UPS Input Power Supply

Please confirm before connecting which input power source you are using corresponds to in the table below. In case of unknown, please measure with the tester etc. and investigate the ground voltage.

To ensure the correct ground potential is used for the computer system and power supply device, connect to the UPS in accordance with the type of AC input power supply as shown in the table below.

①AC input power supply check

Check in advance whether the AC power supply that will be used corresponds to one of those shown in the table. If you are unsure, use a tester or other device to measure the voltage to ground and then make a judgment.

② Input wiring work

To ensure that the mark in the "Applicable" column becomes ○ or △, select the connection wires (phase) to the UPS input terminals R and N when carrying out the wiring work.

a. The ○ mark in the "Applicable" column indicates a standard connection of an ungrounded power supply or single-wire grounded power supply.
b. The △ mark indicates that voltage to ground (of both wires) is occurring (not excessive) in the UPS output terminal, so care needs to taken because the power supply will be short circuited if a single-wire ground is used on the load device side.
c. The × mark indicates that voltage to ground of the UPS output terminal is excessive. and may cause the load device to malfunction. Furthermore, using a single-wire ground on the load device side will cause the power supply to be short circuited, so change the wiring to ○ or △, or add an insulation transformer to the output side.

	Input Power Supply Type	Connection to UPS		Appli-cable	UPS Output Voltage to Ground*2		Notes
		R	N		U-G	V-G	
1	3-phase ungrounded power supply	A	B	○	Refer to notes	Refer to notes	The ground to voltage value is unstable because there is a floating voltage. Ground to voltage output: $V_{U-G}+V_{V-G}$= Approx. 200 V
		B	A				
		B	C				
		C	B				
		C	A				
		A	C				
2	Single-phase ungrounded power supply	A	B	○	Refer to notes	Refer to notes	
		B	A				
3	3-phase grounded power supply	A	B	○	Approx. 200 V	Approx. 0 V	1. Connect the ground phase to the N terminal side of the UPS input. 2. If the N terminal is not the ground phase: (1) The ground to voltage of the UPS output rises during non-synchronized operation. (2) If the UPS output side is single-wire grounded, a power supply short circuit occurs.
		C					
		A	C	×	Approx. 200 V (Approx. 400 V)	Approx. 200 V	
		C	A				
		B	A	×	Approx. 0 V (Approx. 400 V)	Approx. 200 V	
			C				
4	Single-phase grounded power supply	A	B	○	Approx. 200 V	Approx. 0 V	
		B	A	×	Approx. 0 V (Approx. 400 V)	Approx. 200 V	
5	Intermediate grounded power supply Single-phase, 3-wire	A	B	△	Approx. 100 V (Approx. 300 V)	Approx. 100 V	1. The ground to voltage of the UPS output rises during non-synchronized operation. 2. If the UPS output side is single-wire grounded, a power supply short circuit occurs.
		B	A				
6	Intermediate grounded power supply 3-phase, 4-wire	A	B	△	Approx. 120 V (Approx. 320 V)	Approx. 120 V	
		B	A				
		B	C				
		C	B				
		C	A				
		A	C				
7	Intermediate grounded power supply 3-phase, 3-wire	A	B	×	Approx. 100 V (Approx. 380 V)	Approx. 180 V	1. The ground to voltage of the UPS output rises during non-synchronized operation. 2. If the UPS output side is single-wire grounded, a power supply short circuit occurs.
		C					
		B	A	△	Approx. 100 V (Approx. 300 V)	Approx. 100 V	
			C				
		A	C				
		C	A				

*1. The voltage values in the table above are when the input/output voltage is 200 V. The values in parenthesis are the maximum values during non-synchronized operation.

*2. Nonstandard input power supply types are also shown in the table above.