

## Checking Current Consumption and Power Consumption

After selecting a Power Supply Unit based on considerations such as the power supply voltage, calculate the current and power requirements for each Rack.

### Condition 1: Current Requirements

There are two voltage groups for internal power consumption: 5 V and 24 V.

Current consumption at 5 V (internal logic power supply)

Current consumption at 24 V (relay driving power supply)

### Condition 2: Power Requirements

For each Rack, the upper limits are determined for the current and power that can be provided to the mounted Units. Design the system so that the total current consumption for all the mounted Units does not exceed the maximum total power or the maximum current supplied for the voltage groups shown in the following tables.

The maximum current and total power supplied for CPU Racks and Expansion Racks according to the Power Supply Unit model are shown below.

**Note 1.** For CPU Racks, include the CPU Unit current and power consumption in the calculations. When expanding, also include the current and power consumption of the I/O Control Unit in the calculations.

**2.** For Expansion Racks, include the I/O Interface Unit current and power consumption in the calculations.

Power Supply Units	Max. current supplied		Max. total power supplied
	5 V	24 V (relay driving current)	
CJ1W-PA205C	5.0 A	0.8 A	25 W
CJ1W-PA205R	5.0 A	0.8 A	25 W
CJ1W-PA202	2.8 A	0.4 A	14 W
CJ1W-PD025	5.0 A	0.8 A	25 W
CJ1W-PD022	2.0 A	0.4 A	19.6 W

Conditions 1 and 2 below must be satisfied.

Condition 1: Maximum Current

(1) Total Unit current consumption at 5 V ≤ (A) value

(2) Total Unit current consumption at 24 V ≤ (B) value

Condition 2: Maximum Power

(1) × 5 V + (2) × 24 V ≤ (C) value

### Example: Calculating Total Current and Power Consumption

Example: When the Following Units are Mounted to a CJ-series CPU Rack Using a CJ1W-PA205R Power Supply Unit

Unit type	Model	Quantity	Voltage group	
			5 V	24 V
CPU Unit	CJ2H-CPU68-EIP	1	0.820 A	---
I/O Control Unit	CJ1W-IC101	1	0.020 A	---
Basic I/O Units (Input Units)	CJ1W-ID211	2	0.080 A	---
	CJ1W-ID231	2	0.090 A	---
Basic I/O Units (Output Units)	CJ1W-OC201	2	0.090 A	0.048 A
Special I/O Unit	CJ1W-DA041	1	0.120 A	---
CPU Bus Unit	CJ1W-CLK23	1	0.350 A	---
Current consumption	Total		$0.820 + 0.020 + 0.080 \times 2 + 0.090 \times 2 + 0.090 \times 2 + 0.120 + 0.350$	$0.048 \text{ A} \times 2$
	Result		1.83 A (≤ 5.0 A)	0.096 A (≤ 0.8 A)
Power consumption	Total		$1.83 \times 5 \text{ V} = 9.15 \text{ W}$	$0.096 \text{ A} \times 24 \text{ V} = 2.30 \text{ W}$
	Result		$9.15 + 2.30 = 11.45 \text{ W} (\leq 25 \text{ W})$	

**Note:** For details on Unit current consumption, refer to *Ordering Information*.

### Using the CX-Programmer to Display Current Consumption and Width

CPU Rack and Expansion Rack current consumption and width can be displayed by selecting Current Consumption and Width from the Options Menu in the CJ2 Table Window. If the capacity of the Power Supply Unit is exceeded, it will be displayed in red characters.

Example:

