

PSA-24



Model PSA-24/PSA-24L

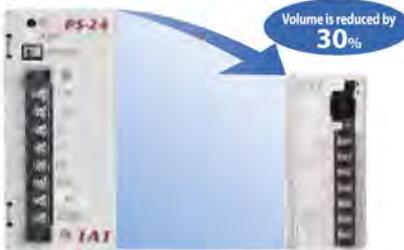
24VDC Power supply



Features

Compact

Compared with the conventional 24V power supply, it has a compact size, allowing a smaller installation space.



PS-24 **NEW** PSA-24

Output of internal data from the power supply

Possible to monitor the following data by connecting with R-unit:

- Output voltage
- Output current
- Load factor
- Cumulative energizing time
- Internal temperature
- Alarm for low fan rotational speed



Power supply calculator

By simulating actuator operations in advance, an optimum power supply capacity and the required number of power supply units are calculated.

Enter conditions of the actuators to be connected and set up operation patterns. Operation patterns can easily be set up by icons.

Enter conditions of the actuators.



Setting operation patterns.



Calculation results

The power supply capacity and the required number of power supply units are displayed. Current values and axis operation status are also displayed.

Calculation results are displayed.

計算結果	PSA-24必要容量
ピーク電力値 522.66 [W]	FAN電圧 2 [V]
平均電力値 108.07 [W]	FAN電流 2 [mA]

Required number of power supply units

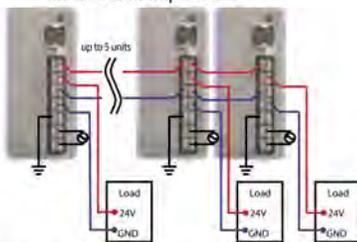


Current value graph

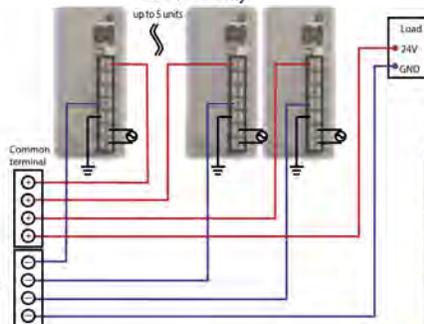


Parallel operation of up to 5 units is possible

In case of multiple loads



One load only



The number of parallel connections and allowable power supply

Number of units connected	Rated current [A]		Peak current [A]
	PSA-24 (without fan)	PSA-24L (with fan)	
1	8.5	13.8	17.0
2	15.3	24.8	30.6
3	22.95	37.3	45.9
4	30.6	49.7	61.2
5	38.25	62.1	76.5

(Note) Parallel operations under the following condition are not possible.
 * Parallel connection of PSA-24 (without fan specification) and PSA-24L (with fan specification).
 * Parallel connection with a power supply other than this unit.
 * Parallel connection with PS-24.

Specifications

tem		Specifications		Conditions
		PSA-24 (without fan)	PSA-24L (with fan)	
Power source voltage range		AC100V ~ AC230V ±10%		
Power current	AC100V	2.5A or less	3.9A or less	Continuous rated output 204W
	AC200V	1.4A or less	1.9A or less	Continuous rated output 204W
Power frequency range		50/60 Hz± 5%		
Power supply capacity	AC100V	250VA	390VA	Continuous rated output 204W
	AC200V	280VA	380VA	Continuous rated output 204W
Inrush Current (Note 1)	AC100V	27.4A (typ)		When Cold-started (40°C)
	AC200V	54.8A (typ)		
Momentary power failure resistance	50Hz	20 ms		
	60Hz	16 ms		
Electric shock protection mechanism		Class I		
Efficiency	AC100V	86% or more		Continuous rated output 204W
	AC200V	90% or more		
Output voltage range (Note 2)		17A (408W)		
Continuous rated output		8.5A (204W)	13.8A (330W)	
Peak output		17A (408W)		
Protective function		Protection against over current, over heat and over load.		
		Protection against over voltage, input low voltage and fan rotation		
Ambient operating temperature		0°C ~ +55°C (derating)		
Ambient operating humidity		5%RH - 85%RH		No condensing
Ambient operating atmosphere		Not exposed to corrosive gases or dusts.		
Vibration resistance		Oscillation frequency: 10-57Hz / Amplitude: 0.075mm Oscillation frequency: 57-150Hz / Acceleration: 9.8m/s ² Sweepage time of XYZ each direction: 10 minutes Number of sweepages: 10 times		
Shock resistance		Drop height 800mm, one corner, 3 edges, 6 surfaces		
Electric shock protection mechanism		Class I		
Degree of protection		Not applicable		
Calorific value	AC100V	28.6W		Continuous rated output 204W
	AC200V	20.4W		Continuous rated output 204W
Cooling method		Natural air cooling	Forced air cooling by fan unit	
Withstand voltage	AC input - DC output	Leak current 10mA		AC3000V, 1 minute
	AC input - FG	Leak current 10mA		AC2000V, 1 minute
	DE output - FG	Leak current 25mA		AC500V, 1 minute
Insulation resistance	AC input - DC output	DC500V 50MΩ or higher		
	AC input - FG	DC500V 50MΩ or higher		
	DE output - FG	DC500V 50MΩ or higher		
Leak current (Note 3)	AC100V	0.40mA typ		
	AC200V	0.75mA typ		
Safety standard		UL61010, EN61010-1		
		KC(EMC), EN55011		
Mass		805g	845g	

(Note 1) The pulse width of rush current is less than 5ms. During a parallel operation, the rush current will be multiplied by the number of units.

Please carefully select taking the characteristics into account, so that the breaker is not activated due to rush current.

(Note 2) This power supply features changing output voltage according to load to make enable parallel operations possible.

Therefore, this unit is for an exclusive use of IAI controllers. Please refer to the operation manual about output voltage by overload.

(Note 3) Represents leak current of the power supply unit.

 Caution	<ul style="list-style-type: none"> • This power supply is not a constant voltage power supply. The output voltage changes with the load (voltage decreases according to the load percentage). Therefore, do not connect any equipment other than IAI actuators. • Up to 5 units can be operated in parallel. Do not use any power supplies other than this power supply at the same time for parallel operations. • Note that serial operations are not possible. • As a rule, when operating multiple units (without fan) in a row, allow at least 10mm space between each power supply. (No space is necessary for the units with fan.) • This unit is a natural air-cooled power supply. Please give due consideration to natural convection so that heat does not build up around the power supply. • The case of this product also has a heat radiating effect. Do not touch the case after installation as it may result in severe burns.
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Controller

Controller overview

R-unit

RSEL (6-axis Cartesian Type)

RCP6S

PCON -CB/CFB

PCON -CBP (Pulse press)

PCON

ACON-CB DCON-CB

ACON DCON

SCON -CB

SCON-CB (Servo press)

SSEL

MSEL

XSEL

XSEL (SCARA)

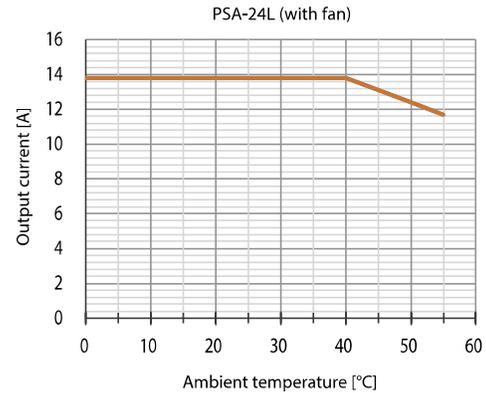
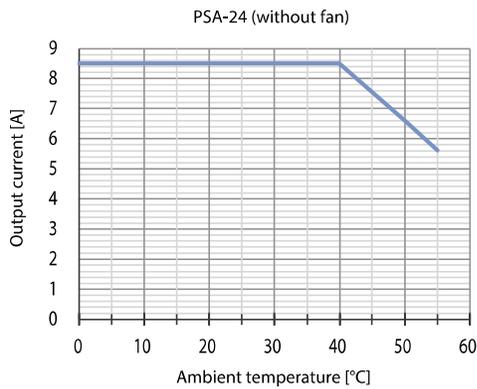
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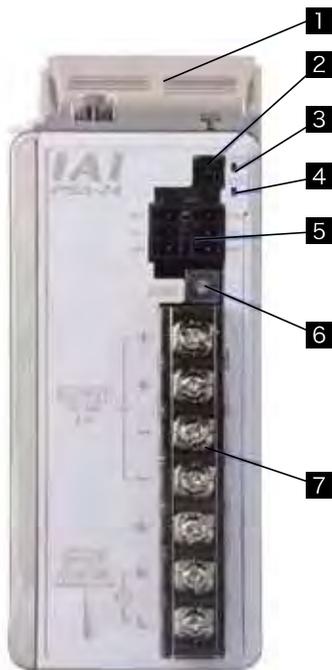
Software overview

Derating against ambient temperature

When the ambient temperature is higher than 40°C, please lower the output power according to the derating curve shown below.



Names



1 Fan unit

A unit to be connected when using at the rated continuous output 330W (PSA-24L).

2 Fan connecting unit

A connector for fan connection when using at the rated continuous output 330W.

3 Fan alarm LED 4 Normal operation LED

Two LEDs for indicating the conditions of the fan and the power supply.

Name	Panel mark	Color	Condition	Description
Fan alarm LED	FAN	Orange	Lighting	Abnormal fan rotation
			Flashing	Alarm for fan rotation
			Lights out	Normal fan rotation
Normal operation LED	SYS	Green	Lighting	Normal operation
			Lights out	Stopping

5 Connector for communications

A connector for monitoring the status data in the power supply by communication

6 Address switch for communications

Setting assigned communication slave addresses by connecting multiple power supplies via multi-drop.

7 Terminals for power supply

To connect the wiring for the AC input, frame grounding and output voltage.

External dimensions

CAD drawings can be downloaded from our website:
www.intelligentactuator.com



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(6-axis Cartesian Type)

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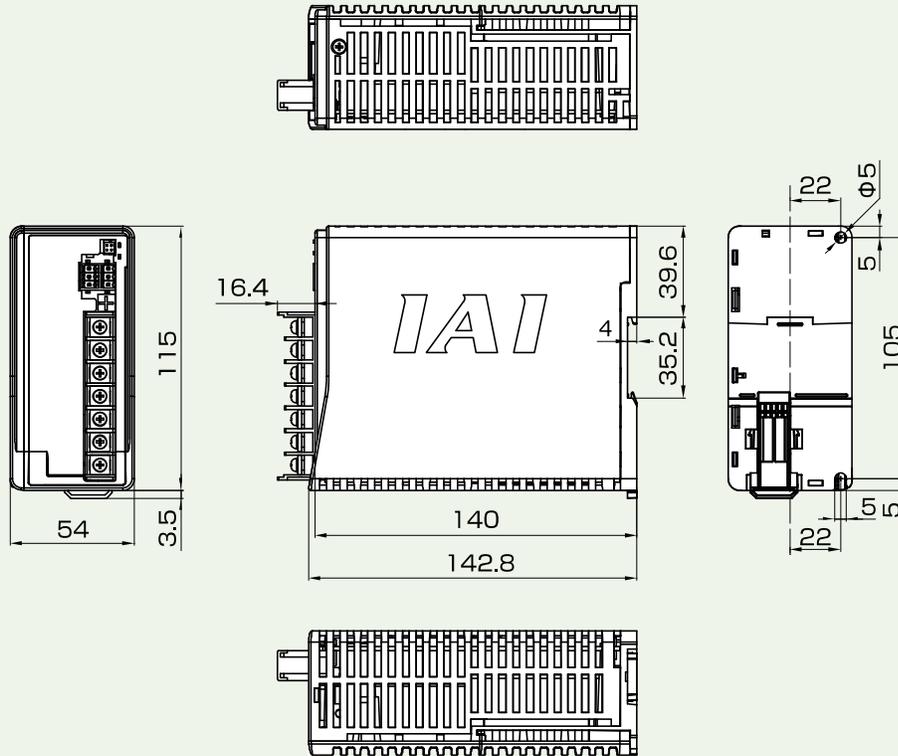
XSEL
(SCARA)

PSA-24

TB-03
/02

Software overview

PSA-24 (without fan)



PSA-24L (with fan)

