



ENGLISH

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E600

FREQUENCY INVERTER

0,4 kW - 5,5 kW



E600_{0,4 kW - 5,5 kW}

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

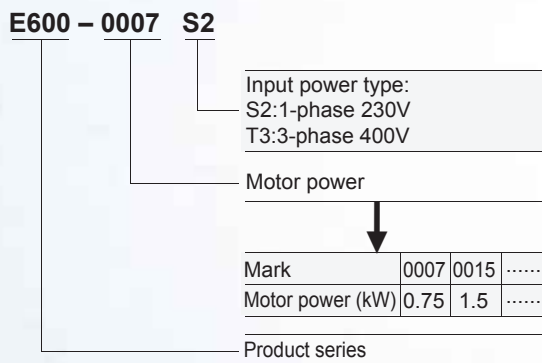
Economical mass production on highly automated and dedicated SMT lines

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

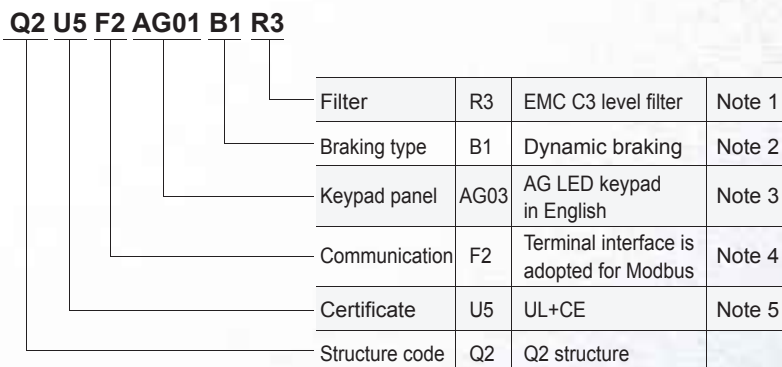
Approved and certified by American independent bodies

Naming rule

Model naming rule



Function naming rule



Note:

- E600 series has two kinds of built-in filters, R3 is tested with 25m motor cable conforming to standard EMC C3 grade, R5 is tested with 10m unshielded motor cable conforming to EMC C3 grade.
- Braking unit is standard for 3-phase 400V and optional for 1-phase 230V.
- Local keypad AG03 is the English version

Remote keypad

Keypad code	Contents
A623	A6 English version without potentiometer
A624	A6 English version with potentiometer
AA23	AA English version without potentiometer
AD21	AD English version without potentiometer

4. Communication

Communication code	Contents
F2	Modbus

5.Certificate

Certificate code	Contents
U1	CE
U5	UL+CE
U8	CE+STO
U9	CE+UL+STO

TECHNICAL DATA

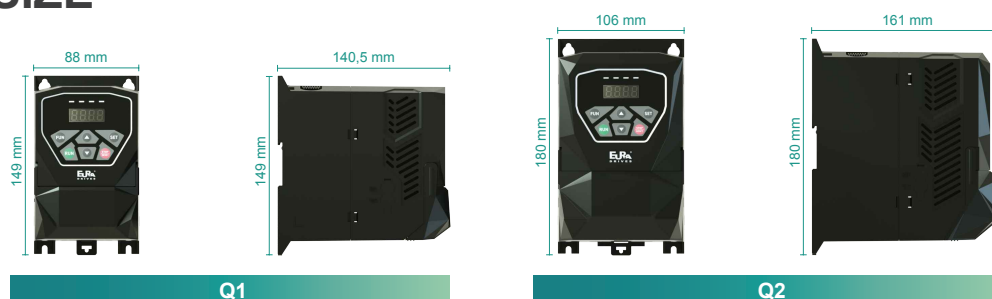
Power supply	Rated voltage	3-phase 380...460V +/- 15% - 1-phase 200...240V +/- 15%
	Input frequency	44...67 Hz
	EMC filter	Integrated for 2. environment
Output	Output voltage	0.....V-input
	Output frequency	0.5.....650 Hz
	Resolution of output frequency	0,01 Hz
	Overload capability	150% - 60 sec. / 10 Min
Control-Mode	PWM control-modes	V/Hz - Mode
	PWM frequency	0,8.....6 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
I/O Channels, control functions	Inverter control - Start/Stop	To configure: terminals / operation panel / serial link
	Digital control inputs	4 digital inputs (HIGH/LOW configurable)
	Speed reference signal	Potentiometer, analogue input (terminals 0...10V, (0)4...20 mA), Operating panel keys ,serial link
	Reference analogue channels	1 Analogue channels 0...10V, (0)4....20 mA
	Analogue outputs	1 analogue output channel programmable in gain, different functions to assign (0...10V)
	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 – ASCII/RTU)
	Special function - control options	Jog mode, 12V / 50 mA auxiliary power supply on terminals PI-control Fixed frequency control, programmable cycling frequency sequence AUTORESET/RESTART function
Protection functions, incl. fault memory	Electrical protection functions	Overvoltage, Undervoltage Overcurrent, Overload, Motor-Overload, Output-short Analogue reference interruption
	Thermal protection functions	Heatsink overtemperature
Options	Operating panel	Remote keypad
	Brake resistors	Braking resistors for heavy duty operation
	Filter / chokes	PFC chokes – dv/dt limiting output filter - sinusfilter
	Parameter copy stick	USB Stick with parameter dublication function
	PC-Link Software (via MODBUS)	Special tool for programming, control and diagnostic (parameter set memory)
	Safety	STO (Q2 only)
Environmental conditions	Protection	IP21
	Operating temperature	-10.....+40 °C
	Humidity	Max. 90 % not condensing, no corrosion
	Elavation	1000 m - 1% derating / 100m above
	Vibration	Max. 0,5 g
Power range	V/Hz	230V: 0,2...2,2 kW 400V: 0,2...5,5 kW
Standards	EMC	EN61800-3(2004)
	Safety	EN61800-5-1 2003

Functions of Control Terminals

Termin	Type		Description		Function								
DO1	Output signal		Multifunctional output terminal 1	When 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 per manufacturer's value. Their initial state may be changed through changing function codes.		
TA		Relay contact	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.										
TB													
TC													
10V	Analog power supply		Self contained power supply	Internal 10V self-contained power supply. When used externally, it can only be used as the power supply for voltage control signals with restricted current below 20mA.									
AI1	Input Signal		Voltage /current analog input port	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 is 0 ~20mA, the input resistor is 50Ω, and grounding: GND. If the input is 4 ~20mA, it can be realized by setting F400=2. The voltage or current signal can be chosen by coding switch. The default setting of AI1 is 0~10V.									
GND	Power supply		Self-contained Power supply Ground	Ground terminal of external control signal (voltage control signal or current source control signal) is also the ground of 10V power supply of this inverter.									
24V		Control power supply	Power: 24±1.5V, grounding is CM; current is restricted below 200mA for external use.										
DI1		Digital input control termina	Jogging terminal	When this terminal is valid, the inverter will have jogging running. The jogging function of this terminal is valid under both at stopped and running status.							The functions of input terminals shall be defined per manufacturer's value. Other functions can also be defined by changing function codes.		
DI2	External Emergency Stop		When this terminal is valid, “ESP” malfunction signal will be displayed.										
DI3	“FWD” Terminal		When this terminal is valid, inverter will run forward.										
DI4	“REV” Terminal		When this terminal is valid, inverter will run reversely.										
GND	485 communication terminals		Grounding of differential signal	Grounding of differential signal									
5V			Power of differential signal	Power of differential signal									
A+			Positive polarity of differential signal	Standard: TIA/EIA-485(RS-485) Communication protocol: Modbus Communication rate: 1200/2400/4800/9600/19200/38400/57600bps									
B-			Negative polarity of Differential signal										
TA	TB	TC	DO1	24V	CM	DI1	DI2	DI3	DI4	10V	AI1	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)	Rated Current Output (A)	Structure Code	Weight (kg)	Cooling Mode
E600-0004S2Q1U1F2AG03B1R3	0,4 kW	2,5	Q1	0,45	Self-cooling
E600-0007S2Q1U1F2AG03B1R3	0,75 kW	4,5	Q1	0,48	Air-Cooling
E600-0015S2Q1U1F2AG03B1R3	1,5 kW	7,0	Q1	0,49	Air-Cooling
E600-0022S2Q2U1F2AG03B1R3	2,2 kW	10,0	Q2	0,75	Air-Cooling
E600-0004T3Q1U1F2AG03B1R3	0,4 kW	1,2	Q1	0,8	Self-cooling
E600-0007T3Q1U1F2AG03B1R5	0,75 kW	2	Q1	0,82	Air-Cooling
E600-0015T3Q1U1F2AG03B1R5	1,5 kW	4	Q1	0,85	Air-Cooling
E600-0022T3Q2U1F2AG03B1R5	2,2 kW	6,5	Q2	1,3	Air-Cooling
E600-0030T3Q2U1F2AG03B1R3	3 kW	7,6	Q2	1,3	Air-Cooling
E600-0040T3Q2U1F2AG03B1R3	4 kW	9	Q2	1,45	Air-Cooling
E600-0055T3Q2U1F2AG03B1R3	5,5 kW	12	Q2	1,45	Air-Cooling



LCD REMOTE
KEYPAD IP66

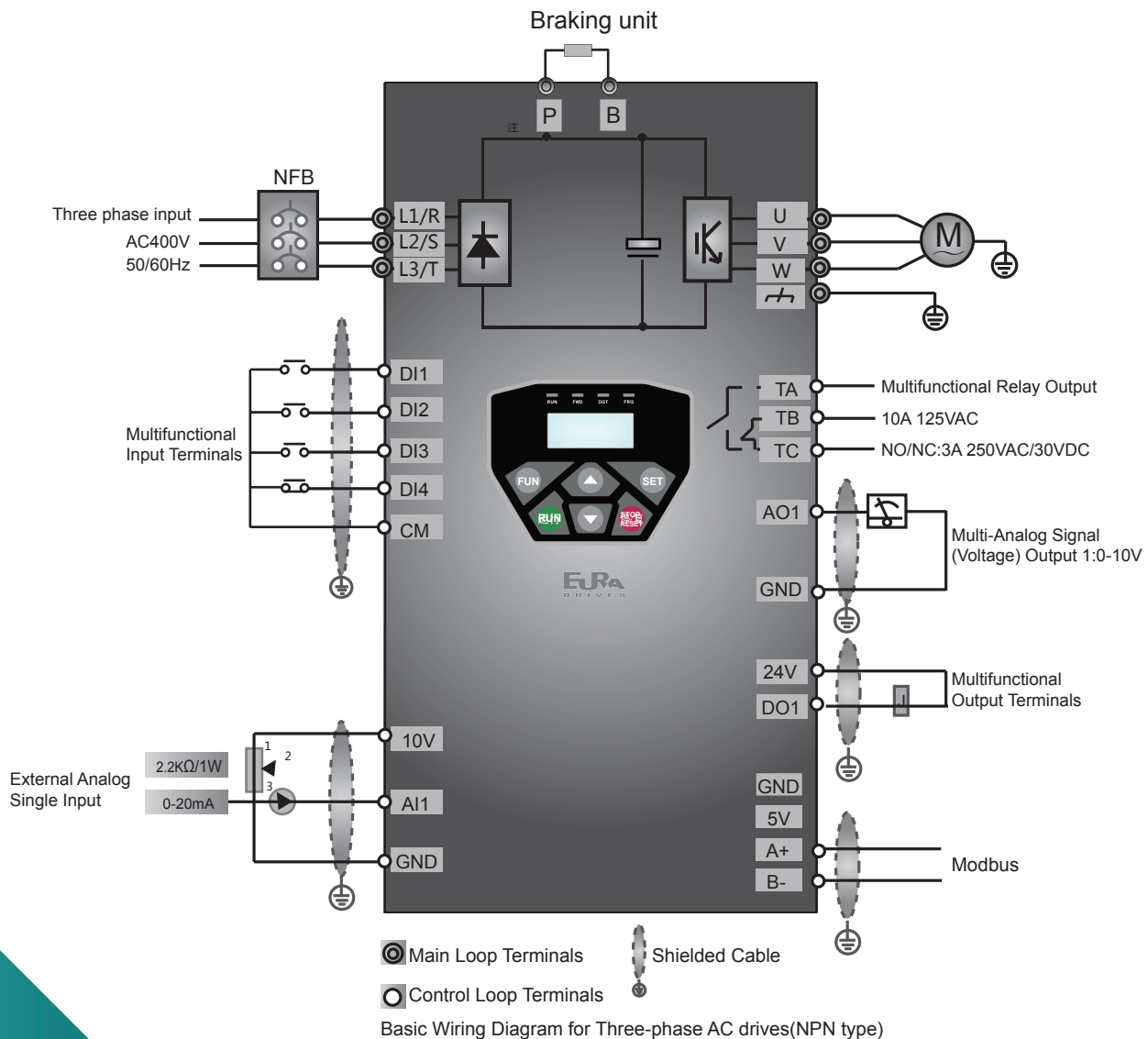


PARAMETER
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Wiring diagram

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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