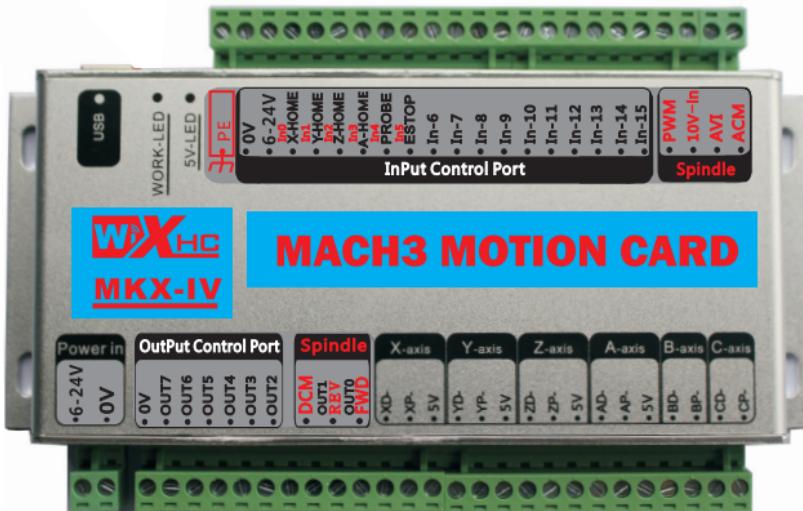




适合系统：
MACH3运动控制系统

MACH3控制卡

MKX(标准版) - 4代说明书



标准卡：184x110x30mm

型号

MK3-IV：带USB接口的，3轴运动控制卡

MK4-IV：带USB接口的，4轴运动控制卡

MK6-IV：带USB接口的，6轴运动控制卡

The following information describes the English

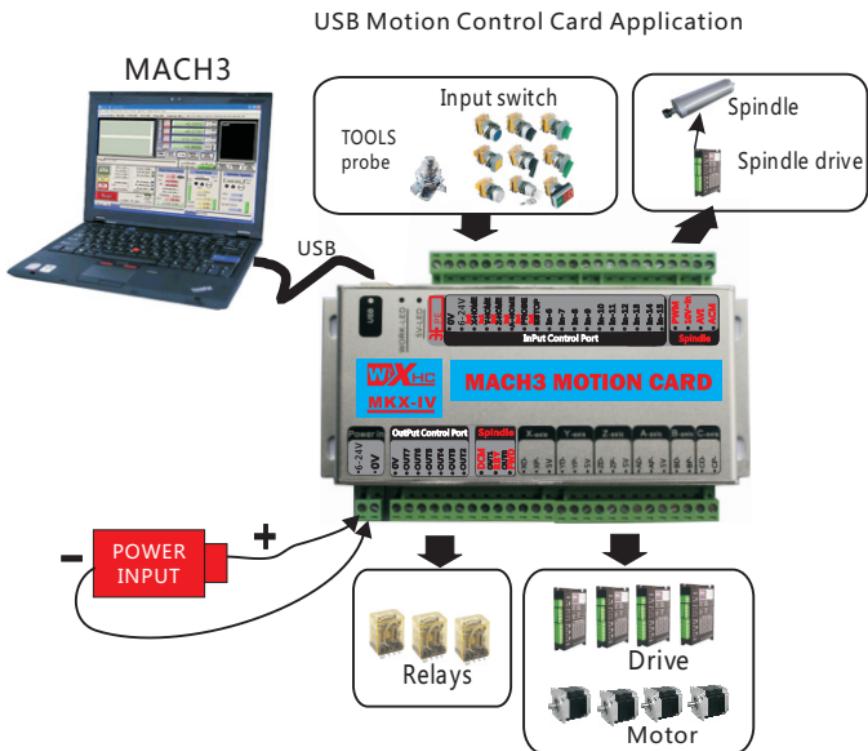


Features:

- ★ Fully supporting all Mach3 versions
- ★ Full support for USB hot-swappable, the card is Monitoring USB connection status at any time.
- ★ Supports Up 6-axis
- ★ Maximum step-pulse frequency is 2000KHz
- ★ Status indicator LED can be useful to show the USB connection, and working stauts by flashing.
- ★ 16 general-purpose input
- ★ has speed function, the spindle actual speed Mach3 interface in real-time display
- ★ all IO-port isolation, interference, stable performance

Simple connection description

Application Connection Diagram

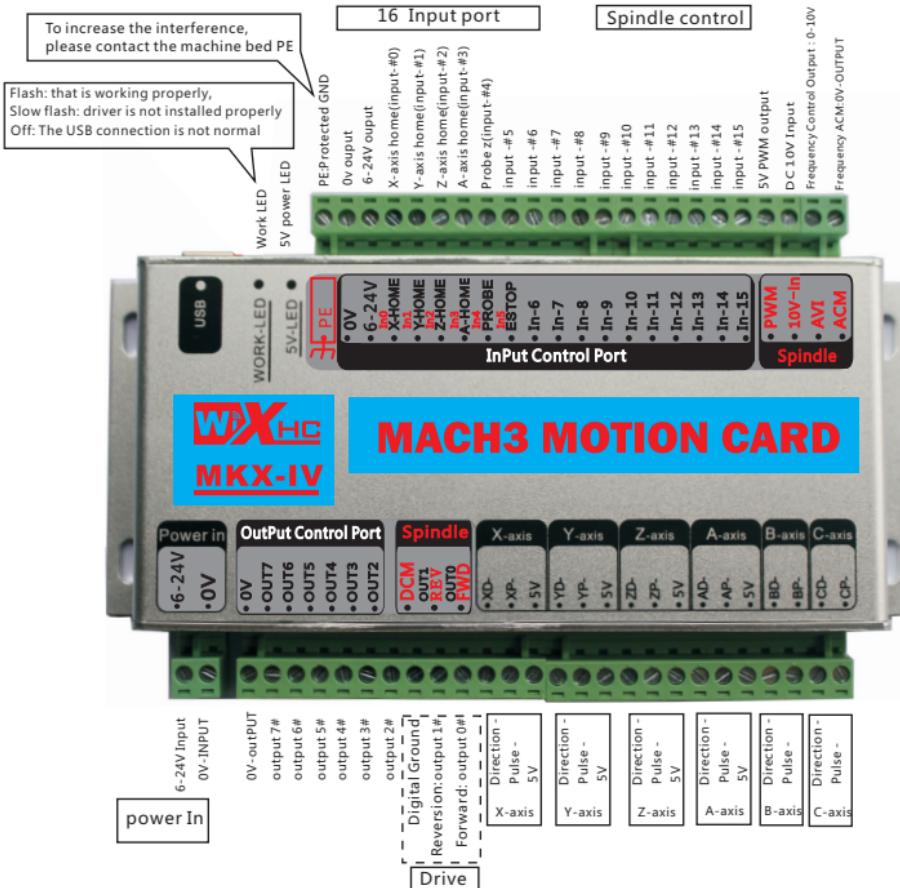


Support: 3-axis or 4-axis, or 6-axis

Mk3-IV: 3-axis; Mk4-IV: 4-axis; Mk6-IV: 6-axis

第2部份：英文介绍/ English Introduction

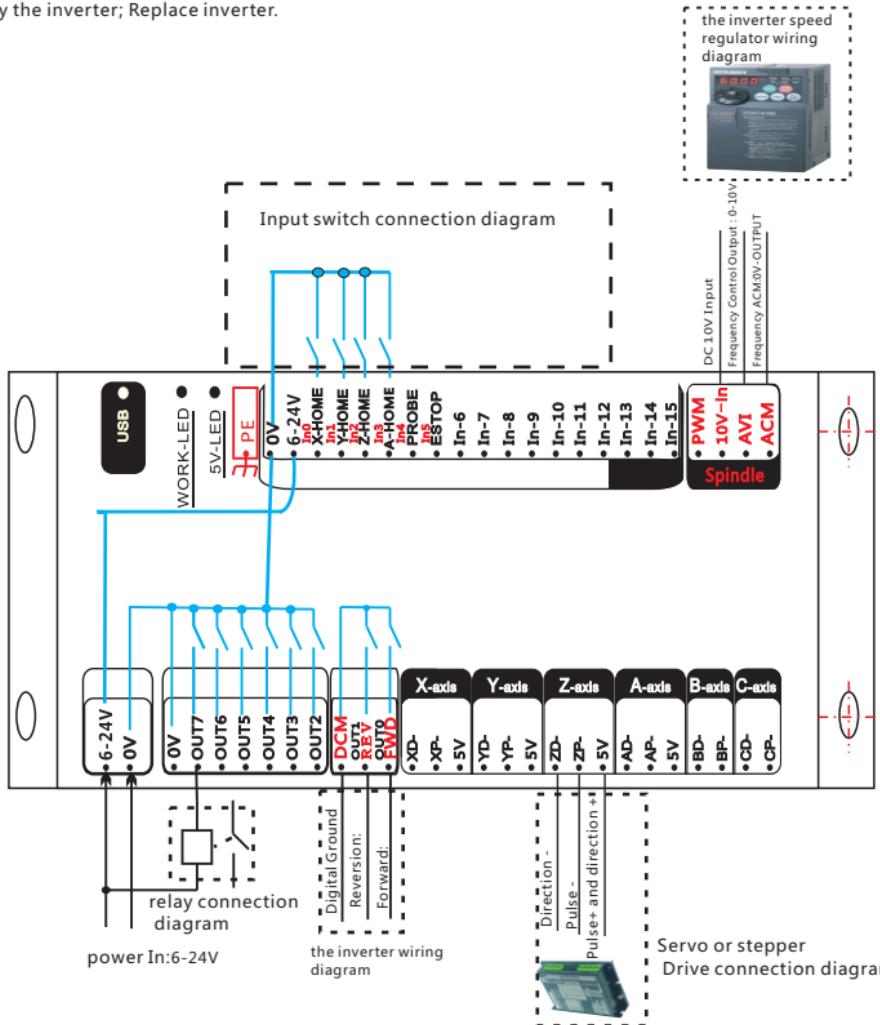
Signal Description



第2部份：英文介绍/ English Introduction

Wiring diagram shows

NOTE: If the inverter is turned on, the control card is not working properly because of interference caused by the inverter; Replace inverter.



Electrical Characteristics

Parameter Description		
axis output control:	Drive Current	Isolated open collector output; 5V, 20mA
	Drive	Pulse + direction output
	Output frequency	2000KHZ
	axes	MK3:3-axis;MK4:4-axis;MK6:6-axis
	Isolation Voltage	3.5KV
Spindle inverter output: 3 types of output modes	Analog voltage output	0—10V
	PWM output	5V, 1KHZ, Duty:0-100%
	Pulse+direction output	5V, 15HZ to 4KHZ
8 IO output	Drive Current	Isolation:50mA, 25V
	Isolation Voltage	3.5KV
16 IO output	Inupt Current	Isolated inputs, 5 mA, maximum voltage 25V
	Isolation Voltage	3.5KV
USB interface	Complies with USB2.0 standard	

● 第1步：安装MACH3软件

No.1:Install MACH3 software

产品附带的光盘里边，双击Mach3Version3.043.066.exe文件，进行安装。

The product comes with the CD inside,
double-click the Mach3Version3.043.066.exe file, installation

● 第2步：拷贝驱动到指定的MACH3目录

No.2: copy drive to the specified MACH3 directory

具体操作：参见光盘资料..\中文资料\MACH3卡驱动v2.38.5\《驱动安装说明.txt》
see the disc information:..\English Manual\usb card driver-v2.38.5\readme.txt

● 第3步：参见附件2，将控制卡连线正确

No.3: See Annex 2, which will control the card connection correctly

● 第4步：用USB线将控制卡和电脑连接起来

No.4: Connect the control card and computer to the computer with the USB line.

完成以上步骤，你就可以打开MACH3软件，进行操作，使用了。

To complete the above steps, you can open the MACH3
software, and use



参见印刷说明书：《MACH3软件参数设置》，调整脉冲当量等参数设置

See print Manual: "MACH3 parameter setting", adjust the parameters such as pulse equivalent set

附件2：接线图(Annex 2:Wiring schematics)

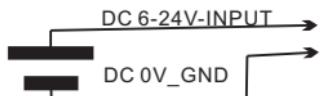
应用接线图

MKX Wiring schematics

1. 第1步，给控制卡接上电源线

NO.1 : power input

power : 6—24V, 0.5A



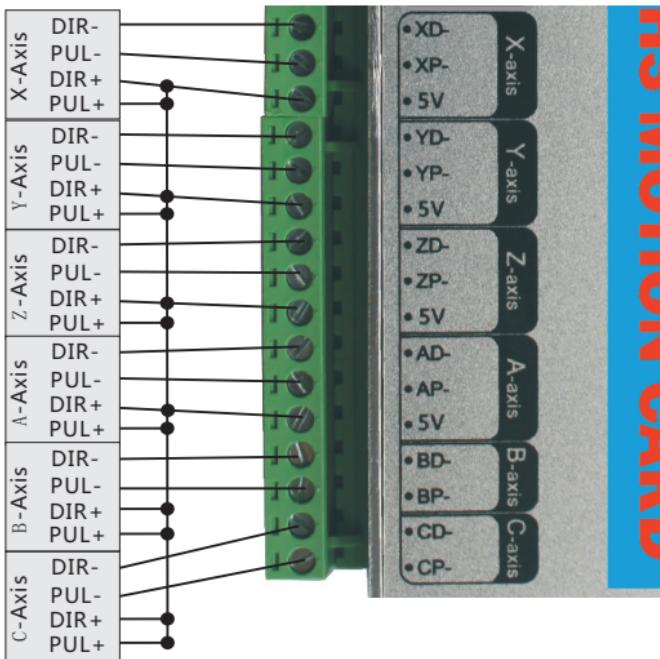
使用控制卡前，需要给控制卡提供电源
直流6V到24V都可以；工作电流0.5A

2. 第2步：驱动器连接：支持伺服或步进驱动器，共阳接法

NO.2 : Drive Interface : Supporting servo or stepping drive

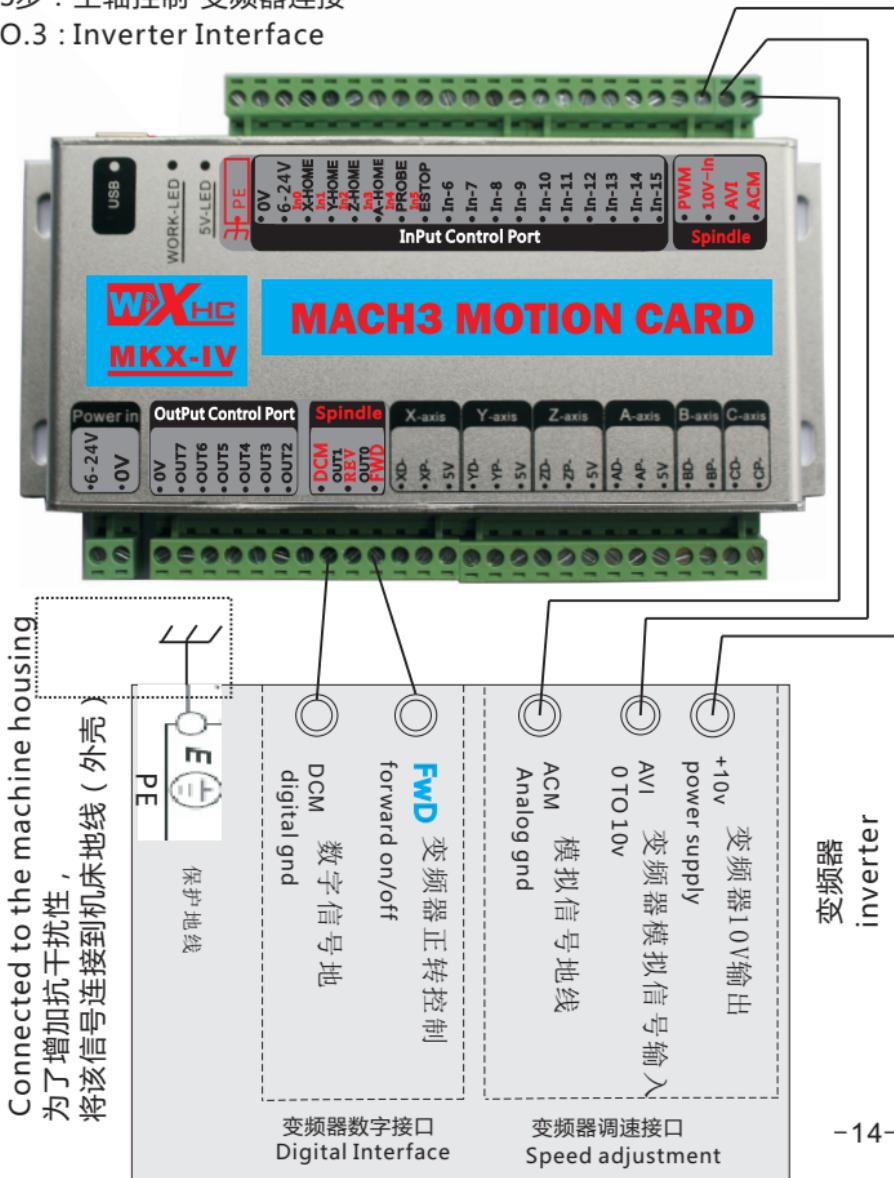
脉冲和方向输出
的驱动电流最大
50毫安
Drive current
maximum 50 mA

步进或伺服驱动器
Stepper or servo drives



3. 第3步：主轴控制-变频器连接

NO.3 : Inverter Interface



Connected to the machine housing

为了增加抗干扰性，将该信号连接到机床地

卷之三

保护地线

DCM 数字信号地
digital gnd

FwD 变频器正转控制
forward on/off

ACM 模拟信号地线
Analog gnd

AVI 变频器模拟信号输入
0 TO 10V

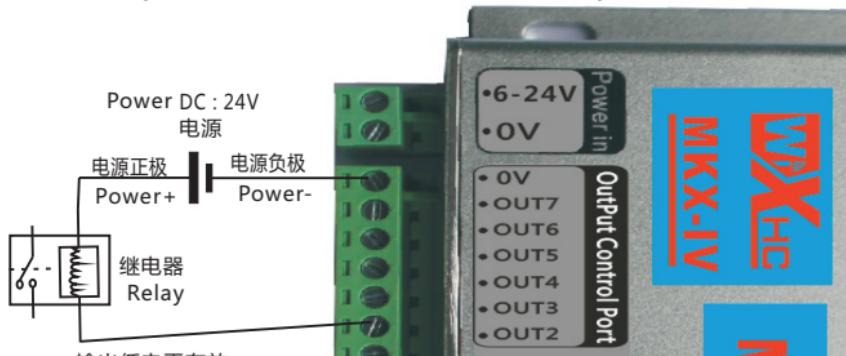
+10v 变频器10V输出

变频器调速接口
Speed adjustment

变频器
inverter

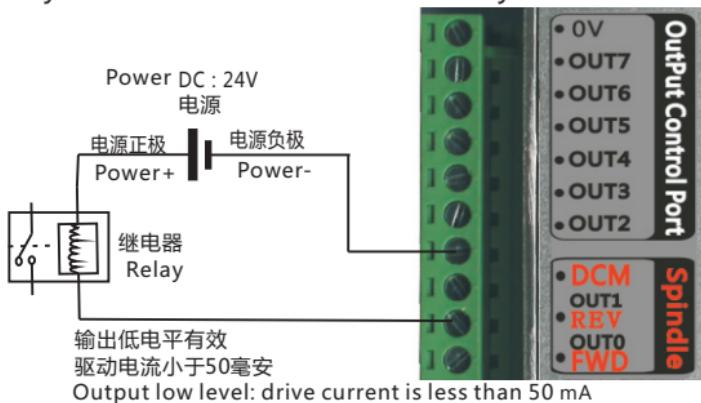
4.第4步：输出口 继电器连接：OUT2到OUT7连接继电器方式

NO.4 : Relay Interface : OUT2 to OUT7 Relay Interface



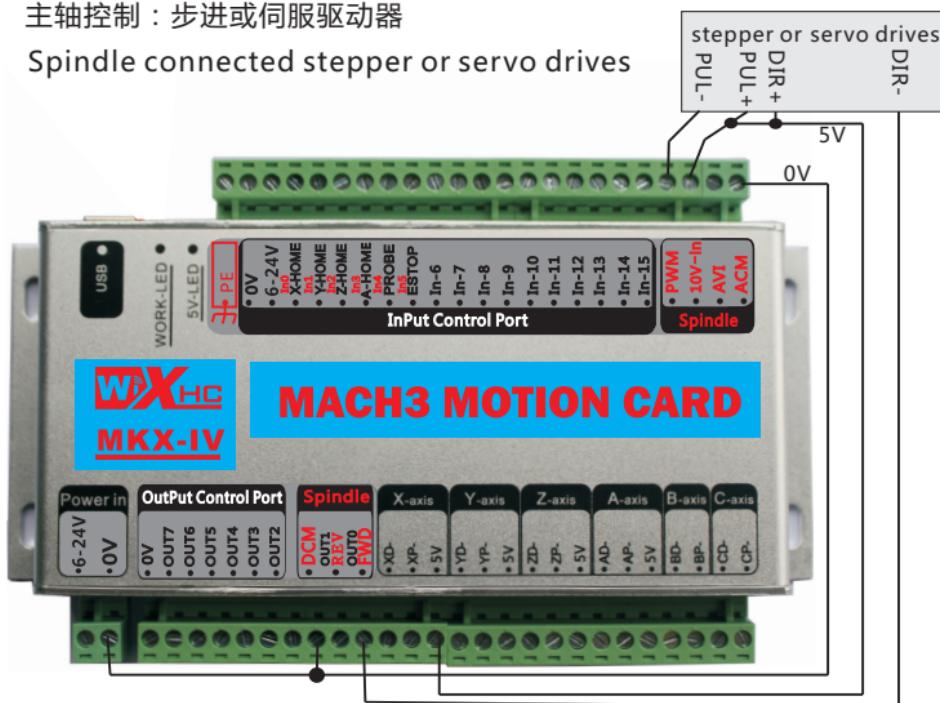
继电器连接：OUT0到OUT1连接继电器方式

Relay Interface : OUT0 to OUT1 Relay Interface



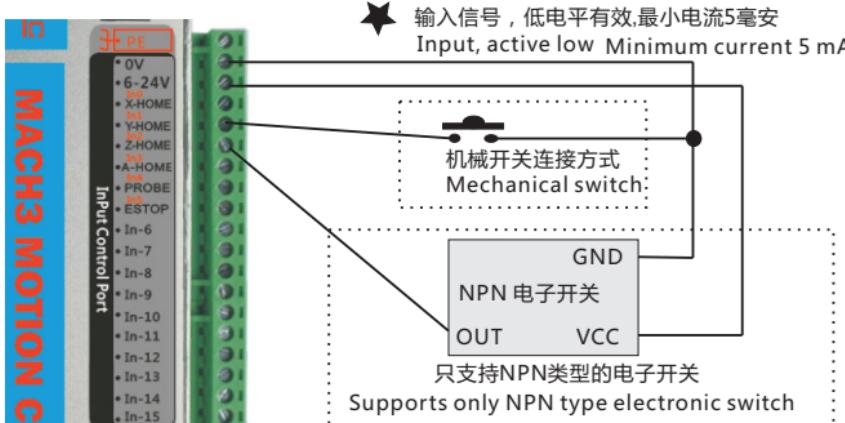
主轴控制：步进或伺服驱动器

Spindle connected stepper or servo drives



5.第5步：16个输入口IN0-IN15接法：限位开关等接口：输入低电平有效

NO.5 : input Interface : 15 input port;In0 to In15



常见问题 (Common problem)

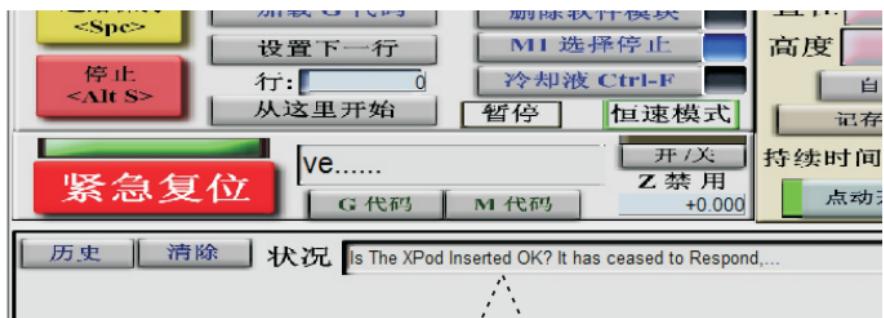
因为干扰，MACH3找不到USB卡

问题描述：控制卡工作正常，当突然打开主轴的时候，或则进行主轴速度调节的时候，出现该问题：MACH3软件处于急停状态，状态栏提示：请插入USB卡。

Because of the interference, MACH3 can not find the USB card

Problem Description: control cards, when suddenly turn on the spindle, or for spindle speed adjustment.

The problem: MACH3 software is stoping, status bar: please insert USB card.



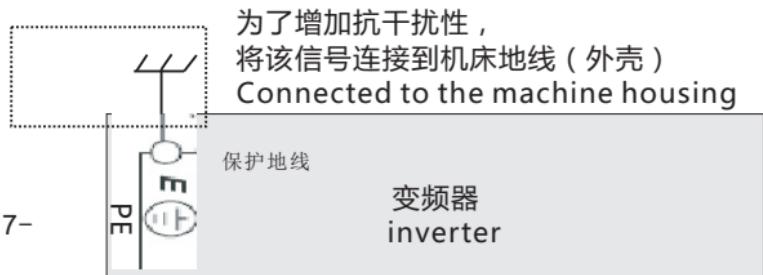
Is The XPod Inserted OK? It has ceased to Respond,...

解决方法：该问题，是由干扰引起的。

请将变频器的地线 (PE)和主轴的地线，连接到大地，以增加抗干扰

Solution: the problem is caused by interference

Please connect the ground wire (PE) of the inverter and the ground wire of the shaft to the earth



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