Electrical Specifications (T_j = 25°C/77°F)

Parameters	DM556			
	Min	Typical	Max	Unit
Output current	0.5	-	5.6 (4.0 RMS)	A
Supply voltage	+20	-	+50	VDC
Logic signal current	7	10	16	mA
Pulse input frequency	0	-	200	kHz
Isolation resistance	500			Mohm

Connector P1 Configurations

| Pin Function	Details
PUL+ **PUL-**	Pulse signal: In single pulse (pulse/direction) mode, this input represents pulse signal, each rising or falling edge active (software configurable); 4-5V when PUL-HIGH, 0-0.5V when PUL-LOW. In double pulse mode (pulse/pulse) , this input represents clockwise (CW) pulse,active both at high level and low level (software configurable). For reliable response, pulse width should be longer than 2.5μs. Series connect resistors for current-limiting when +12V or +24V used. The same as DIR and ENA signals.
DIR+ **DIR-**	DIR signal: In single-pulse mode, this signal has low/high voltage levels, representing two directions of motor rotation; in double-pulse mode (software configurable), this signal is counter-clock (CCW) pulse,active both at high level and low level (software configurable). For reliable motion response, DIR signal should be ahead of PUL signal by 5μs at least. 4-5V when DIR-HIGH, 0-0.5V when DIR-LOW. Please note that rotation direction is also related to motor-drive wiring match. Exchanging the connection of two wires for a coil to the drive will reverse motion direction.
ENA+ **ENA-**	Enable signal: This signal is used for enabling/disabling the drive. High level (NPN control signal, PNP and Differential control signals are on the contrary, namely Low level for enabling.) for enabling the drive and low level for disabling the drive. Usually left **UNCONNECTED (ENABLED)**.

Connector P2 Configurations

Pin Function	Details
+Vdc	Power supply, 20~50 VDC, Including voltage fluctuation and EMF voltage.
GND	Power Ground.
A+, A-	Motor Phase A
B+, B-	Motor Phase B

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Microstep & Current

Microstep resolutions and output current are programmable, the former can be set from full-step to 102,400 steps/rev and the latter can be set from 0.5A to 5.6A.

However, when it's not in software configured mode, this drive uses an 8-bit DIP switch to set microstep resolution, and motor operating current, as shown below:
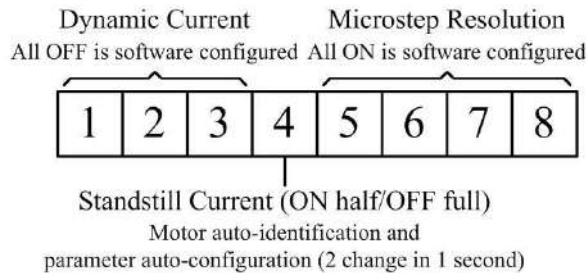
Microstep Resolution Selection

When it's not in software configured mode, microstep resolution is set by SW5, 6, 7, 8 of the DIP switch as shown in the following table:

Microstep	Steps/rev.(for 1.8o motor)	SW5	SW6	SW7	SW8
1 to 512	Default/Software configured	on	on	on	on
2	400	off	on	on	on
4	800	on	off	on	on
8	1600	off	off	on	on
16	3200	on	on	off	on
32	6400	off	on	off	on
64	12800	on	off	off	on
128	25600	off	off	off	on
5	1000	on	on	on	off
10	2000	off	on	on	off
20	4000	on	off	on	off
25	5000	off	off	on	off
40	8000	on	on	off	off
50	10000	off	on	off	off
100	20000	on	off	off	off
125	25000	off	off	off	off

Current Settings

When it's not in software configured mode, the first three bits (SW1, 2, 3) of the DIP switch are used to set the dynamic current. Select a setting closest to your motor's required current.

Peak Current	RMS Current	SW1	SW2	SW3
Default/Software configured (0.5 to 5.6A)		OFF	OFF	OFF
2.1A	1.5A	ON	OFF	OFF
2.7A	1.9A	OFF	ON	OFF
3.2A	2.3A	ON	ON	OFF
3.8A	2.7A	OFF	OFF	ON
4.3A	3.1A	ON	OFF	ON
4.9A	3.5A	OFF	ON	ON
5.6A	4.0A	ON	ON	ON

Note: Due to motor inductance, the actual current in the coil may be smaller than the dynamic current setting, particularly under high speed condition.