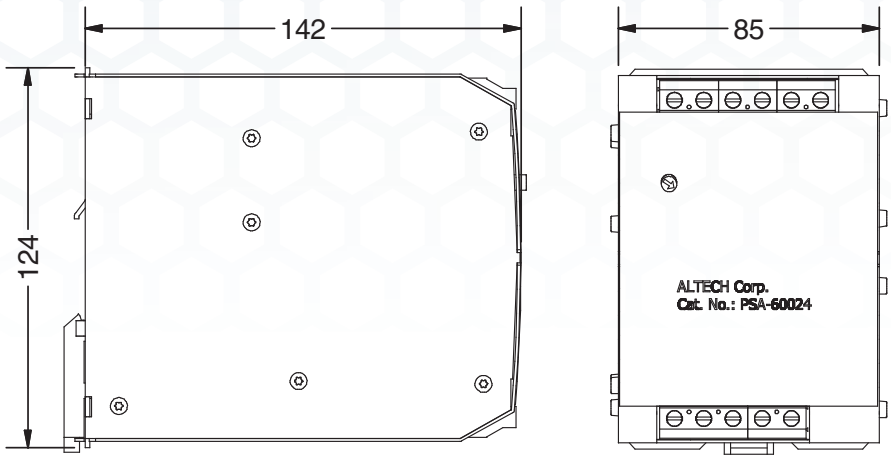
Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.

PSA-600 Series (1 Phase)
Specifications

Features:
- Multiple overload/ short circuit protection modes
- Efficiency above 92%
- **Easy parallel connection for more power**
- 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

	Cat. No.	PSA-60024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	25 A
	CURRENT RANGE	0-25A
	RATED POWER	600 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	SHORT CIRCUIT CURRENT Icc	60 A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	54 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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 switch select
	FREQUENCY RANGE	47 ~ 63 Hz +-6%
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (115 – 230 Vac.)	8 ~ 4.2 A
	INRUSH CURRENT (Typ.)	< 16 A < 5 msec
	INTERNAL FUSE	10A (T)
	EXTERNAL FUSE (recommended)	16 A (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	30 ~ 35 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 - Selectable
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	WORKING TEMP.	-25 up to +70 °C
	HUMIDITY	95 % at 25°C, no condensation
	STORAGE TEMP	-40 up to +85 °C
	TEMP. COEFFICIENT	± 0.03% / C° (0 ~ 60 °C)
	MOUNTING	In according to IEC60068-2-6
SAFETY & EMC	SAFETY STANDARDS	UL508 Listed
		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	IP 20 (EN/IEC 60529)
	ISOLATION RESISTANCE	100 MΩ (min) @ 500 Vdc
	EMI CONDUCTION & RADIATION	EN61000-6-4
	HARMONIC CURRENT	
	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 it still meets EMC directives.
OTHERS	MTBF IEC 61709	> 500.000 h
	POLLUTION DEGREE	2
	CONNECTION TERMINAL BLOCK	4 mm Screw terminal (30 ~ 10 AWG)
	DIMENSION	85x120x140 mm (3.34x4.72x5.51 in)
	PACKING	0.75 kg (1.9 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

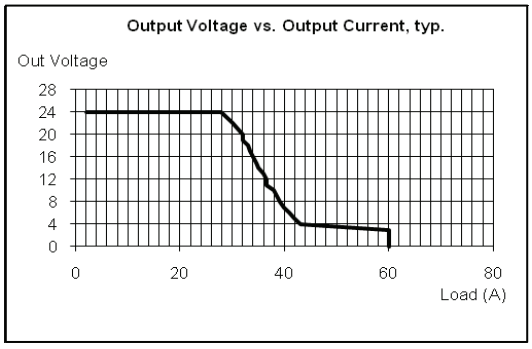
Pin No.	Assignment (1 phase)
1	N / AC
2	L / AC
3	Jumper 115V AC
4	Jumper 115V AC
5	FG⏚

TB2 Terminal Pin. No Assignment

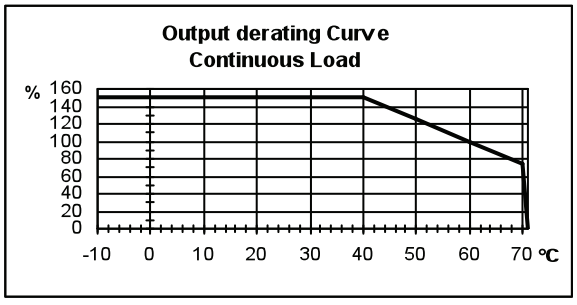
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts

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%.

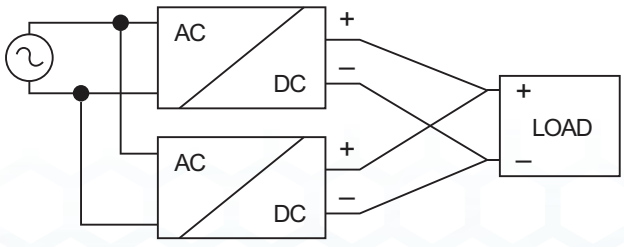


Output Derating Curve



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. In PSA-600xx, for more power, the position of the Easy Parallel jumper needs to be changed to enable a parallel connection. In this mode up to 4 power supplies can be put together in parallel.



Easy Parallel conenction
OFF (factory selection)

Easy Parallel
ON

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

FLEX Power Two and Three Phase 24V DC** Power Supplies

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

120W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSB-12024	2	24V DC 5A	±3%	≤80 mVp-p	≥91%	

180W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSB-18024	2	24V DC 7.5A	±3%	≤80 mVp-p	≥91%	

12 VDC and 48 VDC output on request

360W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSB-36024	2	24V DC 14A	±3%	≤80 mVp-p	≥91%	

12 VDC and 48 VDC output on request

600W DIN Rail Power Supply

Cat. No.	Phases	Output V DC A	Tol. %	Ripple & Noise	Efficiency	NOTES
PSB-60024	3	24V DC 25A	±3%	≤80 mVp-p	≥92%	

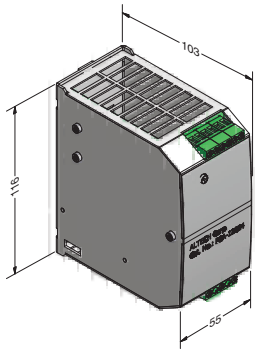
48 VDC output on request

**Other output voltages on request.

For the latest on Altech Power Supply specifications please visit www.altechcorp.com/power.

SPECIFICATIONS

PSB-12024 Series



TB1 Terminal Pin. No Assignment

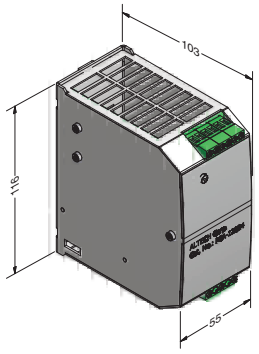
Pin No.	Assignment (2 phase)
1	N / L
2	L / L
3	FG ⏚

TB2 Terminal Pin. No Assignment

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

Nominal Input Data: 230VAC/1.0A - 400VAC/0.5A - 500VAC/0.4A (selectable by switch)
Connection: screw terminal blocks for 0.2-2.5mm² / AWG 24-14 wires.
Size (WxHxD): 55x116x103 mm (2.17x4.57x4.06 inches)
Packaging: 1/box; 0.5kg (1.1 lbs)

PSB-18024 Series



TB1 Terminal Pin. No Assignment

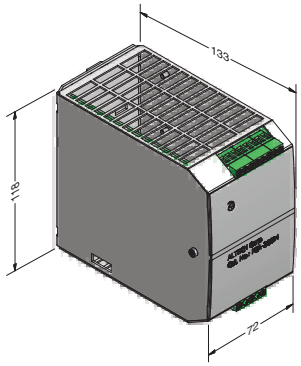
Pin No.	Assignment (2 phase)
1	N / L
2	L / L
3	FG ⏚

TB2 Terminal Pin. No Assignment

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

Nominal Input Data: 230VAC/1.5A - 400VAC/0.8A - 500VAC/0.7A (selectable by switch)
Connection: screw terminal blocks for 0.2-2.5mm² / AWG 24-14 wires.
Size (WxHxD): 55x116x103 mm (2.17x4.57x4.06 inches)
Packaging: 1/box; 0.6kg (1.32 lbs)

PSB-36024 Series



TB1 Terminal Pin. No Assignment

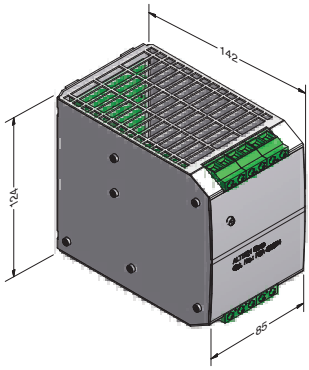
Pin No.	Assignment (2 phase)
1	N/L
2	L/L
3	FG ⏚

TB1 Terminal Pin. No Assignment

Pin No.	Assignment
1,2,3	DC output -V
4,5,6	DC output +V
7,8	DC OK relay contacts

Nominal Input Data: 230VAC/2.2A - 400VAC/1.4A - 500VAC/1.0A (selectable by switch)
Connection: screw terminal blocks for 0.2-2.5mm² / AWG 24-14 wires.
Size (WxHxD): 72x118x133 mm (2.83x4.49x5.24 inches)
Packaging: 1/box; 0.72kg (1.59 lbs)

PSB-60024 Series



TB1 Terminal Pin. No Assignment

Pin No.	Assignment (3 phase)
1	L1
2	L2
3	L3
4	FG ⏚
5	FG ⏚

TB2 Terminal Pin. No Assignment

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

Nominal Input Data: 400VAC/0.95A - 500VAC/0.85A
Connection: screw terminal blocks for wires up to 4mm² / 11AWG (solid), 6mm² / 10AWG (stranded)
Size (WxHxD): 85x120x142 mm (3.35x4.72x5.59inches)
Packaging: 1/box; 1.1kg (2.43 lbs)

PSB-120 Series (2 Phase)

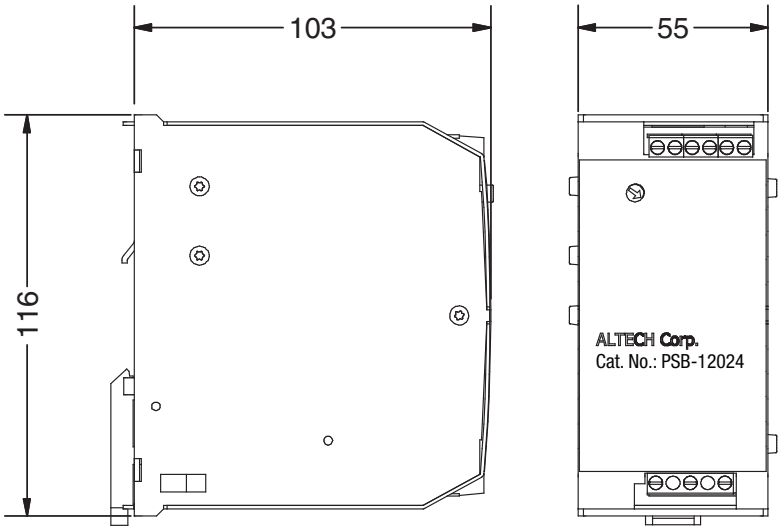
Specifications

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

	Cat. No.	PSB-12024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	5A
	CURRENT RANGE	0 - 5 A
	RATED POWER	120 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	CURRENT SHORT CIRCUIT Icc	12A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	11 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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	187 ~ 264 V AC / 330 ~ 550V AC by switch
	FREQUENCY RANGE	47 ~ 63 Hz +-6%
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (115 – 230 Vac.)	1.0 ~ 0.58 ~ 0.46A
	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	30 – 35 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 - Selectable
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	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 60204-1
	WITHSTAND VOLTAGE	I/P-O/P: 3k VAC I/P-FG: 1.6k VAC O/P-FG: 500 VAC
	PROTECTION CLASS	IP 20 (EN/IEC 60529)
	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,
		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.
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	0.50 kg (1.1 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

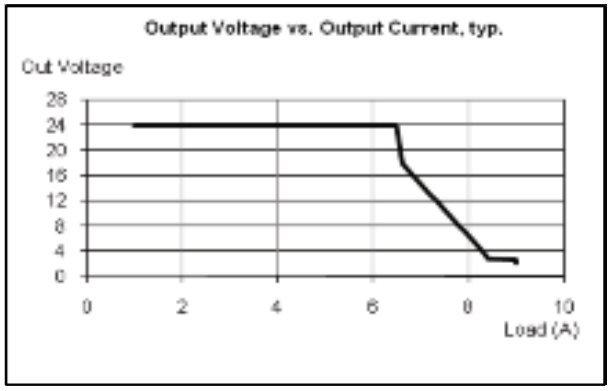
Pin No.	Assignment (2 phase)
1	N / L
2	L / L
3	FG⏚

TB2 Terminal Pin. No Assignment

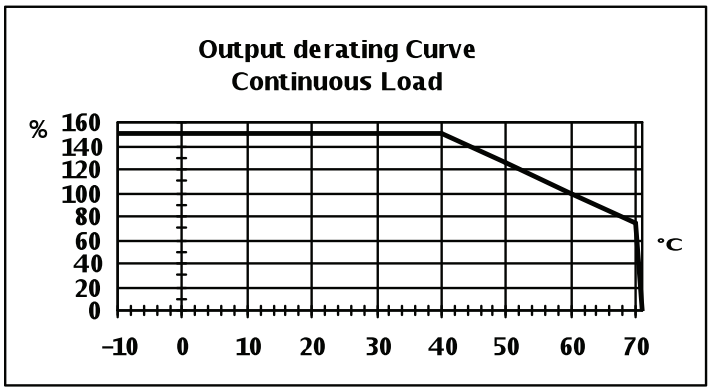
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts

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



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

PSB-180 Series (2 Phase)

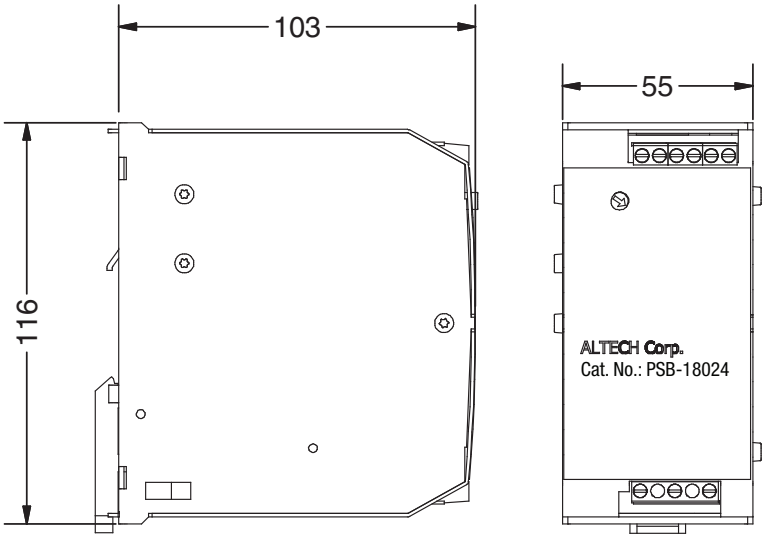
Specifications

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

	Cat. No.	PSB-18024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	7.5 A
	CURRENT RANGE	0 - 7.5 A
	RATED POWER	180 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	CURRENT SHORT CIRCUIT Icc	16 A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	17 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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	187 ~ 264 V AC / 330 ~ 550V AC by switch
	FREQUENCY RANGE	47 ~ 63 Hz +-6%
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (230 – 400 – 500 Vac.)	1.5 ~ 0.8 ~ 0.7 A
	INRUSH CURRENT (Typ.)	< 17 A < 5 msec
	INTERNAL FUSE	T 4 A
	EXTERNAL FUSE (recommended)	10 A (MCB curve B)
	LEAKAGE CURRENT	< 1.5 mA @ 500 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	30 ~ 35 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 - Selectable
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	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 60204-1
	WITHSTAND VOLTAGE	I/P-O/P: 3k VAC I/P-FG: 1.6k VAC O/P-FG: 500 VAC
	PROTECTION CLASS	IP 20 (EN/IEC 60529)
	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 it 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) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

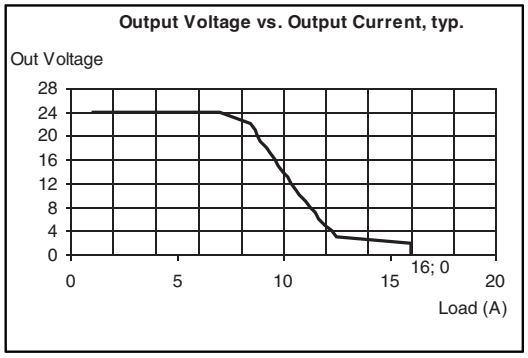
Pin No.	Assignment (2 phase)
1	N / L
2	L / L
3	FG⏚

TB2 Terminal Pin. No Assignment

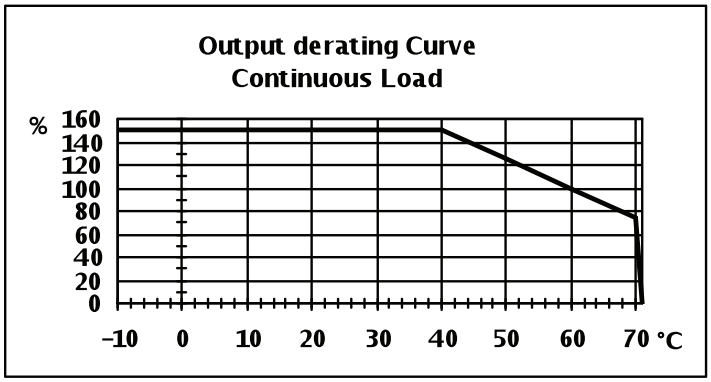
Pin No.	Assignment
1,2	DC output -V
3,4	DC output +V
5,6	DC OK relay contacts

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



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

PSB-360 Series (2 Phase)

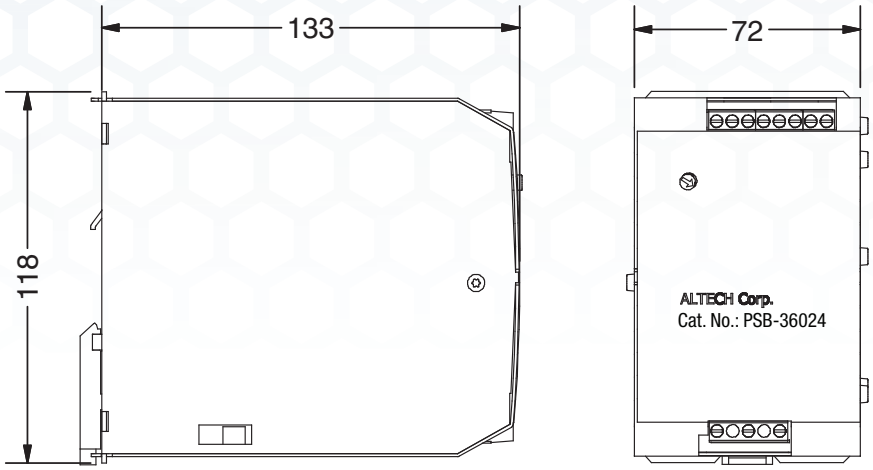
Specifications

Features:

- Multiple overload/ short circuit protection modes
- Efficiency above 91%
- Easy parallel connection for more power
- 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

	Cat. No.	PSB-36024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	14 A
	CURRENT RANGE	Refer to Output derating curve
	RATED POWER	336 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	CURRENT SHORT CIRCUIT Icc	30 A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	28 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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	187 ~ 264 V AC / 330 ~ 550V AC by switch
	FREQUENCY RANGE	47 ~ 63 Hz +-6%
	EFFICIENCY (Typ.)	>91 %
	AC CURRENT (230 – 400 – 500 Vac.)	2.2 ~ 1.4 ~ 1.0 A
	INRUSH CURRENT (Typ.)	< 17 A < 5 msec
	INTERNAL FUSE	T 4 A
	EXTERNAL FUSE (recommended)	16 A (MCB curve B)
	LEAKAGE CURRENT	< 1.5 mA @ 500 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	30 ~ 35 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 - Selectable
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	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 60204-1
	WITHSTAND VOLTAGE	I/P-O/P: 3k VAC I/P-FG: 1.6k VAC O/P-FG: 500 VAC
	PROTECTION CLASS	IP 20 (EN/IEC 60529)
	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 it 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	72x115x135 mm (2.8x4.5x5.3 in)
	PACKING	0.65 kg (1.3 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25˚C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

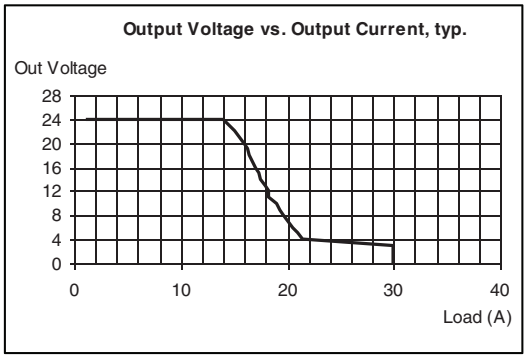
Pin No.	Assignment (2 phase)
1	N/L
2	L/L
3	FG⏚

TB1 Terminal Pin. No Assignment

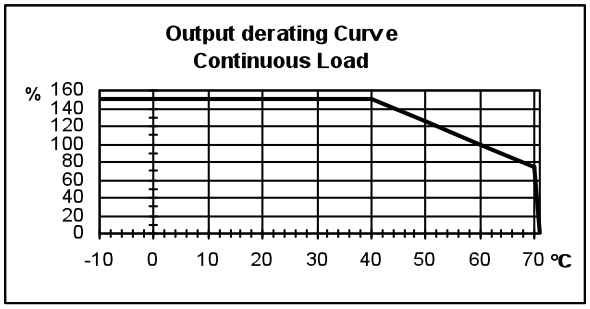
Pin No.	Assignment
1,2,3	DC output -V
4,5,6	DC output +V
7,8	DC OK relay contacts

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%.

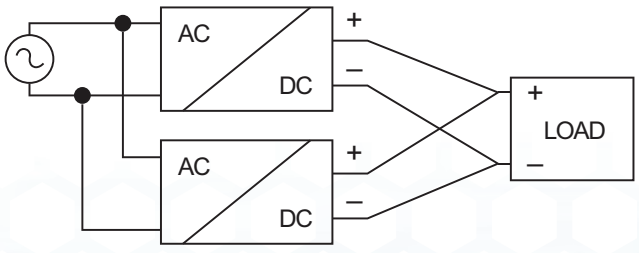


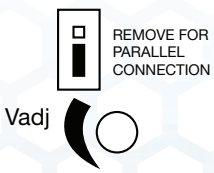
Output Derating Curve



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. In PSA-600xx, for more power, the position of the Easy Parallel jumper needs to be changed to enable a parallel connection. In this mode up to 4 power supplies can be put together in parallel.





Easy Parallel conenction OFF (factory selection)

Easy Parallel ON

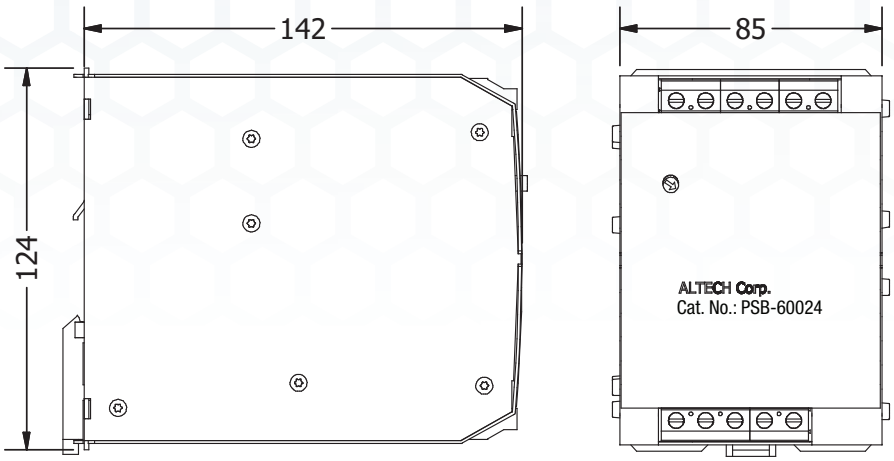
Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.

PSB-600 Series (3 Phase)
Specifications

Features:
- Multiple overload/ short circuit protection modes
- Efficiency above 92%
- Easy parallel connection for more power
- 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

	Cat. No.	PSB-60024
OUTPUT	DC VOLTAGE	24 V
	RATED CURRENT	25 A
	CURRENT RANGE	Refer to Output derating curve
	RATED POWER	600 W
	RIPPLE & NOISE (max)	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	22 V ~ 27 V
	VOLTAGE TOLERANCE	-0.03
		Tolerance: includes set up tolerance, line regulation and load regulation.
	START UP WITH STRONG LOAD	≤ 50,000 μF
	CURRENT SHORT CIRCUIT Icc	60 A
		Max 2 sec.: Hiccup mode
		Permanent: Continuous mode
	DISSIPATION POWER LOAD mas	28 W
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 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	330 ~ 550V AC
	FREQUENCY RANGE	47 ~ 63 Hz +-6%
	EFFICIENCY (Typ.)	>92 %
	AC CURRENT (330 – 500 Vac.)	0.95 – 0.85 A
	INRUSH CURRENT (Typ.)	< 17 A < 5 msec
	INTERNAL FUSE	T 6.3 A
	EXTERNAL FUSE (recommended)	16 A (MCB curve B)
	LEAKAGE CURRENT	< 1.5 mA @ 500 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	30 ~ 35 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
ENVIRONMENT	DC OK AKTIV SIGNAL (max.)	20 ~ 30 Vdc
	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 60204-1
	WITHSTAND VOLTAGE	I/P-O/P: 3k VAC I/P-FG: 1.6k VAC O/P-FG: 500 VAC
	PROTECTION CLASS	IP 20 (EN/IEC 60529)
	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 it 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	85x120x140 mm (3.34x4.72x5.51 in)
	PACKING	0.75 kg (1.9 lbs) each
	NOTE	All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

Mechanical Specification



TB1 Terminal Pin. No Assignment

Pin No.	Assignment (3 phase)
1	L1
2	L2
3	L3
4	FG ⏚
5	FG ⏚

TB2 Terminal Pin. No Assignment

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

DC OK Relay Contact

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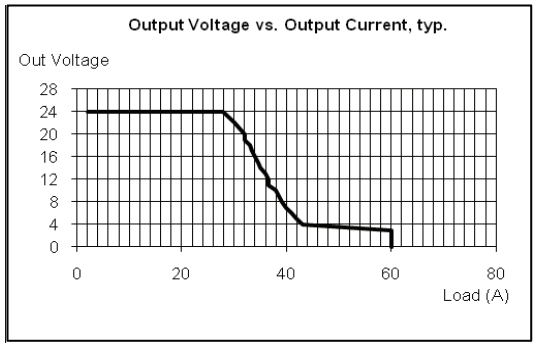
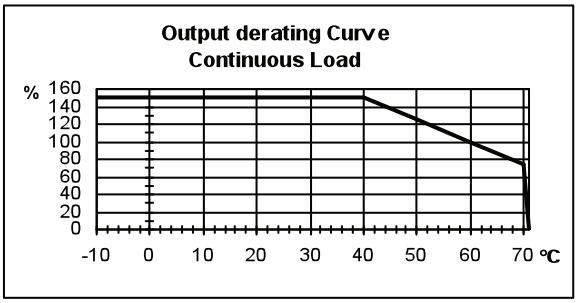
Output Derating Curve





Parallel Connection

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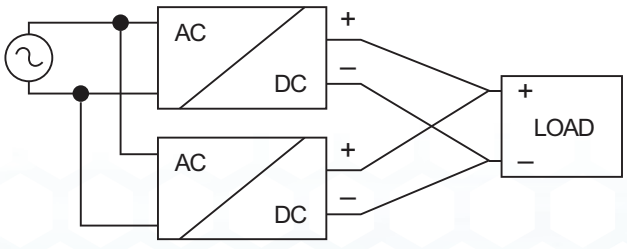

Easy Parallel conenction OFF (factory selection)

Easy Parallel ON

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