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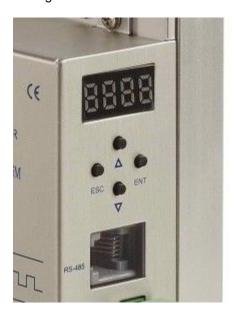**B6F, T3 Building, South District, Hi-tech Industrial Park, Shenzhen, China**
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General Introduction

DM2722M is 2-phase stepper motor driver based on 32-bit DSP control. It is fully digital new product configured by advanced DSP control chip and 2-phase IPM module. Since DSP provides high processing speed and rich resources, the driver not only can replace traditional stepper motor driver which is based on single chip or CPLD, but also can satisfy the customers who have special requirements. (e.g., requirements about acceleration/deceleration)

Additionally, DM2722M supports RS-485 port communication. The user can set the parameters, control internal pulse and program single-axis control mode in PC which is installed driving software.

Name Design

DM	Fully Digital Stepper Motor Driver
2	Mating 2-Phase Stepper Motor
7	Output: 1.2-7.0A RMS
22	Input : AC110－AC220V
M	M：Standard Driver with Basic Function

(1)CON1

Signal Name	Symbol	Pin No.		Function & Application
Power supply terminal of signals	VCC	CN1	1	Power supply terminal of signals(+5V power supply) A resistance is needed if it is over 5V.
Pulse Input	PU	CN1	2	For pulse input. If choose "pulse+direction" mode through BS04, PU is for stepper pulse signal. If choose "CW/CCW rotating pulse" mode, PU is for pulse signal of CW rotating. (The driving current is requested to be above 15mA.)
Direction Signal Input	DR	CN1	3	If choose "pulse+direction" mode, DR is for direction signal. If choose "CW/CCW rotating pulse" mode, DR is for pulse signal of CCW rotating. (The driving current is requested to be above 15mA.)
Signal of Micro Steps Choosing	SM	CN1	4	Choose the micro steps set through BS03 when input low level. Choose the micro steps set through BS02 when input high level.
Signal of Motor Free	MF	CN1	5	MF is valid when input low level. The driver cut off motor current and motor is in free state.
Common signal input	IN1,IN2I N3,IN3	CN1 CN1 CN1 CN1	6 7 8 9	Common signal input
Ready Signal Output	RDY	CN1	10	After driver is powered up, it will finish self-test. RDY is valid when the driver works normally and able to receive external signals. The max output current is 50mA
Signal for fault	ALM	CN1	101	If driver occur failure or over current, overheating, overload, ALM is valid.(low level) The max output current is 50mA.
Speed Adjusting Terminal	AMS+ AMS-	CN1 CN1	14 15	Input external analog to adjust motor running speed.
Useless Port	NC	CN1	15	NC

(2) RS-485

Signal Name	Symbol	Pin No.		Applications
Internal ground	GND	CN2	1	Internal power ground. To guarantee the reliable communication of port, the users can connect the port together with that of other drivers to the ground.
Internal power 5V	5V	CN2	2	Internal working power, please do NOT connect it in other ways.
485 Port	485+	CN2	7	A phase signal input
485 Port	485-	CN2	8	B phase signal input
NC	N			3、4、5、6 are special leads. NC.

(3) Basic Parameter Table

NO.	Symbolic NO.	Name & Function	Initial value setting	unit	Set range
0	BS00	To set running current of motor	0030	hundred mA	0010-0070
1	BS01	To set locking current of motor.	50% of the working current	%	0%-100%
2	BS02	The 1st group micro steps. Please choose this group when SM signal input is in high level.. 20E3 means 20×10³＝20000 pulse/R	2000	Pulse/R	400-60E3
3	BS03	The 2nd group micro steps. Please choose this group when SM signal input is in low level.. 4000 means 4000 pulse/R	4000	Pulse/R	400-60E3
4	BS04	Pulse input mode. To choose waveform of pulse train input. 0000: CW/CCW rotating pulse control mode, it is valid on the trailing edge.. 0001: pulse and direction control mode, it is valid on the trailing edge.. 0002: CW/CCWrotating pulse control mode, it is valid on the rising edge. 0003: pulse and direction control mode, it is valid on the rising edge.	0001		0000-0003
5	**BS05**	**Driver pulse filter constant. The smoothing effect upon external pulse is stronger if the value is set bigger. And the high-speed function is also better. However, the driver response time is longer too. If PC gives opposite**	**3**		**0-6**

		direction with previous instruction, please delay BS05 setting time and then give opposite direction instruction. When the value is 0, there is no smoothing function.			
6	BS06	The initial speed of internal pulse control/serial ports control/speed control mode. The value must be less or equal to the value of BS08.	50	R/min	10-200
7	BS07	The accelerating speed of internal pulse control/serial control/speed control mode.	150	ms	20-2000
8	BS08	The max speed of internal pulse control/serial control/speed control mode	100	R/min	10-3000
9	BS09	The rotating pulse count of internal pulse control mode. Please set the four high bit,	2000		1-9999
10	BS10	The rotating pulse count of internal pulse control. Please set low four bit.	0000		1-9999
11	BS11	Internal pulse control status,. Using up and down to CW/CCW rotate.	00		
12	BS12	Parameter range reference: 0000：External pulse input mode 0001：Internal pulse control mode 0002：serial port control mode 0003：speed control mode	0000		0000-0003
13	BS13	Port setting 0001：No.1 port	1		1-32
14	BS14	Serial port baud rate setting 48: 4800 96:9600 192:19200	192	Hundred b/s	48 96 192 384

		384:38400 560:56000 576:57600 1152:115200 2304:230400			560 576 1152 2304
15	BS15	read/write setting 0055：BS00-BS15 readable, writable； Other value： BS00-BS14only readable，BS15 writable	55		0-90
16	BS16	Microsoft version 3A00			