

# Specifications

Voltage Class		200 V				400 V						
Model Number CIMR-ACA		25P5	2011	2022	2045	45P5	4011	4022	4045	4075	4110	4160
Max. Applicable Motor Output*1 kW		5.5	11	22	45	5.5	11	22	45	75	110	160
Rated Input Current*2 A		26	47	91	174	14	26	49	92	157	228	287
Output Characteristics	Rated Output Capacity kVA	9	17	33	63	10	19	36	67	114	166	209
	Rated Output Current*3 A	27	49	96	183	15	27	52	97	165	240	302
	Max. Output Voltage	95 % of input voltage										
	Max. Output Frequency	Frequencies supported up to 120 Hz using parameter setting										
Power Supply Characteristics	Rated Voltage and Frequency	3-phase, 200/208/220 V, 50/60 Hz					3-phase, 380/400/415/440/460/480 V, 50/60 Hz					
	Allowable Voltage Fluctuation	+10% to -15%										
	Allowable Frequency Fluctuation	±3% (Frequency fluctuation rate: 1 Hz/100 ms or less)										
	Allowable Power Voltage Imbalance between Phases	Within 2%										
	Input Power Factor	0.95 or more (When the rated load is applied.)										
Control Characteristics	Control Method	Sine-wave PWM [Flux vector control, open-loop vector control, V/f control (switched by parameter setting)]										
	Torque Characteristics	150% / 0 Hz (Flux vector control)*4										
	Speed Control Range	1 : 1000 (Flux vector control)*4										
	Speed Control Accuracy*5	±0.2% (Open-loop vector control : 25°C ±10°C)*4, ±0.05% (Flux vector control : 25°C ±10°C)*4										
	Speed Control Response	30 Hz (Flux vector control)*4										
	Torque Limits	Provided for vector control only (4 quadrant steps can be changed by parameter settings.)										
	Torque Accuracy	±10% (Flux vector control : 25°C ±10°C with a vector motor, carrier frequency of 4 kHz)*4										
	Frequency Control Range	0.01 Hz to 120 Hz										
	Frequency Accuracy (Temperature Characteristics)	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 (11bit with no sign)										
	Output Frequency Resolution	0.001 Hz										
	Overload Capacity*6	150% of rated output current per minute (carrier frequency of 4 kHz)										
	Accel/Decel Time	0.00 to 6000.0 s (4 selectable combinations of independent acceleration and deceleration settings)										
Braking Torque	Same overload capacity for motoring and regeneration											
Main Control Functions	Momentary power loss restart, Speed search, Overtorque detection, Torque limit, 17-speed control (maximum), Accel/decel time change, S-curve accel/decel, 3-wire sequence, Autotuning (rotational or stationary), Dwell function, Cooling fan ON/OFF control, Slip compensation, Torque compensation, Jump frequency, Frequency upper/lower limit settings, DC injection braking at start/stop, PID control (with sleep function), MEMOBUS communication (RS-485/422, max.19.2 kbps), Fault restart, Droop control, Parameter copy, Torque control, Speed/torque control switching, etc.											
Protective Functions	Regenerative Function	Provided										
	Motor Protection	Protection by electronic thermal overload relay.										
	Instantaneous Overcurrent	Stops at approx. 200% of rated output current.										
	Fuse Blown Protection	Stops for fuse blown.										
	Overload Protection	150% of rated output current per minute (carrier frequency of 4 kHz)										
	Overvoltage Protection	Stops when input power supply voltage is greater than 250 VAC.					Stops when input power supply voltage is greater than 550 VAC.					
	Undervoltage Protection	Stops when input power supply voltage is less than 150 VAC.					Stops when input power supply voltage is less than 300 VAC.					
	Momentary Power Loss	Stops for 2 ms or more. By parameter setting, operation can be continued if power is restored within 2 s.*7										
	Cooling Fin Overheating	Protection by thermistor.										
	Stall Prevention	Stall prevention during acceleration, deceleration, or running.										
Grounding Protection*8	Protection by electronic circuits.											
Charge Indicator	Remains lit until DC bus voltage falls below 50 V.											
Environment	Ambient Operating Temperature	-10°C to +40°C (Enclosed wall-mounted type), -10°C to +45°C (Open chassis type)										
	Ambient Operating Humidity	95% RH max. (with no condensation)										
	Storage Temperature	-20°C to +60°C (short-term temperature during transportation)										
	Application Site	Indoor (no corrosive gas, dust, etc.)										
	Altitude	1000 m max.										
Vibration		10 Hz to 20 Hz : 9.8 m/s <sup>2</sup>										
		20 Hz to 55 Hz : 5.9 m/s <sup>2</sup> (Motor output : 22 kW or less), 2.0 m/s <sup>2</sup> (Motor output : 45 kW or more).										
Protective Structure		Open chassis type (IP00) and enclosed wall-mounted type (NEMA Type1)										

- \*1: The motor capacity (kW) refers to a Yaskawa 4-pole motor. The rated output current of the MxC output amps should be equal to or greater than the motor rated current.
- \*2: The rated current will vary in accordance with the values of the voltage or impedance of the power supply (including the power transformer, the input reactor, and wires).
- \*3: Required to reduce the rated output current in accordance with the values of the carrier frequencies or control method.
- \*4: Rotational autotuning must be performed to ensure obtaining the specifications given for open-loop or flux vector control.
- \*5: The speed control accuracy depends on the installation conditions and type of motor used. Contact your Yaskawa representative for details.
- \*6: Applications with repetitive loads may require derating (reducing the MxC's carrier frequency and rated current, which requires a larger frame size MxC). Contact your Yaskawa representative for details.
- \*7: If the CIMR-ACA25P5, 2011, 2022, 45P5, or 4011 needs two seconds or more to ride through momentary power loss, a back-up capacitor unit is required. If Momentary Power Loss Detection Selection (L2-01) is enabled, MxC will stop 2 ms after momentary power loss occurs. Contact your Yaskawa representative for details about use in trolley cranes and other such application that tend to experience momentary power losses or phase loss.
- \*8: Protection may not be provided under the following conditions as the motor windings are grounded internally during run:
- Low resistance to ground from the motor cable or terminal block.
  - MxC already has a short-circuit when the power is turned on.