ERiC DRiVE®
TRANSISTORIZED INVERTER
AC MOTOR SPEED CONTROLLER

RICH INVERTER

Mini-Economic AC Inverter

EI-450M Series

220V Class (1-Phase Input) 200W~2HP
220V Class (3-Phase Input) 200W~2HP
440V Class (3-Phase Input) 400W~2HP

Rich Electric
Drives the world

ISO 9001
No:119764
UKAS

CE Mark
Safety Approved

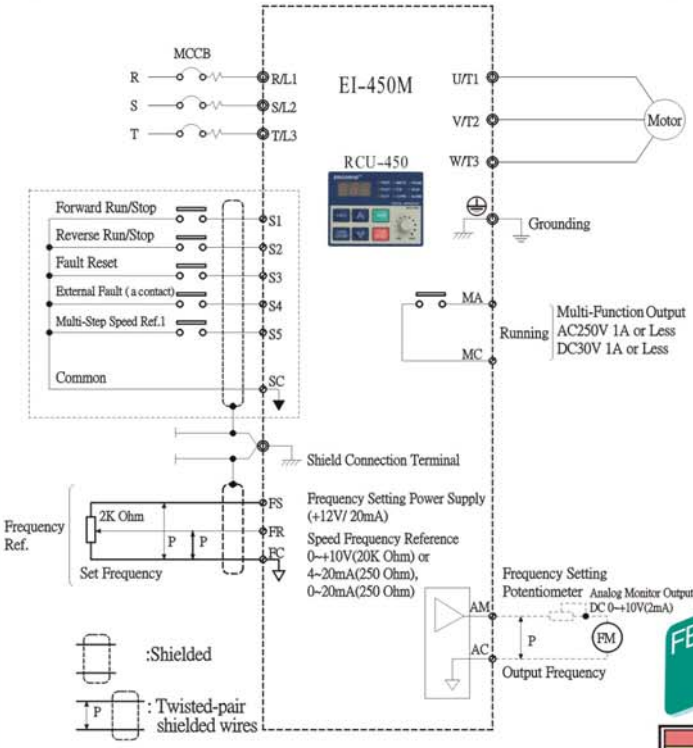
C-Tick Mark
Safety Approved

RICH ELECTRIC

Voltage Class			220V Class (Single-phase • 3-phase)				440V Class (3-phase)		
Model EI-450M-			P2L	P4L	S1L	S2L	P4H	01H	02H
Max. Application Motor Output (HP)			1/4	1/2	1	2	1/2	1	2
Max. Application Motor Output (KW)			0.2	0.4	0.75	1.5	0.4	0.75	1.5
Output Features	Rated Output Current (A)		1.6	3	5	8	1.8	2.5	4
	Max. Output Voltage (V)		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(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)						
	Frequency Control Range		0.1 ~ 400Hz						
	Frequency Accuracy (Temperature Change)		Digital reference: ±0.01% (-10℃~+ 50℃) Analog reference: ± 0. 5 % (+25℃~± 10℃)						
	Frequency Setting Resolution		Digital reference: 0.1Hz (less than 100Hz) , 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)Frequency setting potentiometer (Selectable)						
	Accel/ Decel Time		**0.1~999 sec . (2 accel/decel time are independently programmed)**						
	Braking Torque		Short-term average deceleration torque : 1HP : 100% or more, 2HP : 50% or more, Continuous regenerative torque : Approx.: 20%						
	V/F Characteristics		Possible to program any V/F pattern						
Protective Features	Motor Overload Protection		Electronic thermal overload relay						
	Instantaneous Over Current		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 less than 200V (220V Class) Motor coasts to a stop if DC bus voltage less than 400V (440V Class)						
	Momentary Power Loss		Following items are selectable: Stops if power loss is 15ms or longer (default)/ Continuous operation if power loss is approx. 0.5s or shorter/ Continuous operation						
	Cooling Fin Overheat		Protected by electronic circuit						
	Stall Prevention Level		Can be set individual level during accel/running, enable/disable provided available during deceleration						
	Ground Fault		Protected by electronic circuit (overcurrent level)						
	Cooling Fan Fault		Protected by electronic circuit (fan lock detection)						
	Power Charge Indication		ON until the DC bus voltage becomes 50V or less						
Other Features	Multi-Function Input		Four of the following input signals are selectable: Reverse command, forward/ reverse run (3-wire sequence), external fault, fault reset, multi-step speed operation, jog command, accel/decel time select, external baseblock, speed search command, UP/DOWN command, accel/decel hold command, LOCAL/REMOTE selection, communication/control circuit terminal selection, emergency stop fault, emergency stop alarm, self-test						
	Multi-Function Output		Following output signals are selectable (1C contact output) : Fault, running, zero speed, at frequency, frequency detection (output frequency ≦ or ≧ set value), during overtorque detection, minor error, during baseblock, operation mode, inverter run ready, during fault retry, during UV, during reverse runs, during speed search						
	Standard Functions		Full-range automatic torque boost, slip compensation, 9-step speed operation (Max.), Momentary power loss at restart, frequency reference bias/gain, fault reset, speed search, reference upper /lower limit setting, overtorque detection, frequency hold command, DC injection braking current/ time at start/ stop frequency, accel/decel time select, accel/decel hold command, accel/decel S pattern, frequency reference with built-in potentiometer						
	Display	Status Indicator LED	RUN and ALARM provided as standard LEDs						
		Digital Operator	Available to monitor frequency reference, output frequency, output current						
		Terminals	Main circuit : screw terminal Control circuit : plug-in screw terminal						
		Wiring Distance between Inverter and Motor	100M or less						
		Enclosure	IP20						
		Cooling Method	Forced air cooling						
Environmental Conditions		Ambient Temperature	-10℃~+50℃ (not frozen)						
		Humidity	90%RH or less (non-condensing)						
		Storage Temperature*1	-20 ℃ ~ +60 ℃						
		Location	Indoor (free from corrosive gases or dust)						
		Elevation	1000M or less						
		Vibration	Up to 9.8m/s² (1G) at 10 ~ 20Hz , Up to 2m/s² (0.2G) at 20 ~ 50Hz						

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

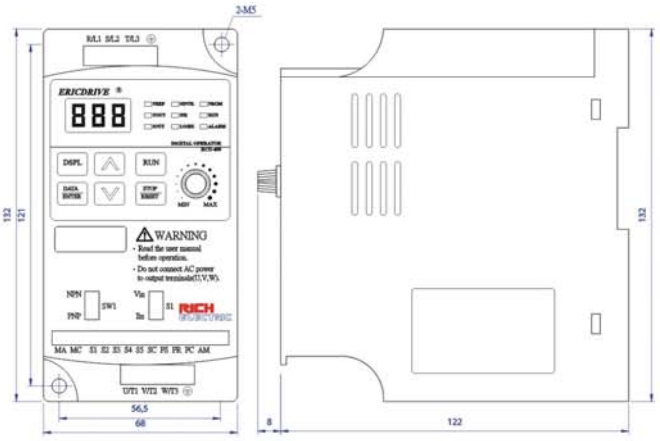
FEATURE 1 Standard Wiring



:Only basic insulation is provided for the control circuit terminals. Additional insulation may be necessary in the end product.
*Short-circuit bar should be removed when connecting DC reactor.

FEATURE 2 Dimension

Unit:mm



FEATURE 3 Standard Specification

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	Frequency Control Range	0.1 ~ 400Hz						
	Frequency Accuracy (Temperature Change)	Digital reference: ±0.01% (-10℃~+50℃) Analog reference: ±0.5 % (+25℃~±10℃)						
	Frequency Setting Resolution	Digital reference: 0.1Hz (less than 100Hz) / 1Hz (100Hz or more) Analog reference: 1/1000 of max. output frequency						
	Output Frequency Resolution	0.01Hz						
	Overload Capacity	150% rated output current for one minute						
	Frequency Reference Signal	DC0 ~ +10V(20KΩ), 4 ~ 20mA(250Ω), 0 ~ 20mA(250Ω) /Frequency setting potentiometer (Selectable)						
	Accel/ Decel Time	**0.1~999 sec. (2 accel/decel time are independently programmed)**						
	Braking Torque	Short-term average deceleration torque : 1HP : 100% or more, 2HP : 50% or more. Continuous regenerative torque : Approx. 20%						
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Protective Features	Motor Overload Protection	Electronic thermal overload relay						
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	Standard Functions	Full-range automatic torque boost, slip compensation, 9-step speed operation (Max.), Momentary power loss at restart, frequency reference bias/gain, fault reset, speed search, reference upper/lower limit setting, overtorque detection, frequency hold command, DC injection braking current/ time at start/ stop frequency, accel/decel time select, accel/decel hold command, accel/decel S pattern, frequency reference with built-in potentiometer						
	Display: Status Indicator LED	RUN and ALARM provided as standard LEDs						
	Display: Digital Operator	Available to monitor frequency reference, output frequency, output current						
	Terminals	Main circuit : screw terminal Control circuit : plug-in screw terminal						
	Wiring Distance between Inverter and Motor	100M or less						
	Enclosure	IP20						
	Cooling Method	Forced air cooling						
Environmental Conditions	Ambient Temperature	-10℃~+50℃ (not frozen)						
	Humidity	90%RH or less (non-condensing)						
	Storage Temperature*1	-20 ℃ ~ +60 ℃						
	Location	Indoor (free from corrosive gases or dust)						
	Elevation	1000M or less						
	Vibration	Up to 9.8m/s² (1G) at 10 ~ 20Hz ; Up to 2m/s² (0.2G) at 20 ~ 50Hz						

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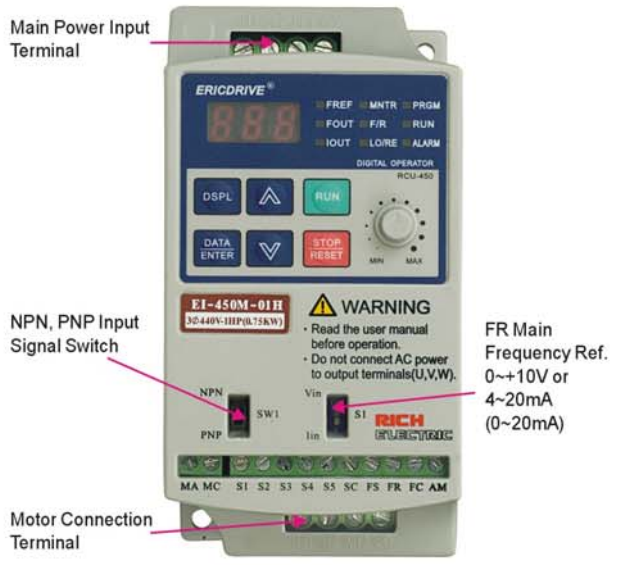
FEATURE 4 Illustration



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