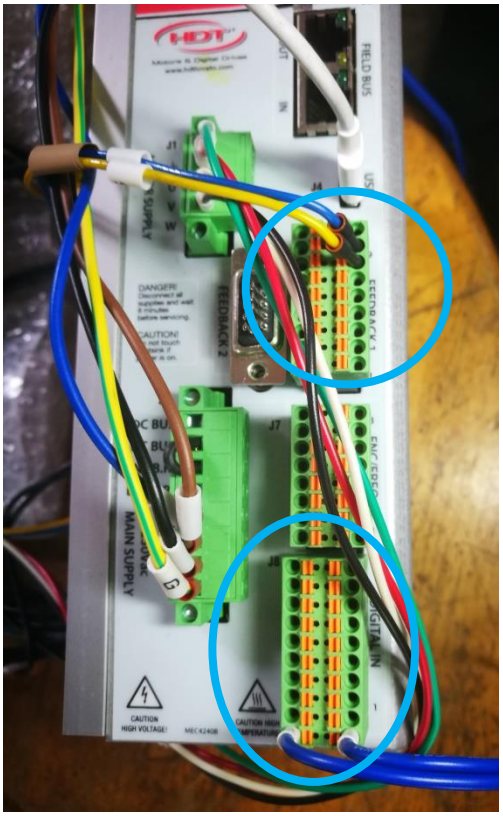
NTT 驅動器用 Analog 類比電壓 0~+10V 驅動 2000rpm 感應馬達的設定方法

Date: May 8th, 2020

1. 使用 NTT240 驅動器連接主軸，硬體接線，除了 RST 及 UVW 外, J8 的 PIN 1 接+24V(Digital IN), PIN11 接 0V; 溫度 KTY84 接 J5 的 PIN7 及 PIN8. **PS: 若沒接溫度偵測 sensor, 則 pin7 和 pin8 要短路**.

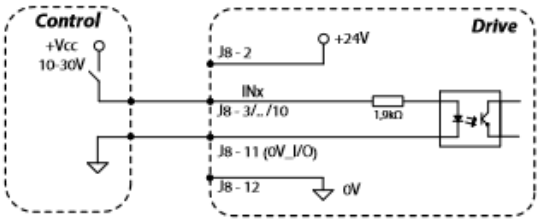


5.10.2 J8 connector: digital I/O

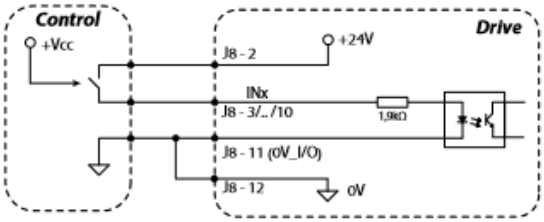
Connector TYPE	**Double row, pitch 3.5mm, male connection** **Maximum cable section: 1mm²**
Utility	Programmable 10-30V digital I/O. Programmable clean contact relay output.
N° pins	**20**

PIN	J8 connector description	
1	+24V I/O	Digital OUTx supply +24V voltage input. Monitored supply: for information, see *"8.03 Diagnostics" pag. 121.*
2	+24V	+24V internal supply available for feeding voltage to digital OUTx (pin 1).
3	IN0	Optoinsulated PNP input also programmable related to chosen operating mode. For information, see *"6.08.1 Digital I/O functions" pag. 85.*
4	IN1	
5	IN2	
6	IN3	
7	IN4	
8	IN5	
9	IN6	
10	IN7	
11	0V I/O	Isolated Common Ground 0V_I/O for I/O signals.
12	0V	Common Ground 0V for +24V
13	OUT0	Optoinsulated PNP output also programmable. For information, see *"6.08.1 Digital I/O functions" pag. 85.*
14	OUT1	
15	OUT2	
16	OUT3	
17	OUT4	
18	OUT5	
19	OUT6 relay	Programmable clean contact relay output. For information, see *"6.08.1 Digital I/O functions" pag. 85.*
20		

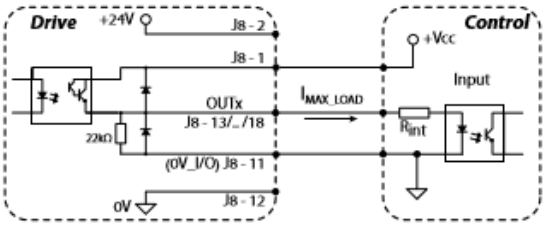
EXTERNAL SOURCE PNP INPUT



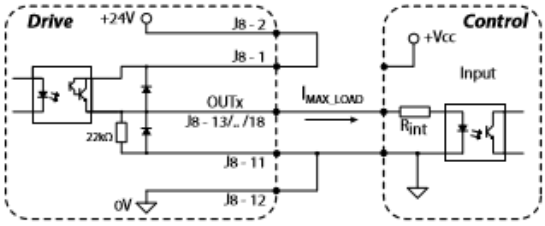
INTERNAL SOURCE PNP INPUT

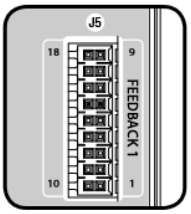


EXTERNAL SOURCE PNP OUTPUT



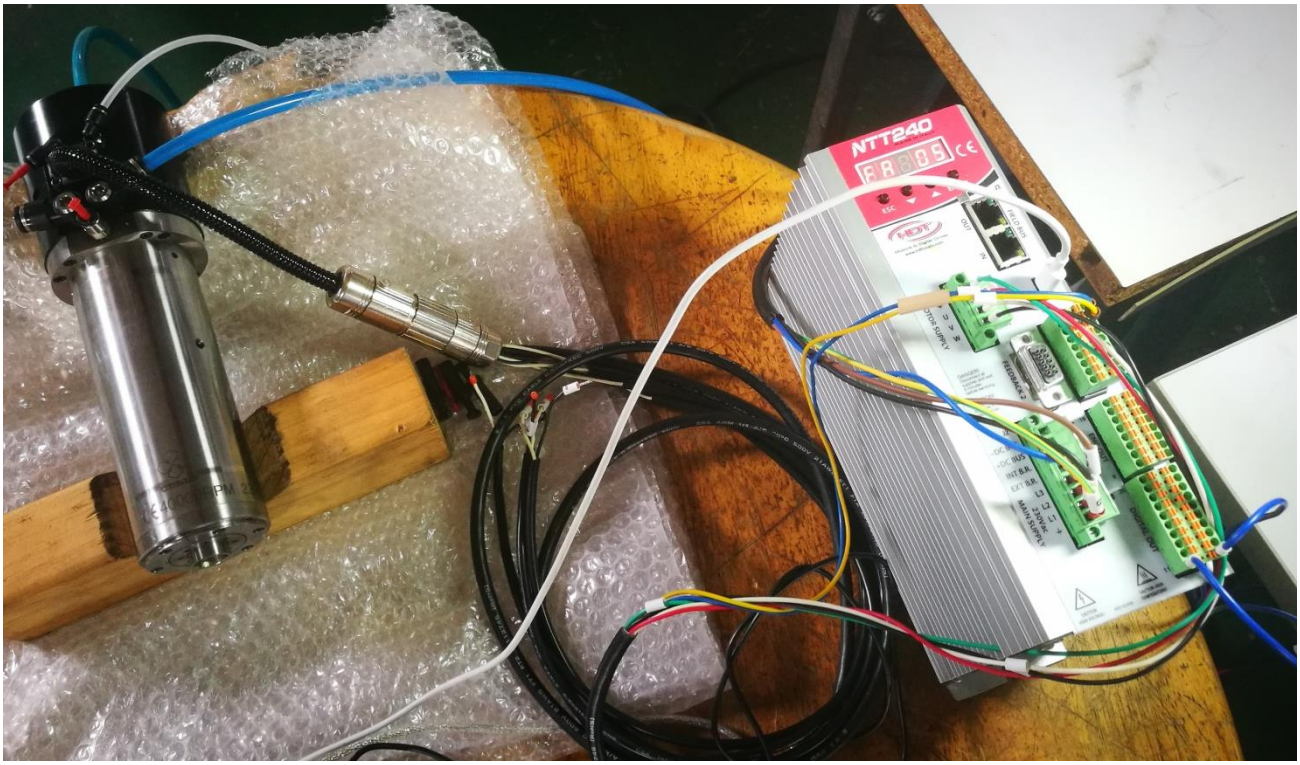
INTERNAL SOURCE PNP OUTPUT



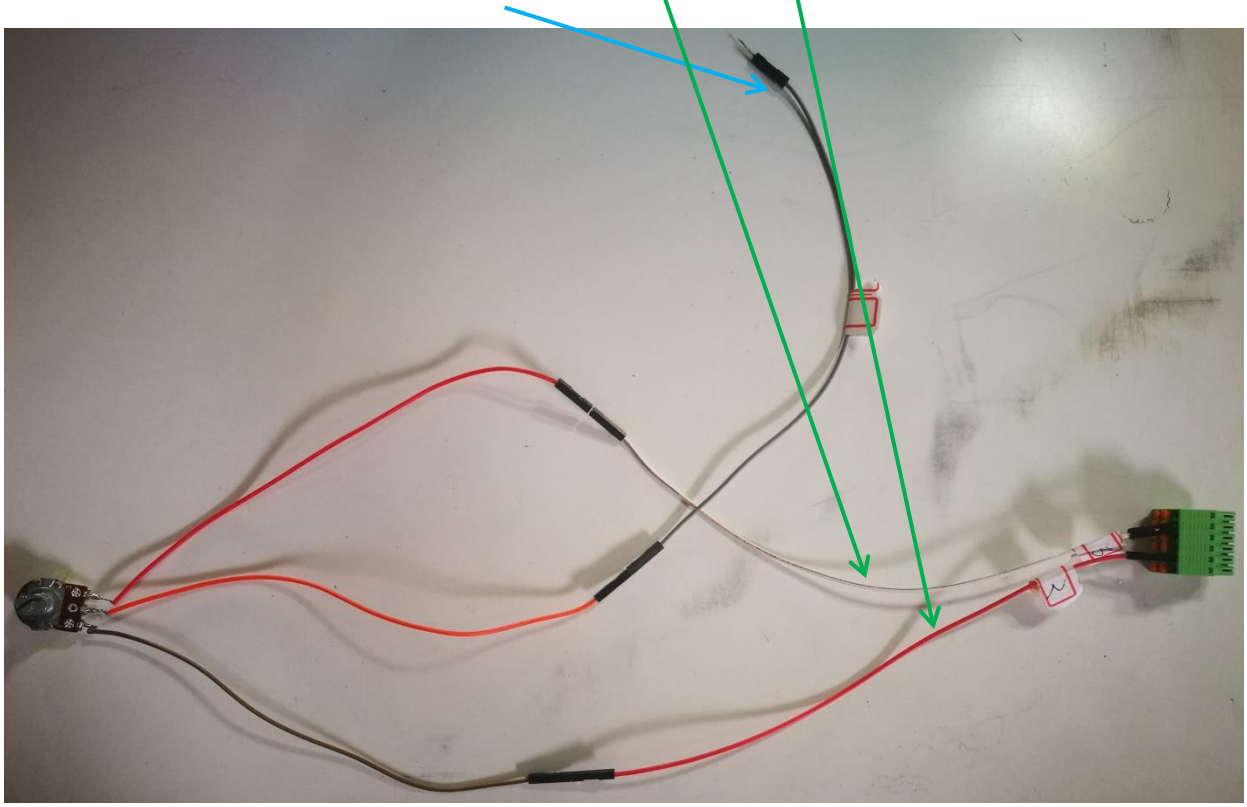


Connector TYPE	**Double row, pitch 3.5mm, male connection** **Max cable section: 1mm²**
Utility	Motor main Feedback. Incremental or absolute encoder and HALL sensors.
N° pins	**18**

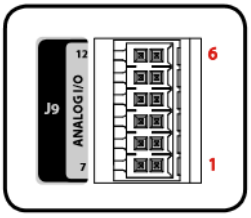
PIN	J5 connector description	
1	A +	Differential line driver (5V) input for incremental channel A.
2	A –	
	A	Single (5V) Open Collector and Push Pull input for incremental channel A.
3	B +	Differential line driver (5V) input for incremental channel B.
4	B –	
	B	Single (5V) Open Collector and Push Pull input for incremental channel B.
5	Z + / CK+	Differential line driver (5V) input for channel Z of incremental encoder.
6	Z – / CK –	Differential line driver (5V) output for CLOCK data for SSI absolute encoder.
	Z	Single (5V) Open Collector and Push Pull input for incremental channel Z.
7	PTC	Digital input for motor PTC. If motor is devoid of PTC, ensure to short pin 7 and 8.
8	PTC	
9	+V_SENSE1	Supply voltage sensing input pin from encoder.
10	+V	Regulated encoder supply 5-9V for feedback 1. • for 5V encoder supply: if available, connect supply sensing pins (9 and 18 pin), otherwise, leave them open circuit. • for encoder supply higher than 5V: perform short circuit between supply sensing pins (9 and 18 pin) to obtain 9V encoder supply.
11	0L	Common Ground 0L for encoder supply and signals.
12	D –	Differential line driver (5V) input for DATA for SSI absolute encoder.
13	(HA) / D +	
	HA / (D +)	HALL sensor A signal input
14	HB	HALL sensor B signal input
15	HC	HALL sensor C signal input
16	SHIELD	Encoder and signal cable shield. This pin is connected to drive Power Earth (PE)
17	SHIELD	
18	0L_SENSE1	Supply common groung sensing input pin from encoder.



2. Caliper 軟體需用 4.33 版; NTT firmware 需更新至 4.25 版.
3. 將可變電阻的最旁邊二條訊號線，分別接 J9 的 pin11 及 pin8，如此可變電阻的最大電壓為+10V. 可變電阻的中間一條訊號線接 J9 的 pin1，將電阻 0~+10V 訊號輸入 Main Ref. 來產生速度命令.

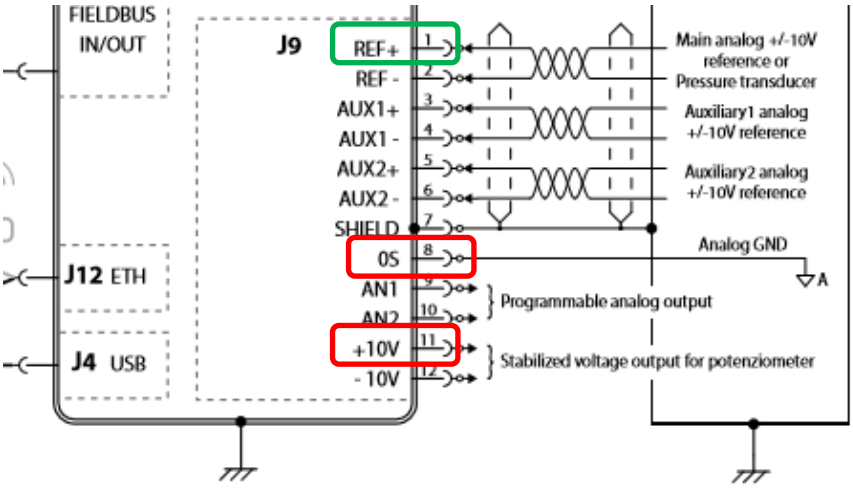


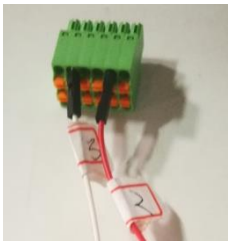
5.10.3 J9 connector: analog I/O

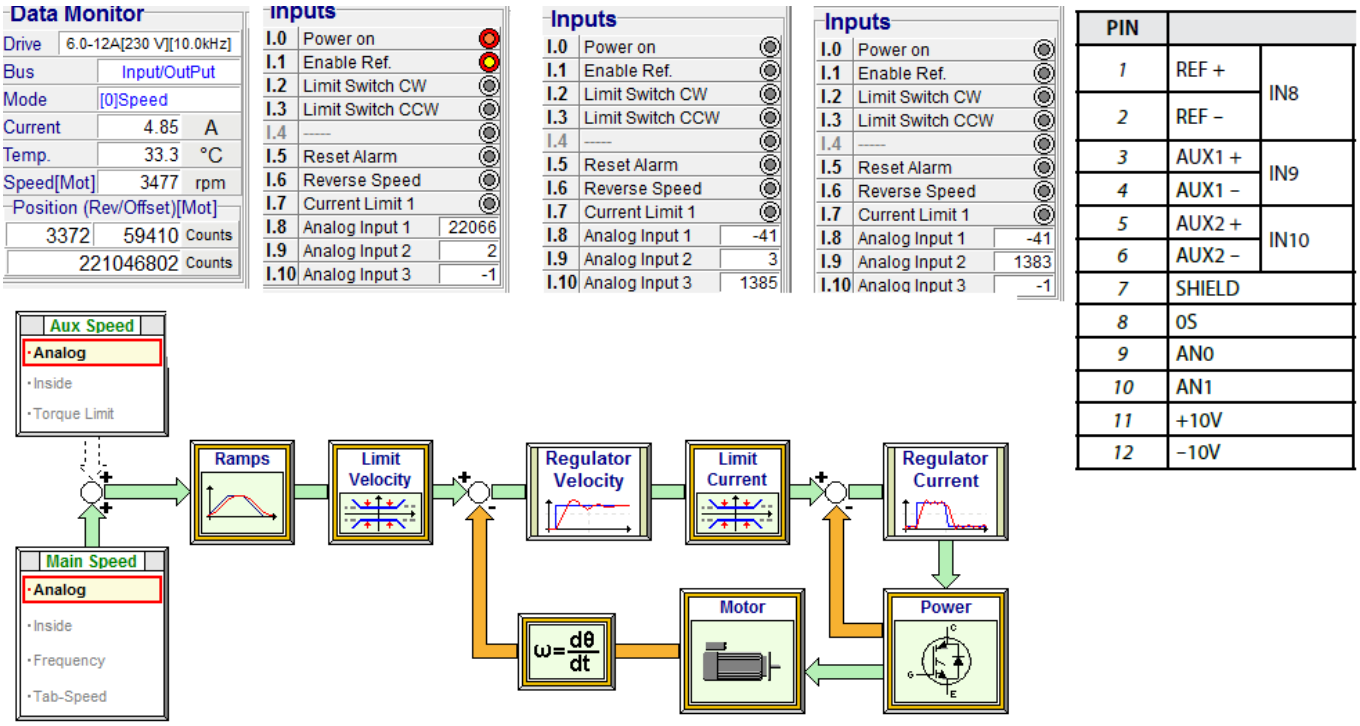


Connector TYPE	**Double row, pitch 3.5mm, male connection** **Maximum cable section: 1mm²**
Utility	Analog I/O
N° pins	**12**

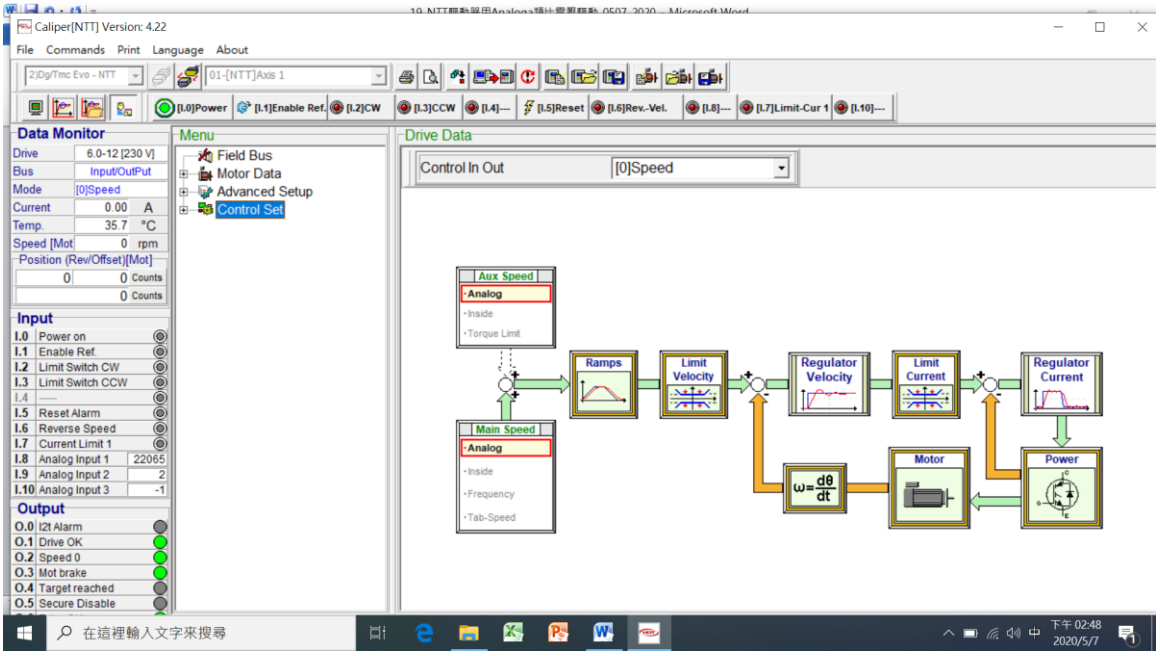
PIN			J9 connector description
1	REF +	IN8	Analog differential IN8 ±10V input ADC 16bit for main reference. Also available as IN8 digital input (single ended PNP). For information, see *"6.09 Drive references" pag. 87*.
2	REF –		
3	AUX1 +	IN9	Analog differential ±10V input ADC 12bit for auxiliary IN9-IN10 references. Also available as IN9-IN10 digital input (single ended PNP). For information, see *"6.09.2 Auxiliary references" pag. 88*.
4	AUX1 –		
5	AUX2 +	IN10	
6	AUX2 –		
7	SHIELD		Signal cable shield. This pin is connected to drive Power Earth (PE).
8	0S		Common Ground 0L for analog I/O and stabilized +/-10V supply.
9	AN0		Analog single ended ±10V programmable output DAC 10bit.
10	AN1		
11	+10V		Stabilized internal supply output +/-10V (< 15mA), usefull for feeding voltage to analog input via external potentiometer.
12	–10V		

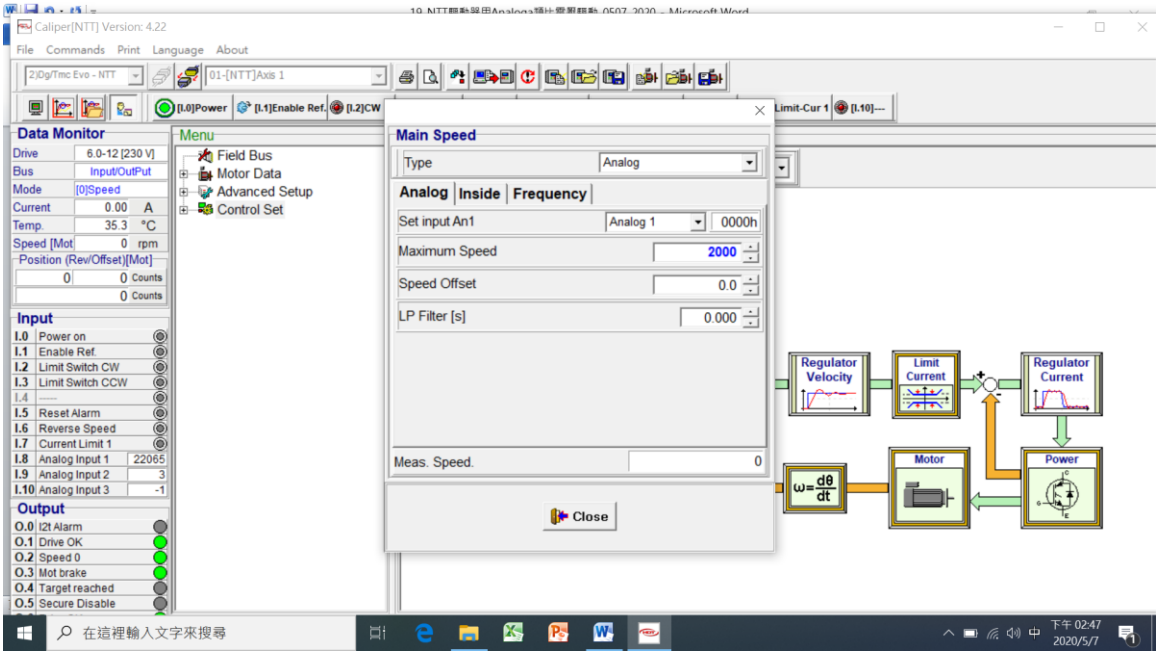




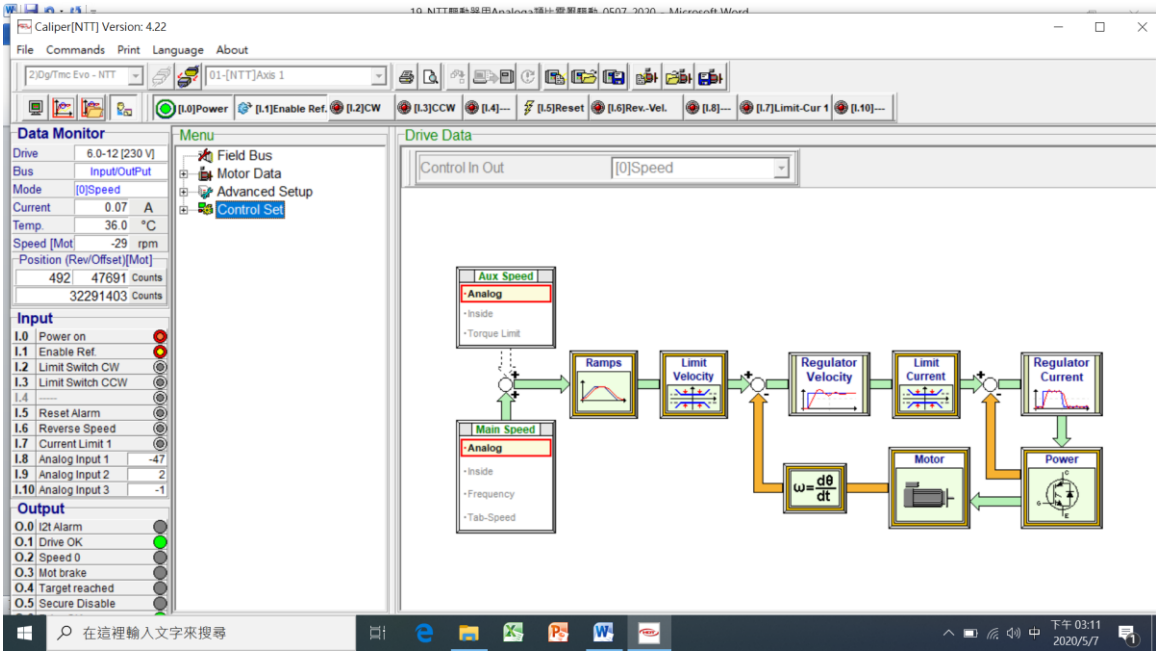


4. 在 speed 模式下, Main speed 改為 Analog , 最高速度改為 2000rpm, 先用 Max. 2000rpm 測試, 保護安全.





5. 分別按下 power on 及 Enable Ref.，若可變電阻有電壓出來，就會有轉速.



6. 旋轉可變電阻，則主軸轉速就會產生變快或變慢.

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謝謝您的選用

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