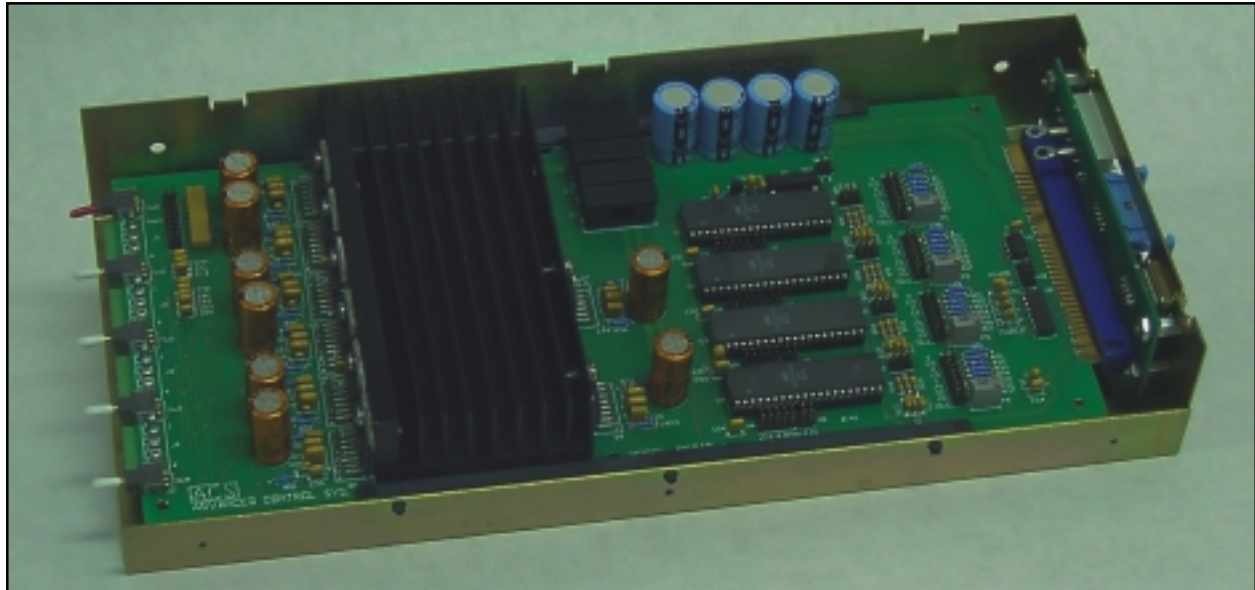




ADVANCED CONTROL SYSTEMS CORPORATION

MCB-4B

Intelligent Motion Controller/Driver



MCB-4B is an integrated Stepping Motor Controller/Driver Board capable of controlling four motors simultaneously. It is controlled by a host computer, via a serial communications port, executing a comprehensive, easy to use, Instruction Set.

FEATURES:

- Drives four two-phase stepping motors 3 Amp per phase.
- High efficiency, low noise motor drivers, full step, half step, mini step.
- Stepping rates up to 50,000 step/sec.
- Up to 16.7 million steps per move.
- Programmable acceleration/deceleration.
- Home and two limits inputs for each motor.
- Motor currents shut-off switch.
- Nonvolatile memory for motion control variables.
- Comprehensive instruction set.
- Four toggle switches for manual jog control.
- RS-232 and RS-485 communications ports.
- 19 inch rack enclosure for multiple boards available.
- Single board enclosure also available.

MCB-4B

SPECIFICATIONS:

MCB-4B is an integrated stepping motor Controller/driver board capable of controlling 4 motors simultaneously. The board operates in various modes, executing a high level instruction set.

MCB-4B boards are addressable and several boards can be controlled by a single communications port. Matching power supplies and enclosures are also manufactured by ACS.

DIRECT MODE OF OPERATION:

Host computer communicates with the MCB-4B via serial communication port in straight ACSII type messages. Request for operation is issued by a host computer. The MCB-4B provides a response acknowledging each request.

STEPPING MODES:

- Two-phase on full step drive
- Half step drive with torque compensation
- Quarter step drive with torque compensation
- One-eighth step drive with torque compensation

MOTOR REQUIREMENTS:

4, 6, or 8 lead stepping motors
Phase current up to 3 Amp/phase

POWER REQUIREMENTS:

Logic Supply: 5Vdc +5% 100mA
Motor Voltage: 12-45Vdc up to 16A

Motor supply voltages depend on type and size of motor.

DIMENSIONS:

Length: 13", Width: 6", Maximum Height: 1"

ENVIRONMENT:

Operating 0° to 50°C
Humidity ≤95% non-condensing

INSTRUCTION SET:

MOTION EXECUTE:

- M±n MOVE for "n" steps at constant stepping rate.
I±n INDEX for "n" steps using preset rates and ramps.
G±n GO to Absolute position using present rates and ramps.
H± Move to HOME position at constant stepping rate.
F FINISH Function: Motor decelerates and stops.
Q QUIT Function: Motor stops stepping immediately.

DATA ENTER/EXAMINE:

- C Enter/Examine CONSTANT RATE OF STEPPING.
J Enter/Examine JOG RATE OF STEPPING.
V Enter/Examine HIGH SPEED RATE OF STEPPING.
R Enter/Examine RAMP INDEX (Acceleration/Deceleration) OF THE MOTOR.
D Load DEFAULT motion parameters.
X Examine motion status (stepping or stopped).
E Examine limits and home inputs.
L Examine/Disable limit interrupts.
W Turn On/Off or examine motor winding Current.
P Examine or set absolute position.
S Save motion indexes to NV memory.



Photograph above:
19 inch rack enclosure for up
to 8 MCB-4 control boards.



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