

12 Specifications

I

II

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

In this chapter, the inverter's model and type, standard specification, outside dimensions, and approx. mass are described.

12.1 Model and main standard specification

■ Standard specification depending on model

< 240 V class: HD rating >

Item		Specification														
Voltage class		240 V class														
Frame size		A1				A2	A3		A4			A5			A6	
Applicable motor (kW)		0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55
Applicable motor (HP)		0.5	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75
Rating	Type	VFAS3-														
	Form	2004P	2007P	2015P	2022P	2037P	2055P	2075P	2110P	2150P	2185P	2220P	2300P	2370P	2450P	2550P
	Output capacity (kVA) ^{*1}	1.3	1.8	3.0	4.3	7.1	9.7	12.5	17.8	24.2	29.9	35.3	46.9	56.8	67.1	80.4
	Output current (A) ^{*2}	3.3	4.6	8.0	11.2	18.7	25.4	32.7	46.8	63.4	78.4	92.6	123	149	176	211
	Output voltage	3-phase 200 V to 240 V (The maximum output voltage is equal to the input supply voltage)														
	Overload current rating	150%-1 minute, 180%-2 s														
Electrical braking	Dynamic braking circuit	Built-in													Optional	
	Dynamic braking resistor	External braking resistor (Optional)														
Power supply	Voltage-frequency	3-phase 200 V to 240 V - 50/60 Hz														
	Allowable fluctuation	Voltage 170 V to 264 V ^{*3} , Frequency \pm 5%														
	Required power supply capacity (kVA) ^{*4}	0.7	1.4	2.4	3.7	5.9	7.7	10.5	15.7	20.6	24.9	30.7	40.5	49.6	61.0	73.3
Degree of protection (IEC60529)		IP20												IP00		
Cooling method		Forced air-cooled														
Cooling fan noise (dBA) (Reference value) ^{*5}		58				54	60		64			63			70	
Color		RAL7016 / RAL7035														
EMC filter		No EMC filter														
DC reactor		Built-in														
UL type1 kit		Built-in													Optional	

*1 Capacity is calculated at 220 V for the 240 V class.

*2 Indicates rated output current when setting <F300: Carrier frequency> into 4 kHz for frame size A1 to A5, 2.5 kHz for frame size A6.

*3 Lower limit of voltage for 240 V class is 180 V when the inverter is used continuously (load of 100%).

*4 Required power supply capacity varies with the value of the power supply side inverter impedance (including those of the input reactor and wires).

*5 These acoustic noise values are not guaranteed because they are just reference values.

< 240 V class: ND rating >

Item		Specification														
Voltage class		240 V class														
Frame size		A1			A2	A3		A4			A5			A6		
Applicable motor (kW)		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Applicable motor (HP)		1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100
Rating	Type	VFAS3-														
	Form	2004P	2007P	2015P	2022P	2037P	2055P	2075P	2110P	2150P	2185P	2220P	2300P	2370P	2450P	2550P
	Output capacity (kVA) *1	1.8	3.0	4.3	7.1	9.7	12.5	17.8	24.2	29.9	35.3	46.9	56.8	67.1	80.4	107
	Output current (A) *2	4.6	8.0	11.2	18.7	25.4	32.7	46.8	63.4	78.4	92.6	123	149	176	211	282
	Output voltage	3-phase 200 V to 240 V (The maximum output voltage is equal to the input supply voltage)														
	Overload current rating	120%-1 minute, 135%-2 s														
Electrical braking	Dynamic braking circuit	Built-in													Optional	
	Dynamic braking resistor	External braking resistor (Optional)														
Power supply	Voltage-frequency	3-phase 200 V to 240 V - 50/60 Hz														
	Allowable fluctuation	Voltage 170 V to 264 V *3, Frequency ± 5%														
	Required power supply capacity (kVA) *4	1.2	2.3	3.3	5.9	7.8	10.3	15.0	20.6	24.9	29.4	40.5	49.3	59.6	73.3	98.1
Degree of protection (IEC60529)		IP20												IP00		
Cooling method		Forced air-cooled														
Cooling fan noise (dBA) (Reference value) *5		58			54	60		64			63			70		
Color		RAL7016 / RAL7035														
EMC filter		No EMC filter														
DC reactor		Built-in														
UL type1 kit		Built-in													Optional	

*1 Capacity is calculated at 220 V for the 240 V class.

*2 Indicates rated output current when setting <F300: Carrier frequency> into 4 kHz for frame size A1 to A5, 2.5 kHz for frame size A6.

*3 Lower limit of voltage for 240 V class is 180 V when the inverter is used continuously (load of 100%).

*4 Required power supply capacity varies with the value of the power supply side inverter impedance (including those of the input reactor and wires).

*5 These acoustic noise values are not guaranteed because they are just reference values.

< 480 V class: HD rating >

Item		Specification												
Voltage class		480 V class												
Frame size		A1				A2		A3			A4			
Applicable motor (kW)		0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37
Applicable motor (HP)		0.5	1	2	3	5	7.5	10	15	20	25	30	40	50
Rating	Type	VFAS3-												
	Form	4004PC	4007PC	4015PC	4022PC	4037PC	4055PC	4075PC	4110PC	4150PC	4185PC	4220PC	4300PC	4370PC
	Output capacity (kVA) ^{*1}	1.1	1.7	3.0	4.3	7.1	9.7	12.6	17.9	24.2	29.9	35.3	46.9	56.8
	Output current (A) ^{*2}	1.5	2.2	4.0	5.6	9.3	12.7	16.5	23.5	31.7	39.2	46.3	61.5	74.5
	Output voltage	3-phase 380 V to 480 V (The maximum output voltage is equal to the input supply voltage)												
	Overload current rating	150%-1 minute, 180%-2 s												
Electrical braking	Dynamic braking circuit	Built-in												
	Dynamic braking resistor	External braking resistor (Optional)												
Power supply	Voltage-frequency	3-phase 380 V to 480 V - 50/60 Hz												
	Allowable fluctuation	Voltage 323V to 528V ^{*3} , Frequency ± 5%												
	Required power supply capacity (kVA) ^{*4}	0.7	1.4	2.6	3.9	6.6	8.5	11.4	16.6	22.3	27.3	32.7	44.3	53.9
Degree of protection (IEC60529)		IP20												
Cooling method		Forced air-cooled												
Cooling fan noise (dBA) (Reference value) ^{*5}		58				54		60			64			
Color		RAL7016 / RAL7035												
EMC filter		Built-in												
DC reactor		Built-in												
UL type1 kit		Built-in												

Item		Specification									
Voltage class		480 V class									
Frame size		A5			A6			A7	A8		
Applicable motor (kW)		45	55	75	90	110	132	160	200	220	280
Applicable motor (HP)		60	75	100	125	150	200	250	300	350	450
Rating	Type	VFAS3-									
	Form	4450PC	4550PC	4750PC	4900PC	4110KPC	4132KPC	4160KPC	4200KPC	4220KPC	4280KPC
	Output capacity (kVA) *1	67.1	80.8	111	132	161	191	239	295	325	419
	Output current (A) *2	88.0	106	145	173	211	250	314	387	427	550
	Output voltage	3-phase 380 V to 480 V (The maximum output voltage is equal to the input supply voltage)									
	Overload current rating	150%-1 minute, 180%-2 s						150%-1 minute, 165%-2s			
Electrical braking	Dynamic braking circuit	Built-in			Optional			Built-in	Optional		
	Dynamic braking resistor	External braking resistor (Optional)									
Power supply	Voltage-frequency	3-phase 380 V to 480 V - 50/60 Hz						3-phase 380 to 440 V - 50 Hz, 3-phase 380 to 480 V - 60 Hz			
	Allowable fluctuation	Voltage 323 V to 528 V *3, Frequency ± 5%						Voltage 323 to 484 V - 50 Hz, 323 V to 528 V - 60 Hz *3, Frequency ± 5%			
	Required power supply capacity (kVA) *4	65.6	79.5	108	133	155	181	225	275	308	379
Degree of protection (IEC60529)		IP20				IP00					
Cooling method		Forced air-cooled									
Cooling fan noise (dBA) (Reference value) *5		63			70			73	76		
Color		RAL7016 / RAL7035									
EMC filter		Built-in									
DC reactor		Built-in						Attached			
UL type1 kit		Built-in			Optional			-			

*1. Capacity is calculated at 440 V for the 480 V class.

*2. Indicates rated output current when setting <F300: Carrier frequency> into 4 kHz for frame size A1 to A5, 2.5 kHz for frame size A6 to A8.

*3. Lower limit of voltage for 480 V class is 342 V when the inverter is used continuously (load of 100%).

*4. Required power supply capacity varies with the value of the power supply side inverter impedance (including those of the input reactor and wires).

*5. These acoustic noise values are not guaranteed because they are just reference values.

< 480V class: ND rating >

Item		Specification												
Voltage class		480V class												
Frame size		A1				A2		A3			A4			
Applicable motor (kW)		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45
Applicable motor (HP)		1	2	3	5	7.5	10	15	20	25	30	40	50	60
Rating	Type	VFAS3-												
	Form	4004PC	4007PC	4015PC	4022PC	4037PC	4055PC	4075PC	4110PC	4150PC	4185PC	4220PC	4300PC	4370PC
	Output capacity (kVA) ^{*1}	1.7	3.0	4.3	7.1	9.7	12.6	17.9	24.2	29.9	35.3	46.9	56.8	67.1
	Output current (A) ^{*2}	2.2	4.0	5.6	9.3	12.7	16.5	23.5	31.7	39.2	46.3	61.5	74.5	88.0
	Output voltage	3-phase 380 V to 480 V (The maximum output voltage is equal to the input supply voltage)												
	Overload current rating	120%-1 minute, 135%-2 s												
Electrical braking	Dynamic braking circuit	Built-in												
	Dynamic braking resistor	External braking resistor (Optional)												
Power supply	Voltage-frequency	3-phase 380 V to 480 V - 50/60 Hz												
	Allowable fluctuation	Voltage 323 V to 528 V ^{*3} , Frequency \pm 5%												
	Required power supply capacity (kVA) ^{*4}	1.2	2.4	3.4	6.1	8.3	10.9	15.6	21.3	26.4	31.4	42.0	52.4	63.2
Degree of protection (IEC60529)		IP20												
Cooling method		Forced air-cooled												
Cooling fan noise (dBA) (Reference value) ^{*5}		58				54		60			64			
Color		RAL7016 / RAL7035												
EMC filter		Built-in												
DC reactor		Built-in												
UL type1 kit		Built-in												

Item		Specification									
Voltage class		480 V class									
Frame size		A5			A6			A7	A8		
Applicable motor (kW)		55	75	90	110	132	160	220	250	280	315
Applicable motor (HP)		75	100	125	150	200	250	350	400	450	500
Rating	Type	VFAS3-									
	Form	4450PC	4550PC	4750PC	4900PC	4110KPC	4132KPC	4160KPC	4200KPC	4220KPC	4280KPC
	Output capacity (kVA) *1	80.8	111	132	161	191	230	325	367	419	469
	Output current (A) *2	106	145	173	211	250	302	427	481	550	616
	Output voltage	3-phase 380 V to 480 V (The maximum output voltage is equal to the input supply voltage)									
	Overload current rating	120%-1 minute, 135%-2 s									
Electrical braking	Dynamic braking circuit	Built-in			Optional			Built-in	Optional		
	Dynamic braking resistor	External braking resistor (Optional)									
Power supply	Voltage-frequency	3-phase 380 V to 480 V - 50/60 Hz						3-phase 380 to 440 V - 50 Hz, 3-phase 380 to 480 V - 60 Hz			
	Allowable fluctuation	Voltage 323 V to 528 V *3, Frequency \pm 5%						Voltage 323 to 484 V - 50 Hz, 323 V to 528 V - 60 Hz *3, Frequency \pm 5%			
	Required power supply capacity (kVA) *4	77.0	103	125	155	181	214	296	335	379	422
Degree of protection (IEC60529)		IP20				IP00					
Cooling method		Forced air-cooled									
Cooling fan noise (dBA) (Reference value) *5		63			70			73	76		
Color		RAL7016 / RAL7035									
EMC filter		Built-in									
DC reactor		Built-in						Attached			
UL type1 kit		Built-in			Optional			-			

*1. Capacity is calculated at 440 V for the 480 V class.

*2. Indicates rated output current when setting <F300: Carrier frequency> into 4 kHz for frame size A1 to A5, 2.5 kHz for frame size A6 to A8.

*3. Lower limit of voltage for 480 V class is 342 V when the inverter is used continuously (load of 100%).

*4. Required power supply capacity varies with the value of the power supply side inverter impedance (including those of the input reactor and wires).

*5. These acoustic noise values are not guaranteed because they are just reference values.