

## Motors Loads Instruction Manual

### 1---AC Coupling Solution(Hybrid Solution)

When the PCS/HPS series is equipped with motor loads (such as water pumps, air conditioners, compressors, etc.), the following conditions must be met:

1.1 The total motor load rated power is not greater than half(50%) of the PCS/HPS rated power, and the maximum operating power is not greater than the PCS/HPS rated power;

1.2 When the rated power of a single motor is greater than 10KW or greater than one-eighth of the rated power of the equipment, a VFD is required.

	HPS30	HPS50	HPS100	HPS120	HPS150
Single Motor required VFD power (KW)	3.75	6.25	10	10	10
Total allowable power of motors (KW)	15	25	50	60	75
The total maximum operating power allowed by the motor(KW)	30	50	100	120	150

	PCS50	PCS100	PCS250	PCS500	PCS630
Single Motor required VFD power(KW)	6.25	10	10	10	10
Total allowable power of motors (KW)	25	50	125	250	315
The total maximum operating power allowed by the motor(KW)	50	100	250	500	630

## 2---DC Coupling Solution(New Solution)

When the PCS/HPS series is equipped with motor loads (such as water pumps, air conditioners, compressors, etc.), the following conditions must be met:

2.1 The total motor load rated power is not greater than 70% of the PCS/HPS rated power, and the maximum operating power is not greater than the PCS/HPS rated power.

2.2 When the rated power of a single motor is greater than 10KW or greater than one-eighth of the rated power of the equipment, a VFD is required.

	HPS30	HPS50	HPS100	HPS120	HPS150
Single Motor required VFD power(KW)	3.75	6.25	10	10	10
Total allowable power of motors(KW)	21	35	70	84	120
The total maximum operating power allowed by the motor(KW)	30	50	100	120	150

	PCS50	PCS100	PCS250	PCS500	PCS630
Single Motor required VFD power(KW)	6.25	10	10	10	10
Total allowable power of motors(KW)	35	70	175	350	441
The total maximum operating power allowed	50	100	250	500	630

by the motor(KW)					
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### **3--- VFD requirements**

3.1 According to the specifications of mainstream VFD such as Inovance VFD: voltage range -15%~+10%, frequency range 47HZ~53HZ/57HZ~63HZ, overcurrent 1.5 times rated current 60S protection.

### **4--- Voltage drop time**

4.1 Meet the above requirements within 20ms.