



MIND-B SERIES STEPPING MOTOR DRIVES

PACKAGED DRIVES



High power upto 12A @ 180V for high speed performance.

Drives motors 4.2" frame, 3 stack.

DC power supply. Just add mains transformer, rectifier & capacitor.

400 to 4000 step/rev resolution for smooth running at low speeds.

Protection from motor short, overtemperature and overvoltage.

High efficiency bipolar chopper.

Suitable for two phase motors, 4, 6 or 8 leads

LEDs for motor phase, overtemp, overvoltage and motor short.

X 4 step input frequency multiplication factor.

Opto isolated inputs & outputs.

The MIND-B series of stepper motor drives is ideal for high power single and dual axis motion control applications where high speed and resolution are required. They are DC powered and require only a mains transformer, capacitor and rectifier, stepping motor and a suitable controller with step and direction output signals. The opto isolated step and direction inputs are compatible with 5, 12 or 24 V or current sinking indexers.

Three models are available, to cover different motor sizes while the maximum 4000 step resolution ensures smooth running. Protection against motor short circuit is also included. Because the maximum input frequency is 100kHz, there is also a X4 input frequency multiplier built into the drive. This enables a low frequency input to produce a high motor speed, even at 4000 steps/rev resolution.

SPECIFICATIONS

LOGIC INPUTS

Opto isolated (OFF = 0 - 4 V or open, ON = 5 - 24V)
Step
Direction
De-energise
Step x 4

MAXIMUM STEP FREQUENCY

80kHz

LOGIC OUTPUTS

Opto isolated (45V @ 10mA sink open collector)
Drive fault

RESOLUTION

400, 800, 1600, 3200,
500, 1000, 2000 & 4000 steps/rev

STANDBY CURRENT

automatic at 65%

MOTOR CURRENT

4 settings by DIP switch

RESONANCE DAMPING

at low speeds

OPERATING TEMPERATURE

5-40°C
(Forced cooling may be required in cabinet)

WEIGHT

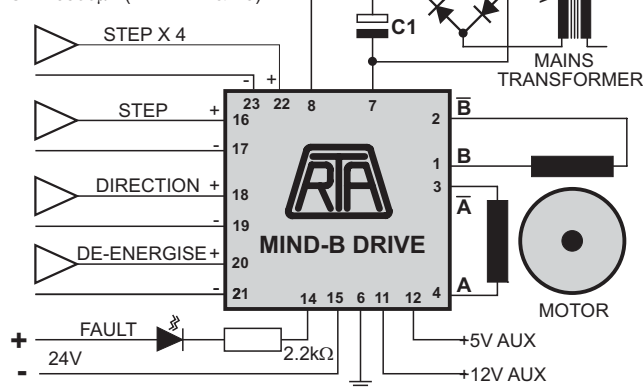
1.0 kg.

SPECIFICATIONS	MIND-B2	MIND-B3	MIND-B4	MIND-B5
SUPPLY RANGE (VDC)	55 - 85	55 - 85	95 - 140	120 - 180
TRANSFORMER (VAC)	39 - 60	39 - 60	67 - 99	85 - 127
SUPPLY (VDC) (maximum)	102	102	170	220
SUPPLY (VDC) (minimum)	42	42	75	85
MOTOR CURRENT (A) (maximum)	4.0	10.0	8.0	12.0
MOTOR CURRENT (A) (minimum)	2.3	5.7	4.55	6.7
CURRENT STEPS (A)	0.43	1.4	1.15	1.3

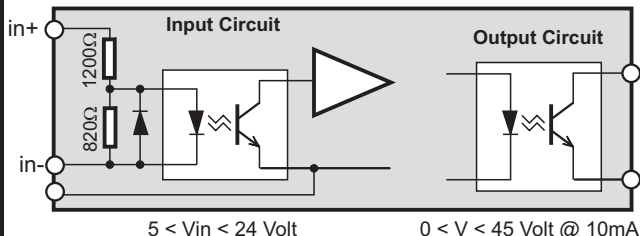
WIRING DIAGRAM

C1 > 1500µF (MIND-B4 & B5)

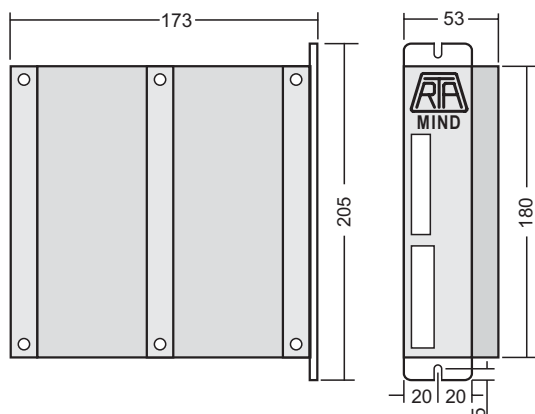
C1 > 3300µF (MIND-B2 & B3)



LOGIC SIGNALS



DIMENSIONS (in mm)



CONNECTIONS

- Motor** Motor winding B (2B or B+)
- Motor** Motor winding B (2A or B-)
- Motor** Motor winding A (1B or A-)
- Motor** Motor winding A (1A or A+)
- Motor shield** Motor cable shield
- Earth** Drive Ground
- Supply** - DC Power from rectifier and capacitor.
- +Supply** + DC Power from rectifier and capacitor.
- +12V AUX** 12V @ 12mA auxiliary supply.
- +5V AUX** 5V @ 12mA auxiliary supply.
- Step signal** Link to +12V for high to low step transition.
- +Drive Fault** Normally shorted when drive is in working state but becomes open circuit when drive has shut down due to protection circuits.
- Drive Fault**
- +Step** The motor steps once for an OFF-ON transition of this signal. Ideal duty cycle 50%.
- Step**
- +Direction** When this signal is ON the motor direction is reversed. This signal must be on for at least 100µs before STEP input is received and must remain on at least 100µs after the last step is received.
- Direction-**
- +De-energise** When this signal is ON the drive is active.
- De-energise** When this signal is OFF the drive is inhibited so motor current (and holding torque) is zero.
- +Step X 4** When this signal is ON the step frequency input is multiplied by 4. This enables high motor speed with a low frequency controller.
- Step X 4**

Motors, transformers, controllers, motion control software and motor couplings also available on request.
Continuous development may necessitate changes in models and specifications without notice.

AUTOMATED MOTION SYSTEMS PTY.LTD.

MAILING ADDRESS:
P.O.BOX 1240
WANGARA DC
W.A. 6947

PHONE: (08) 9309 1896
FAX: (08) 9309 5671
EMAIL: sales@automotsys.com.au
INTERNET: <http://www.automotsys.com.au>

OFFICE ADDRESS:
UNIT 2, 7 BARETTA RD.
WANGARA, PERTH
WESTERN AUSTRALIA