

STEPPER INDEXER/DRIVE BOARDS

CD Series Boards

Programmable stepper boards with RS232 indexer and bipolar microstepping drive.

◆ **Driver**

- Bipolar chopper drive for two-phase stepper motors
- Programmable microstepping for smooth operation - up to four microsteps per full step
- Current reduction during rest to reduce motor heating
- Drive disable possibility by means of user input as well as by indexer command
- Single unregulated supply voltage

The stabilized power supply is not necessary due to the motor current chopper regulation. Only a transformer and a diode bridge are sufficient. An external power supply capacitor can be omitted due to the electrolytic capacitor 4 000 µF (5 000 µF) on the board.

Torque speed characteristics of the CD series boards with stepper motors - see page 23, 24.

◆ **Indexer**

The indexer is equipped with the M1486 controller which provides simple and flexible stepper motor control.

The M1486 controller includes:

- **Programmable stepper motor controller** (distance, velocity, acceleration, microstepping)
- **Small programmable logic controller** (inputs/outputs, loops, conditional jumps, dwells)

Complete machine control can be simply executed by using a controller command file. See page 10 and 11 for details about the controller commands - standard ASCII characters. The board can be linked to a PC or any host computer equipped with the RS232 interface. The CD30M and CD40M boards serial port is opto-isolated. Up to 16 units can be controlled from one host computer using a single port for multi-axis control.

- Stand Alone Mode

After command file is downloaded the board can be used in a stand alone application. In the stand alone mode the internal EEPROM memory enables pre-programmed move sequences to be repeated off line.

- User Inputs/Outputs

The board provides digital user inputs/outputs which are available to initiate or monitor external events.

- 5 opto-isolated user inputs

All user inputs are opto-isolated for a high noise immunity. Both anodes and cathodes of optocouplers input diodes are connected to CANNON 15 Pin/F connector. The standard input level is 24 V (7 mA), 5 V optional.

- 4 user outputs




Open collector outputs (up to 30 V) and auxiliary 24 V (100 mA) output.
 Low level output current 100 mA
 24 V source drivers (switchable to 5 V output level) are optional - please add A1 appendix to the board name.
 High level output current 40 mA

- Input and Output Connectors

RS232 serial port input CANNON 9 Pin/M
 RS232 serial port output CANNON 9 Pin/M
 User inputs/outputs CANNON 15 Pin/F
 Stepper motor removable screw terminal - 4 way
 Power supply removable screw terminal - 2 way

- Applications

The board enables quick solution of applications requirements with flexible changes possibility using modified command file when needed.

| CD20M | CD30M | CD40M |
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| <p>Driver Specifications</p> <p>Supply voltage 12 to 35 V</p> <p>Motor current amplitude / ph. ... 2 A peak</p> <p>Motor current amplitude in 8 levels from 0,4 to 2 A peak</p> <p>Board electrolytic capacitor 4 000 µF</p> <p>Suitable stepper motors - holding torque from 0,15 to 1,2 Nm</p> <p>Dimensions</p> <p>160x100x30 mm; eurocard-sized board</p> | <p>Driver Specifications</p> <p>Supply voltage 12 to 48 V</p> <p>Motor current amplitude / ph. 3,3 A peak</p> <p>Motor current amplitude in 16 levels from 0,4 to 3,3 A peak</p> <p>Board electrolytic capacitor 5 000 µF</p> <p>Suitable stepper motors - holding torque from 1,2 to 8,5 Nm</p> <p>Dimensions</p> <p>160x100x30 mm; eurocard-sized board</p> | <p>Driver Specifications</p> <p>Supply voltage 12 to 48 V</p> <p>Motor current amplitude / ph. ... 4 A peak</p> <p>Motor current amplitude in 16 levels from 0,4 to 4 A peak</p> <p>Board electrolytic capacitor 5 000 µF</p> <p>Suitable stepper motors - holding torque from 3 to 8,5 Nm</p> <p>Dimensions</p> <p>160x100x45 mm; eurocard-sized board</p> |