



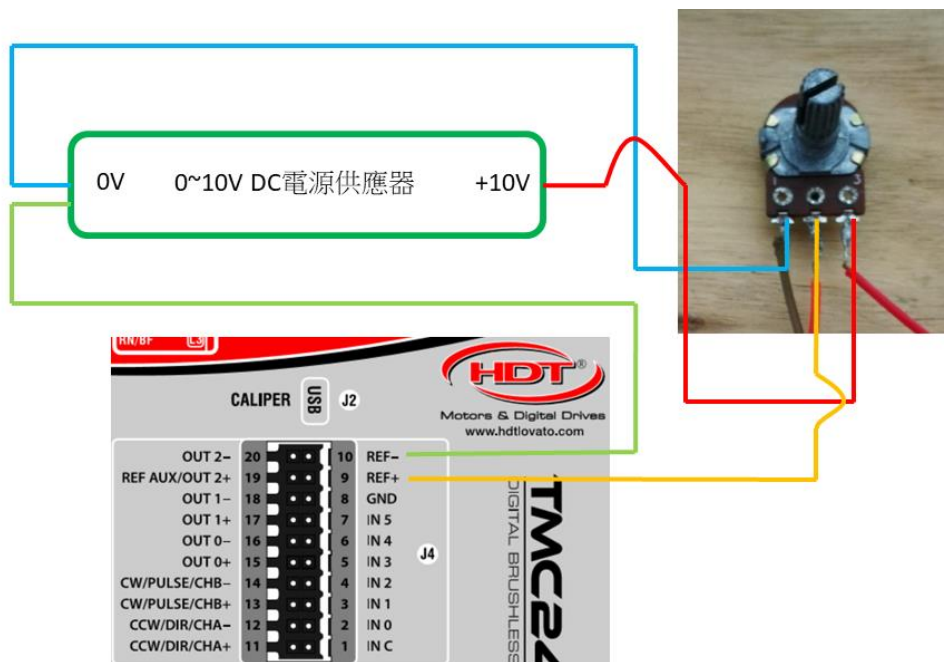
使用類比電壓輸入執行扭力控制模式的設定

Date: June 15th, 2020

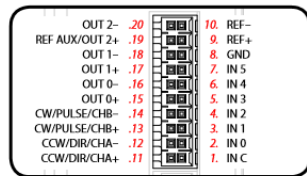
1. 準備工具:

- (A) 0~+ 10V 的直流電源供應器(應該是-10V~+10V的直流電源供應器, 此文先用 0~+10V 的直流電源供應器, 限制馬達只轉單一方向)
- (B) 旋鈕
- (C) 三用電表, 量測旋鈕的實際電壓值.(0V 和中間的電壓), 確認電壓用.

2. 接線, 如下所示:



5.06 J4 connector: I/O



Connector TYPE	Double row, pitch 3.5mm
Utility	Analog and digital I/O and Frequency main reference input
N° pins	20

PIN	J4 connector description	
1	IN C	Common reference for NPN or PNP digital inputs.
2	IN_0	
3	IN_1	
4	IN_2	
5	IN_3	
6	IN_4	
7	IN_5	
8	GND	0V ground for analog inputs.
9	REF +	± 10V 12bit ADC differential analog input for main reference.
10	REF -	Available also for PNP digital input IN_6 (single ended PNP). For information, see "6.09.1 Main Reference" pag. 68.
11	CCW/DIR/CH +	Frequency main reference input
12	CCW/DIR/CH -	
13	CW/PULSE/CH +	
14	CW/PULSE/CH -	Line Driver, NPN and PNP optoinsulated digital input for PULSE / CH B external encoder / CW data.
15	OUT 0 +	Optoinsulated programmable NPN/PNP digital output. Normally used for "Drive OK" function, it's high active when no alarms occurred. It's low disabled when an error occurs and drive shuts down in FAULT condition. For information, see "6.08.1 Digital I/O functions" pag. 66.
16	OUT 0 -	
17	OUT1 +	Optoinsulated programmable NPN/PNP digital output. For information, see "6.08.1 Digital I/O functions" pag. 66.
18	OUT1 -	
19	(OUT2+) / REF AUX	0/+10V 12bit ADC single-ended analog input for auxiliary reference (GND at pin 8). Available also for PNP digital input IN_7. For information, see "6.09.2 Auxiliary Reference" pag. 69.

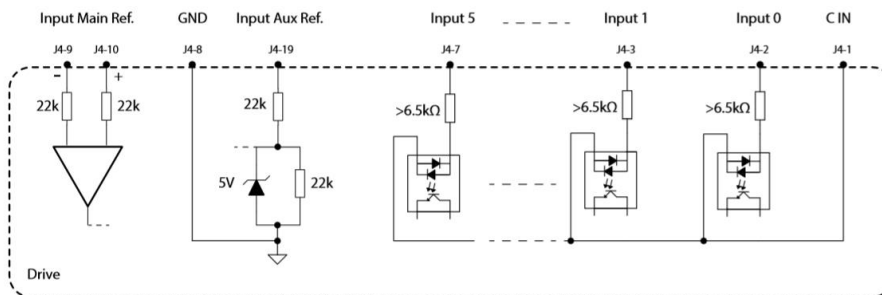
5.13 Analog input and optoinsulated NPN and PNP digital input

The drive allows N° 8 not insulated input:

- N° 1 analog main reference input ±10V (12bit).
- N° 1 analog auxiliary reference input 0/+10V (12bit).
- N° 6 optoinsulated digital input 10/30V, for NPN and PNP configuration.

Signal reference 'C IN' (pin 1 of J4) is common among every optoinsulated input, and GND (pin 8 of J4) is used for analog reference input.

Block diagram for each **input** is shown below:



6.09 Drive references

Drive acquires references, related to operation mode and control topology, from type shown below:

1. Main reference
2. Auxiliary AUX reference



Having the main analog reference a voltage range between $-10V$ e $+10V$, zero condition is obtained when input voltage to drive pin port (pin 9 and 10 of J4 connector) equals to $0V$. Having the auxiliary reference a voltage range between $0V$ e $+10V$, zero condition is obtained when input voltage to drive pin port (pins 8 and 19 of J4 connector) equals to $5V$. For any further information about connections and about analog input topology, please see "5.06 J4 connector: I/O" pag. 27, "5.13 Analog input and optoinsulated NPN and PNP digital input" pag. 37 e "5.12 Optoinsulated digital output: NPN and PNP" pag. 37.

3. Caliper 設定如下:

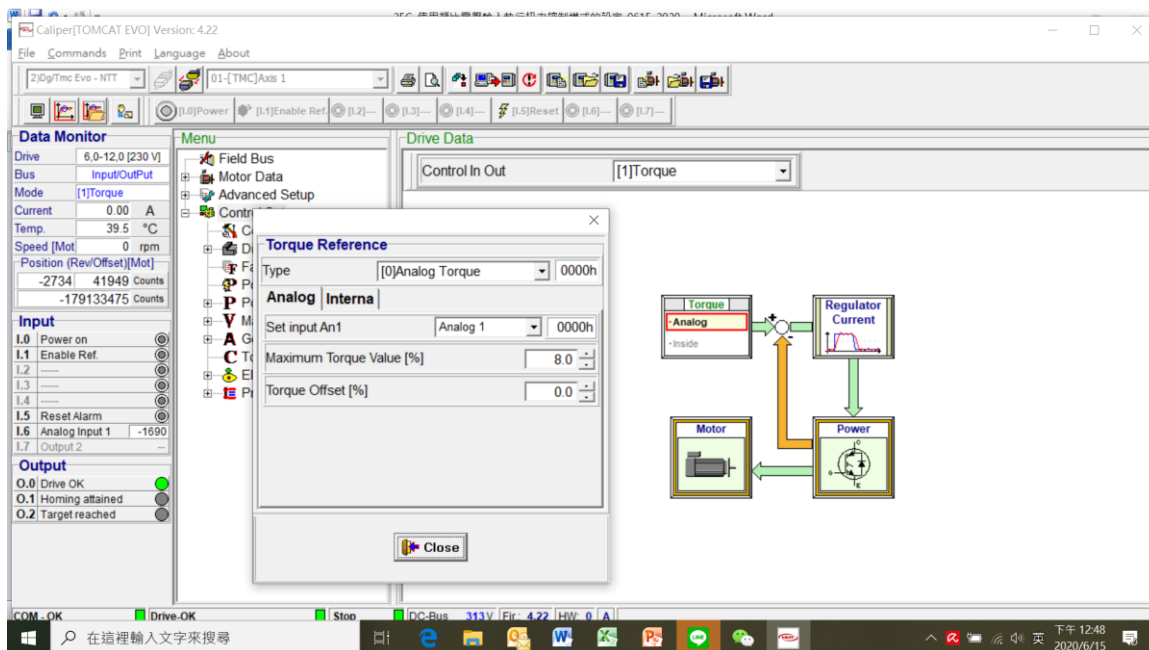
Control In Out = Torque

Type = [0]Analog Torque

Set input An1 = Analog 1

Maximum Torque Value[%] = ***

(最高電流的百分比, 如 400W 馬達 rated currency = 2.3A, 10% = 0.23A)



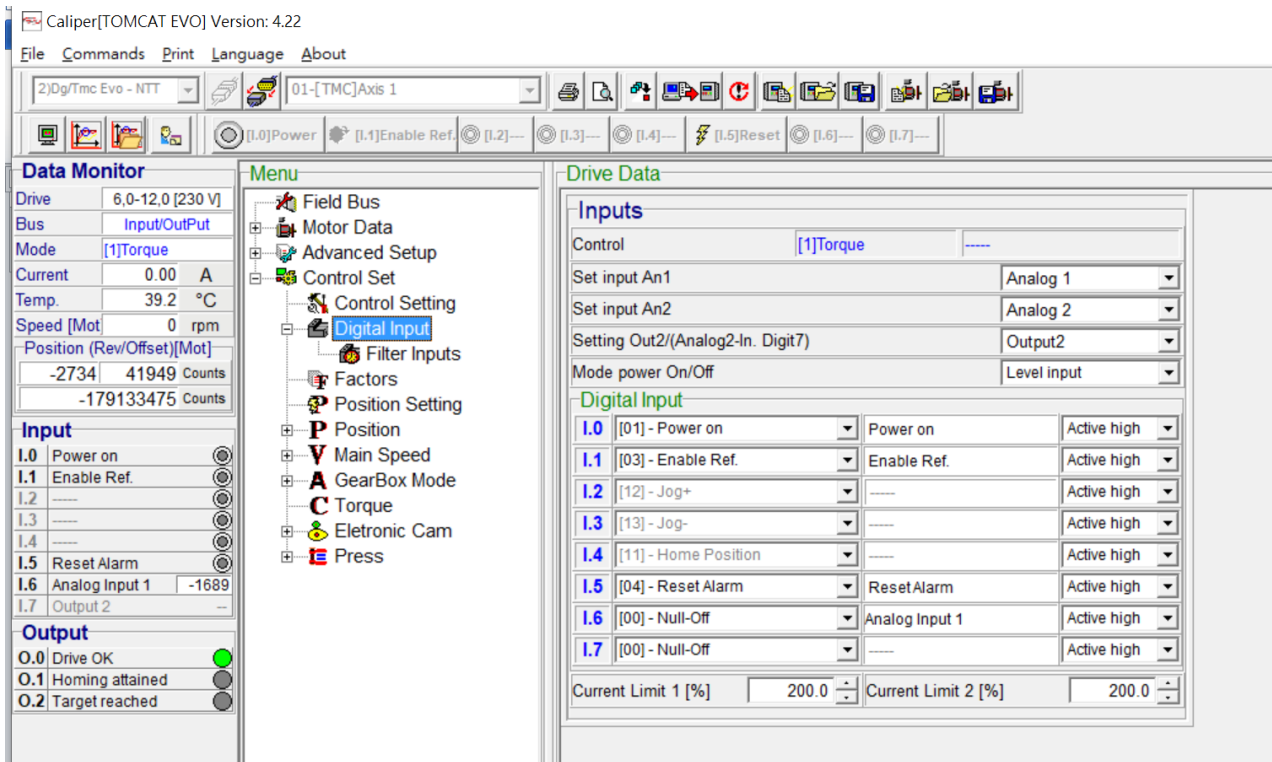
Digital Input 要設定如下

Set input An1 = Analog1

I.0 = Power on

I.1 = Enable Ref.

I.5 = Reset Alarm



4. 按下 Local control, 按下[I.0] = Power on, 按下 [I.1] = Enable Ref; 再開始旋轉旋鈕, 則馬達的電流值會隨旋鈕變化, 可以由 0A 轉到**A (設定的最大值), 設定的最大值在 Maximum Torque Value[%].
5. 若是有-10V~+10V 的電源供應器, 接線接法相同, 馬達電流變化範圍可以由-A~+A; 即馬達會正反轉.

以下空白



嵐天自動化股份有限公司
i-Maku Automation CO., LTD.



Motors & Digital Drives

謝謝您的選用

E-mail: sales@imaku.com.tw

聯絡人: 范揚昇

手機: 0937583280