

Specifications

Model CIMR-G7A□□□□		20P4	20P7	21P5	22P2	23P7	25P5	27P5	2011	2015
Max. Applicable Motor Output (kW) (Note 1.)		0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Output Characteristics	Inverter Capacity (kVA)	1.2	2.3	3.0	4.6	6.9	10	13	19	25
	Rated Current (A)	3.2	6	8	12	18	27	34	49	66
	Max. Voltage	3-phase, 200/208/220/230/240 V (Proportional to input voltage)								
	Max. Frequency	400 Hz by constant setting (Note 2.)								
	Rated Input Voltage and Frequency	3-phase 200/208/220/230/240 V, 50/60 Hz (Note 3.)								
Power Supply	Allowable Voltage Fluctuation	+10% to -15%								
	Allowable Frequency Fluctuation	±5%								
Harmonic Wave Suppression	DC Reactor	Option								
	12-Pulse Input	Not possible								
Model CIMR-G7A□□□□		2018	2022	2030	2037	2045	2055	2075	2090	2110
Max. Applicable Motor Output (kW) (Note 1.)		18.5	22	30	37	45	55	75	90	110
Output Characteristics	Inverter Capacity (kVA)	30	37	50	61	70	85	110	140	160
	Rated Current (A)	80	96	130	160	183	224	300	358	415
	Max. Voltage	3-phase, 200/208/220/230/240 V (Proportional to input voltage)								
	Max. Frequency	400 Hz by constant setting (Note 2.)								
	Rated Input Voltage and Frequency	3-phase 200/208/220/230/240 V, 50/60 Hz (Note 3.)								
Power Supply	Allowable Voltage Fluctuation	+10% to -15%								
	Allowable Frequency Fluctuation	±5%								

Harmonic Wave	DC Reactor	Provided
Suppression	12-Pulse Input	Possible (Note 4.)

Note 1: Our standard 4-pole motors are used for max. applicable motor output. Choose an Inverter model whose rated current is allowable within the motor rated current range. Do not choose a larger motor than the maximum applicable motor.

2: The maximum frequency is 60 Hz for open-loop vector control 2.

3: When using a 200 V class, 37 kW or higher Inverter with a cooling fan, use a three-phase 200/208/220 V 50-Hz or 200/208/220/230 V 60-Hz power supply. A transformer is required for 230 V 50-Hz and 240 V 50/60-Hz cooling fan power supplies.

4: An optional 3-winding transformer is required for 12-pulse input.

400 V Class

Model CIMR-G7A□□□□	40P4	40P7	41P5	42P2	43P7	45P5	47P5	4011	4015	4018	4022	
Max. Applicable Motor Output (Note 1.) (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	
Inverter Capacity (kVA)	1.4	2.6	3.7	4.7	6.9	11	16	21	26	32	40	
Output Characteristics Rated Current (A)	1.8	3.4	4.8	6.2	9	15	21	27	34	42	52	
Max. Voltage	3-phase, 380/400/415/440/460/480 V (Proportional to input voltage)											
Max. Frequency	400 Hz by constant setting (Note 2.)											
Rated Input Voltage and Frequency	3-phase 380/400/415/440/460/480 V, 50/60 Hz											
Power Supply Allowable Voltage Fluctuation	+10% to -15%											
Allowable Frequency Fluctuation	±5%											
Harmonic Wave Suppression	DC Reactor	Option									Provided	
	12-Pulse Input	Not possible									Possible (Note 3.)	
Model CIMR-G7A□□□□	4030	4037	4045	4055	4075	4090	4110	4132	4160	41 ^{*85}	42 ^{*20}	43 ^{*0}

Max. Applicable Motor Output (Note 1.) (kW)		30	37	45	55	75	90	110	132	160	185	220	300
	Inverter Capacity (kVA)	50	61	74	98	130	150	180	210	230	280	340	460
Output Characteristics	Rated Current (A)	65	80	97	128	165	195	240	270	302	370	450	605
	Max. Voltage	3-phase, 380/400/415/440/460/480 V (Proportional to input voltage)											
	Max. Frequency	400 Hz by constant setting (Note 2.)											
	Rated Input Voltage and Frequency	3-phase 380/400/415/440/460/480 V, 50/60 Hz											
Power Supply	Allowable Voltage Fluctuation	+10% to -15%											
	Allowable Frequency Fluctuation	±5%											
Harmonic Wave Suppression	DC Reactor	Provided											
	12-Pulse Input	Possible (Note 3.)											

*: The main circuit of 400 V Class Inverters uses a 3-level control method.

Note 1: Our standard 4-pole motors are used for max. applicable motor output. Choose an Inverter model whose rated current is allowable within the motor rated current range. Do not choose a larger motor than the maximum applicable motor.

2: The maximum frequency is 60 Hz for open-loop vector control 2.

3: An optional 3-winding transformer is required for 12-pulse input.

Enclosures

	Model CIMR-G7A□□□□	20P4	20P7	21P5	22P2	23P7	25P5	27P5	2011	2015	
200 V Class	Enclosed Type [NEMA 1 (Type 1)]	Possible as standard									
	Open Chassis Type (IP00)	Possible by removing the upper and lower cover of enclosed type									
200 V Class	Model CIMR-G7A□□□□	2018	2022	2030	2037	2045	2055	2075	2090	2110	

	Enclosed Type [NEMA 1 (Type 1)]	Possible with option										Not possible	
	Open Chassis Type (IP00)	Possible as standard											
	Model CIMR- G7A□□□□	40P4	40P7	41P5	42P2	43P7	45P5	47P5	4011	4015	4018	4022	
400 V Class	Enclosed Type [NEMA 1 (Type 1)]	Possible as standard										Possible with option	
	Open Chassis Type (IP00)	Possible by removing the upper and lower cover of enclosed type										Possible as standard	
	Model CIMR- G7A□□□□	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220	4300
400 V Class	Enclosed Type [NEMA 1 (Type 1)]	Possible with option											Not possible
	Open Chassis Type (IP00)	Possible as standard											

Enclosed Type [NEMA 1 (Type 1)] :

Provides a clean and ventilated environment within the enclosure. Front and rear panels are firmly secured (e.g. front, rear, right, left, top, bottom).

Open Chassis Type (IP00):

Designed for mounting in a customer's enclosure. Constructed so that openings do not permit direct or inadvertent access to live parts by personnel.

200/400 V Class

Control Characteristics	Control Method	Sine wave PWM [Flux vector, open loop vector 1 and 2, V/f, V/f with PG (switched by parameter)]
	Starting Torque	150% at 0.3 Hz (open loop vector control 2), 150% at 0 min ⁻¹ (Flux vector control) (Note 1.)
	Speed Control Range	1:200 (open loop vector control 2), 1:1000 (Flux vector control) (Note 1.)
	Speed Control Accuracy	±0.2% (open loop vector control 2 at 25°C ±10°C), ±0.02% (Flux vector control at 25°C ±10°C) (Note 1.)
	Speed Response	10 Hz (open loop vector control 2), 40 Hz (Flux vector control) (Note 1.)

Torque Limit	Can be set by parameter: 4 steps available (only with vector control)	
Torque Accuracy	±5%	
Frequency Control Range	0.01 Hz to 400 Hz (Note 2.)	
Frequency Accuracy (Temperature Change)	Digital reference: ±0.01%, -10°C to 40°C; Analog reference: ±0.1%, 25°C ±10°C	
Frequency Setting Resolution	Digital reference: 0.01 Hz; Analog reference: 0.03 Hz/60 Hz (11-bit + sign)	
Output Frequency Resolution (Calculation resolution)	0.001 Hz	
Overload Capacity	150% of rated output current for 1 minute, 200% of rated output current for 0.5 s	
Frequency Setting Signal	-10 to 10 V, 0 to 10 V, 4 to 20 mA, pulse train	
Accel/Decel Time	0.01 to 6000.0 s (Accel/Decel time setting independently, 4 steps available)	
Braking Torque	Approx. 20% (Approx. 125% when using braking resistor) (Note 3.) Built-in braking transistor provided for Inverters of 15 kW or less (200/400 V)	
Main Control Function	Momentary power loss restart, Speed search, Overtorque detection, Torque limit, 17-step speed operation (maximum), Accel/decel time changeover, S-curve accel/decel, 3-wire sequence, Auto-tuning (rotational, stationary), DWELL, Cooling fan ON/OFF, Slip compensation, Torque compensation, Jump frequency, Frequency upper/lower limit settings, DC injection braking at start/stop, High slip braking, PID control (with sleep function), Energy-saving control, MEMOBUS communication (RS-485/422 max. 19.2 kbps), Fault retry, Constant copy, Droop control, Torque control, Speed/torque control changeover, etc.	
Protective Functions	Motor Overload Protection	Electronic thermal overload relay
	Instantaneous Overcurrent	Motor coasts to stop at approx. 200% rated output current.
	Fuse Protection	Motor coasts to stop at blown fuse.
	Overload	150% of rated output current for 1 minute, 200% of rated output current for 0.5 s
	Overvoltage	Motor coasts to stop if the main circuit voltage exceeds approx.

		410 VDC (approx. 820 VDC for 400 V class).
	Undervoltage	Motor coasts to stop if the main circuit voltage drops to approx. 190 VDC (approx. 380 VDC for 400 V class) or below.
	Momentary Power Loss	Immediately stop after 15 ms or longer power loss (at factory setting). Continuous operation during power loss less than 2 s (standard).
	Fin Overheat	Thermistor
	Stall Prevention	Stall prevention during acceleration/deceleration and constant speed operation
	Ground Fault	Provided by electronic circuit (overcurrent level)
	Power Charge Indication	Indicates until the main circuit voltage reaches 50 V.
	Location	Indoor (Protected from corrosive gasses and dust)
	Humidity	95% RH (non-condensing)
	Storage Temperature	-20 to 60°C (for short period during shipping)
Environmental Conditions	Ambient Temperature	-10 to 40°C for NEMA 1 (type 1), -10 to 45°C for open chassis type
	Altitude	1000 m or lower
	Vibration	Up to 9.8 m/s ² (1G) at a vibration frequency of 20 Hz, up to 2 m/s ² (0.2G) at a vibration frequency of 20 to 50 Hz

Note 1: Specifications for open loop vector control 1/2 and flux vector control require rotational auto-tuning.

2: The maximum frequency is 60 Hz for open-loop vector control 2.

3: When using a Braking Resistor or Braking Resistor Unit, set L3-04 = 0 (deceleration stall prevention).

If not, the motor may not stop at the set time.