

[Home](#) > [Products & Solutions](#) > [AC Drives \(LV\)](#) > [FRENIC-Ace](#) > [Specifications](#)

FRENIC-Ace

[Product information](#)

[Variation](#)

[Specifications](#)

[Three phase 400V class series](#)

[Common specifications](#)

[External Dimensions](#)

[Catalog Download](#)

[Document Download](#)

AC Drives(Low Voltage)

[Japan Lineup](#)

[Europe Lineup](#)

[North America Lineup](#)

[China Lineup](#)

[Asia Lineup](#)

[Taiwan Lineup](#)

[Korea Lineup](#)

[Contact Us](#)

[Download \(AC Drives\)](#)

Specifications

China

Three phase 400V class series

Items			Specifications											
Type			FRN □□□□ E2S-4C											
			0002	0004	0006	0007	0012	0022	0029	0037	0044	0059	0072	
Nominal applied motor ^{*1} [kW(HP)]			ND	0.75(1)	1.5(2)	2.2(3)	3.0(4)	5.5(7.5)	11(15)	15(20)	18.5(25)	22(30)	30(40)	37(50)
			HD	0.75(1)	1.1(1.5)	2.2(3)	3.0(4)	5.5(7.5)	7.5(10)	11(15)	15(20)	18.5(25)	22(30)	30(40)
			HND	0.75(1)	1.1(1.5)	2.2(3)	3.0(4) ¹⁰	5.5(7.5) ¹⁰	7.5(10)	11(15)	15(20)	18.5(25)	22(30)	30(40)
			HHD	0.4(1/2)	0.75(1)	1.5(2)	2.2(3)	3.7(5)	5.5(7.5)	7.5(10)	11(15)	15(20)	18.5(25)	22(30)
Output ratings	Rated capacity [kVA] ^{*2}	ND	1.6	3.1	4.2	5.3	9.1	16	22	28	34	45	55	
		HD	1.4	2.6	3.8	4.8	8.5	13	18	24	29	34	46	
		HND	1.4	2.6	3.8	4.8 ¹⁰	8.5 ¹⁰	13	18	24	29	34	46	
		HHD	1.1	1.9	3.2	4.2	6.9	9.9	14	18	23	30	34	
	Rated voltage [V] ^{*3}		Three-phase 380 to 480V (With AVR)											
	Rated current [A] ^{*4}	ND	2.1	4.1	5.5	6.9	12	21.5	28.5	37.0	44.0	59.0	72.0	
		HD	1.8	3.4	5.0	6.3	11.1	17.5	23.0	31.0	38.0	45.0	60.0	
		HND	1.8	3.4	5.0	6.3 ¹⁰	11.1 ¹⁰	17.5	23.0	31.0	38.0	45.0	60.0	
		HHD	1.5	2.5	4.2	5.5	9.0	13.0	18.0	24.0	30.0	39.0	45.0	
	Overload capability	ND, HND	120% of nominal current for 1min											
		HD	150% of nominal current for 1min											
		HHD	150% of nominal current for 1min or 200% of nominal current for 0.5s											
Input ratings	Main power supply		Three-phase 380 to 480V (With AVR)											
	Voltage/frequency variations		Voltage: +10 to -15% (Voltage unbalance:2% or less ^{*5} , Frequency: +5 to -5%)											
	Rated current without DCR ^{*5} [A]	ND	2.7	4.8	7.3	11.3	16.8	33.0	43.8	52.3	60.6	77.9	94.3	
		HD	2.7	3.9	7.3	11.3	16.8	23.2	33.0	43.8	52.3	60.6	77.9	
		HND	2.7	3.9	7.3	11.3 ¹⁰	16.8 ¹⁰	23.2	33.0	43.8	52.3	60.6	77.9	
		HHD	1.7	3.1	5.9	8.2	13.0	17.3	23.2	33.0	43.8	52.3	60.6	
	Rated current with DCR ^{*5} [A]	ND	1.5	2.9	4.2	5.8	10.1	21.1	28.8	35.5	42.2	57.0	68.5	
		HD	1.5	2.1	4.2	5.8	10.1	14.4	21.1	28.8	35.5	42.2	57.0	
		HND	1.5	2.1	4.2	5.8 ¹⁰	10.1 ¹⁰	14.4	21.1	28.8	35.5	42.2	57.0	
		HHD	0.85	1.6	3.0	4.4	7.3	10.6	14.4	21.1	28.8	35.5	42.2	
	Required power supply capacity ^{*6} [kVA]	ND	1.1	2.1	3.0	4.1	7.0	15	20	25	29	39	47	
		HD	1.1	1.5	3.0	4.1	7.0	10	15	20	25	29	39	
		HND	1.1	1.5	3.0	4.1 ¹⁰	7.0 ¹⁰	10	15	20	25	29	39	
		HHD	0.6	1.2	2.1	3.1	5.1	7.3	10	15	20	25	29	
Braking	Braking torque ^{*7} [%]	ND	53%	50%	48%	29%	27%	12%						
		HD	53%	68%	48%	29%	27%	15%						
		HND	53%	68%	48%	29% ¹⁰	27% ¹⁰	15%						
		HHD	100%			70%	40%	20%						
	DC braking		Starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60% (ND spec.), 0 to 80% (HD/HND spec.), 0 to 100% (HHD spec.) of nominal current											
	Braking chopper		Built-in											
	Minimum connectable resistance [ohm]		200		160		130	80	60	40	34.4	16		
	Braking resistor		Option											
DC reactor (DCR)			Option											
Enclosure (IEC60529)			IP20, UL open type											
Cooling method			Natural cooling			Fan cooling								
Mass [kg]			1.2	1.5	1.5	1.6	1.9	5.0	5.0	8.0	9.0	9.5	10	

* 1

Fuji 4-pole standard motor. At the selection of the inverter rating, consider not only the rating capacity(kW) is enough but also inverter output current is larger than selected the motor's nominal current.

* 2

Rated capacity is calculated by assuming the output rated voltage as 440 V.

* 3

The output voltage cannot exceed the power supply voltage.

* 4

When the carrier frequency (F26) is set to below value or higher, the inverter is sure to be necessary to derate their nominal current.
HHD spec.---type 0002 to 0012 : 8kHz, type 0022 to 0168 : 10kHz, type 0203 to 0590 : 6kHz
HND spec.---type 0002 to 0012 : 8kHz, type 0022 to 0059 : 10kHz, type 0072 to 0168 : 6kHz, type 0203 to 0590 : 4kHz
HD,ND spec.---All type : 4kHz
The rated output current at HD/ND spec. is decreased 2% for every 1 °C (1.8 °F) when ambient temperature is +40 °C (+104 °F) or more.

* 5

The value is calculated assuming that the inverter is connected with a power supply with the capacity of 500 kVA
(or 10 times the inverter capacity if the inverter capacity exceeds 50 kVA) and %X is 5%.
Be sure to use the DCR when applicable motor capacity is 75kW or above.

* 6

Obtained when a DC reactor (DCR) is used.