HITACHI
Inspire the Next

SJ-P1 Variable Frequency Drives

The SJ-P1 model is rated for single-phase applications, so even the most remote environments are now accessible.

Add a New Level of Control with a Hitachi SJ-P1

Hitachi drives eliminate the expense and complexity of additional equipment. Our SJ-P1 model has received approval for single-phase installations, so even the most remote environments are now accessible. The Hitachi-exclusive IVMS feature keeps your PMAC motors running in high torque at slow speeds—saving you both energy and operational costs.

HIGH PERFORMANCE

High torque at low speed resulting in a smoother operation

Sensorless vector control with ND rating

High speed rotation—up to 590 Hz

Trip reduction during acceleration and deceleration

EASY TO USE

Color TFT Display

Easily monitor, set or review operation data and parameters

Effortless data transfer

Error in spoken language

FLEXIBLE

Multimode operation - PMAC motors with IVMS feature

Customizable with slot-in cassettes Certified functional safety

EZSQ text editor

Allows users to develop custom solutions

Be Confident with the SJ-P1 Series from Hitachi

Hitachi continues to expand on the reliability of the latest SJ-P1 drives and now has received UL approval for use in single-phase input applications. Many of these applications exist in rural or remote locations where a three-phase power source is not economically accessible. The SJ-P1 series drives can help you get all the benefits of a variable frequency drive without adding additional hardware or modification of your equipment. Please review the other side for the correct size drives to operate the load requirement, and get the peace of mind that it is a UL-rated inverter.

Hitachi Industrial Equipment
Hitachi Industrial Equipment Systems Co., Ltd.
Hitachi America, Ltd.
HAL-SJP1_030819

Check out additional inverter options at **www.hitachi-america.us/ice/inverters** or call 980-500-7141.

200V Class Specifications

Model name (P1- _ _ _ -L)			00044	00080	00104	00156	00228	00330	00460	00600	00800	00930	01240	01530	01850	02290	02950
Applicable motor capacity (4 poles) (kW) (*1)		VLD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
		LD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
		ND	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Output	Rated output current (A)	VLD	4.4	8.0	10.4	15.6	22.8	33.0	46.0	60.0	80.0	93.0	124	153	185	229	295
		LD	3.7	6.3	9.4	12.0	19.6	30.0	40.0	56.0	73.0	85.0	113	140	169	210	270
		ND	3.2	5.0	8.0	11.0	17.5	25.0	32.0	46.0	64.0	76.0	95.0	122	146	182	220
	Overload current rating (*2)	VLD	110% 60sec / 120% 3sec														
		LD	120% 60sec / 150% 3sec														
		ND	150% 60sec / 200% 3sec														
	Output Current Rating Using Single-Phase Source	ND (A)						12.0	15.5	22.0	31.0	36.5	46.0	60.0	70.0	88.0	105.0
	Rated capacity (kVA) 200V	VLD	1.5	2.8	3.6	5.4	7.9	11.4	15.9	20.8	27.7	32.2	43.0	53.0	64.1	79.3	102.2
		LD	1.3	2.2	3.3	4.2	6.8	10.4	13.9	19.4	25.3	29.4	39.1	48.5	58.5	72.7	93.5
		ND	1.1	1.7	2.8	3.8	6.1	8.7	11.1	15.9	22.2	26.3	32.9	42.3	50.6	63.0	76.2
	Rated capacity (kVA) 240V	VLD	1.8	3.3	4.3	6.5	9.5	13.7	19.1	24.9	33.3	38.7	51.5	63.6	76.9	95.2	122.6
		LD	1.5	2.6	3.9	5.0	8.1	12.5	16.6	23.3	30.3	35.3	47.0	58.2	70.3	87.3	112.2
		ND	1.3	2.1	3.3	4.6	7.3	10.4	13.3	19.1	26.6	31.6	39.5	50.7	60.7	75.7	91.5
Input	Rated input AC voltage (*3)		Main circuit power supply: 3-phase 200 to 240V 50/60 Hz, Control power supply: 1-phase 200 to 240V 50/60 Hz														
	Permissible AC voltage/ Frequency fluctuation		AC voltage : 170 to 264V 50/60 Hz, Frequency : ± 5%														
	Power supply capacity (kVA) (*4)	VLD	2.0	3.6	4.7	7.1	10.3	15.0	20.9	27.2	36.3	42.2	56.3	69.4	83.9	103.9	133.8
		LD	1.7	2.9	4.3	5.4	8.9	13.6	18.1	25.4	33.1	38.6	51.3	63.5	76.7	95.3	122.5
		ND	1.5	2.3	3.6	5.0	7.9	11.3	14.5	20.9	29.0	34.5	43.1	55.3	66.2	82.6	99.8
Carrier frequency range (*5)		VLD	0.5 to 10.0kHz														
		LD	0.5 to 12.0kHz														
		ND	0.5 to 16.0kHz														

400V Class Specifications

Model name (P1- _ _ _ -H)			00041	00054	00083	00126	00175	00250	00310	00400	00470	00620	00770	00930	001160	01470	01760	02130	02520	03160
Applicable motor capacity (4 poles) (kW) (*1)		VLD	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160
		LD	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160
		ND	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132
Output	Rated output current (A)	VLD	4.1	5.4	8.3	12.6	17.5	25.0	31.0	40.0	47.0	62.0	77.0	93.0	116	147	176	213	252	316
		LD	3.1	4.8	6.7	11.1	16.0	22.0	29.0	37.0	43.0	57.0	70.0	85.0	105	135	160	195	230	290
		ND	2.5	4.0	5.5	9.2	14.8	19.0	25.0	32.0	39.0	48.0	61.0	75.0	91.0	112	150	182	217	260
	Overload current rating (*2)	VLD	110% 60sec / 120% 3sec																	
		LD	120% 60sec / 150% 3sec																	
		ND	150% 60sec / 200% 3sec																	
	Output Current Rating Using Single-Phase Source	ND (A)					6.0	8.0	12.0	16.0	19.0	24.0	30.0	37.0	45.0	56.0				
	Rated capacity (kVA) 400V	VLD	2.8	3.7	5.8	8.7	12.1	17.3	21.5	27.7	32.6	43.0	53.3	64.4	80.4	101.8	121.9	147.6	174.6	218.9
		LD	2.1	3.3	4.6	7.7	11.1	15.2	20.1	25.6	29.8	39.5	48.5	58.9	72.7	93.5	110.9	135.1	159.3	200.9
		ND	1.7	2.8	3.8	6.4	10.3	13.2	17.3	22.2	27.0	33.3	42.3	52.0	63.0	77.6	103.9	124.7	124.7	180.1
	Rated capacity (kVA) 500V	VLD	3.6	4.7	7.2	10.9	15.2	21.7	26.8	34.6	40.7	53.7	66.7	80.5	100.5	127.3	152.4	184.5	218.2	273.7
		LD	2.7	4.2	5.8	9.6	13.9	19.1	25.1	32.0	37.2	49.4	60.6	73.6	90.9	116.9	138.6	168.9	199.2	251.1
		ND	2.2	3.5	4.8	8.0	12.8	16.5	21.7	27.7	33.8	41.6	52.8	65.0	78.8	97.0	129.9	155.9	187.9	225.2
Input	Rated input AC voltage (*3)		Main circuit power supply: 3-phase 380 to 500V 50/60 Hz, Control power supply: 1-phase 380 to 500V 50/60 Hz																	
	Permissible AC voltage/ Frequency fluctuation		AC voltage : 323 to 550V 50/60 Hz, Frequency : ± 5%																	
	Power supply capacity (kVA) (*4)	VLD	3.7	4.9	7.5	11.4	15.9	22.7	28.1	36.3	42.6	56.3	69.9	84.4	105.2	133.4	159.7	193.2	228.6	286.7
		LD	2.8	4.4	6.1	10.1	14.5	20.0	26.3	33.6	39.0	51.7	63.5	77.1	95.3	122.5	145.2	176.9	208.7	263.1
		ND	2.3	3.6	5.0	8.3	13.4	17.2	22.7	29.0	35.4	43.5	55.3	68.0	82.6	101.6	136.1	163.3	196.9	235.9
Carrier frequency range (*5)		VLD	0.5 to 10.0kHz														0.5 to 8.0kHz			
		LD	0.5 to 12.0kHz														0.5 to 8.0kHz			
		ND	0.5 to 16.0kHz														0.5 to 10.0kHz			

Notes:
*1: The applicable motor refers to Hitachi standard 3-phase motor (4-pole). To use other motors, be sure to prevent the rated motor current (50Hz) from exceeding the rated output current of the inverter.
*2: Electronic thermal protection is valid in accordance to derating. *3: In order to comply with the Low Voltage Directive (LVD), it must be connected to a neutral grounding supply. 200V class: -Pollution degree 2 -Overvoltage category 3. 400V class: -Pollution degree 2 -Overvoltage category 3 (In the case the input supply is 380 to 460Vac) -Overvoltage category 2 (If the input supply is 460Vac or more). *4: The power supply capacity is the value of the output rated current at 220V / 440V. The impedance at the supply side may be affected by the wiring, breaker, input reactor, etc. *5: Carrier frequency may be limited in the range according to the use of drive. *6: The values for the sensorless vector control are assigned according to the values in the ND rating in the Hitachi standard motor table. Torque characteristics may vary by the control system and the motor in use. *7: Usually, an external regenerative braking is necessary. By your order it is possible to include the built-in braking circuit. By attaching the braking resistor the regenerative braking unit is no longer required.

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