



PLUS-A SERIES STEPPING MOTOR DRIVES

SMALL PACKAGED DRIVES DC SUPPLY



Suitable for 34 or 42 frame motors.

DC power supply.

85V @ 8 Amp or 140V @ 6 Amp.

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

Protection from motor short, overtemperature and overvoltage.

Built in ramped oscillator for manual RUN control.

Small size, high packing density.

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 PLUS-A 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 with rectifier and capacitors. The opto isolated step and direction inputs are compatible with 5 or 12V voltage sourcing or current sinking indexers. A built in ramped oscillator is useful for manual control.

Two models are available, the PLUS-A3 for lower voltage higher current applications and the PLUS-A4 for higher voltage to cover large motors or high speeds. Protection against motor short circuit and incorrect power supply voltage are also included. The maximum input frequency is 60kHz so for rapid moves, there is a X4 input frequency multiplier built into the drive. Small size enables large numbers of drives to be packed into a small cabinet.

SPECIFICATIONS

LOGIC INPUTS

Opto isolated (OFF = < 3.5 V, ON = 3.5 to 13V)
 Step or RUN enable
 Direction
 Current off (De-energise)
 Aux (Step x 4)

MAXIMUM STEP FREQUENCY

60kHz

LOGIC OUTPUTS

Opto isolated (45V @ 50mA sink open collector)
 Drive fault

RESOLUTION

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

STANDBY CURRENT

automatic at 50%

MOTOR CURRENT

8 settings by DIP switch

INTERNAL OSCILLATOR

14 to 450 rpm (16 settings, some with microramping)

OPERATING TEMPERATURE

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

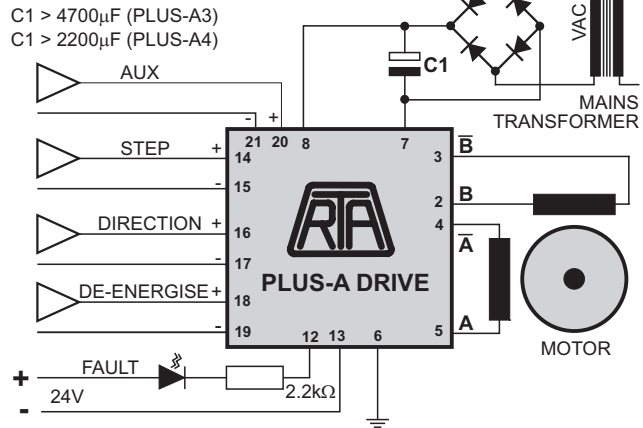
WEIGHT

0.7 kg.

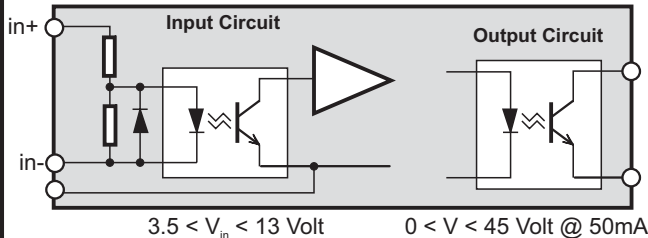
SPECIFICATIONS

SPECIFICATIONS	PLUS-A3	PLUS-A4
SUPPLY (VAC) (maximum)	85	140
SUPPLY (VAC) (minimum)	35	70
MOTOR INDUCTANCE (maximum)	12	12
MOTOR INDUCTANCE (minimum)	0.8	1.2
MOTOR CURRENT (A) (maximum)	8.0	6.0
MOTOR CURRENT (A) (minimum)	2.4	1.9

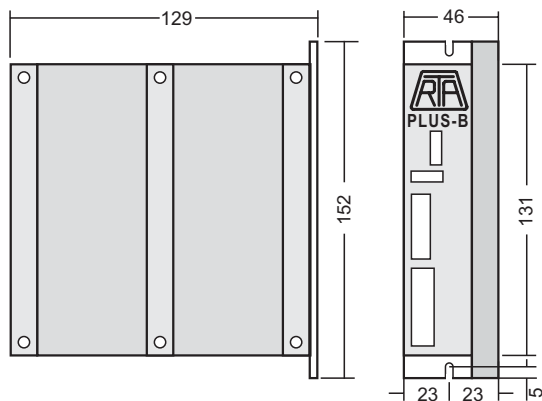
WIRING DIAGRAM



LOGIC SIGNALS



DIMENSIONS (in mm)



CONNECTIONS

- Motor shield** Motor cable shield
- 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+)
- Earth** Drive Ground
- Supply** - DC Power from transformer.
- Supply** + DC Power from transformer.
- not connected.
- +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/enable** The motor steps once for an OFF-ON transition of this signal. Ideal duty cycle 50%.
- Step/enable**
- +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 for at least 100µs after the last step is received.
- Direction**
- +Current off** When this signal is ON the drive is active. When this signal is OFF the drive is inhibited so motor current (and holding torque) is zero.
- Current off**
- +Aux input** When this signal is ON the step frequency input is multiplied by 4. This enables high motor speed with a low frequency controller.
- Aux input**
- Logic ground** Internally connected to terminals 1 & 6.

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.

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