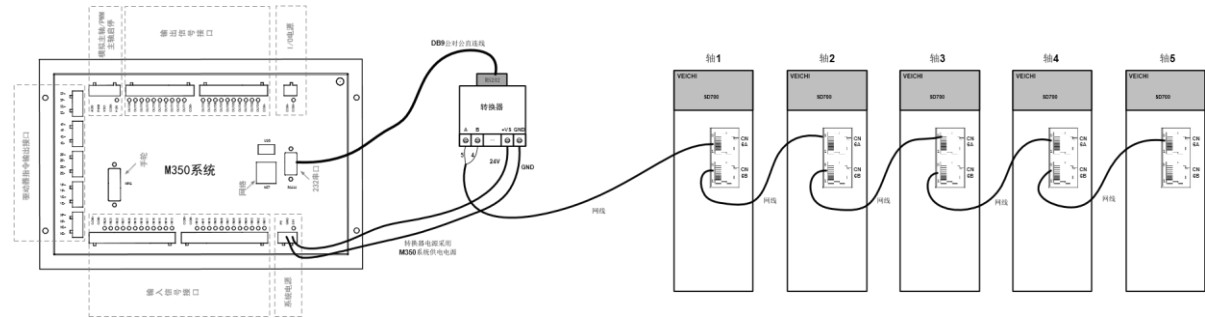


M350 and S700 absolute value servo communication

operation instructions

1.1 Wiring diagram



Wiring diagram of M350 system and SD700 absolute value servo communication

1.2 System parameter settings

Parameter 266: Serial port 1 baud rate 9600

Parameter No. 100: Mechanical zero point mode Absolute value servo

1.3 User-provided information

1. Servo encoder bits 17 23 24?
2. Each shaft pitch in mm or angle,
For example: XYZ linear axis: one revolution of the motor corresponds to the distance moved by the machine tool;
ABC rotation axis: the swing angle of the rear end corresponding to one revolution of the motor;
3. Communication station number of X/Y/Z/A/B/C five-axis servo drive;
4. Encoder direction; if the coordinate change and the encoder change relationship setting;

1.4 Machine origin setting of each axis

Since the absolute value servo mode is adopted, the absolute value position of the drive when the machine coordinate is 0 needs to be recorded for the first use; the M code for setting the zero point of each axis is as follows:

M code	Features	storage location
M110	The X-axis absolute value position is latched and the machine coordinate is cleared	Parameter No. 101
M111	The absolute value position of the Y axis is latched and the machine coordinate is cleared	Parameter No. 102
M112	The absolute value position of Z axis is latched and the machine coordinate is cleared	Parameter No. 103
M113	The absolute value position of the 4th axis is latched and the machine coordinates are cleared	Parameter No. 104
M114	The absolute value position of the 5th axis is latched and the machine coordinates are cleared	Parameter No. 105

For example: X-axis mechanical coordinate reset operation process:

1. Provide information 1, 2, and 3 to the system manufacturer in accordance with Section 1.3;
2. Update the system manufacturer configuration upgrade package;
3. Manually move the X-axis to a certain position (this position will be used as the mechanical zero point);
4. Enter MDI, enter M110, and execute;
5. Continue to execute M110 after manually moving the X axis, and then observe whether the value of No. 101 parameter changes. If it does not change, please check whether the servo, system settings and wiring are correct;
6. If the No. 101 parameter is changed, observe whether the direction of change is consistent with the direction of movement. If it is inconsistent, contact the system manufacturer;
7. If the position display is correct, and the X-axis mechanical coordinates have been cleared, it means that the X-axis absolute value configuration is successful;
8. Configure the mechanical zero point of other axes in the same way;

1.5 Testing

After the mechanical zero point configuration is completed--shutdown--rotate the motor offline--restart the system--observe whether the mechanical position of the current axis is automatically updated;1.6 Notice

1. This function is only available in software versions after 2020-10-28;
2. The multi-turn position of the servo shaft needs to be manually cleared before the first use;
3. If the multi-turn position of the servo during use is mistakenly cleared or lost, it needs to be reset according to the operation instructions in chapter 1.5;
4. This setting description is only applicable when the rotation axis is not infinitely rotating in one direction;

1.6 Appendix: Update current position M command

M code	Features
M105	Automatic correction of X-axis mechanical position at startup
M106	The Y-axis mechanical position is automatically corrected at startup
M107	Automatic correction of Z-axis mechanical position when power on
M108	The mechanical position of the 4th axis is automatically corrected at startup
M109	The mechanical position of the 5th axis is automatically corrected at startup