

STEPPER INDEXER/DRIVE MODULES

CD34M

High performance stepper module with RS232/422 indexer and bipolar microstepping drive.

The CD34M is suitable for stepper motors with the holding torque from 1,5 Nm to 8,5 Nm.

◆ **Driver**

- Bipolar chopper drive for two-phase stepper motors
- Motor current amplitude up to 3,5 A peak / phase
- Programmable microstepping for smooth operation up to four microsteps per full step
- Current reduction during rest to reduce motor heating
- User selectable motor current amplitude in sixteen levels from 0,4 A to 3,5 A peak
- Drive disable possibility by means of user input as well as by indexer command
- Single unregulated supply voltage between 12 V and 48 V

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 module electrolytic capacitor 5 000 µF.

◆ **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 module can be linked to a PC or any host computer equipped with the RS232 interface. The module serial port is opto-isolated. Up to 16 modules can be controlled from one host computer using a single port for multi-axis control.

- **Stand Alone Mode**

After command file is downloaded the module 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 module provides digital user inputs/outputs which are available to initiate or monitor external events.

- **8 opto-isolated user inputs** - 24 V level (5 V optional)
- **4 user outputs**

- **Applications**

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

- **Module Versions**

- CD34M** - RS232 serial port - basic version
- CD34M-A1** - RS232 serial port, 24 V (5 V opt.) source drivers
- CD34MD (CD34MD-A1)** - RS422 serial port



◆ **Technical Specifications**

- **Driver Specifications**

- Supply voltage12 to 48 V
- Motor current amplitude / phase3,5 A peak

Torque speed characteristics of the CD34M module with stepper motors are identical to the CD30M board characteristics - see page 23, 24; separately on page 24.

- **Indexer Specifications**

See the M1486 controller description on page 10 and 11.

- **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.

- **User Outputs**

- Open collector outputs (up to 30 V); auxiliary 24 V (100 mA) output, GND and motor moving flag are connected to CANNON 9 Pin/F connector.
- Low level output current 100 mA
- 24 V source drivers (switchable to 5 V output level) are optional - please add A1 appendix to the module name.
- High level output current 40 mA

- **Input and Output Connectors**

- RS232 (RS422) serial port inputCANNON 9 Pin/M
- RS232 (RS422) serial port outputCANNON 9 Pin/M
- User inputsCANNON 15 Pin/F
- User outputsCANNON 9 Pin/F
- Stepper motor removable screw terminal - 4 way
- Power supply removable screw terminal - 2 way

- **Dimensions**

170x130x50 mm; the module contains rails for standard eurocard mounting.

STEPPER INDEXER/DRIVE MODULES

CD6410M

High performance stepper module with RS232 indexer and bipolar microstepping drive.

The CD6410M is suitable for stepper motors with the holding torque from 3 Nm to 22 Nm.

◆ Driver

- Bipolar chopper drive for two-phase stepper motors
- Motor current amplitude up to 7 A peak / phase
- Programmable microstepping for smooth operation - binary step size (from 2 to 256 microsteps per full step), decimal step size (from 5 to 250 microsteps per full step)
- Current reduction during rest to reduce motor heating
- Patented 4-phase bipolar chopper drive for superior current regulation and low ripple current
- **Patented digital electronic damping reduces instability at speeds in middle of operating range**
- User selectable motor current in eight levels from 0,625 A rms to 5 A rms
- Drive disable possibility by means of user input as well as indexer command
- Single unregulated supply voltage between 24 V and 75 V

◆ 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 module can be linked to a PC or any host computer equipped with the RS232 interface. The module serial port is opto-isolated. Up to 16 modules can be controlled from one host computer using a single port for multi-axis control.

- Stand Alone Mode

After command file is downloaded the module 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.

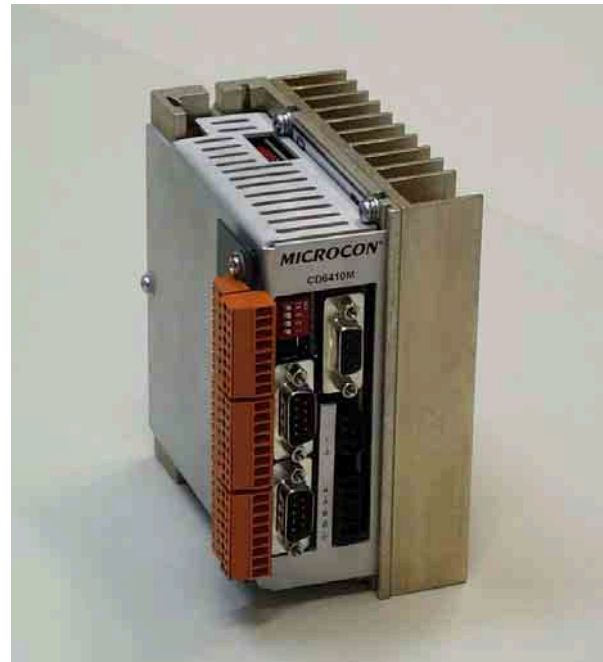
- User Inputs/Outputs

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

- **14 opto-isolated user inputs** - 24 V level (5 V optional)
- **6 user outputs**

- Applications

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



◆ Technical Specifications

- Driver Specifications

Supply voltage 24 to 75 V
Motor current amplitude / phase 7 A peak

Torque speed characteristics of the CD6410M module with stepper motors - see page 24, 25.

- Indexer Specifications

See the M1486 controller description on page 10 and 11.

- User Inputs

All user inputs are opto-isolated for a high noise immunity. Input optocouplers with bipolar input photo diode allows common anode or common cathode connection. It is possible to connect both sink and source outputs. The standard input level is 24 V (5 V is optional).

- User outputs

Open collector outputs (up to 30 V).
Low level output current 100 mA
24 V source drivers (switchable to 5 V output level) are optional - please add A1 appendix to the module 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..... removable screw terminal - 24 way
Stepper motor..... removable screw terminal - 5 way
Power supply..... removable screw terminal - 3 way

- Dimensions

127x110x80 mm (with cover and heat sink)

- Accessories

Cover, heat sink, connector kit, user manual

STEPPER INDEXER/DRIVE MODULES

CDZMP-Mini

High performance stepper module with RS232 indexer and bipolar microstepping drive.

The auxiliary board - MB-Mini with overvoltage protection can be used for easier motor and power supply connection through the screw terminals.

ZMP-Mini driver specifications - see page 15, indexer specifications below - the C1 board.

The CDZMP-Mini module is suitable for stepper motors with the holding torque from 11 Nm to 40 Nm.

STEPPER INDEXER BOARD

C1 Board

RS232 indexer - M1486 controller

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 indexer board can be linked to a PC or any host computer equipped with the RS232 interface. Up to 16 boards 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.

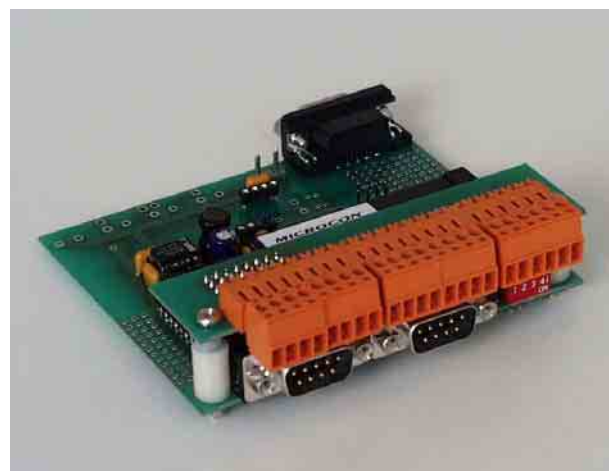
- User Inputs/Outputs

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

- 12 opto-isolated user inputs

All user inputs are opto-isolated for a high noise immunity. Input optocouplers with bipolar input photo diode allows common anode or common cathode connection. It is possible to connect both sink and source outputs. The standard input level is 24 V (5 V is optional).

- **6 user outputs** - open collector outputs (up to 30 V)
 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 removable screw terminal - 22 way
- Power supply..... removable screw terminal - 2 way
- Stepper motor drive outputs -
- Step and Direction signals, Enable CANNON 9 Pin/F

- Dimensions

85x100x35 mm

The C1 board can be used as follows:

- independent small programmable logic controller for universal applications
- programmable stepper motor controller with Step and Direction outputs for external drive; small programmable logic controller is also available.