EL10
UNIVERSAL

SMART INVERTER

More Intelligent, More Boundless

EI10 is a general-purpose compact inverter with high reliability design and rich hardware and software configurations, featuring compactness, ease of use and reliability, which is widely used in food and beverage, logistics, packaging, textile, woodworking machinery and other industries.

Food and beverage

Fans, pumps, dryers, feeding and loading machines, conveyor belts

Logistics packaging

Conveyor lines, conveyor belts, sealing machines, packaging machines, etc.

Textileindustry Spin

Ventilation and heat exchange fans, conveyors, drum washing machines, dyeing machines, cutting machines, pumps, etc.

Woodworking machinery

Conveyors, edging machines, saws, drills, etc.

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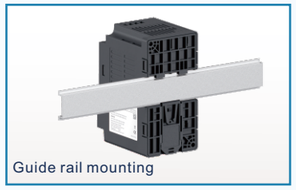
Productadvantage

1. Nuance and dexterity

The high power density design is compact and supports DIN-rail/wall mounting with no slit, which is 50% smaller than the previous generation, saving space for panelization and makingfield installation more flexible.


Wall Mounting

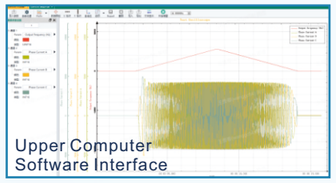

Guide rail mounting

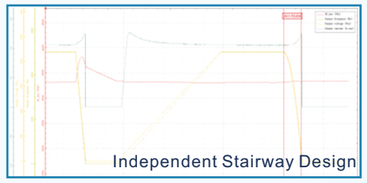
2. Ease of Use

(1) Supports an optional external keyboard for one-click parameter download and fast copying.

(2) Supports monitoring software for upper-level computers, real-time fault monitoring, and operation status monitoring, easy to use for startup debugging.

(3)Supports network design, multi-speed operation, energy-saving operation modes, sleep mode during idle states, and other rich industry-specific features, meeting the application needs of fans, pumps, and other multi-scenario industries.

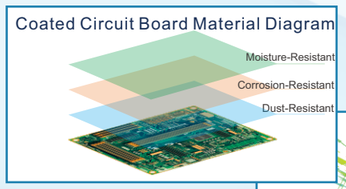

Upper Computer Software Interface

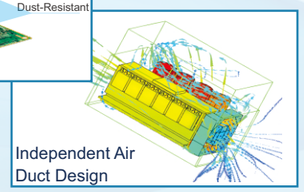

Independent Stairway Design

3. Reliability

(1) Standard coated circuit board, optimized independent air duct design, and consideration for component cooling, which improves the product's reliability in harsh environmental conditions;.

(2) Wide input voltage range, automatic voltage regulator output adjustment, shock suppression, stall prevention, wave-by-wave current limiting, and non-stop function are some of the special features that make it possible for the inverter to operate stably in poor grid conditions.




Independent Air Duct Design

Comprehensive Fault Protection			
Undervoltage	Overvoltage	Overcurrent	Output phase loss
IGBT over-emperature	Inverter overload	Motor overload	Line abnormality detection
PID disconnection	Parameter read error	Parameter password error	Communication abnormality
Communication Timeout	DEB abnormality	Excessive slip	Input phase loss
Output phase loss	External terminal emergency stop	External terminal failure	External interruption of operation

Customized Features

Project	Introduction
Acceleration and deceleration curves	Linear, S-curve, 1.5 power curve, 2 power curve (initial arc can be set separately) Automatic acceleration and deceleration curves
Built-in PID	Built-in PID, for Process Control in Specific Applications
Operation Command Channel	Three Channels: Operation Panel, External Terminals, Communication (Switchable via Parameters)
Frequency Jump Function	Skip parts of the frequency band to avoid resonance points
Energy Consumption Braking	Reduction of the voltage surge in the bore line through energy consumption
Multi-speed Operation	Achieve 16-segment speed switching through external terminals
Automatic Voltage Adjustment	The output voltage is automatically kept constant when the grid voltage varies.
Overvoltage and overcurrent stall prevention	Automatic limiting of current and voltage during operation to prevent frequent overcurrent and overvoltage trips
Rapid Current Limiting Function	Minimize overcurrent to the greatest extent, ensuring stable transition of the inverter under extreme conditions
Energy-saving Operation	Energy-saving operation and high work efficiency
Instantaneous Stop Prevention	The inverter can be operated normally for a short period of time by compensating for the voltage reduction in a certain manual manner during an instantaneous power failure.

Usage Environment

Project	Presentation
Usage Location	Indoor, not exposed to direct sunlight, no dust, corrosive, flammable or oil mist,water vapors, drips or salts, etc; Altitude up to 1000 m, above 1000 m with reduced availability
Ambient Temperature	Environmental temperature-10°C to +40°C (tightly side-by-side installation, upper operating temperature limit is 40°C, operation above 40°C requires reduced use, maximum use temperature is 50°C)
Storage Temperature	-20°C~+60°C
Humidity	<95%RH, no water condensation
Vibration	<5.9m/s² (0.6g)
Protection level	IP20
Degree of Environmental Pollution	2
Cooling Method	Forced air cooling

EL10 A - 4T 4R0 G ■

Product Name
EL10：Product series

Mark	Model
A	RS485 model
B	CANopen model

Mark	voltage level
3S	Single-phase 220V
4T	Three-phase 380V

Mark	Power Rating (kW)
R75	0.75
···	···
5R5	5.5

Mark	Applicable motor type
G	Universal Load

Mark	Brake Unit
None	Without brake unit
B	Including
(B)	Optional brake unit

* Nameplate identification and product type

Note: For EL10 series inverters, C0 and C1 do not support built-in braking unit.

El10 Inverter Models and Technical Data

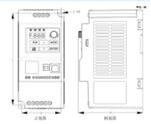
- 220V 1ϕ

	Model EL10A(B)-3S_G(B)	R40	R75	1R5	2R2
	Power (kW)	0.4	0.75	1.5	2.2
	Structure Frame	C0	C0	C0	C1
Output	Rated output capacity (kVA)	1.0	1.6	2.9	4.2
Output	Rated output current (A)	2.7	4.2	7.5	11.0
Output	Maximum Output Voltage (V)	Corresponding RV in three phases			
Output	Output frequency range (Hz)	0.1Hz~599Hz			
Output	Carrier frequency (kHz)	2kHz~6kHz((default 4kHz)			
Input	Input current (A)	6.5	9.3	15.7	24.0
Input	Rated voltage, Frequency	Single-phase 200V~240V，50/60Hz			
Input	Allowable Input Voltage Range	±10%			
Input	Allowable power supply frequency variation	±5%			
	Cooling Method	Forced cooling			
	Weight (kg)	0.6	0.6	0.6	0.8

- 380V 3ϕ

	Model EL10A(B)-4T___G(B)	R75	1R5	2R2	4R0	5R5
	Power (kW)	0.75	1.5	2.2	4.0	5.5
	Structure Frame	C1	C1	C1	C2	C2
Output	Rated output capacity (kVA)	2.0	3.3	4.4	7.4	10.4
Output	Rated output current (A)	2.5	4.2	5.5	9.0	13.0
Output	Maximum Output Voltage (V)	Corresponding RV in three phases				
Output	Output frequency range (Hz)	0.1Hz~599Hz				
Output	Carrier frequency (kHz)	2kHz~6kHz((default 4kHz)				
Input	Input current (A)	3.2	5.0	7.1	10.0	17.0
Input	Rated voltage, Frequency	Three-phase power supply 380V~460V, 50/60Hz				
Input	Allowable Input Voltage Range	±10%				
Input	Allowable power supply frequency variation	±5%				
	Cooling Method	Forced cooling				
	Weight (kg)	0.8	0.8	0.85	0.85	0.85

Mounting	Model	(L) mm	(W) mm	(H) mm	Mounting hole diameter (D) ϕ mm
	C0	119.5	57.5	104	4.5
	C1	129.5	59.5	105	5.5
	C2	167.5	72	116	5.5



	Specificities	Description
Control Characteristics	Control method	V/FControl
	Frequency Setting/ Output Frequency Resolution	Panel control: 0.01Hz below 10Hz; 0.1Hz above 10Hz Communication control: 0.01Hz Analog Setting: ±0.1% of Maximum Frequency
	Torque Characteristics	Starting Torque at 5.0Hz meets 150% of Rated Torque
	Overload capacity	Operate at 150% of rated output current for 60 seconds and 180% for 3 seconds
	Frequency Offset	4 points can be set since 0.1~599.0Hz.
	Acceleration and Deceleration Time	0.1~600 seconds (4-stage acceleration/deceleration times can be set independently)
	Stall Prevention	Set at 20~200% of the rated current of the drive according to the motor load characteristics
	DC Braking	Braking current: 0~100% of rated current, braking time: 0~60 seconds
	V/F Curve	Normal V/F curve setting, 1.5 quartile setting, 2 quartile setting
Operation Characteristics	Frequency Setting Signal — Panel operation	Faceplate VR Setting
	Frequency Setting Signal — External Signal	External Terminals: UP/DOWN Frequency, Jog Operation, AVI/ACI:0~+10VDC/(~20mA Serial Communication Port: Standard Model Supports RS485, Extended Model Supports CANopen
	Operation Setting Signal — Panel operation	Set by RUN, STOP key
	Operation Setting Signal — External Signal	Mi1, MI2, MI3 two-stage three-wire control, spot operation, serial communication (RS485)
	Input Terminal Function	16 speeds (including main speed), default speed switching, acceleration/deceleration OFF command, 4-step acceleration/deceleration switching, external counter, fault reset, incremental/ decremental terminal sub-frequency setting, jogging, etc.
	Output Terminal Function	The running indicator, frequency reach indicator, and zero speed indicator are displayed,Counter arrival indication, fault indication, overheat warning, emergency stop, etc.
Interface	Communication/Bus	EL10A supports RS485 communication, EL10B supports CANopen.
	Analog Input	One-way AI
	Digital Input	Four-way DI
	Digital Output	One open relay output normally
	Digital Operation Panel	Includes six function keys, four-digit 7-segment LED display, four-digitLED status indicator, programmable frequency, Display of actual output frequency, output current, parameter settings, parameter lock, and fault indication. Run, stop, reset, forward/reverse can be performed.
	Background Software	Supports inverter parameter operation and virtual monitor function.Graphical monitoring of the inverter's internal status can be realized by means of a virtual monitor.
	Protection Function	Overvoltage, voltage, overcurrent Short circuit before operation, IGBT over temperature, inverter overload, motor overloadDetect line abnormality, PIDdisconnection, parameter reading abnormality, parameter password error, communication abnormality,protective functionCommunication timeout, DEB abnormality, overslip, input phase loss, output phase loss,External terminal emergency stop, external terminal exception, external interrupt operation, etc.

Wiring diagram for EL10 Rs485 Model

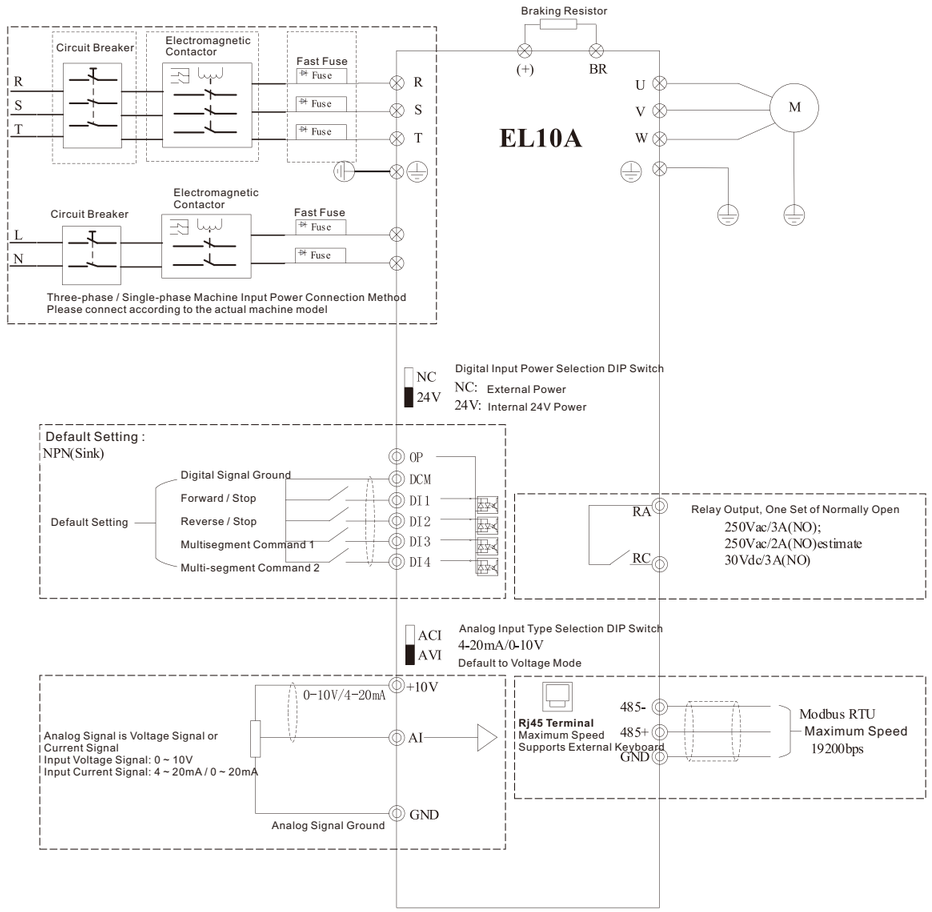


Figure: 3-Phase/Single-Phase Power In terminal wiring diagram
(EL10A-4T4R0GB, EL10A-4T5R5GB can be optionally equipped with an internal brake unit, other models do not support built-in brake unit.

Wiring diagram for EL10 CANopen Model

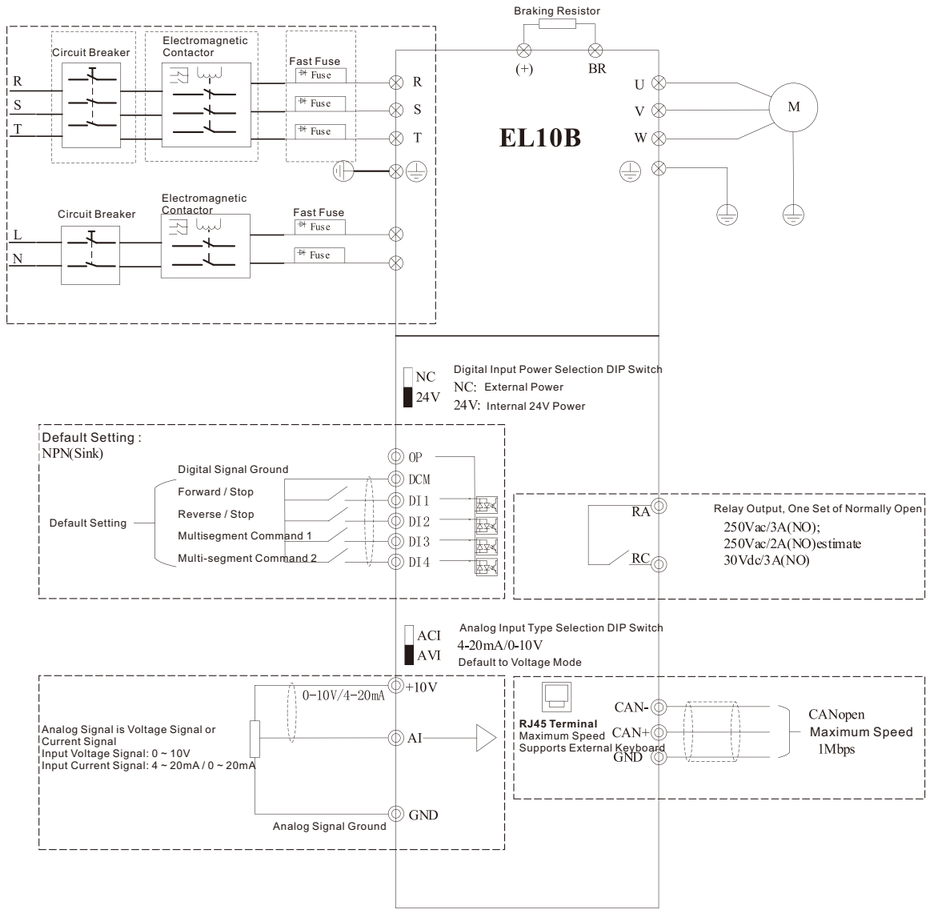


Figure: 3-Phase/Single-Phase Power In terminal wiring diagram
(EL10A-4T4R0GB, EL10A-4T5R5GB can be optionally equipped with an internal brake unit, other models do not support built-in brake unit).