

Other Available Products:

MCCB (Breakers)

Contactors

Solid State Relays

Level Control

Temperature Control

Push Button

Sensors

Transmitters

Transformers Control & Power

Automatic Transfer Switches

And more...

EDISAcorp. Industrial Automation

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Factory Address: Yunpu Industry Park, Huangpu District, Guangzhou, Guangdong, 510760, China

R&D Center: China, Nicaragua & USA

Contact: 305-921-0921

Web Site: www.edisacorp.com

Support: drivesupport@edisacorp.com

Local Provider Address:

EDISA CORP AC DRIVES



ED700 AC Drive

CE IEC 60529
IEC/EN 61800-3
IEC/EN 61800-5-1

USA Company Profile



Edisa corp is a company dedicated to distributing, designing and assembling electronic equipment for electrical areas, electronics and industrial. We have a dedicated service department to provide help and technical support to customers in their projects, and services.

Edisa Corp was originally founded in 1987, is a project of an undergraduate instructor, who needed components, sensors and equipment to conduct investigations and the manner of a tutoring program. He worked hard for many hours every day of the week, but was not able to purchase the required amounts of components as they had few resources but his determination and decision to help yourself to grow and display the various materials, such as , Physics, Mathematics, Chemistry, Power Electronics, Electrical, Electricity and more in different counties and help many people and students to form a great network of clients began to provide electronic, electrical, automation, instrumentation and industrial parts, this being the beginning of Hadassah soon for 1999.

For this reason, EDISACorp has a wide range and variety of different electrical and electronic equipment area and growing very rapidly since it became a company and put its headquarters at 1011 Hialeah Dr., Hialeah FL 33010, Miami-Dade, USA. Today, EDISA Corp has offices in different countries with a large network of customers and distributors and will advocate for green energy technologies and major benefit of humanity and the natural environment, so the support at a discount to students and teaching programs.



Factory Facilities in China

Quality Assurance & Reliability (CE Certification)

IEC/EN 61800-5-1 **Adjustable speed electrical power drive systems - Part 5-1:** Safety Requirements - Electrical, thermal and energy.

IEC/EN 61800-3 **Adjustable speed electrical power drive systems - Part 3:** EMC requirements and specific test methods.

GB/T 12668.2 **Adjustable speed electrical power drive systems - part 2:** General requirements-Rating specifications for low voltage adjustable frequency a.c. power drive systems.

GB 12668.3 **Adjustable speed electrical power drive systems - part 3:** EMC product standard including specific test methods.

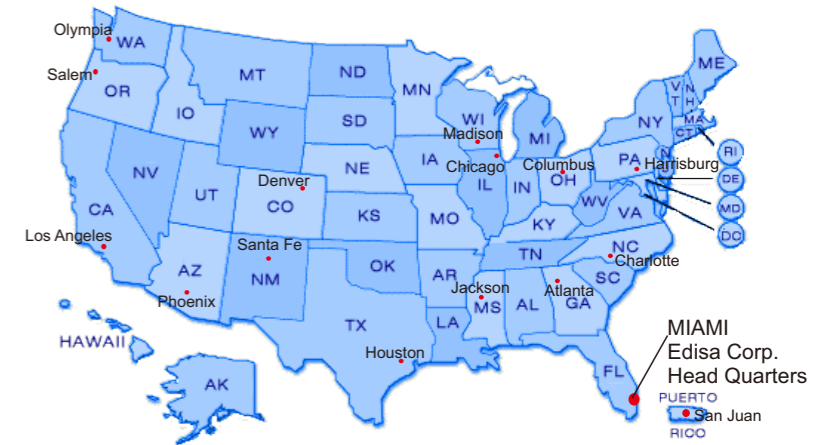
IEC 60529 Degrees of protection provided by enclosures (IP Code)

Meet C3 without external EMC filter.



Service Items

1. Global warranty service
2. Field maintenance or Carry-in Service
3. Convenient and fast spare parts localization supply services
4. 24 hours technical consulting hot-line service
5. The expert site technical support service
6. Industry system solutions support service
7. Professional technical training service



Service Net



Keypad

LCD Keypad



Keypad Function

Switches	Function Description
	In different level display, pressing the switch will return to the last level. Long press on the switch will display the value of normal display parameter decided by P05.01. When the Keypad is locked, 5 seconds pressing on the switch will unlock.
	Programmable switch, it can be function of Jog, Fwd./Rev., Coasting stop by setting P05.07. Default function is jog.
	Enter next level of the keypad display.
	When it is keypad control mode (P00.03 or P10.07=0), pressing the switch will make the drive run.
	<ul style="list-style-type: none"> Stop, the switch will stop the drive unless the keypad is locked totally. Reset the drive if the keypad is not locked totally.
	Used to select parameters and edit their values. In keypad mode, they are used to increase and decrease the speed of the motor.
	<ul style="list-style-type: none"> In run/stop mode and pressing the switch, the LED display will be output frequency, reference frequency, output current, output voltage, DC bus voltage in turn. In the edit of parameter value mode, pressing the switch will change the bite of the value.

Note: If there is a conflict on the content of parameter, pressing switch can not enter the next parameter.

Options

LCD keypad	Remote keypad	Profibus module (SELV)	Keypad pallet
EDOM-232 (SELV)	EDOM-USB (SELV)	EDSOFT (PCTools)	EDOM-IO-Logic

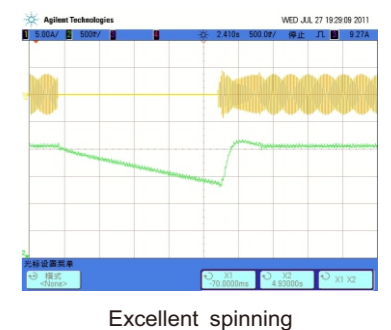
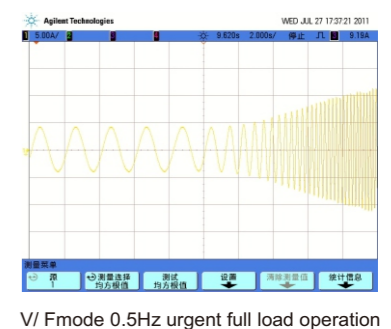
Product Outlook

Performance Features

- Advanced motor control algorithm
- High performance open loop vector control
- Optimal V/F mode
- Excellent ramp slope control
- Fast auto-tune (less than 1 minute)
- Overload:
 - 150% rated output current, 1 minute
- Low frequency torque:
 - 0.5Hz: 100% rated torque
 - 1Hz: 150% rated torque

The Main Hardware Features

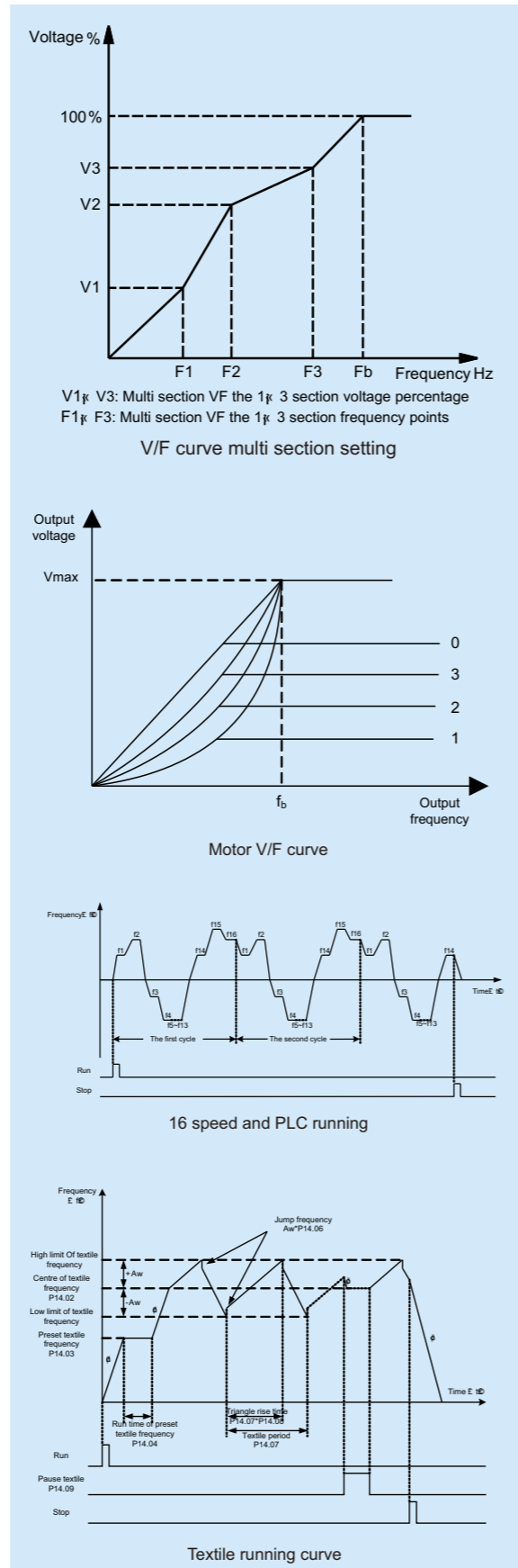
- Dual CPU processing, more precise control
- Standard configuration 5-digit LED keypad, standard RJ45 Keypad connector
- 5.5 kW and above with standard DC choke
- 22kW and below with standard internal brake unit
- Above 22kW models, if the internal brake unit fitted or not, could be selected by the model reference
- Internal EMC filter with breakpoint design, convenient for access and disconnection, meet different application requirements
- PCBA coating process, increase environment adaptability
- Unique control terminals: simple electronic switch set to complete the conversion between source and sink of I/O terminals
- Reference (current) loose, trip or not could be selected
- IGBT thermal design
- Wireless fan block design, easy to replace or maintain
- Connecting auxiliary fan makes the drive suitable for worse environment



Product Outlook

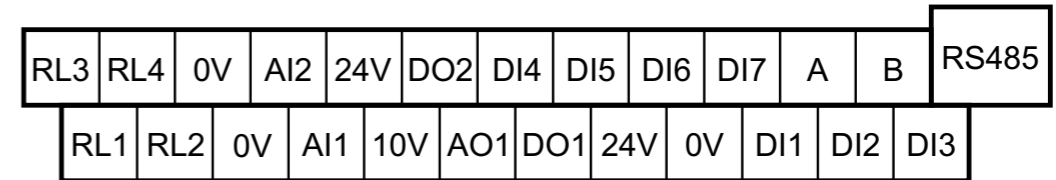
The Main Function Features

- Balance on easy use and powerful function
- Powerful programmable platform makes users program easier
 - Built-in advanced function blocks:
 - 2 threshold control blocks
 - 2 logic control blocks
 - 3 variable selectors
 - brake logic control block
- Programmable I/O terminals
- Internal energy meter, the user calculate energy saving conveniently
- Low DC voltage operation mode (380V products can work on 220V power supply)
- The stop mode can be controlled when power off
- AVR
- Switching frequency automatic adjustment
- Catch spinning function
- Injection braking
- Jump frequency control function
- Keypad disconnected trip could be controlled
- Powerful electronic potentiometer function, adjust reference conveniently
- Standard serial comms. and optional fieldbus
- The comprehensive warning and protection function:
 - Fast protection for output shortage, over current, over load, over voltage, under voltage, phase loss, over heat (heatsink and junction), external trip, etc.
 - Motor heat protection from terminals
- Warning information display or not could be selected
- Preset speed select, 16 preset speeds (decided by control terminals)
- PID control
- User define V/F:
 - 3 point line setting
 - 1.2 law ramp
 - 1.7 law ramp
 - 2.0 law ramp
- Automatic sleep mode function
- Textile function
- Pulse counting
- Length control



Control Terminal

Control Terminal Diagram



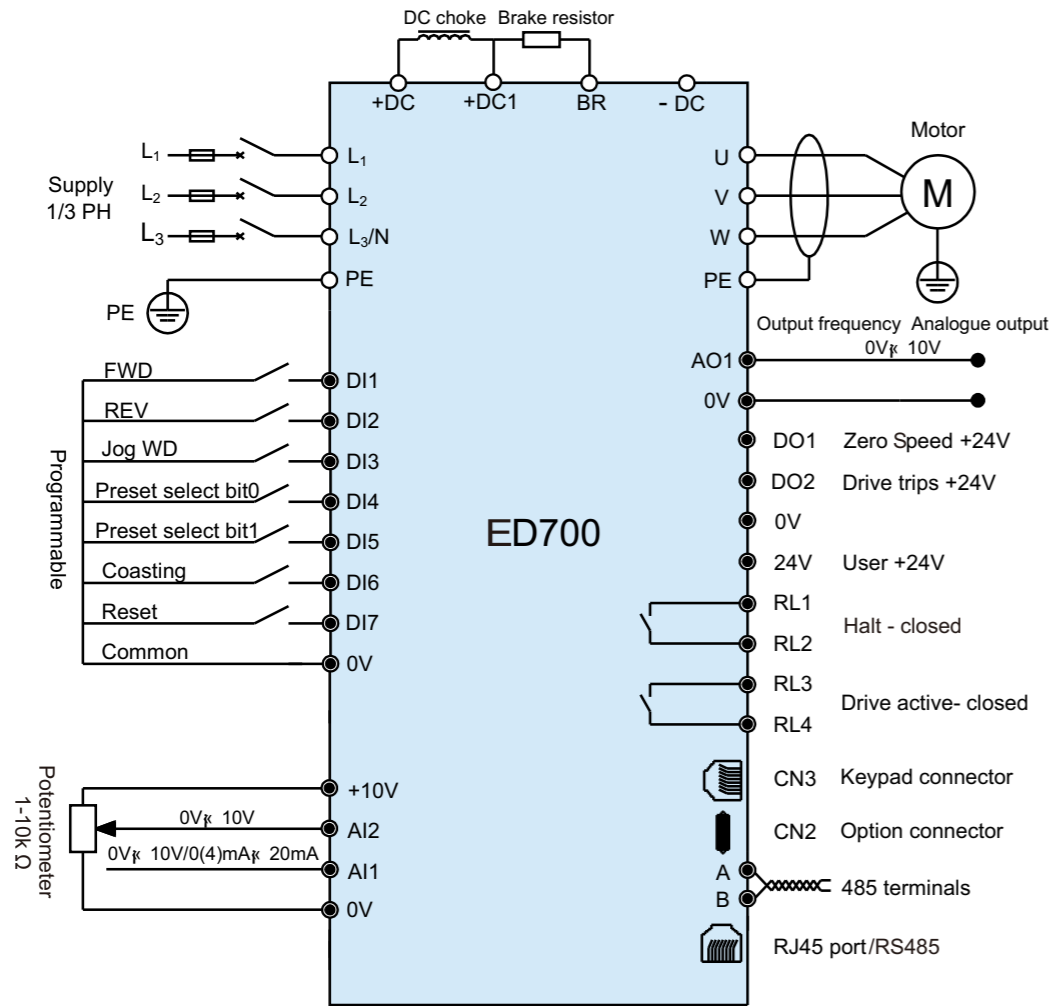
Control Terminal And Comms. Port

Type	Terminal Name	Function	Technical Specification
Serial comms.	RS485	RJ45 port	Two lines, Modbus RTU protocol
	A	485 plus signal	Same function with RJ45 port, mainly for multi network
	B	485 minus signal	
Digit input	DI1~DI5	Programmable digital input terminals	The common can be 0V or 24V by setting the P09.21 (default is 0V) Input resistance: 10kΩ High logic threshold: 10V±1V Sample time: 1ms
	DI6	Normal digital input Length counting Number counting	<ul style="list-style-type: none"> ● Same as DI1~DI5 ● Length counting by input pulse Sample time: 5ms ● Number counting by input pulse Sample time: 5ms Note: pulse frequency range is 0Hz~60Hz
	DI7	Normal digital input High frequency pulse input Motor thermister input	<ul style="list-style-type: none"> ● Same as DI1~DI5, but Input resistance is 5kΩ ● High frequency pulse input Frequency range: 1kHz~50kHz ● Only when P09.21=1 input can be thermister Trip resistance: 3kΩ Reset resistance: 1.8kΩ Sample time: 5ms
Digital output	DO1	Programmable digital output terminal1	Output: 24V/0V Maximum output current: 50mA Updating rate: 20ms
	DO2	Programmable digital output terminal1	<ul style="list-style-type: none"> ● Same with DO1 ● High frequency pulse output (0.1kHz~50kHz) ● PWM output (10kHz)
Analogue input & output	AI1	Programmable analogue input1	0V~10V, Input resistance: 100kΩ, 0 (4) mA~20mA Load resistance:188Ω, Minimum potentiometer resistance: 0.5kΩ Resolution: 0.1%, Accuracy: 2%, Sampling period: 5ms
	AI2	Programmable analogue input1	0V~10V, Input resistance: 30kΩ Minimum potentiometer resistance: 0.5kΩ Resolution: 0.1%, Accuracy: 2% Sampling period: 5ms
	AO1	Programmable analogue output	0V~10V, Maximum output current: 5mA, Resolution: 0.4% Accuracy: ±5%, Update rate: 5ms
Rail supply & Relay	10V	Analogue reference rail	Accuracy: 2%, Maximum output current: 20mA
	24V	User supply (2)	Accuracy: ±15%, Maximum output current: 100mA
	0V	Common (3)	Common reference point for control signal
	RL1, RL2	Programmable Relay1 output contactors	Type: normal open Update rate: 5ms Contactor rating: 250VAC/2A(cosφ=1); 250VAC/1A(cosφ=0.4); 30VDC/1A
	RL3, RL4	Programmable Relay2 output contactors	Default: Relay1: closed when powered and halted Relay2: closed when drive is active

Mechanical Dimension

Size	Model Name	W (mm)	W1 (mm)	W2 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	Mounting Hole Ø(mm)	Weight (kg)	Comments
L	ED700-40T31500	804	-	-	2200	-	804	-	-	350	Internal AC Choke
	ED700-40T35500										
	ED700-40T40000										
	ED700-40T45000										
	ED700-60T31500										
	ED700-60T35500										
	ED700-60T40000										
	ED700-60T45000										

Typical Cabling

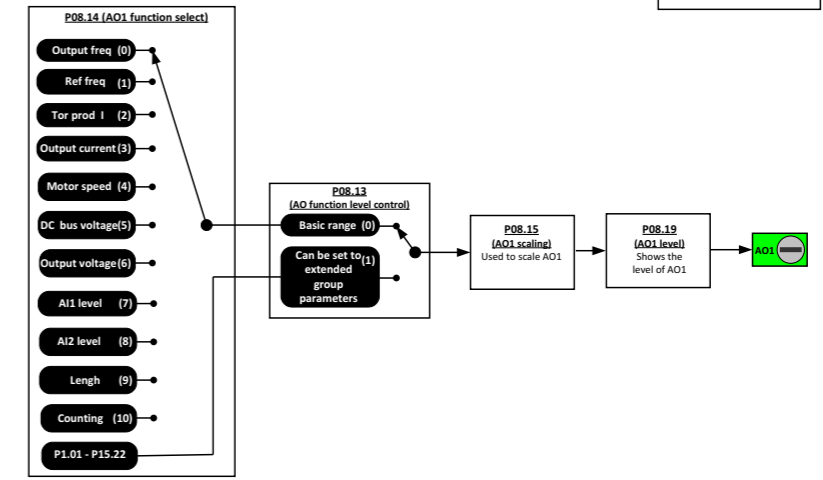
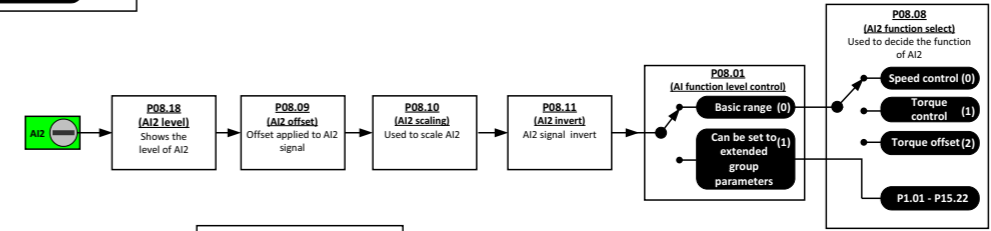


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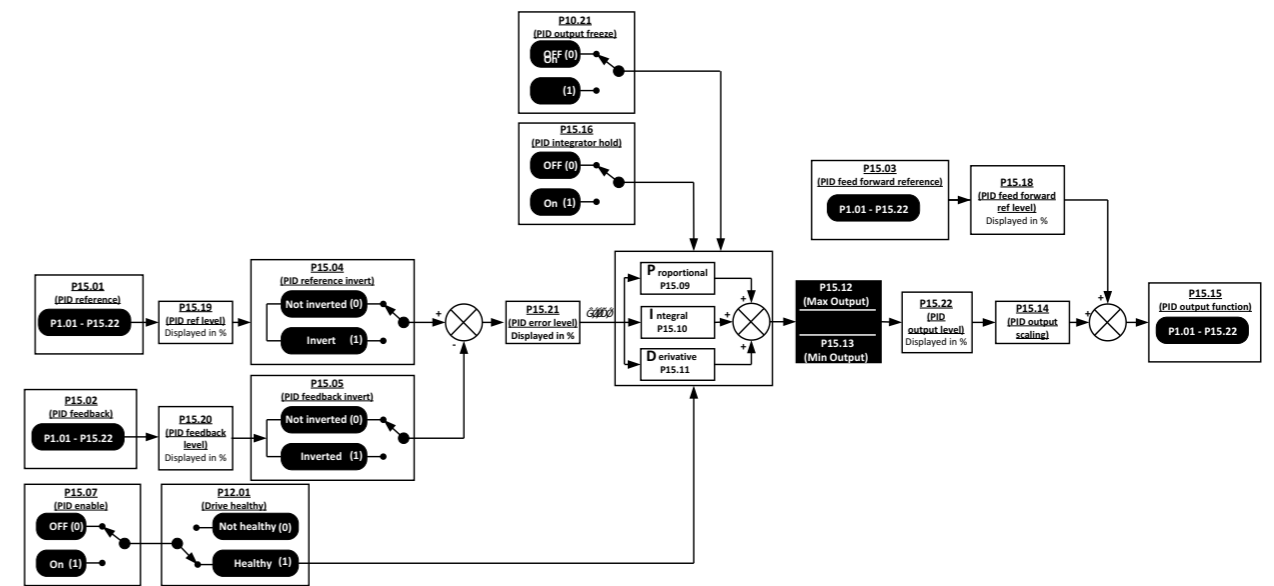
- All the programmable control terminal functions are factory default set;
- For control wire, recommend using unshielded twisted pair, shielded cable or shielded twisted pair;
- 5.5kW~280kW models (including 220V/4kW, except size E1 models), internal DC choke is fitted. 315kW~450kW models with AC reactor fitted.

Logic Diagram

The design of logic diagram makes the user understand and set parameters conveniently.



Analogue inputs and outputs overview diagram



PID controller overview diagram

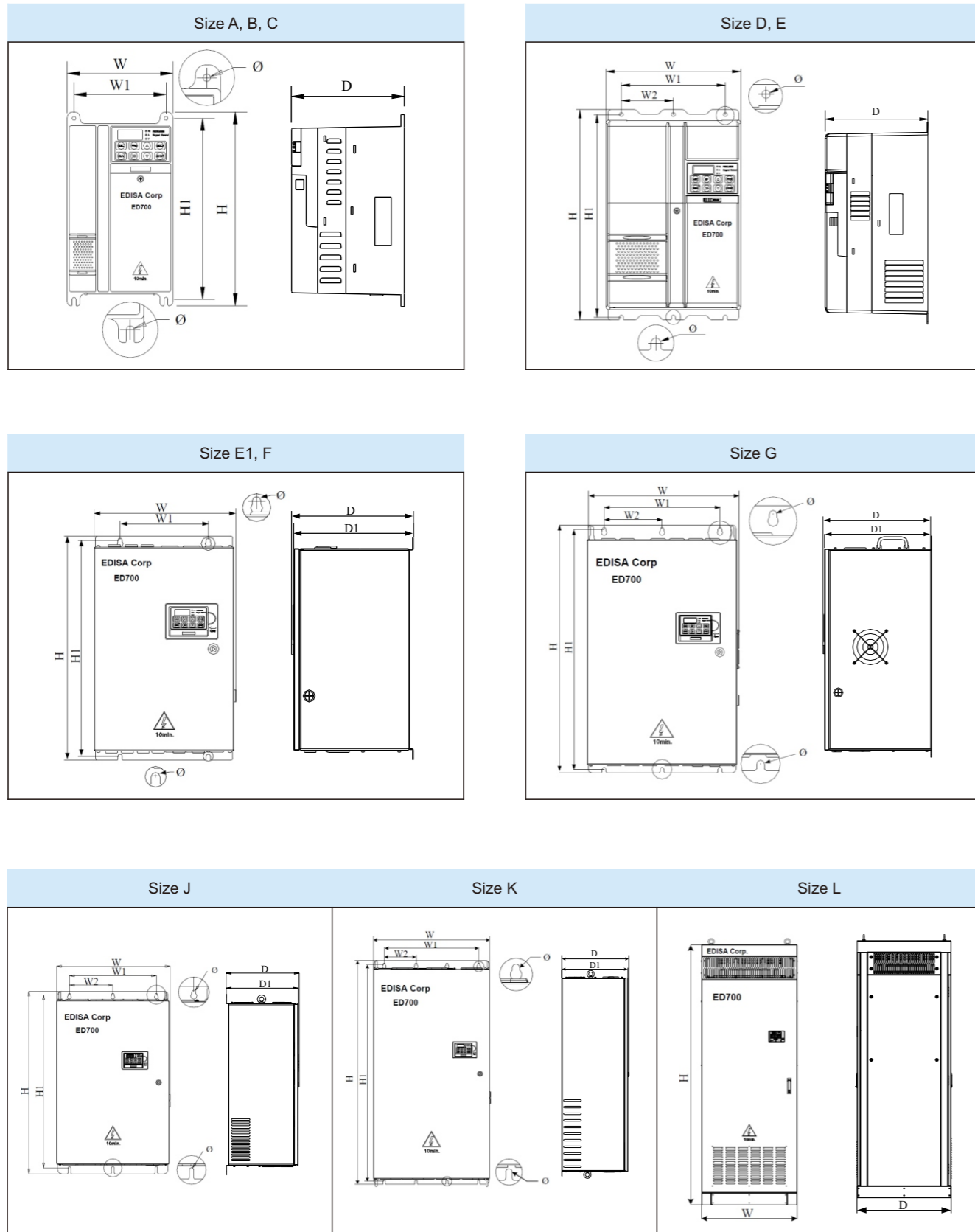
General Technical Data

Input power	Input voltage U_{in}	200V (-10%)~240V (+10%) 1/3 PH 380V (-10%)~480V (+10%) 3PH 500V (-10%)~690V (+10%) 3PH
	Input frequency	50Hz/60Hz(±2Hz)
	Maximum supply imbalance	≤3%
Power output	Output voltage	0V~ U_{in}
	Output frequency	0Hz~300Hz
Main performance function	Voltage control	V/F, Open loop Vector Control
	Switching frequency	1kHz~15kHz
	Adjust speed range	Open loop vector control -1:100, V/F mode -1:50
	Start torque	0.5Hz: 100% rated torque 1Hz: 150% rated torque
	Torque accuracy	7%
	Reference resolution	Digital- 0.01Hz, Analogue- 0.1%×Maximum frequency
	Acce. & Dece. rate	0.1s~3600min
	Voltage boost	0.1%~30.0%
	Overload	E, G type: 150% rated output current, 1 minute P type: 110% rated output current, 1 minute
	V/F	4 types: V/F (user can program) and ramp (2.0 power, 1.7 power, 1.2 power)
	DC injection	Injection frequency: 0.0%~100.0% maximum frequency Injection current: 0.0%~300.0% rated current Injection time: 0.00s~60.00s
	Dynamic braking	The utilization rate of dynamic braking : 0.0%~100.0%
	Jog	Jog frequency: 0.00Hz~maximum frequency Jog acceleration rate: 0.1s~600.0s Jog interval time: 0.1s~600.0s
	Preset	16 preset speeds (decided by control terminals)
	AVR	Maintain the rated output voltage when the input power supply voltage changed
Special function	Textile	For textile machines control
	Simple PLC	Onboard PLC
	Length control	Winding control
	PID control	Process control (reference close loop control)
	Advanced function blocks	2 logic control blocks 1 binary selector 2 threshold control blocks 3 variable selectors

Mechanical Dimension

Size	Model Name	W (mm)	W1 (mm)	W2 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	Mounting Hole Ø(mm)	Weight (kg)	Comments
A	ED700-20D00040	97.4	80	-	202.4	190	148.8	-	5	1.4	-
	ED700-20D00075										
	ED700-20D00150										
	ED700-40T00075										
	ED700-40T00150										
B	ED700-20D00220	142.4	123.5	-	220.4	208	155.5	-	5	2.2	-
	ED700-40T00220										
	ED700-40T00400										
	ED700-40T00550E										
	ED700-40T00550P										
C	ED700-20D00400	163.1	142	-	300	280	176.8	-	6	4.5	Internal DC choke
	ED700-40T00550										
	ED700-40T00750										
	ED700-40T01100P										
D	ED700-40T01100	238.5	184	92	370	356.5	189	-	7	8.8	Internal DC choke
	ED700-40T01500										
E	ED700-40T01850	238.5	184	92	435.5	422	200.3	-	7	12.1	Internal DC choke
	ED700-40T02200										
E1	ED700-40T03000E	320	210	-	510	490	226	222.5	8	20	-
	ED700-40T03700E										
F	ED700-40T03000	355.5	221	-	573	552.5	315.5	310	10	40	Internal DC choke
	ED700-40T03700										Internal DC choke
	ED700-40T04500										Internal DC choke
	ED700-40T05500										External DC choke
	ED700-40T07500										External DC choke
	ED700-60T03000										Internal DC choke
	ED700-60T03700										Internal DC choke
	ED700-60T04500										Internal DC choke
	ED700-60T05500										External DC choke
	ED700-60T07500										External DC choke
G	ED700-40T09000	445.6	340	170	725	701.5	355	349.5	10	63	External DC choke
	ED700-40T11000										
	ED700-40T13200										
	ED700-60T09000										
	ED700-60T11000										
J	ED700-40T16000E	575.5	440	220	937	889	379.3	373.8	13	104	External DC choke
	ED700-40T18500E										
	ED700-40T20000E										
	ED700-60T16000E										
	ED700-60T18500E										
ED700-60T20000E											
K	ED700-40T16000	640	520	175	1246.5	1207.5	405.5	400	13	150	External DC choke
	ED700-40T18500										
	ED700-40T20000										
	ED700-40T25000										
	ED700-40T28000										
	ED700-60T16000										
	ED700-60T18500										
	ED700-60T20000										
ED700-60T25000											
ED700-60T28000											

Diagram of Mounting



General Technical Data

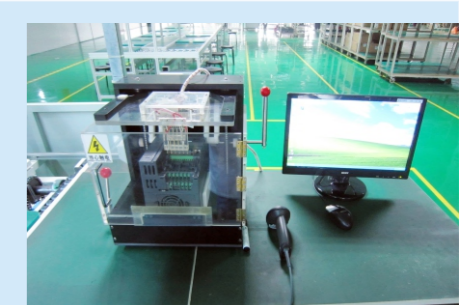
Control terminal	Reference source	Digit: Keypad, motorized pot (E-Pot), pulse, comms. Analogue: AI1: 0V~10V, 0(4) mA~20mA; AI2: 0V~10V
	Operating mode	Keypad, Control terminal, Serial comms.
	Digital input terminals	DI1~DI7: Programmable terminals and DI6 can be set as pulse input, 0Hz~60Hz; DI7 can be high frequency pulse input (1Hz~50.0kHz) or PTC thermistor input
	Digital output terminals	DO1~DO2: Programmable terminals, Max. output current: 50mA, DO2 can be the terminal to output pulse (0.1kHz~50.0kHz), and output PWM
	Analogue output Terminals	AO1: programmable terminal, 0V~10V
	Status relay	2 programmable relays, contactor data: AC250V/2A (COS ϕ =1) AC250V/1A (COS ϕ =0.4) DC30V/1A
Comms.	Connector	2 terminals (A&B) and RJ45 port
	Protocol	Modbus RTU
Environment	Altitude	1000m rated 1000m~3000m, 1% rated current derating per 100m
	Operating temperature	-10°C~+40°C
	Maximum humidity	≤90%RH, no-condensing
	Vibration	≤5.9m/s ² (0.6g)
	Storage temperature	-40°C~+70°C
	Running environment	Indoor, non-flammable, no corrosive gasses, no contamination with electrically conductive material, avoid dust which may restrict the fan
Optional module		LCD Keypad, EDOM-232, EDOM-USB, Profibus module, Keypad pallet, EDISOFT (PCTools), etc.
Protection		Output shortage, over current, over load, over voltage, under voltage, phase losing, over heat (heatsink and junction), external trip, etc.
Efficiency		1.5kW and below: ≥89% 2.2kW~22kW: ≥93% 30kW and above: ≥95%
Mounting method		Surface mounting, through hole, cubicle standing
Enclosure		IP20, IP21 (by adding optional device)
Cooling method		220V/0.4kW model is nature cool, others are forced air cool



Automatic DT test platform

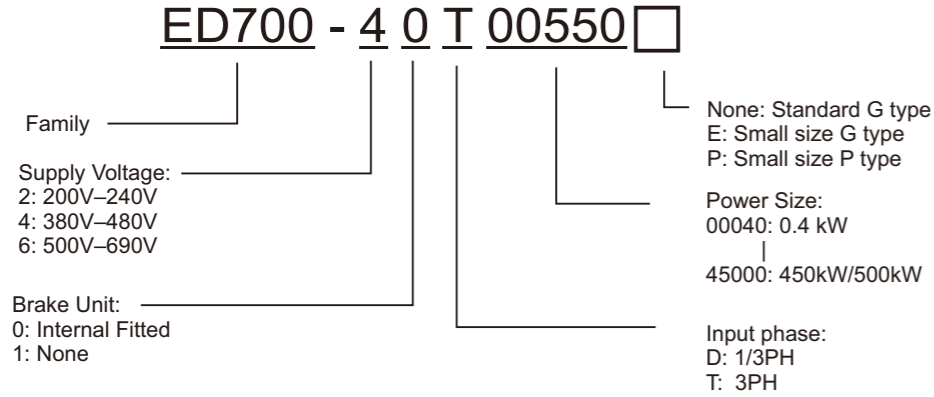


Automatic PCBA ATE test platform



Automatic FLASH test platform

Model Reference



Power size of HD700 is referred to the standard 4 poles induction motor at rated voltage.

E, G: Heavy duty P: Normal duty

Overload of E, G type: 150% rated output current, 1 minute

Overload of P type: 110% rated output current, 1 minute

220V Rating Data

Power supply: 200Vac~240Vac, 50Hz/60Hz, single/three phase

Model Name	Default Carrier Frequency (kHz)	Drive Power Size (kVA)	Rated Input Current (A)		Rated Output Current (A)	Motor Power (kW)/(HP)		Size
			1/3PH					
ED700-20D00040	6	1.1	7.1/4		2.8	0.4	0.5	A
ED700-20D00075	6	1.9	12.8/7.1		5	0.75	1.0	A
ED700-20D00150	6	3.0	20.5/11.3		8	1.5	2.0	A
ED700-20D00220	6	4.2	24/14.5		11	2.2	3.0	B
ED700-20D00400	6	6.7	16.5		17.6	4	5.0	C

380V Rating Data

Power supply: 380Vac~480Vac, 50Hz/60Hz, three phase

Model Name	Default Carrier Frequency (KHz)	G				P				Size		
		Drive Power Size (kVA)	Rated Input Current (A)	Rated Output Current (A)	Motor Power (kW)/(HP)	Drive Power Size (kVA)	Rated Input Current (A)	Rated Output Current (A)	Motor Power (kW)/(HP)			
ED700-40T00075	6	1.7	3.6	2.5	0.75	1.0	-	-	-	-	A	
ED700-40T00150	6	2.8	5.7	4.2	1.5	2.0	-	-	-	-	A	
ED700-40T00220E	6	3.4	6.1	5.2	2.2	3.0	-	-	-	-	A	
ED700-40T00220	6	3.8	8.3	5.8	2.2	3.0	-	-	-	-	B	
ED700-40T00400	6	6.3	13.2	9.5	3.7	5.0	-	-	-	-	B	
ED700-40T00550E	6	8.6	14.3	13	5.5	7.5	-	-	-	-	B	
ED700-40T00550P	6	-	-	-	-	-	8.6	14.3	13	5.5	10	B
ED700-40T00550	6	8.6	12.4	13	5.5	7.5	-	-	-	-	C	
ED700-40T00750	6	11	16.1	17	7.5	10	-	-	-	-	C	
ED700-40T01100P	6	-	-	-	-	-	15.2	21	23	11	15	C
ED700-40T01100	6	16.5	24	25	11	15	21	31	32	15	20	D
ED700-40T01500	6	21	31	32	15	20	25	36	38	18.5	25	D
ED700-40T01850	6	25	36	38	18.5	25	30	44	46	22	30	E
ED700-40T02200	6	30	44	46	22	30	40	58	60	30	40	E
ED700-40T03000E	3	40	58	60	30	40	50	72	75	37	50	E1
ED700-40T03700E	3	50	72	75	37	50	-	-	-	-	-	E1
ED700-40T03000	3	40	58	60	30	40	50	72	75	37	50	F
ED700-40T03700	3	50	72	75	37	50	63	93	96	45	60	F

380V Rating Data

Power supply: 380Vac~480Vac, 50Hz/60Hz, three phase

Model Name	Default Carrier Frequency (KHz)	G				P				Size		
		Drive Power Size (kVA)	Rated Input Current (A)	Rated Output Current (A)	Motor Power (kW)/(HP)	Drive Power Size (kVA)	Rated Input Current (A)	Rated Output Current (A)	Motor Power (kW)/(HP)			
ED700-40T04500	3	63	93	96	45	60	83	121	125	55	75	F
ED700-40T05500	3	83	121	125	55	75	103	151	156	75	100	F
ED700-40T07500	3	103	151	156	75	100	119	175	180	90	120	F
ED700-40T09000	3	119	175	180	90	120	139	204	210	110	150	G
ED700-40T11000	3	139	204	210	110	150	169	248	256	132	175	G
ED700-40T13200	3	169	248	256	132	175	205	301	310	160	215	G
ED700-40T16000E	3	205	301	310	160	215	231	340	350	185	250	J
ED700-40T18500E	3	231	340	350	185	250	255	375	387	200	270	J
ED700-40T20000E	3	255	375	387	200	270	280	415	427	220	300	J
ED700-40T16000	3	205	301	310	160	215	231	340	350	185	250	K
ED700-40T18500	3	231	340	350	185	250	255	375	387	200	270	K
ED700-40T20000	3	255	375	387	200	270	310	457	471	250	330	K
ED700-40T25000	3	310	457	471	250	330	343	505	520	280	375	K
ED700-40T28000	3	343	505	520	280	375	403	592	610	315	420	K
ED700-40T31500	2	403	592	610	315	420	444	653	673	355	475	L
ED700-40T35500	2	444	653	673	355	475	495	728	750	400	540	L
ED700-40T40000	2	495	728	750	400	540	551	810	835	450	600	L
ED700-40T45000	2	551	810	835	450	600	622	915	943	500	670	L

690V Rating Data

Power supply: 500Vac~690Vac, 50Hz/60Hz, three phase

Model Name	Default Carrier Frequency (KHz)	G				P				Size		
		Drive Power Size (kVA)	Rated Input Current (A)	Rated Output Current (A)	Motor Power (kW)/(HP)	Drive Power Size (kVA)	Drive Power Size (kVA)	Rated Output Current (A)	Motor Power (kW)/(HP)			
ED700-60T03000	3	43	36	36	30	40	51	49	51	37	50	F
ED700-60T03700	3	61	49	51	37	50	65	52	54	45	60	F
ED700-60T04500	3	65	52	54	45	60	75	61	63	55	75	F
ED700-60T05500	3	75	61	63	55	75	103	83	86	75	100	F
ED700-60T07500	3	103	83	86	75	100	120	97	100	90	120	F
ED700-60T09000	3	120	97	100	90	120	157	127	131	110	150	G
ED700-60T11000	3	157	127	131	110	150	179	145	150	132	175	G
ED700-60T13200	3	179	145	150	132	175	209	170	175	160	215	G
ED700-60T16000E	3	209	170	175	160	215	237	192	198	185	250	J
ED700-60T18500E	3	237	192	198	185	250	276	224	231	200	270	J
ED700-60T20000E	3	276	224	231	200	270	296	235	248	220	300	J
ED700-60T16000	3	209	170	175	160	215	237	192	198	185	250	K
ED700-60T18500	3	237	192	198	185	250	276	224	231	200	270	K
ED700-60T20000	3	276	224	231	200	270	327	266	274	250	330	K
ED700-60T25000	3	327	266	274	250	330	350	285	293	280	375	K
ED700-60T28000	3	350	285	293	280	375	392	318	328	315	420	K
ED700-60T31500	2	392	318	328	315	420	462	375	387	355	475	L
ED700-60T35500	2	462	375	387	355	475	509	413	426	400	540	L
ED700-60T40000	2	509	413	426	400	540	576	468	482	450	600	L
ED700-60T45000	2	576	468	482	450	600	651	529	545	500	670	L