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# E600 FREQUENCY INVERTER

0.2kW - 5.5kW / 0.3HP- 7.5HP



# E600<sub>0.2 kW - 5.5 kW / 0.3HP - 7.5HP</sub> FREQUENCY INVERTER

## HIGHLIGHTS

Best performance/cost ratio, without compromise in reliability and quality

Compact design, easy to integrate in multiple environments: DIN rail mounting, contactor-style I/O

Easy to setup: Simple set of optimized parameters for all basic functions and applications

PID and HVAC functions - safety integrated - MODBUS - open for networking

Internal EMC filter as standard: Ready for CE market

Economical mass production on highly automated and dedicated SMT lines

General purpose drive - made for the worldwide market (CE/UL)

Approved and certified by American independent bodies

### Naming rule

#### Model naming rule

#### E600-0007 S2



#### Function naming rule

#### Q2 U5 F2 AG01 B1 R3

Filter	R3	EMC C3 level filter
Braking type	e B1	Dynamic braking
Keypad pan	el AG03	AG LED keypad in English
— Communica	tion F2	Terminal interface is adopted for Modbus
Certificate	U5	UL+CE
Structure co	de Q2	Q2 structure

CE

ISO 910

#### **Remote keypad**

Keypad code	Contents
A623	A6 English LED without potentiometer
A624	A6 English LED without potentiometer
AA23	AA English LED without potentiometer
AD21	AD English LCD1 without potentiometer

#### Communication

Communication code	Contents			
F2	Modbus			

#### Certificate

Contents				
CE				
UL+CE				
CE+STO				
CE+UL+STO				

### TECHNICAL DATA

		3-phase 380460V +/- 15% - 1-phase 200240V +/- 15%				
Power supply	Input frequency	4467 Hz				
	EMC filter	C3 level				
	Output voltage	0V-input				
Output	Output frequency	0.5590Hz				
output	Resolution of output frequency	0,01 Hz				
	Overload capability	150% - 60 sec. / 10 Min				
	PWM control-modes	V/Hz - Mode				
Control-Mode	PWM frequency	0,86 kHz				
	V/Hz characteristic	Linear, quadratic, and user-programmable curve				
	Starting torque	100% rated torque at 1 Hz				
	DC-Brake	Freq. threshold, duration and intensity programmable – DC injection				
	Brake chopper	Integrated chopper transistor				
Display	7 Segment LED display -4- digit	For programming and visualization of different operating parameters				
		V/Hz - Mode				
	Inverter control - Start/Stop	To configure: terminals / operation papel / serial link				
	Digital control inputs	4 digital inputs (HIGH/I OW configurable)				
	Bigital control inputo	Potentiometer, analogue input (terminals 010V, (0)420 mA).				
	Speed reference signal	Operating panel keys , serial link				
	Reference analogue channels	1 Analogue channels 010V, (0)420 mA				
		1 analogue output channel programmable in gain, different functions to				
I/O Channels,	Analogue outputs	assign (010V)				
control functions	Digital outputs	1 digital output (OC, different functions to assign)				
	Relays output	1 switchover contact 3 A 230 V (programmable for different functions)				
	Interface	Serial link (MODBUS – ASCI/RTU)				
		Jog mode, 12V / 50 mA auxiliary power supply on terminals				
	Special function - control options	PI-control				
		Fixed frequency control, programmable cycling frequency sequence				
		AUTORESET/RESTART function				
		Overvoltage, Undervoltage				
Protection functions,	Electrical protection functions	Overcurrent, Overload, Motor-Overload, Output-short				
Incl. fault memory	<b>T</b>	Analogue reference interruption				
	I hermal protection functions	Heatsink overtemperature				
	Operating panel	Remote keypad				
	Brake resistors	Braking resistors for heavy duty operation				
Ontions	Parameter copy stick	USB Stick with parameter dublication function				
Options	DO Link Orferenz (dia MODDUO)	Special tool for programming, control and diagnostic (parameter set				
	PC-LINK Soffware (VIa MODBUS)	memory)				
	Safety	STO(O2 only)				
	Salety					
	Diretaction					
Environmental conditions	Humidity	Max 90 % not condensing no corresion				
	Flavation	1000  m = 1% derating / 100m above				
	Vibration	Max 0.5 a				
Dennes	\//I					
Power range	V/HZ	200V. U,ZZ,Z KVV 400V. U,Z5,5 KVV				

# Functions of Control Terminals

Termin	Тур	e	Descr	iption		Function							
<b>DO</b> 1		Multifunctional output terminal 1When the token function is valid, the value between this terminal and CM is 0V; when the inverter is stopped, the value is 24V.					The functions of output terminals shall be defined						
TA TB TC	Outp signa	out al	Relay co	ontact		TC is a common point, TB-TC are normally closed contacts, TA-TC are normally open contacts. The contact capacity is 3A 250VAC/30VDC, 10A/125VAC.					per manufacturer's value. Their initial state may be changed through changing function codes.		
10V	Anal powe supp	og er Ily	Self con power s	utained upply		Internal 10V used as the 20mA.	Internal 10V self-contained power supply. When used externate used as the power supply for voltage control signals with a 20mA.						nly be nt below
AI1	Inpu Sign	t al	Voltage analog input po	/current ort		When analog speed control is adopted, the voltage or current signal is input through this terminal. The range of voltage input is $0-5V$ or $0-10V$ , and the current input $\sim 20$ mA, the input resistor is $50\Omega$ , and grounding: GND. If the input is $4 \sim 20$ mA, can be realized by setting F400=2. The voltage or current signal can be chosen by coding switch. The default setting of Al1 is $0-10V$ .							through put is 0 mA, it en by
GND			Self-cor Power supply (	ntained Ground		Ground term control signa	ninal of ext al) is also t	ternal contro the ground o	ol signal (v of 10V pov	oltage con ver supply	trol signal of this inve	or current so erter.	ource
24V	PowerControl powersupplysupplyPower: 24±1.5V, grounding is CM; current is restricted						l below 200mA for external use.						
DI1	Jogging terminal					When this terminal is valid, the inverter willhave jogging running. The jogging functionof this terminal is valid under both atstopped and running status.When this terminal is valid, "ESP"				The fun termina	he functions of input erminals shall be defined er manufacturer's value.		
DI2	input		Emerge	ency Stop		malfunction	signal will	be displaye	ed.		Other fu	inctions can	also be
DI3	termir	na	"FWD"	Terminal		When this te	rminal is v	alid, inverter	will run for	ward.	defined by changing function		
DI4			"REV"	Terminal		When this te	rminal is v	alid, inverter	will run rev	versely.	coues.		
GND			Ground differen	ling of tial signal		Grounding o	of different	ial signal					
5V			Power of differen	of itial signal	signal Power of differential signal								
A+	485 communication terminals		Positive polarity of differential signal			Standard: TIA/EIA-485(RS-485) Communication protocol: Modbus							
B-			Negativ Differer	gative polarity of Communication rate: fferential signal 1200/2400/4800/9600/19200/38400/57600bps									
TA	TB	TC	DO1	24V	СМ	DI1	DI2	DI3	DI4	10V	Al1	GND	AO1
GND	+5V	A+	B1										
SR1	SR2	24V	FB	CM									

SR1, SR2, 24V, FB, CM is optional for Q2 structure for STO function.

### FRAMESIZE



Model	Motor Power (kW/HP)	Rated Current Output (A)	Structure Code	Weight (kg)	Cooling Mode
E600-0002S2Q1U5F2AG03B1R3	0.2/0.3	1.5	Q1	0.45	Self-cooling
E600-0004S2Q1U5F2AG03B1R3	0.4/0.5	2.5	Q1	0.45	Self-cooling
E600-0007S2Q1U5F2AG03B1R3	0.75/1.0	4.5	Q1	0.48	Air-Cooling
E600-0015S2Q1U5F2AG03B1R3	1.5/2.0	7.0	Q1	0.49	Air-Cooling
E600-0002S2Q2U5F2AG03B1R3	0.2/0.3	1.5	Q2	0.45	Self-cooling
E600-0004S2Q2U5F2AG03B1R3	0.4/0.5	2.5	Q2	0.45	Self-cooling
E600-0007S2Q2U5F2AG03B1R3	0.75/1.0	4.5	Q2	0.48	Air-Cooling
E600-0015S2Q2U5F2AG03B1R3	1.5/2.0	7.0	Q2	0.49	Air-Cooling
E600-0022S2Q2U5F2AG03B1R3	2.2/3.0	10	Q2	0.75	Air-Cooling
E600-0002T3Q1U5F2AG03B1R5	0.2/0.3	0.6	Q1	0.45	Self-cooling
E600-0004T3Q1U5F2AG03B1R5	0.4/0.5	12	Q1	0.8	Self-cooling
E600-0007T3Q1U5F2AG03B1R5	0.75/1.0	2.0	Q1	0.82	Air-Cooling
E600-0015T3Q1U5F2AG03B1R5	1.5/2.0	4.0	Q1	0.85	Air-Cooling
E600-0002T3Q2U5F2AG03B1R3	0.2/0.3	0.6	Q2	0.8	Self-cooling
E600-0004T3Q2U5F2AG03B1R3	0.4/0.5	1.2	Q2	0.8	Self-cooling
E600-0007T3Q2U5F2AG03B1R3	0.75/1.0	2.0	Q2	0.82	Air-Cooling
E600-0015T3Q2U5F2AG03B1R3	1.5/2.0	4.0	Q2	0.85	Air-Cooling
E600-0022T3Q2U5F2AG03B1R3	2.2/3.0	6.5	Q2	1.3	Air-Cooling
E600-0030T3Q2U5F2AG03B1R3	3.0/4.0	7.6	Q2	1.3	Air-Cooling
E600-0040T3Q2U5F2AG03B1R3	4.0/5.5	9.0	Q2	1.45	Air-Cooling
E600-0055T3Q2U5F2AG03B1R3	5.5/7.5	12	Q2	1.45	Air-Cooling



LCD REMOTE KEYPAD **IP66** 



### Wiring diagram

#### Note :

- 1. Connect power terminals L1/R and L2/S with power grid for single-phase inverters.
- 2. 485 communication port has built-in standard MODBUS communication protocol. Communication port is on the right side of inverter.
- 3. The contact capacity is 10A/125VAC. NO/NC: 3A 250VAC/30VDC.





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