

R1000 – Technical Specification

Control Characteristics	
Product	R1000
Type	Power Regenerative Unit
Compatible Inverter Types	A1000, V1000, J1000, GA700, GA500, G7, L1000A, Servo Drives & All conventional Inverters (with a DC Bus),
Control Method	120° excitation method
Regenerative Torque	150% 30 s, 100% 25% ED 60 s, 80% continuous
Input Power Factor	0.9 min. (for rated load)
Environmental Factors	
Ambient Temperature	-10 to +40°C (UL Type1), -10 to +50°C (IP00, IP20)
Altitude	Up to 1000 meters (derating required at altitudes from 1000 to 3000 m)
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
Area of Use	Indoors (Protected from corrosive gases and dust)
Protection Features	
Fuse burnout	Operation stops if the fuse burns out.
Momentary Overcurrent Protection	Operation stops for approx. 250% or higher of the rated power supply current.
Overload Protection	30 s at approx. 150% of rated current.
Overvoltage Protection	200 V class: Stops when input voltage exceeds approx. 227 Vac, Output:Stops when DC bus voltage exceeds approx. 410 Vdc 400 V class: Stops when input voltage exceeds approx. 554 Vac, Output :Stops when DC bus voltage exceeds approx. 820 Vdc

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Undervoltage Protection	200 V class: Stops when input voltage falls below approx. 150 Vac, Output: Stops when DC bus voltage falls below approx. 190 Vdc 400 V class: Stops when input voltage falls below approx. 300 Vac, Output: Stops when DC bus voltage falls below approx. 380 Vdc
Momentary Power Loss	Immediately stops after Momentary Power Loss is detected.
Heatsink Overheat Protection	Thermistor
Charge LED	Charge LED illuminates when DC bus voltage is more than 50 V.
Standards Compliance	UL508C, IEC/EN61800-5-1, IEC/EN61800-3
Power Specifications	
Rated input Voltage/Frequency	400V Class: Three-phase AC power supply: 380 to 480 Vac 50/60 Hz 200V Class : Three-phase AC power supply: 200 to 240Vac 50/60Hz
Allowable Voltage Fluctuation	-15% to 10%
Allowable Frequency Fluctuation	±2%
Common Specifications	
Multi Function Digital Inputs	8 Digital Inputs (NPN or PNP)
Multi Function Digital Outputs	1 Programmable Relay M1-M2 (AC 250 V, max. 1 A DC 30 V, max. 1 A min. load DC 5 V, 10 mA), 1 fault relay MA-MB-MC(250 Vac, max. 1 A;30 Vdc, max 1 A(min. 5 Vdc, 10 mA)), 2 photocouplers P1,P2 (48 Vdc, max. 50 mA)
Multi Function Analog Output	2 Multi function Analog outputs FM-AC & AM-AC (-10 to +10 Vdc ,2 mA)
Programming Interface	Serial port or USB B port in front of VFD

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Serial communication	MEMOBUS/Modbus (RTU mode) comm. RS-485, Max. 115.2 kbps
Optional communication Protocols	Mechatrolink, CC-Link
Additional Functions	Cooling Fan on/off Switch, Removable Terminal Block with Parameter Backup, MEMOBUS/Modbus (RTUmode) Comm. (RS-422/RS-485 max, 115.2 kbps)