

Small General-Purpose Vector Control AC Inverter *EI-550 Series*

220V Class (1-Phase Input) 1HP~ 5 HP

220V Class (3-Phase Input) 1HP~10HP

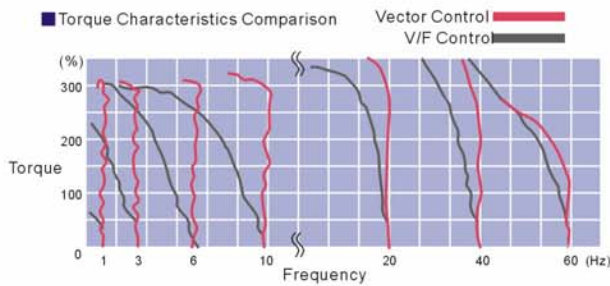
440V Class (3-Phase Input) 1HP~10HP



FEATURE 1

High-Torque Output

- High-torque output for 150% torque /1Hz



- Precise control over a wide speed range

Control Method	Open Loop Vector Control	V/F Control
Controlled Speed Range	100:1	40:1
Speed Regulation	±0.2%	±0.5%~1%

- IGBT braking unit built-in and optional braking resistor to enable the large braking torque.

FEATURE 2

Multiple Functions



- 16 multi-speed settings, UP/DOWN selection, jog command...etc.
- PID control, energy savings control, speed search, auto restarting
- Full-range automatic torque boost, slip compensation, stall prevention, over/under torque detection, DC injection braking... etc.
- Remote speed reference: 0~10VDC, 4~20MA · 0~20MA, pulse input, multifunctional input and output terminal, NPN and PNP input signal switch
- Copy keypad function
- RS422/RS485 serial communication port, MODBUS message format

FEATURE 3

Broad Application

Transporting Machine

- Conveyor
- Lifting
- Elevator

- Operation in vector control mode To output larger torque at low speed has its optimal performance.

Food Processing Machine

- Grinder
- Mixer
- Stirrer

16 Multi-Speed Settings

UP/DOWN Operation

Public Equipment

- Industrial Laundry
- Car Washing Machine
- Running Machine

Stall Prevention

Slip Compensation

Printing · Textile Machine

- Printing Machine
- Textile Machine
- Dyer

PID Control

Energy Savings Control

Flow Machine

- Fan
- Pump
- Blower

Air Conditioning

- Freezer
- Air Conditioner
- Air Compressor



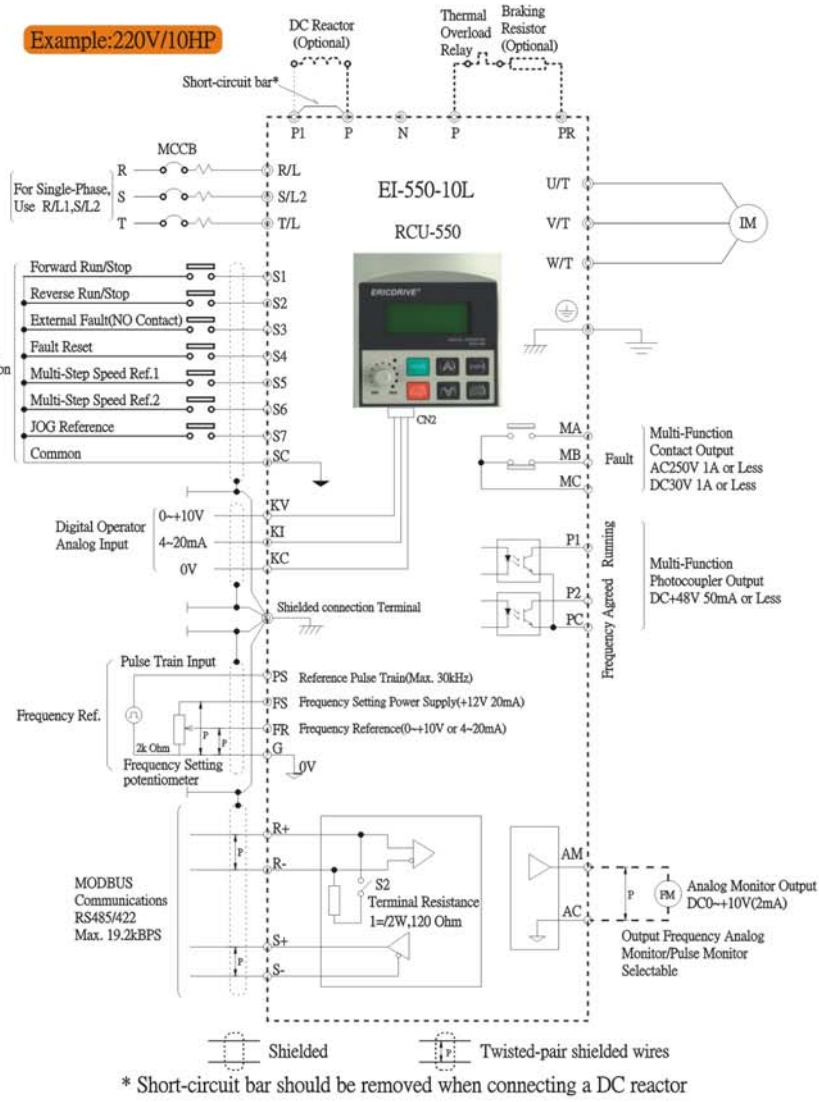
Standard Specification

Voltage Class		220V Class single-phase				220V Class 3-phase						440V Class 3-phase					
Model EI-550-		S1L	S2L	S3L	S5L	O1L	O2L	O3L	O5L	O7L	O10L	O1H	O2H	O3H	O5H	O7H	O10H
Max. Application Motor Output(HP)		1	2	3	5	1	2	3	5	7.5	10	1	2	3	5	7.5	10
Output Features	Rated Output Current(A)	5	8	11	17.5	5	8	11	17.5	25	33	3.4	4.8	5.5	8.6	14.8	18
	Max. Output Voltage(V)	3-phase 200~230V (Proportional to input voltage)				3-phase 200~230V (Proportional to input voltage)						3-phase 380~460V (Proportional to input voltage)					
	Max. Output Frequency(Hz)	400Hz (Programmable)															
Power Supply	Rated Input Voltage and Frequency	Single-phase 200~230V 50/60Hz				3-phase 200~230V 50/60Hz						3-phase 380~460V 50/60Hz					
	Allowable Voltage Fluctuation	-15 ~ +10%															
	Allowable Frequency Fluctuation	± 5%															
Control Features	Control Method	Sine wave PWM (V/F control, Vector control selectable)															
	Frequency Control Range	0.1 ~ 400Hz															
	Frequency Accuracy (Temperature Change)	Digital reference: ±0.01% (-10°C ~ +50°C) Analog reference: ±0.5% (25°C ± 10°C)															
	Frequency Setting Resolution	Digital reference: 0.01Hz (less than 100Hz) · 0.1Hz(100Hz or more) Analog reference: 1/1000 of max. output frequency															
	Output Frequency Resolution	0.01 Hz															
	Overload Capacity	150% rated output current for one minute															
	Frequency Reference Signal	DC0 ~ +10V(20KΩ), 4 ~ 20mA(250Ω), 0 ~ 20mA(250Ω) Pulse train input, frequency setting potentiometer (Selectable)															
	Accel/Decel Time	0.01~6000sec. (4 accel/decel time are independently programmed)															
	Braking Torque	Short-term average deceleration torque 1HP: 100% or more · 2HP: 50% or more · 3HP: 20% or more Continuous regenerative torque: Approx. 20%(150% with optional braking resistor, braking transistor built-in)															
	V/F Characteristics	Possible to program any V/F pattern															
Protective Features	Motor Overload Protection	Electronic thermal overload relay															
	Instantaneous Overcurrent	Motor coasts to a stop at approx. 250% of inverter rated current															
	Overload	Motor coasts to a stop after 1 minute at 150% of inverter rated output current															
	Overvoltage	Motor coasts to a stop if DC bus voltage exceeds 410V (220V Class) Motor coasts to a stop if DC bus voltage exceeds 820V (440V Class)															
	Undervoltage	Motor coasts to a stop if DC bus voltage is less than 200V (220V Class) Motor coasts to a stop if DC bus voltage is less than 400V (440V Class)															
	Momentary Power Loss	Following items are selectable: Stops if power loss is 15ms or longer Continuous operation if power loss is approx. 0.5s or shorter															
	Cooling Fin Overheat	Protected by electronic circuit															
	Stall Prevention Level	Can be set individual level during accel/decel, provided/not provided available during coast to a stop															
	Cooling Fan Fault	Protected by electronic circuit (fan lock detection)															
	Ground Fault	Protected by electronic circuit (overcurrent level)															
	Power Charge Indication	ON until the DC bus voltage becomes 50V or less															
	Other Functions	Multi-Function Input	Seven of the following input signals are selectable: Forward/reverse run (3-wire sequence), external fault, fault reset, 16-step speed operation, jog command, accel/decel time select, external baseblock, speed search command, accel/decel hold command, LOCAL/REMOTE selection, communication/control circuit terminal selection, emergency stop fault, emergency stop alarm UP/DOWN command, self-test, PID control cancel, PID integral reset/hold.														
Multi-Function Output		Three of the following output signals (relay contact output, 2 photo-coupler outputs) are selectable: Fault, running, zero speed, at frequency, frequency detection (output frequency ≤ or ≥ set value), during overtorque detection, during undervoltage detection, minor error, during baseblock, operation mode, inverter run ready, during fault retry, during UV, during speed search, data output through communication, PID feedback loss detection.															
Standard Function		Voltage vector control, RCU-550 digital operator full-range automatic torque boost, slip compensation, DC injection braking current/time at start/stop, frequency reference bias/gain, MODBUS communications (RS-485/422, max. 19.2KBPS), PID control, energy-saving control, constants copy, frequency reference with built-in potentiometer, unit selection for frequency reference setting/display, multi-analog input.															
Digital Operator		Available to monitor frequency reference, output frequency, output current															
Terminals		Main circuit: screw terminals Control circuit: plug-in screw terminal															
Wiring Distance between Inverter and Motor		100M or less															
Enclosure		IP20															
Environmental Conditions	Cooling Method	Forced air cooling															
	Ambient Temperature	Open chassis -10°C ~ +50°C															
	Humidity	90%RH or less (non-condensing)															
	Storage Temperature*1	-20°C ~ +60°C															
	Location	Indoor (free from corrosive gases or dust)															
	Elevation	1000M or less															
	Vibration	Up to 9.8m/S ² (1G) at 10 ~ 20Hz · Up to 2m/S ² (0.2G) at 20 ~ 50Hz															

*1 Storage Temperature during shipping (for short period).

FEATURE 5

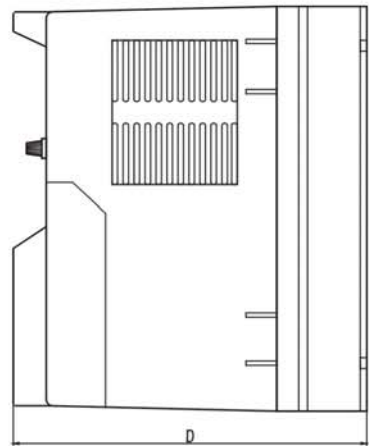
Standard Wiring



FEATURE 7

Dimension

Unit:mm



FEATURE 6

Digital Operator (RCU-550) User Instruction



Voltage Class	Capacity (HP)	W	H	D	W1	H1	H2	Mass
220V single-phase	1HP	109	165	150	100	125	20	1.4
	2HP							
	3HP							
	5HP	137	185	161	128	145	20	2.0
220V 3-phase	1HP	109	165	150	100	125	20	1.4
	2HP							
	3HP							
	5HP	137	185	161	128	145	20	2.0
440V 3-phase	7.5HP	191	280	168	181	224	28	5.3
	10HP							
	1HP	109	165	150	100	125	20	1.4
	2HP							
440V 3-phase	3HP	137	185	161	128	145	20	2.0
	5HP							
	7.5HP	191	280	168	181	224	28	5.3
10HP								

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