TP CAN bus – Stepper motor

Messages tables

<u>For an optimal use of this board, you must turn the motor manually until the indicator mark faces the 0° angle.</u>

This system running 2 different modes :

- **Automatic Mode :**

An automatic angle calculation mode, you just have to send a configured CAN frame with the motor angle, then the motor will turn until the new angle is reached.

<u>Frame composition :</u>

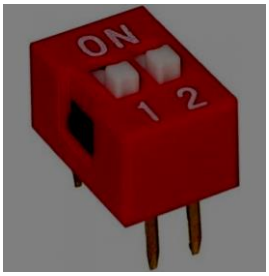
- D0 data : Angle wanted, between 0° and 180° (>180° will be 180°)
- D1 data : Represent the sign of the angle
- For exemple, D0 = 0x54 – D1 = 0x01 – Results an -90° Angle

- **Manual Mode :**

This mode allows you to send a complex CAN frame to control

- The number of steps
- The rotation direction
- The speed of the motor

Function	Arbitration ID	D0	D1	D2
Manual Mode	0x60	**Rotation** 0x00 → Anti-Clockwise 0x01 → Clockwise	**Steps** 0x01 to 0xFF (1 unit = 1°)	**Speed** 0x01 = 1 ms / 1 kHz 0xFF = 255ms / 4 Hz
Angle	0x61	0x01 to 0xFF (1 unit = 1°)	**Angle sign** 0x00 Positive 0x01 Negative	
Set internal Position to 0	0x62			



You can change the Can frame acceptance mask with :

- SW1 = 0, SW2 = 0, Can identifier = 0x60 - 0x61 - 0x62
- SW1 = 1, SW2 = 0, Can identifier = 0x70 - 0x71 - 0x72
- SW1 = 0, SW2 = 1, Can identifier = 0x80 - 0x81 - 0x82
- SW1 = 1, SW2 = 1, Can identifier = 0x90 - 0x91 – 0x92

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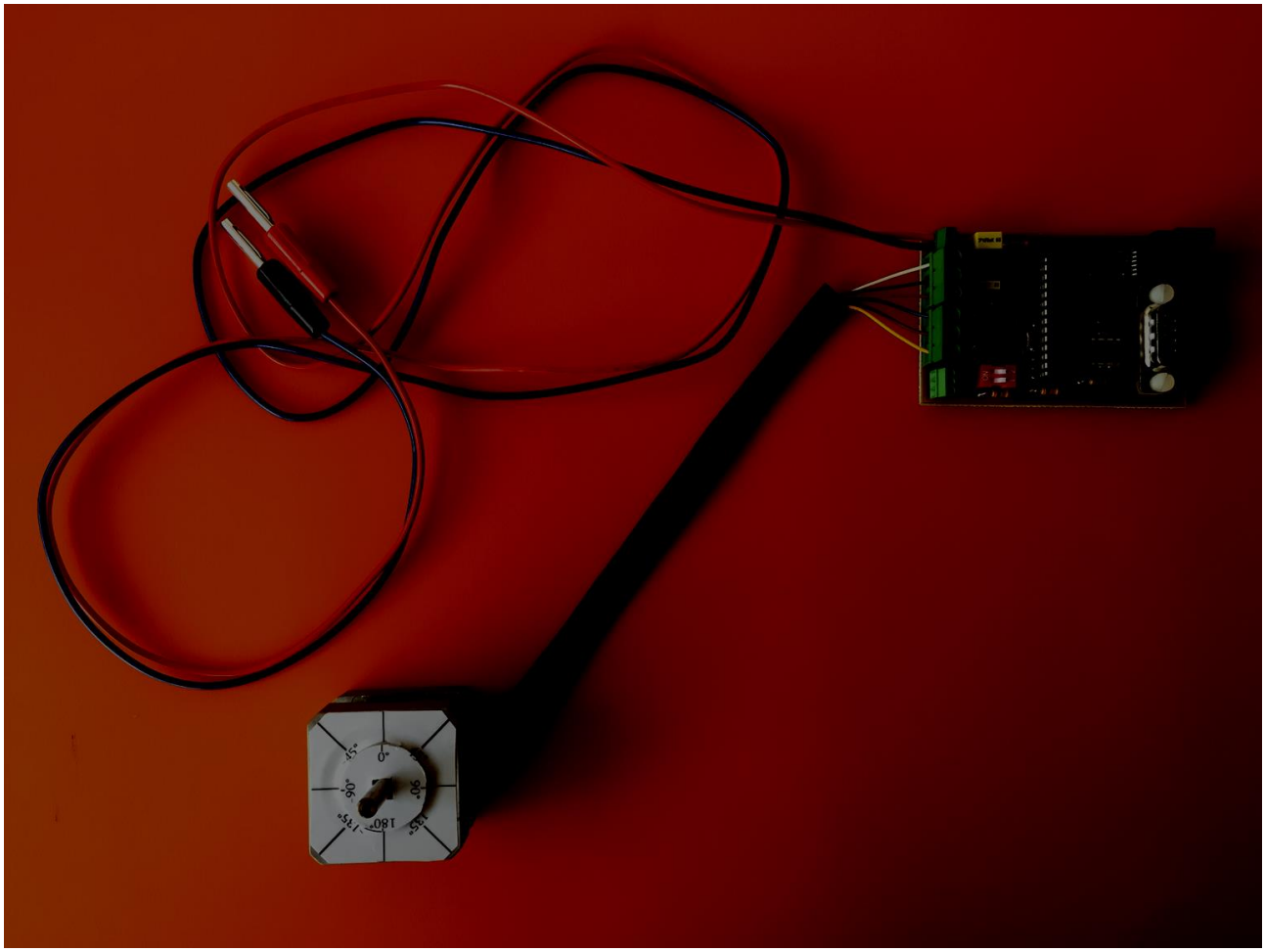
Content of a board



- A board with a PIC18F2585/2680 programmed with the right program (v3 atm) , a Can interface and an hybrid stepper motor driver
- An hybrid 6 wire stepper motor (witch can be RS191-8299 on Rs-online.com)
- Two alimentation wires