

# Stepper Drive MSB - 403 64 Microsteps

MSB - 403 is a fully enclosed Micro stepping stepper motor drive suitable for 4,6 and 8 wire stepper motors.

This 40V, 3 amps drive is suitable up to 40KgCm stepper motors. This drive also features automatic standby mode for reduced motor heating. The 46KHz chopper frequency drives the motors with short electrical time constants.

MSB - 403 provides the user with pulse and direction mode of control. The Clock frequency determines the motor speed and ramping depending upon microstep selected.

## Standby Mode:

This mode is active only when the drive is in operating mode. When selected 50%, the DC current will be half of set current. Similarly when selected 25%, the DC current will be quarter of the set current.

Various operating parameters can be configured using the on-board Piano type DIP switches.



## APPLICATIONS :

- Banking Machines ■
- Office Automation ■
- Tele Communication ■
- Printing Machines ■
- Medical Equipments ■
- Machine Tools ■
- Industrial Automation ■
- Machine for Wood Working ■
- Textile Machineries ■
- Spot Lights ■
- Machines for farm and food industries ■

## Features Stepper Drive MSB - 403

- DMOS, Full Bridge Driver ■
- Operating Voltage up to 40V DC ■
- Selectable Motor current up to 3A ■
- Microstep selection up to 64 ■
- Pulse and Direction Control ■
- Automatic current reduction ( Standby ) ■



## Standard Specification - MSB 403

<b>Power Amplifier</b>	Amplifier Type Current Control Output Current DC Bus Voltage Idle Current Reduction Step Selection Status LEDs	Dual H - Bridge Recirculating, Pulse Width Modulated, 46KHz switching 0.5 - 3.0 Amps, DIP Switch Selectable 40 Volts DC max Automatic 25% or 50% DIP Switch selectable 1,2,4,8,16,32 and 64 Microstepping through M1, M2 and M3 inputs Power and Fault
<b>Control Signals</b>	Mode of Operation Step and Direction Input  Enable Input Boost	Pulse and Direction : Up to 24 KHz Clock frequency Optically Isolated. 5 - 24 VDC 10 microsecond Minimum pulse width. Direction Signal 1 millisecond Minimum.  Optically Isolated. 5 - 24 VDC  Through input M4
<b>System</b>	Overall Size  Chassis Material  Weight  Temperature  Humidity Protections Connectors	Closed Frame - 148 X 78 X 52 mm Open Frame - 120 X 75 X 40 mm MS, Black Powder Coated with an integral heat sink.  400 grams  Operating ( 0 °C to 60 °C) Storage (-20 °C to 85 °C)  MAX 90% non-condensing Over / Under Voltage, Short Circuit, Over temperature. Screw Terminal Connectors

## DIP Switch Details - MSB 403

Standby	Steps Selection	Current Selection																																																																														
<table border="1"> <tr><th colspan="2">S4</th></tr> <tr><td>0</td><td>50%</td></tr> <tr><td>1</td><td>25%</td></tr> </table>	S4		0	50%	1	25%	<table border="1"> <tr><th>MICRO STEP</th><th>M1</th><th>M2</th><th>M3</th></tr> <tr><td>FULL</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>HALF</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>4</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>8</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>16</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>32</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>64</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>64</td><td>1</td><td>1</td><td>1</td></tr> </table>	MICRO STEP	M1	M2	M3	FULL	0	0	0	HALF	0	0	1	4	0	1	0	8	0	1	1	16	1	0	0	32	1	0	1	64	1	1	0	64	1	1	1	<table border="1"> <tr><th>PEAK CURRENT (A)</th><th>S1</th><th>S2</th><th>S3</th></tr> <tr><td>0.0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>0.5</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>1.0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1.5</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>2.0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>2.5</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>3.0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>3.0</td><td>1</td><td>1</td><td>1</td></tr> </table>	PEAK CURRENT (A)	S1	S2	S3	0.0	0	0	0	0.5	0	0	1	1.0	0	1	0	1.5	0	1	1	2.0	1	0	0	2.5	1	0	1	3.0	1	1	0	3.0	1	1	1
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