FAQ of EcoDriveCN E5-H vector control & PID control variable voltage variable frequency (VVVF) drives

Below we list some questions, which you may meet when using E5-H optimized scalar control (V/F control) & vector control AC VSD drives from **V&T Technologies Co., Ltd.**

I. In the case of V/F control, why did E5-H universal VVVF drive have abnormal operation?

(1) Check if parameter auto-tuning has been performed under V/F control. For details, refer to the setting process for parameter auto-tuning under optimized V/F control (scalar control) of our VSD (VFD).

(2) Check if the control lines for the E5-H-4T18.5G E5-H universal VVVF drive or current sensor of above power class are loose or dislocated.

II. Why was the operating frequency of E5-H enhanced V/Hz control universal VVVF drive kept at 0Hz upon reverse operation?

(1) Check if the frequency is set as 0;

(2) Check if the inverter function code parameter P3.09 is set as 0. If not, change it to 0.

III. E5-H universal VVVF drive had been connected with braking resistor featuring dynamic braking, why didn't it work?

(1) Check if the braking resistor is connected between the main circuit terminals B1 and B2;
(2) Check if the inverter function code parameter PA.09 is set as 1. If not, change it to 1.

IV. Why was there large deviation on the correspondence relation between the analog input and the set frequency?

(1) Check if the jumpers of analog input type and control board are properly set. For the analog voltage input, toggle the corresponding channel to the V end of the jumper; for the analog current input, toggle the corresponding channel to the I end of the jumper.
(2) Calibrate the analog input curve according to function codes P6.00 to P6.2. For details, refer to the description of P6 group in Chapter 6 Parameter Description.

V. Why was there large deviation on the correspondence relation between the analog output and the relevant function output?

(1) Check if the jumpers of analog output type and control board are properly set. For the analog voltage output, toggle the corresponding channel to the V end of the jumper; for the analog current output, toggle the corresponding channel to the I end of the jumper.
(2) Calibrate the analog output curve according to function codes P7.05 to P7.09. For details, refer to the description of P7 group in Chapter 6 Parameter Description.

VI. Why did the universal inverter report E.AIF analog input abnormal error?

(1) Check if the jumpers of analog input type and control board are properly set. For the analog voltage input, toggle the corresponding channel to the V end of the jumper; for the analog current input, toggle the corresponding channel to the I end of the jumper.
(2) Check if the analog input exceeds 11V;
(3) When using the +10V power supply of the inverter control board, check if the voltage of +10V is lower than 9V or higher than 11V. If yes, check if the resistance value between the +10V and the GND is less than 1KΩ after the inverter is powered off completely.

VII. Why did E5-H universal variable voltage variable frequency drive report E.P10 abnormal error?

Check if the voltage of +10V on the inverter control board is lower than 9V or higher than 11V. If yes, check if the resistance value between the +10V and the GND is less than 1KΩ after the inverter is powered off completely.

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VIII. Why did the PLC and E5-H universal inverter have abnormal RS485? based communication?

(1) Check if the data format, address and baud rate of the inverter are consistent with that of the PLC;

(2) Check if the PLC address needs Add 1 operation;

(3) Check if the PLC adopts Modbus RTU format;

(4) Check if the register address of the PLC is converted to hexadecimal format;

(5) Check if the RS485 wires are properly connected.

IX. Why did there exist abnormality upon parameter copying?

(1) The parameters for E5 vvvf drive, V5 vector control inverter and V6 torque control inverter cannot be copied between each other;

(2) The copy function can be completed only when the inverter is completely powered down and then powered up after the download of the parameters for copy is completed.

X. Why did the keyboard will have "8.8.8.8" display or have no display sometimes?

(1) Check if the connectors are properly connected when the operation panel is directly connected to the inverter control board;

(2) Check if the connection wire signals are in one to one correspondence when the keyboard is connected to the operation panel and inverter control board through customized extension wires;

(3) Check if the network cable connectors of the operation panel and inverter control

board are properly connected when standard network cable is used to connect the operation panel and the control board.

XI. Why couldn't display or modify the function codes of the operation panel?

(1) When the modification could not be performed, check if P0.01 is set as 1. If not, change it to 0.

(2) When the modification could not be performed, check if the function code has been set as modification disabled;

(3) When the modification could not be performed upon running, check if the function code could not modification upon running;

(4) When display is not available, check if the inverter function code has been encrypted;

(5) When display is not available, check if the inverter operation panel has been locked;

XII. How to change the direction that the inverter drives the motor to rotate?

(1) In the case of operation panel control, the direction is determined by P0.07. However, the FWD/REV key on the operation panel can real time change the direction.

(2) In the case of operation panel control, the direction is determined by P0.07. However, the UP/DN key on the operation panel (or the FWD/REV knob of the shuttle operation panel) can real time change the direction.

(3) In the case of operation panel control, the positive/negative frequency value resulting from the final frequency calculation for composite control can also change the direction in real time.

(4) In the case of terminal control, check if the forward/reverse terminal is in one to one correspondence with that of the control equipment (e.g. PLC).

XIII. Why did the fans of inverters of certain power classes will rotate upon power up, while others could not?

The fans of the 15kW inverters and inverters of lower power class are under no control, and they will run when powered up. The operation of the fans of 18.5kW inverters and inverters of higher power class is controlled by the heatsink temperature. When the inverter is powered up under low temperature condition, the fans will not run.

XIV. What will happen if the CN1 bus bar of the control board is loose or damaged?

If the CN1 bus bar of the control board is loose or damaged, the inverter cannot run or will report several errors. For instance, the inverter may display "-LU-" or "relay/contactor could not pull on", or report such errors as E.oc1, E.FAL, E.oH1, E.oH2 and E.Cur etc.

Enhanced V/Hz control & vector control AC VSD drives

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Simple introduction of company:

V&T Technologies Co., Ltd. is manufacturing **variable speed drive (frequency inverter), servo drive, motor soft starter, inverter, and other power electronics.**

EcoDriveCN variable speed drives (frequency inverters) are used for **motor control, motion control, energy saving and process control**: plastic injection moulding machine, machine tools, **air compressor**, constant pressure water supply, civil engineering, conveyor belt, **sewage disposal (wastewater treatment)**, **extruder (extrusion machine)**, fan and pump, HVAC, food and beverage industry, oil, mining industry, **sugar industry**, industrial washing machine, etc.

As the leading and professional factory with optimum drives, we are competing with ABB, Siemens, Yaskawa, Schneider, AB and Danfosss in the world.

From 200VAC to 1140VAC, power rating is from 0.4KW to more than 3MW (0.5hp to more than 4000hp).

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