驱动器 (速度环)参数修改

<mark>注意:直流伺服系统的一轴电机不连,只连接二轴电机</mark>



1. 双击桌面图标 sudo , 打开 Easymotionstudio 软件

😗 EasyMotion Studio			= 0 ×
Project Communication View Help			
	T E C H N O S O F T		
Ready		Online AxisID 251	S/N XP141 Firmware F024
inany .		Onine Add 23.	ages or an profilmant to 24

 点击菜单栏中"Communication"→"Setup..."弹出如下界面,选择设备连接到电脑的 COM 口(一轴电机为 COM1,二轴电机为 COM2) COM 口在电脑设备管理器中可以 查看,连接需要修改的电机轴(二轴)所连接的串口,更改波特率,点击"OK"

Communication Setup	
Channel Type: RS23	2
CAN Protocol: TMLC	AN (CAN 2.0B, 29-bit identifiers)
	Port: COM1
	Baud Rate: 115200 💌
Axis ID of drive/motor con	nected to PC is 255
	Advanced
ОК	Cancel Help

3. 此时下侧状态栏显示状态为 "Online",点击 "New" →选择 "Upload from Drive/Motor"



4. 点击 "Project"界面下的 "Setup" → "View/Modify" 进入参数设置界面



	Guideline assistant Previous Step 1. Select your motor from a database. If your motor from a database, proceed through all the next steps in order to define your motor and sensors data. In either case, use the tests from the next steps to verify/detect the motor and sensors parameters and operation. Next Motor Step 1. Select your motor from a database. If your motor and sensors data. In either case, use the tests from the next steps to verify/detect the motor and sensors Save to User Database Delete
e e r	Motor data Nominal current 6 A Image: Constant Im
	Motor and load sensors Incremental encoder on motor No. of lines/rev 1000 lines Test Connections C Tacho on motor Tacho gain 0.048 V/rad/s Test Connections C Incremental encoder on load and tacho on motor Test Connections Test Connections T Temperature Sensor type PTC Transmission to load Motor displacement of 1 ret

5. 点击"Drive Setup"关闭"DC Motor Setup"界面

Guideline a	assistant				Database				Duringa
Previous Next	Step 1. Select your motor does not exis through all the next and sensors data. I the next steps to ve parameters and ope	motor from a dat in any database steps in order to n either case, us rify/detect the m ration.	tabase. If your e, proceed define your m e the tests fror notor and sense	otor n ors	Motor	U Dth	1	T Delay	Setup
	1				Save to	User Datab	ase	Delete	Help
Motor data	Newinel automatic	0	- [.	_					
	Nominal current	ь 0	A	-					
	Peak current	8	A	4					
-	l orque constant	0.065	Nm/A	4					
Phase r	esistance (motor + drive)	3.44	Ohms	_					
Phase in	ductance (motor + drive)	0.0023	Н	_					
	Motor inertia	0.0000256	kgm^2	<u> </u>	Motor inertia	is unknowr	1		
Motor and Increm	load sensors ental encoder on motor	No. (of lines/rev 1	000	lines	-	Test Co	onnections	
C Tacho	on motor	1	Facho gain 🗍	.048	V/rad/	's 👻			
⊂ Increm and ta	ental encoder on load cho on motor		- ,		,				
🗖 Tempe	rature Sensor type	C PTC							
Transmissi	on to load								
Transmissi	on type: 💿 Rotary to re	tary	ł	Motor	displacement of	1	rot	•	

6. 设置参数如下图所示,改成"Speed"模式(速度模式),点击"Setup"设置电压速度的换比例(控制器给驱动器发送电压,驱动器把电压转换成电机转速)设置为 10V 对应 3000rpm,点击"OK"完成设置



7. 点击"OK",完成所有参数设置,退出参数设置界面

ive Setup			-	23
-Guideline assistant Previous	Next	Control mode External reference	'ex Setun	ОК
Step 1. In the < <control mode="">> group box, se want to control: position, speed or torque.</control>	lect what do you 🔺	C Speed	Pulse & Direction	L Cancel Help
	*	Advanced Automatically	activated after Power On	Motor
CANbus Baud rate F/W default		Drive Info Set / char	nge axisID H/W 💌	Setup
Drive operation parameters		Protections		
Power supply 23.7419 V 💌 Current limit 6.11 A 💌	Detect	Ver current Motor current > 6.11	▼ for more than 0.001	s 💌
Current controller Kp 2.232		Control error Position error > 90 deg	▼ for more than 0.01	s 💌
Ki 0.237	Tune & Test	Control error Speed error > 3.09e+003 rpm	✓ for more than 32.77	S -
Kp 1160 Integral limit 33	% 🔻	Motor over temperature		
Ki 17.4 Feedforward 0	(Acceleration) Tune & Test	V 12t Over current 6.116	✓ for 2.048	s 🔻
Position controller		External brake resistor		
Kp 0.2 Integral limit 10	% 🔻	Connected Activa	ate if power supply > 28	V -
Ki 0.009979 Deedforward	(Speed)	Inputs polarity		
Kd 1 0	(Acceleration)	Enable	Limit switch+	Limit switch-
Kd filter 0.1		 Active high (Enabled after power-on) 	Active high	C Active high
	Tune & Test	 Active low (Disabled after power-on) 	Active low	Active low

 点击 "Download to Drive/Motor"下载到驱动器,点击" ➤"重启驱动器(也可以断 电重启电箱),设置完成,关闭该软件。

n	1_Motion St 9 2_Drive IO	M 3_Drive Status		
	Motor Digital Inputs	SRH - Status Register Hig	gh SRL - Status Registe	ter Low MER - Error Register
	(rot) Genera	15 - Fault	15 - Axis is ON	15 - Enable input is inactive
	Project			
	In Untitled In Untitled Application		Setup	
	E M Motion	Define/Load	Edit	Save
	(P) Functions (R) Interrupts		iss ≥ View / Modéy	Sine As
		Za⊃open D	Import	Download to Drive/Motor
ß		Upload from Drive/Motor	Load from a previous version	

9. 至此二轴驱动器参数设置完成(速度模式),重复操作 1~8,直至一轴和二轴驱动器参数均修改完成。