EC300 Series Elevator Integrated Controller

About the Product

EC300 intelligent integrated machine all in one designed for drive, control, energy feedback and network communication is a new generation of 4-quadrant intelligent elevator control systems. By the combination of 4-quadrant drive, control and management and the applications on potential loading occasions for elevators, it improves all around in the aspects of energy efficiency, safety and reliability, easy operation and economic practicality.

Main Features

- Resources reducing in elevator installation, debugging, operation and management
- Max. speed: 6m/s, Max floor: 64
- Intelligent network group control can control 8 elevators at the same time
- Embedded high-performance starting compensation technology of non-weighing sensor
- CANBUS for communication in the car, MODBUS or CANBUS for external communication
- Low voltage emergency rescue mode of AC220V single-phase UPS, light load direction search
- Safety enabling hardware input conform to EN81 standards

Special Functions

- Adopts four quadrant frequency control technology to convert the redundant mechanical energy(potential energy and kinetic energy) of the elevator in operation into electricity back to the grid, replace the traditional way of braking resistor energy consumption, energy feedback efficiency up to 80% above, feedback current harmonic < 5%, and total energy-saving up to 30%, in line with the requirement to the power grid harmonic in IEC61000-3-2, makes it easier to get the A grade of elevator energy consumption indicators authentication.
- DSP adopts TI dual-core control chip from the United States, with high communication rate, fast curve tracking response, high control accuracy and strong anti-interference ability
- Built-in data black box function: it can monitor and record the status of elevator operation in real time. When the elevator has instantaneous fault, the control chip can automatically judge the type of fault and record it all in memory

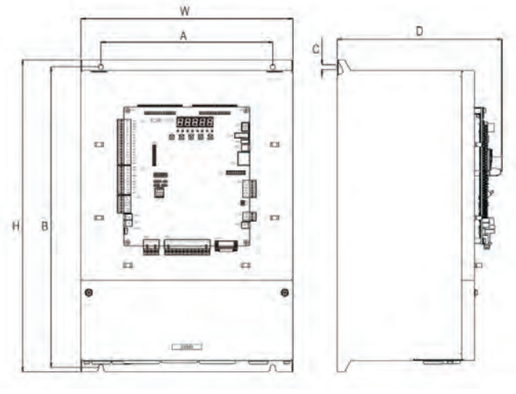
Comprehensive Technical Parameters

Item	Name	Description
I/O characteristics	Input voltage range	3PH 380V(-15%)~440V(+10%)
	Input frequency range	47~63Hz
	Output voltage range	0~rated input voltage
	Output frequency range	0~400Hz
Peripheral interface characteristics	Digital low voltage input	24 digital inputs, 9~30V
	High voltage detection input	3 high voltage detection inputs, 110V/220V
	Switch output	Standard: 6 relay NO outputs, 5A/250 VAC
	Communication interface	2 groups of CANbus,2 groups of Modbus,Ethernet
	Encoder interface	Standard: SIN/COS, UVW, incremental encoder interface Optional: Endat 2.1, rotary PG card
Technical control characteristics	Control mode	V/F, open loop vector, close loop vector
	Speed control accuracy	Sensorless vector control: ±0.5% of the Max. speed; PG vector control: ±0.1% of the Max. speed
	Starting torque	Sensorless vector control: 0.5Hz/150% (SVC); PG vector control: 0Hz/180% (VC)
	Overload capacity	150% of the rated current: 60s, 180% of the rated current: 10s, 200% of the rated current: 1s
	Carrier frequency	1.0~16kHz, adjust carrier frequency automatically according to load characteristics, default value: 6kHz

Configuration

Model	Input Voltage	Output Power (kW)	Input Current (A)	Output Current (A)	Carrier Frequency (kHz)	Input Reactor Model
EC300-7R5-4	3PH AC380V±15%	7.5	25	18.5	1 ~ 15 (6)	ERL20A10504
EC300-011-4		11	32	27	1 ~ 15 (6)	ERL20A10504
EC300-015-4		15	40	34	1 ~ 15 (6)	ERL35A06004
EC300-018-4		18.5	47	37	1 ~ 15 (6)	ERL45A04704
EC300-022-4		22	56	46	1 ~ 15 (6)	ERL45A04704
EC300-030-4		30	70	62	1 ~ 15 (6)	ERL60A03504

Appearance and Installation Dimensions



Installation Dimensions

Input voltage	Power(kW)	W(mm)	H(mm)	D(mm)	A(mm)	B(mm)	C Hole Diameter (mm)	Installation STUD
3PH AC380V	7.5-15	223	347	181	150	334.5	Φ7	M6
	18.5-30	290	426	225	235	410	Φ7	M6