

TMC-USB Series Controllers



Description:

The control software is developed based on LABVIEW, which is easy to operate and achieve secondary development to be integrate with the user's original system. After selecting the model type, user can operate the stages directly since Zolix already collected products data inside the controller.

The interactive interface can display the operating parameters of each axis at the same time, and the operation is intuitive without frequent switching. It can operate a certain axis independently, and can also be combined with multiple axes. It can replace PLC directly in function. It can meet the needs of automatic production line and automatic experimental equipment.

Naming rules:

TMC-USB -x -xxx

TMC-USB:
USB version
full function controller

Total quantity of
axis controlled:
1: 1 axis
2: 2 axis
3: 3 axis
4: 4 axis

Type of motor that can be adapted:
S242: 2-phase 42 (or less) stepper motor
S257: 2-phase 57 stepper motor
S286: 2-phase 86 stepper motor
S528: 5-phase oriental stepper motor
ASP1: Ac servo motor, panasonic 100w
ASP2: Ac servo motor, panasonic 200w
LMC10: Standard linear motor driver,
driving current 10A
S357: 3-phase 57 stepper motor

Structure description:

Front panel

- Emergency stop switch: After pressing the emergency stop switch, all control axes will stop.
- Power indicator: When the main power switch is turned on, the power indicator will turn on.
- USB port: Connects to a PC through this port.



Rear panel

This is TMC-USB-1, 2, 3, 4-S242, TMC-USB-1, 2, 3, 4-S257, TMC-USB-1, 2, 3, 4-S528, TMC-USB-1, 2, 3, 4-S357 controller rear panel.



Rear panel

This is TMC-USB-1, 2, 3, 4-S286 controller rear panel.



Rear panel

This is TMC-USB-1, 2, 3, 4-ASP1, TMC-USB-1, 2, 3, 4-ASP2 controller rear panel.



Rear panel

This is TMC-USB-1, 2, 3, 4-LMP5, TMC-USB-1, 2, 3, 4-LMC10 controller rear panel.



Main specifications:

	Basic function
Output of single controlling card	Pulse control of 2-or 4-channel stepping motor, optocoupler for isolation
Maximum output frequency	4MHZ
Error on pulse output frequency	<0.1%
Interpolation	Linear-interpolation of 2 to 3 random axis; Circle-interpolation of 2 random axis
Continuous interpolation fuction	Yes
Type of acceleration/deceleration	Linear
Digit of logic counter for positioning	32
Capability of real-time-changing of speed during motions	Yes
Parameters can be read during motions	Logic position, real position, driving speed, acceleration
Position detection of eachaxis	Input ports provided for independent left- and right-side-limit sensors and origin-point sensor, for each axis
Inputs	Up to 8-channel optocoupler input for each axis
Inputs of encoder	Pulsed optocoupler inputs for A- and B-phase of encoder
Outputs	Up to 8-channel optocoupler output of open-collector for each axis
	Inputs
Inputs of encoder	220V AC +/- 10% 45-65Hz
Outputs	<1KW
Working temperature range	0°C~50°C
Storage temperature range	-20°C~80°C
Working humidity range	20%~95%
Storage humidity range	0%~95%