

Energy-Saving Unit

Power Regenerative Unit R1000

R1000 Energy-saving Unit

Catalog No. KAEP C710656 05

Voltage		200 V Class												400 V Class																
Model CIMR-RA * A		03P5	0005	0007	0010	0014	0017	0020	0028	0035	0053	0073	0105	03P5	0005	0007	0010	0014	0017	0020	0028	0035	0043	0053	0073	0105	0150	0210	0300	
Max. Applicable Motor Capacity	kW	3.7	5.5	7.5	11	15	18.5	22	30	37	55	75	110	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	110	160	220	315	
Rating	Regeneration Capacity	kW	3.5	5	7	10	14	17	20	28	35	53	73	105	3.5	5	7	10	14	17	20	28	35	43	53	73	105	150	210	300
	Rated Output Current (DC)	A	14	20	27	41	55	68	81	112	138	207	282	413	7	11	15	22	30	36	43	58	73	89	109	149	217	320	440	629
	Rated Input Current (AC)	A	10	15	20	30	41	50	60	83	102	153	209	306	5	8	11	16	22	27	32	43	54	66	81	110	161	237	326	466
Input	Rated Voltage/ Rated Frequency	200 to 240Vac 50/60Hz												380 to 480Vac 50/60Hz																
	Allowable Voltage Fluctuation	- 15 to + 10%																												
	Allowable Frequency Fluctuation	±2%																												
Control Characteristics	Control Method	120° excitation method																												
	Input Power Factor	0.9 min. (for rated load)																												
	Overload Protection	30 s at approx. 150% of rated current.																												
	Regenerative Torque	150% 30 s, 100% 25% ED 60 s, 80% continuous																												
Main Control Functions	Cooling Fan on/off Switch, Removable Terminal Block with Parameter Backup, MEMOBUS/Modbus (RTU mode) Communications (RS-422/RS-485 max. 115.2 kbps)																													
	Momentary Overcurrent Protection	Operation stops for approx. 250% or higher of the rated power supply current.																												
Protection Functions	Fuse burnout	Operation stops if the fuse burns out.																												
	Overloads	Operation stops for 150% of the rated power supply current for 30 s.																												
	Overvoltage Protection	Output	Stops when DC bus voltage exceeds approx. 410 Vdc														Stops when DC bus voltage exceeds approx. 820 Vdc													
		Input	Stops when input voltage exceeds approx. 227 Vac														Stops when input voltage exceeds approx. 554 Vac													
	Undervoltage Protection	Output	Stops when DC bus voltage falls below approx. 190 Vdc														Stops when DC bus voltage falls below approx. 380 Vdc													
		Input	Stops when input voltage falls below approx. 150 Vac														Stops when input voltage falls below approx. 300 Vac													
	Momentary Power Loss	Immediately stops after Momentary Power Loss is detected.																												
	Power Supply Frequency Fault	Operation stops for a deviation of ±6 Hz or more from the rated input frequency.																												
	Heatsink Overheat Protection	Protection by thermistor																												
	Charge LED	Charge LED remains lit until DC bus has fallen below approx. 50 V																												
Environment	Area of Use	Indoors (Protected from corrosive gases and dust)																												
	Ambient Temperature	- 10 to +40°C (UL Type1), - 10 to +50°C (IP00, IP20)																												
	Humidity	95% RH or less (no condensation)																												
	Shock	(2A03P5 to 2A0053, 4A03P5 to 4A0073)10 to 20 Hz : 9.8 m/s ² , 20 to 55 Hz : 5.9 m/s ² (2A0073 to 2A0105, 4A0105 to 4A0300)10 to 20 Hz : 9.8 m/s ² , 20 to 55 Hz : 2.0 m/s ²																												
	Storage Temperature	-20 to +60°C (short-term temperature during transportation)																												
Altitude	Up to 1000 meters (derating required at altitudes from 1000 to 3000 m)																													
Protection Design	Open Type enclosure (IP00) Enclosed Wall-Mounted (IP20/UL Type1)*2																													
Safety Standard	UL508C, IEC/EN61800-5-1, IEC/EN61800-3																													

*1: This number indicates the voltage class (2: 200 V class, 4: 400 V class).

*2: IP20 protection applies if the top cover is removed from a IP20/UL Type1 Unit (CIMR-RA2A03P5 to CIMR-RA2A0028 or CIMR-RA4A03P5 to CIMR-RA4A0028).

R1000 Standard Configuration Devices

Voltage		200 V Class												400 V Class																
Model CIMR-RA * A		03P5	0005	0007	0010	0014	0017	0020	0028	0035	0053	0073	0105	03P5	0005	0007	0010	0014	0017	0020	0028	0035	0043	0053	0073	0105	0150	0210	0300	
Power Coordinating Reactor	Rated Current	A	20	30	40	60	80	90	120	160	200	280	360	500	10	15	20	30	40	50	60	80	90	120	150	200	250	330	490	660
	Inductance	mH	0.53	0.35	0.265	0.18	0.13	0.12	0.09	0.07	0.05	0.038	0.026	0.02	2.2	1.42	1.06	0.7	0.53	0.42	0.36	0.26	0.24	0.18	0.15	0.11	0.09	0.06	0.04	0.03
Current Suppression Reactor	Rated Current	A	15	15	20	40	40	50	60	80	100	153	209	306	7.5	7.5	10	15	25	25	30	40	50	60	75	100	161	237	326	466
	Inductance	mH	0.31	0.31	0.15	0.1	0.1	0.06	0.05	0.04	0.03	0.02	0.015	0.01	1.2	1.2	0.6	0.4	0.3	0.3	0.2	0.15	0.12	0.1	0.08	0.06	0.04	0.03	0.02	0.013
Fuse	Rated Current	A	20	25	32	50	63	80	100	125	160	200	350	500	16	16	16	25	40	40	50	63	80	100	125	160	250	350	500	630

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