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# E600

## FREQUENCY INVERTER

0.4kW - 5.5kW / 0.5HP- 7.5HP



# E600

0.2 kW - 5.5 kW / 0.3HP - 7.5HP

## FREQUENCY INVERTER

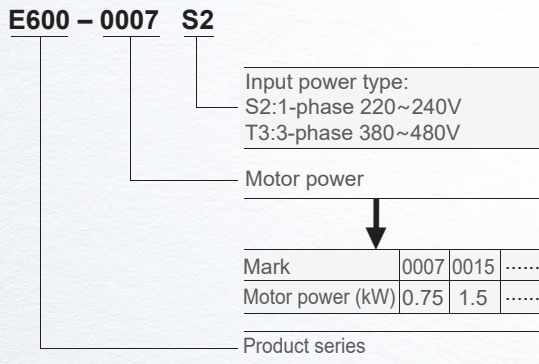
### HIGHLIGHTS

- 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 (UL+cUL+CE)
- Approved and certified by American independent body

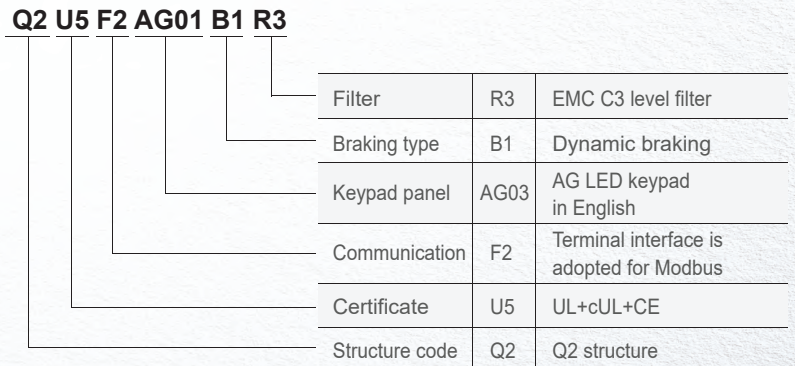


## Naming Rule

### Model naming rule



### Function naming rule



### 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

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

# Technical Data

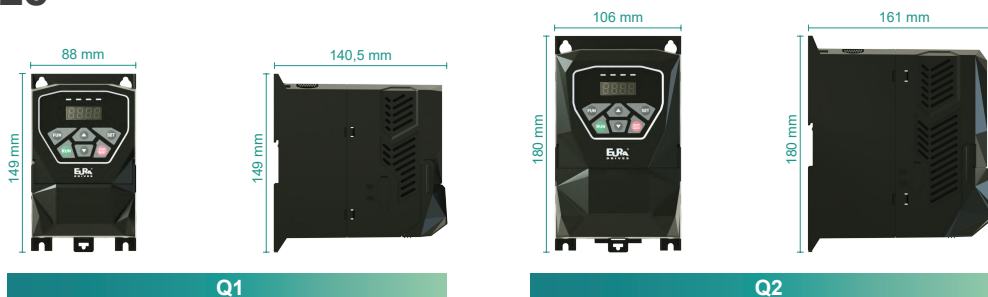
<b>Power Supply</b>	Rated Voltage Range	3-phase 380 - 480V +10% / -15% / 1-phase 220...240V +/-15%
	Input Frequency	50/60Hz +/-5%
	EMC Filter	C3 level
<b>Output</b>	Output Voltage	0.....V-input
	Output Frequency	0.5.....590Hz
	Resolution Of Output Frequency	0,01 Hz
	Overload Capability	150% - 60 sec . / 10 Min Adjustable
<b>Control Mode</b>	PWM Control-Modes	V/Hz - Mode
	PWM Frequency	0,8 - 6 kHz; Mfr's value: 3K
	V/Hz Characteristic	Linear, quadratic, and user-programmable curve
	Starting Torque	100% rated torque at 1 Hz
	DC-Brake	Frequency threshold, duration and intensity programmable – DC injection
	Brake Chopper	Integrated chopper transistor
<b>Display</b>	7 Segment LED Display-4-Digit	For programming and visualization of different operating parameters
<b>I/O Channels, Control Functions</b>	Inverter Control-Start/Stop	To configure terminals / operation panel / serial link
	Digital Control Inputs	4 digital inputs (HIGH/LOW configurable)
	Speed Reference Signal	Potentiometer, analog input (terminals 0 ... 10V, (0) 4 ... 20mA), Operating panel keys, serial link
	Reference Analog Channels	1 analog channels 0...10V, (0) 4 .... 20mA
	Analog Outputs	1 analog 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 / 50mA auxiliary power supply on terminals PID - control Fixed frequency control, programmable cycling frequency sequence AUTORESET/RESTART function
<b>Protection Functions, Incl . Fault Memory</b>	Electrical Protection Functions	Overvoltage, Undervoltage Overcurrent, Overload, Motor-Overload, Output-short Analog reference interruption
	Thermal Protection Functions	Heatsink overtemperature
<b>Options</b>	Operating Panel	Remote keypad
	Brake Resistor	Braking resistors for heavy duty operation
	Parameter Copy Stick	USB stick with parameter duplication function
	PC-Link Software (Via Modbus)	Special tool for programming, control and diagnostic (parameter set memory) – memory stick used as USB to Modbus converter
	Safety	STO (Q2 only)
<b>Environmental Conditions</b>	Protection	IP20/NEMA 1
	Operating Temperature	-10 - 40 °C
	Humidity	Max . 90 % not condensing, no corrosion
	Elevation	1000m - 1% derating/100m above
	Vibration	Max . 0,5 g
<b>Power Range</b>	V/Hz	230V: 0,2...2,2 kW 460V: 0,2...5,5 kW

# Functions of Control Terminals

Terminal	Type	Description	Function										
<b>DO1</b>	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.										
<b>TA</b>		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.										
<b>TB</b>													
<b>TC</b>													
<b>10V</b>	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.										
<b>A11</b>	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 A11 is 0~10V.										
<b>GND</b>		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.										
<b>24V</b>	Power Supply	Control power supply	Power: 24±1.5V, grounding is CM; current is restricted below 200mA for external use.										
<b>DI1</b>	Digital Input Control Terminal	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.										
<b>DI2</b>		External Emergency stop	When this terminal is valid, "ESP" malfunction signal will be displayed.										
<b>DI3</b>		"FWD" Terminal	When this terminal is valid, inverter will run forward.										
<b>DI4</b>		"REV" Terminal	When this terminal is valid, inverter will run reversely.										
<b>GND</b>	485 Communication Terminals	Grounding of differential signal	Grounding of differential signal										
<b>5V</b>		Power of differential signal	Power of differential signal										
<b>A+</b>		Positive polarity of differential signal	Standard: TIA/EIA-485 (RS-485) Communication protocol: Modbus Communication rate: 1200/2400/4800/9600/19200/38400/57600bps										
<b>B-</b>		Negative polarity of differential signal											
TA	TB	TC	DO1	24V	CM	DI1	DI2	DI3	DI4	10V	A11	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



# Product List

Model	Applicable Motor (kW/HP)	Rated Current Output	Structure Code	External Dimension [A×B(B1)×H] mm	Mounting Size(W×L) mm	Mounting Bolt	Cooling Mode	Remarks
E600-0004S2	0.4/0.5	2.50	Q1	88×145×149	70×139	M4	Self-Cooling	1-phase 230V plastic housing
E600-0007S2	0.75/1	4.50	Q1	88×145×149	70×139	M4	Air-Cooling	
E600-0015S2	1.5/2	7.00	Q1	88×145×149	70×139	M4	Air-Cooling	
E600-0004S2	0.4/0.5	2.50	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0007S2	0.75/1	4.50	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0015S2	1.5/2	7.00	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0022S2	2.2/3	10.0	Q2	107×163×180	88×170	M4	Air-Cooling	3-phase 460V plastic housing
E600-0007T3	0.75/1	2.00	Q1	88×145×149	70×139	M4	Air-Cooling	
E600-0015T3	1.5/2	4.00	Q1	88×145×149	70×139	M4	Air-Cooling	
E600-0007T3	0.75/1	2.00	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0015T3	1.5/2	4.00	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0022T3	2.2/3	6.50	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0030T3	3.0/4	7.60	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0040T3	4.0/5.5	9.00	Q2	107×163×180	88×170	M4	Air-Cooling	
E600-0055T3	5.5/7.5	12.0	Q2	107×163×180	88×170	M4	Air-Cooling	



LCD REMOTE KEYPAD

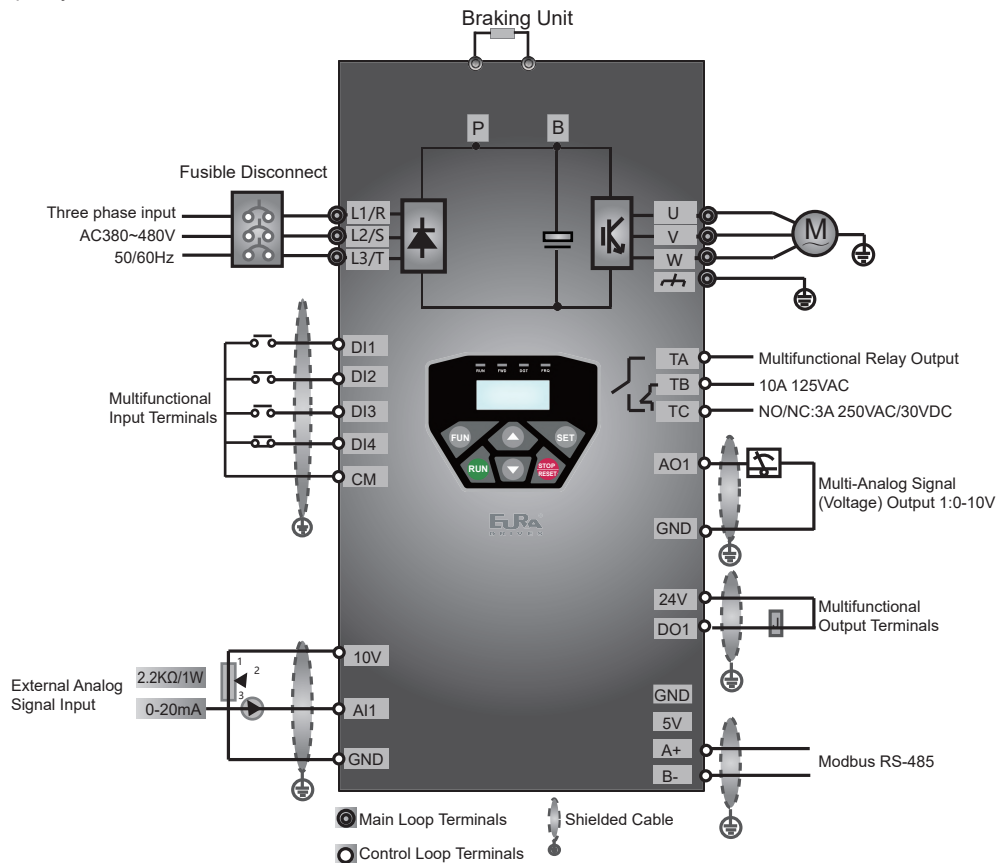


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# Wiring Diagram

**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.



Basic Wiring Diagram for Three-phase AC Drives(NPN type)

# A DRIVES COMPANY

## **EURA DRIVES CANADA LTD**

328 Consumers Road  
North York, Ontario M2J 1P8  
Canada

Tel: +1 647 512 7958  
[contact@euradrives.net](mailto:contact@euradrives.net)  
[www.euradrives.net](http://www.euradrives.net)

