

HCFA E600 series control source insturction



浙江禾川科技股份有限公司

Product Function Instruction

产 品 类 型	变频器	产 品 型 号	HDv-E600-4T3.7B-000	保密等级	☒ 公开 ☐ 内部分享 ☐ 保密
				文档编号	
修订		作者	董建宁	发布日期	
本文档使用硬件设备和软件工具			部门：工业传动产品线		
● 禾川 HDv-E600-4T3.7B-000 ● USB 转 RS485 数据线 ● 禾川 Q1-1200					
适用版本					
无限制					
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1. Hardware version

1.1 Hard ware

VFD: HDv-E600-4T3.7B-000 Version: standard version

IM : 3 phase、380v、0.06KW、IPCS (Induction motor-TECO)

Tools: potentiometer, USB to RS485 Converter

PLC: Q1-1200D

2. Panel Start/Stop

2.1 Panel Introduction

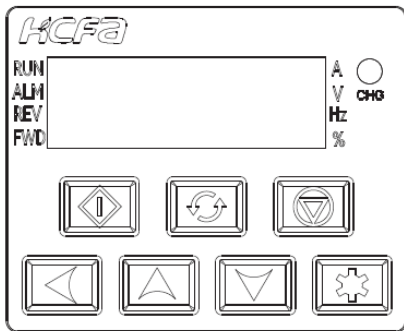
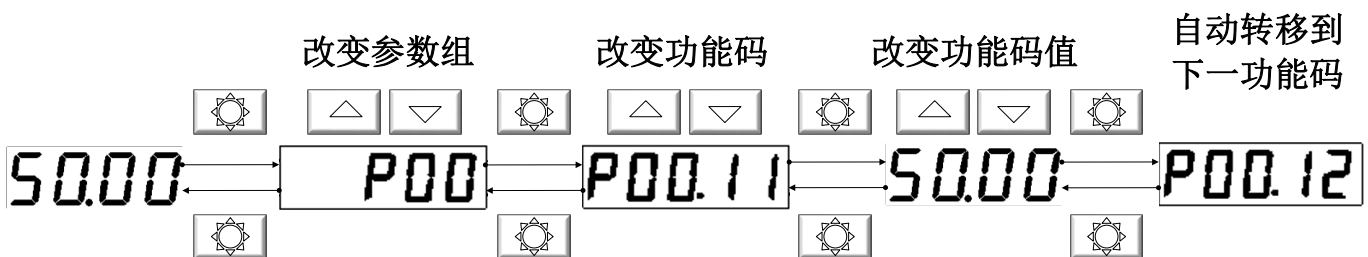


Figure 7. Indicator & key diagram

Table 15. Indicator description

Screen printed label		Name	Description
Status indicator	CHG	Charge	Lit (Red): Power ON Not lit: Power OFF
	RUN	Run	Lit (Green): RUN Not lit: STOP
	ALM	Alarm	Lit (Green): Fault Not lit: No fault
	REV	Reverse rotation	Lit (Green): Indicates the rotation direction and lights up when the equipment is rotating in reverse.
	FWD	Forward rotation	Lit (Green): Indicates the rotation direction and lights up when the equipment is rotating forward.
Unit indicator	A	Current	Lit (Green): Current unit is A.
	V	Voltage	Lit (Green): Current unit is V.
	Hz	Frequency	Lit (Green): Current unit is Hz.
	%	Percentage	Lit (Green): Current unit is %.



■ 三级菜单操作流程

2.2 Set P00.02=0 (panel control)

地址	参数名	*	当前值
▼ 组别: P00 基本参数组			
P00.00	电机控制方式	/	V/F控制
P00.01	GP类型显示	/	G型 (恒转矩负载机型)
P00.02	命令源选择	\	操作面板命令通道 (LED灭) 0

After setting the parameters according to the above steps, press the run key on the panel to enable panel control start/stop.

3. External terminal start/stop

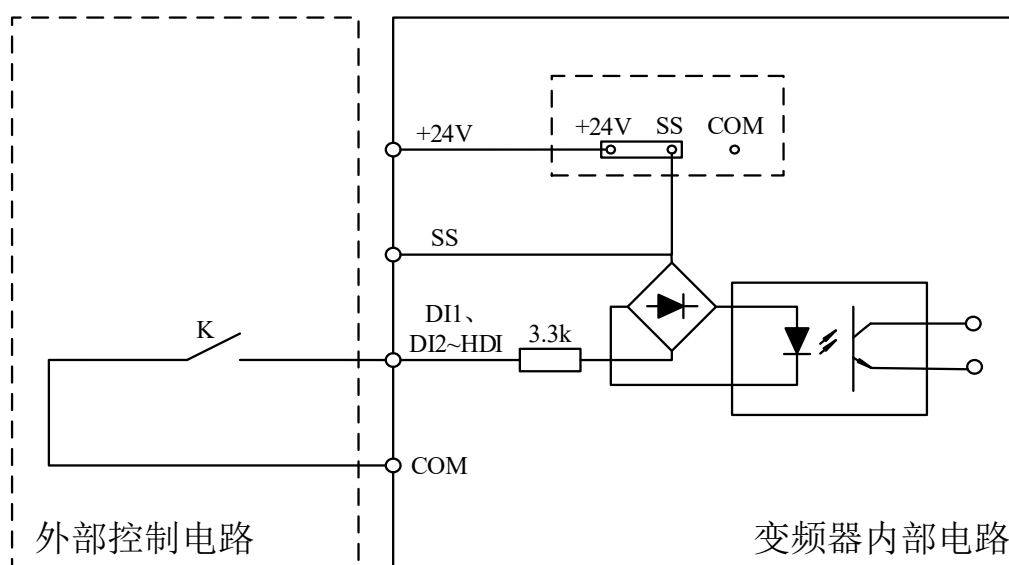
3.1 Set P00.02=1 (terminal command channel)

地址	参数名	*	当前值
▼ 组别: P00 基本参数组			
P00.00	电机控制方式	/	V/F控制
P00.01	GP类型显示	/	G型 (恒转矩负载机型) 1
P00.02	命令源选择		端子命令通道 (LED亮)

3.2 Set P05.00 (DI1 port) = 1; forward rotation, P05.01 (DI2 port) = 2; reverse rotation

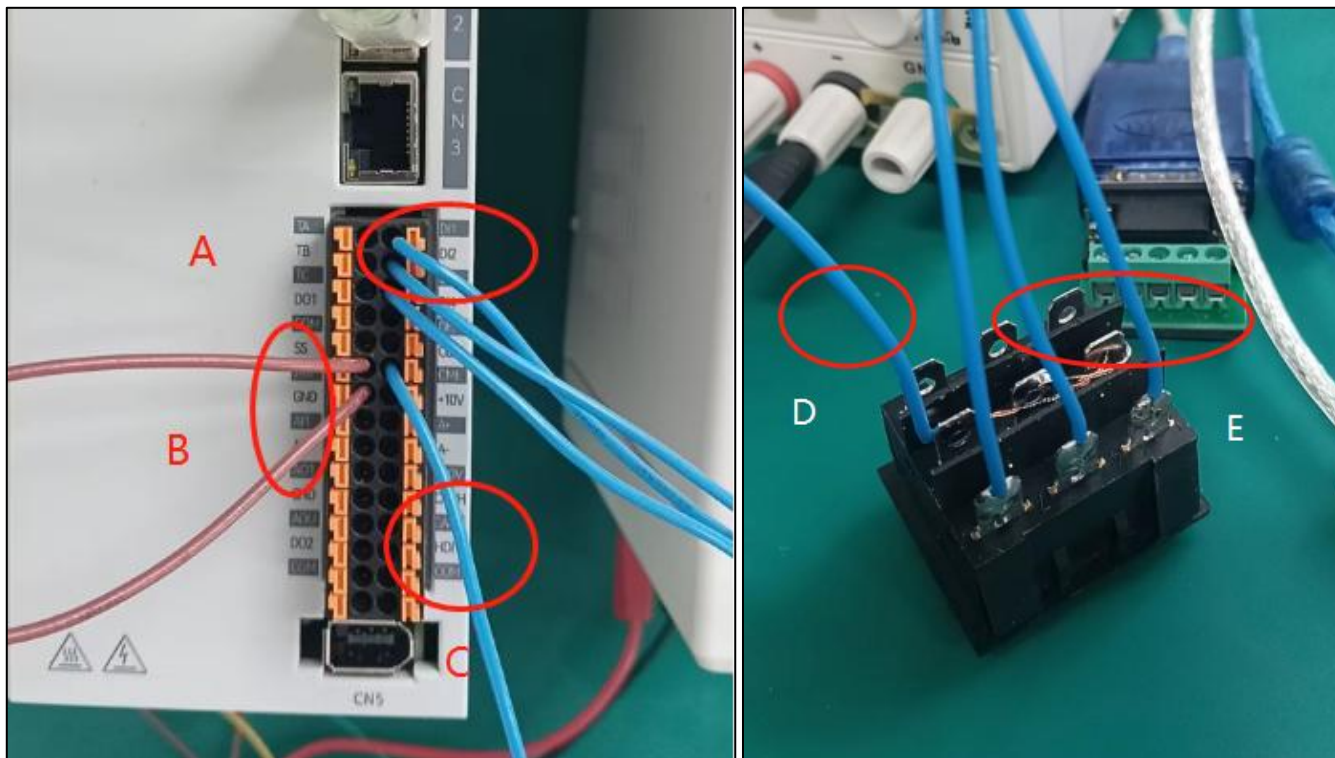
地址	参数名	*	当前值
P05.00	DI1端子功能选择	/	正转运行 (FWD) 1
P05.01	DI2端子功能选择	/	反转运行 (REV) 2

3.3 Wire according to the diagram below



数字量输入端子使用变频器内部电源接线示意图

This experiment uses the NPN wiring method for the internal power supply of the driver. For other wiring methods, please refer to the HDv-E600 series wiring diagram technical documentation



A: Connect the DI1~DI2 ports to the E part of the button.

B: Short-circuit the SS terminal of the driver to the 24V terminal.

C: Short-circuit the digital input common terminal COM of the driver to the common terminal of the button

3.4 Set parameters and wiring according to the above steps

- 1、 Close the button between the DI1 port and COM, and the drive will start running in the forward direction. Open the button, and the drive will stop according to the stop mode set in P01.05 (stop mode).
- 2、 Close the button between the DI2 port and COM, and the drive will start running in reverse. When the button is released, the drive will stop according to the shutdown method set in P01.05 (Shutdown Mode).

地址	参数名	*	当前值
P01.05	停机方式	/	减速停车 0

0: Decelerate to stop

1: Coast to stop

4. Communication control

4.1 Set P00.02=2 (communication command channel)

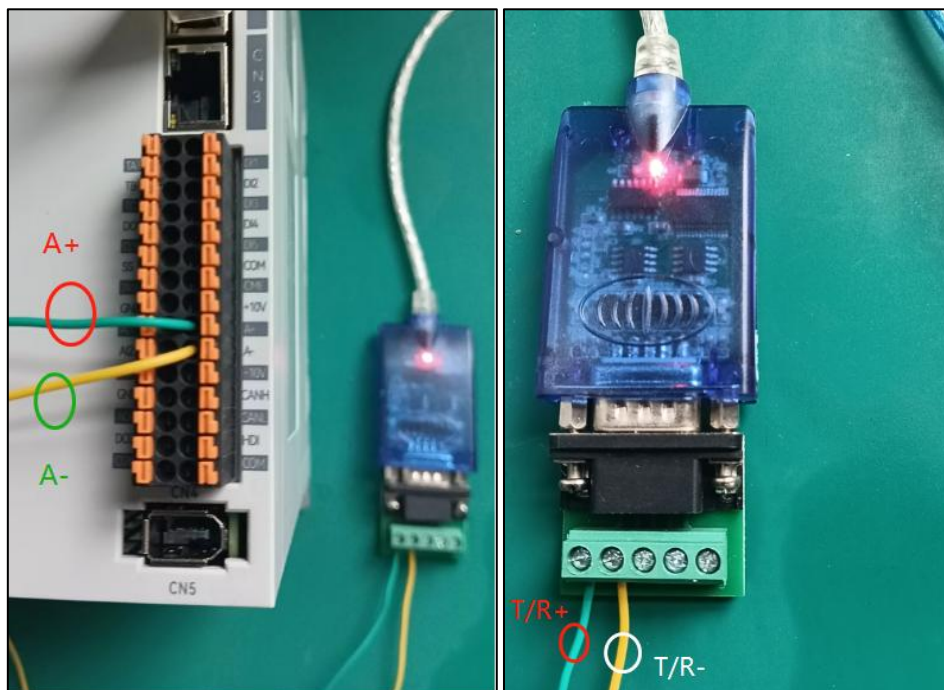
地址	参数名	*	当前值
P00.02	命令源选择	/	串行口通讯命令通道 (LED闪烁) ²

4.2 Set communication group parameters P15.02 to P15.05; baud rate and data format must be consistent with the master , otherwise communication failure may occur

地址	参数名	*	当前值
P15.02	波特率		115200
P15.03	数据格式		无校验(8-N-2)
P15.04	本机地址		1
P15.05	应答延迟		2

Note: Station number P15.04 must not be repeated within the same network, otherwise communication failure may occur

4.3 Wiring as shown in the figure below



Note: To prevent interference and other factors, use shielded twisted pair cables for connection, and ground the shielding layer.

4.4 Sending Messages

Serial port debugging software:



串口调试软件.Zip

Open the serial port debugging software and set the communication parameters. The baud rate and data format must be consistent with the drive side, otherwise communication may fail.

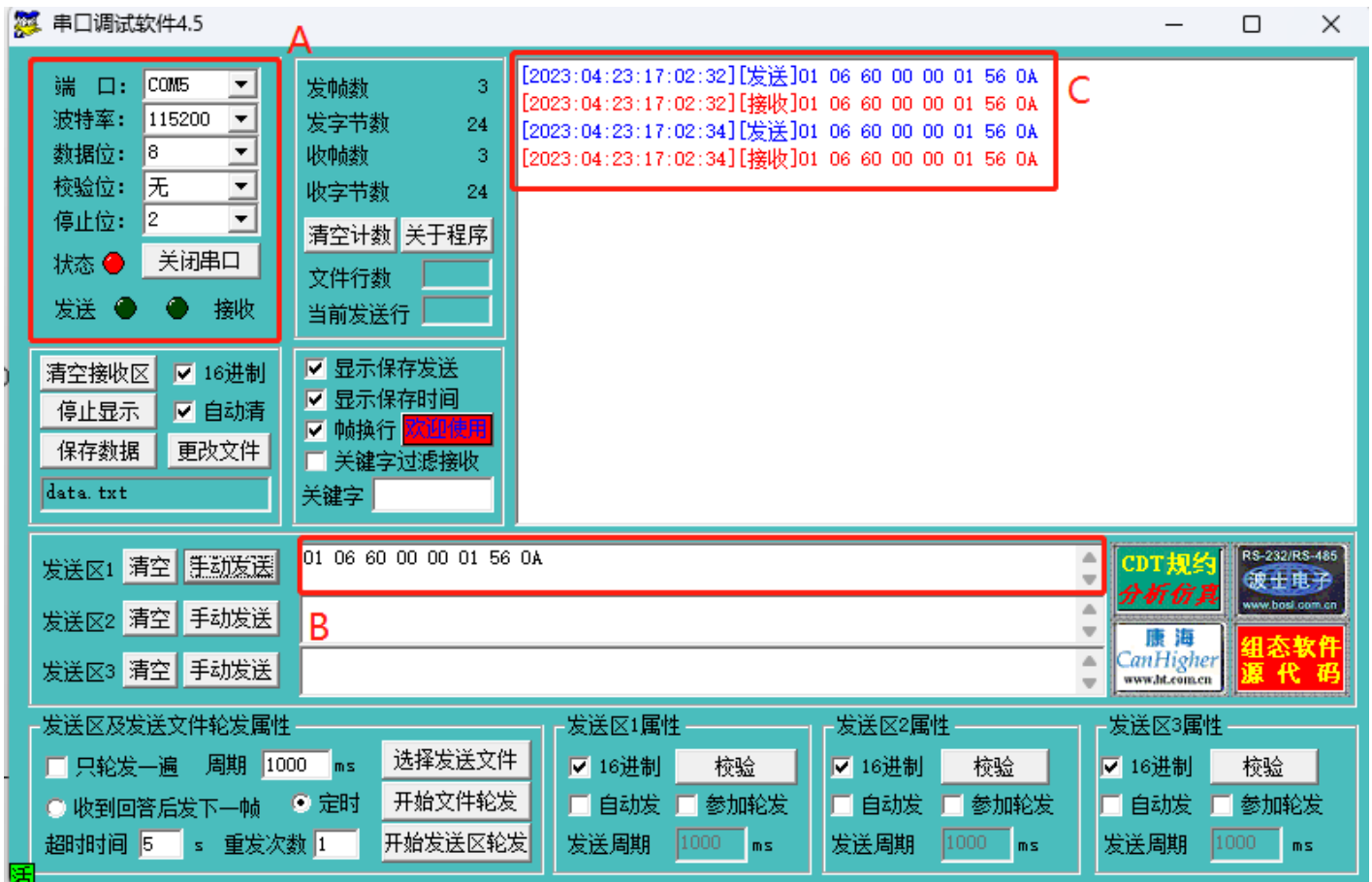
Communication control addresses: control word, status word, fault address

4000H	VFD operation status	0001H: Forward rotation in progress	R
		0002H: Reverse rotation in progress	
		0003H: VFD stopped	
		0004H: VFD in fault	
5000H	Communication set frequency	0–100.00% corresponds to 0Hz–frequency set by parameter P00.08	W
6000H	VFD control word	0001H: Forward rotation operation	W
		0002H: Reverse rotation operation	
		0003H: Forward jog	
		0004H: Reverse jog	
		0005H: Coast stop	
		0006H: Deceleration stop	
		0007H: Fault reset	
		0008H: Forward/reverse rotation switching	

0x8000 : Error code

Fault Code	English Translation	Fault Code	English Translation
0	No Fault	15	External Fault
1	Inverter Unit Protection	16	Communication Fault
2	Acceleration Overcurrent	17	Contactor Fault
3	Deceleration Overcurrent	18	Current Detection Fault

4	Constant Overcurrent Speed	19	Motor Tuning Fault
5	Acceleration Overvoltage	20	EEPROM Fault
6	Deceleration Overvoltage	21	Data Overflow
7	Constant Overvoltage Speed	22	Inverter Hardware Fault
8	Control Power Supply Fault	23	Motor Ground Short Circuit
9	Undervoltage Fault	24	Reserved
10	Inverter Overload	25	Reserved
11	Motor Overload	26	Running Time Reached
12	Input Phase Loss	31	Software Overcurrent
13	Output Phase Loss	40	Fast Current Limit Timeout
14	Heat Sink Overheating	41	Motor Switching During Run



Message parsing:

01: Slave ID

06: Function code; (03: Read register, 06: Write register)

60 00: Control word MODBUS address

00 01: 1; Forward rotation operation

56 0A: CRC check code; Low bit first, high bit last

Follow the steps above to enable communication control start/stop.