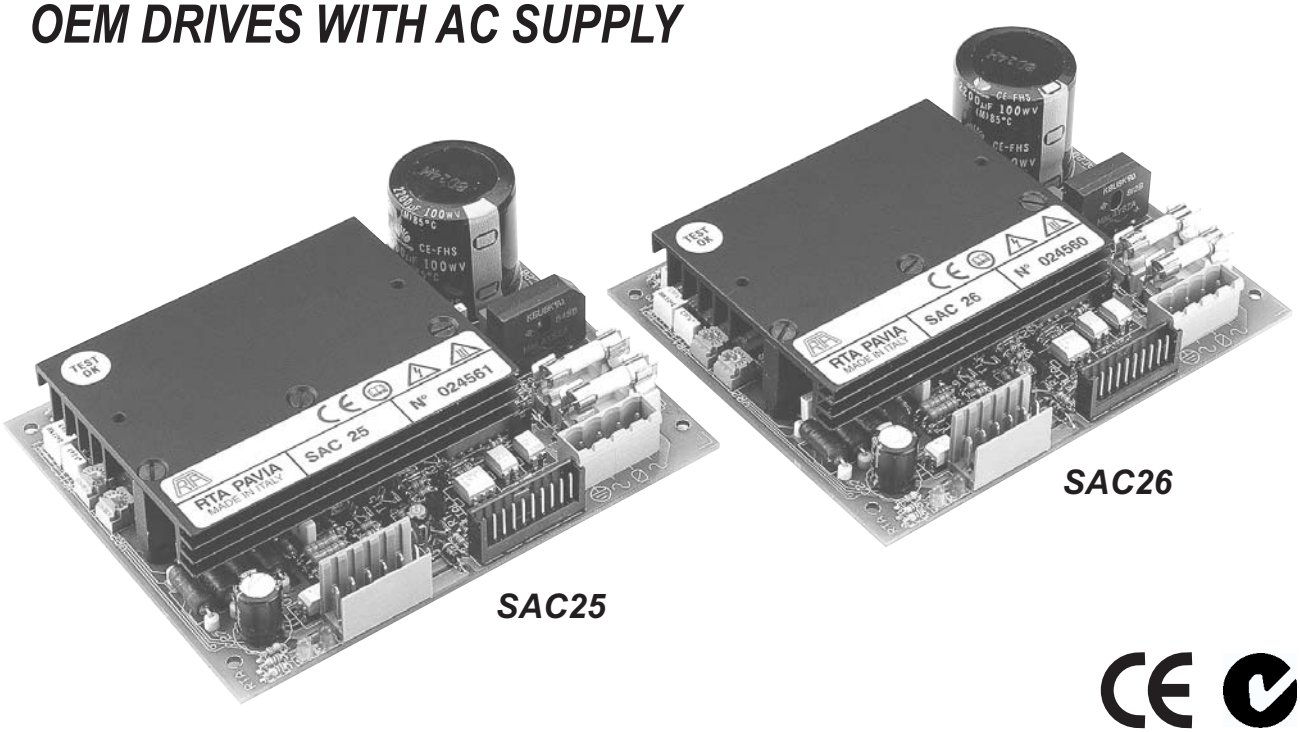
# SAC SERIES
# MINISTEPPING DRIVES

## *OEM DRIVES WITH AC SUPPLY*




*SAC25*

*SAC26*

- **High efficiency bipolar chopper circuit.**
- **Ideal for low power OEM applications.**
- **Protection from motor short circuit, overtemperature and overvoltage.**
- **400 to 4000 steps/rev for smooth running at low speeds.**
- **Low power upto 6 Amps @ 65V. Drives 23 & 34 frame motors.**
- **LEDs for supply, thermal protection, overvoltage and motor fault.**
- **Optocoupled signal inputs & outputs for protection.**
- **Electronic damping reduces low speed resonance.**
- **Suitable for two phase motors, 4, 6 or 8 leads.**
- **Powered by simple transformer AC power supply.**
- **Compatible with 5V TTL indexers.**

The SAC series of stepper motor drives are ideal for single or multi axis motion control applications where high resolution and smooth motion are required. The power supply is centre tapped AC, from user supplied transformer. Control inputs are optocoupled voltage signals for step and direction functions. The drives are compatible with a wide range of indexers producing 5 V TTL and 12V signals.

Two models are available to cover a large range of motor sizes while 4000 step/rev resolution operation and electronic damping reduce resonance at low speeds. Protection against motor short circuit is also included. The SAC drives are ideally suited to OEMs for multi axis motion control applications such as positioning systems, pick and place machines, packaging machines, XY tables, testing machines and contouring systems.

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*AUTOMATED MOTION SYSTEMS PTY.LTD. - PERTH - WESTERN AUSTRALIA - PH: (08) 9309 1896 FAX: (08) 9309 5671*

## SPECIFICATIONS

**LOGIC INPUTS**
*Opto isolated (OFF = 0 -2V or open, ON = 3.5-13V)*
Step
Direction
De-energise

**MAXIMUM STEP FREQUENCY**
60kHz

**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

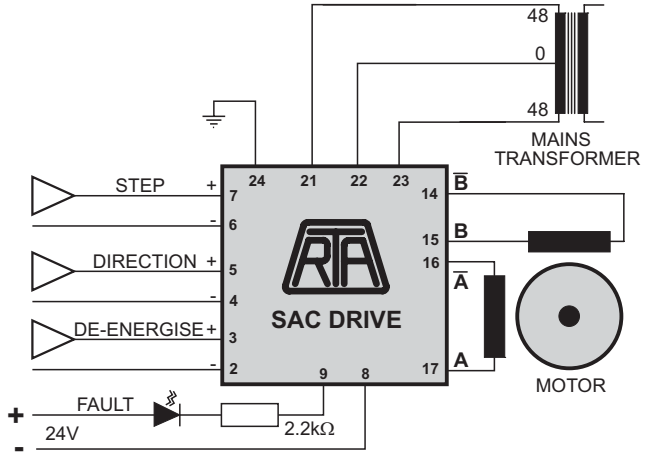
**RESONANCE DAMPING**
at medium and low speeds

**OPERATING TEMPERATURE**
0-45°C
*(Forced cooling may be required)*

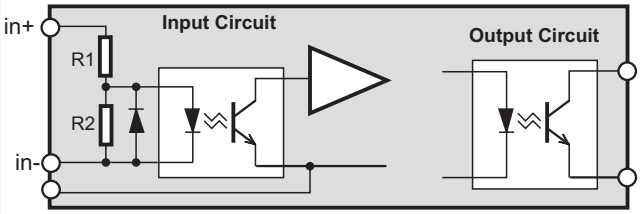
**WEIGHT**
0.5kg.

| SPECIFICATIONS | SAC25 | SAC26 |
|---|---|---|
| SUPPLY (VAC-RMS) (maximum) | 48 - 0 - 48 | 48 - 0 - 48 |
| SUPPLY (VAC-RMS) (minimum) | 24 - 0 - 24 | 24 - 0 - 24 |
| MOTOR CURRENT (A) (maximum) | 3.0 | 6.0 |
| MOTOR CURRENT (A) (minimum) | 1.7 | 3.4 |
| CURRENT STEPS (A) | 0.4 | 0.9 |

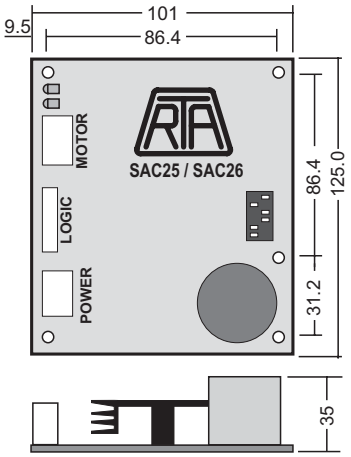
## WIRING DIAGRAM




## LOGIC SIGNALS




| | STEP | DIRECTION | DE-ENERGISE |
|---|---|---|---|
| R1 | 270Ω | 470Ω | 470Ω |
| R2 | 470Ω | 470Ω | 470Ω |




## CONNECTORS

**MOTOR**
AMP MODU1 male 6 pole
model 280611-2

**POWER**
PHOENIX 4 pole
model MSTBVA 25/4-G-5.08

**LOGIC**
AMP MODU2 male 10 pole
model 280374-1




## DIMENSIONS (mm)

## CONNECTIONS

| | | |
|---|---|---|
| 24 | ***Earth*** | Earth (same as cable screen, cabinet and motor) |
| 23 | ***Supply*** | Transformer supply |
| 22 | ***Supply 0V*** | Transformer supply centre tap |
| 21 | ***Supply*** | Transformer supply |
| 14 | ***Motor*** | Motor winding $\overline{B}$ (2B or B+) |
| 15 | ***Motor*** | Motor winding $\underline{B}$ (2A or B-) |
| 16 | ***Motor*** | Motor winding $\overline{A}$ (1B or A-) |
| 17 | ***Motor*** | Motor winding $\underline{A}$ (1A or A+) |
| 18 | ***Motor shield*** | Motor cable shield |
| 8 | ***-Drive Fault*** | Normally shorted when drive is in working state |
| 9 | ***+Drive Fault*** | but becomes open circuit when drive has shut down due to protection circuits. |
| 2 | ***-De-energise*** | When this signal is ON the drive is active. |
| 3 | ***+De-energise*** | When this signal is OFF the drive is inhibited so motor current (and holding torque) is zero. With the jumper CO fitted this input is always on. |
| 4 | ***-Direction*** | When this signal is ON the motor direction is |
| 5 | ***+Direction*** | 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. |
| 6 | ***-Step*** | The motor steps once on the OFF-ON transition of |
| 7 | ***+Step*** | this signal. Ideal duty cycle is 50%. |
| 1 | ***Logic ground*** | 0V common for all logic signals. |
| 10 | ***Logic ground*** | Internally connected to 18, 13 & 12. |

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