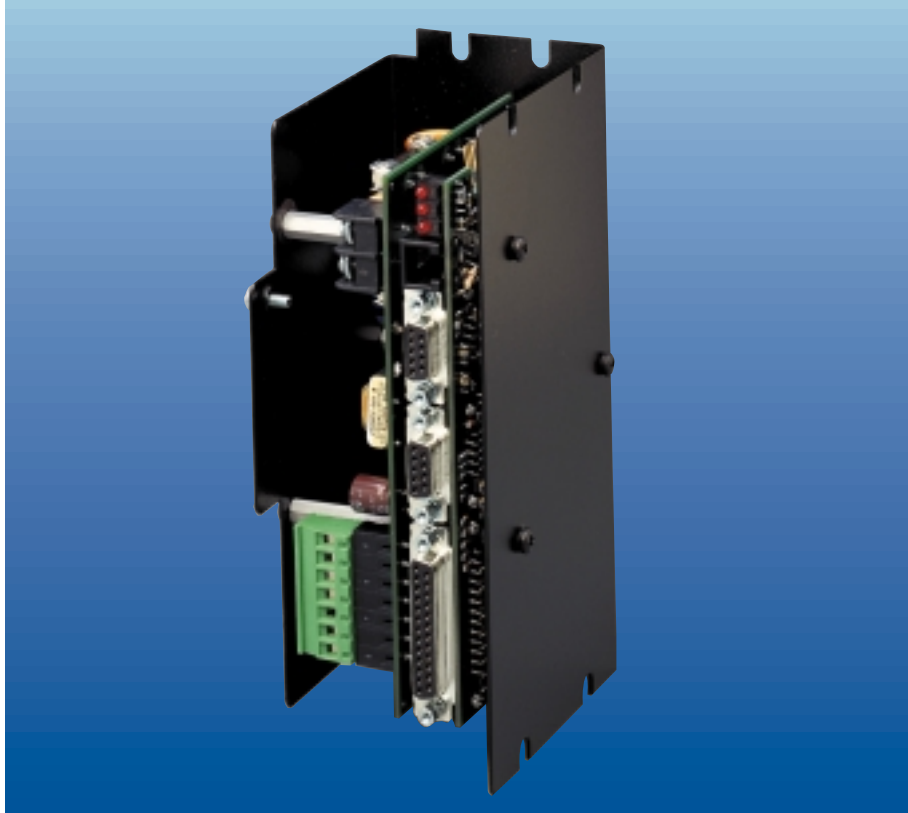


# SLO-SYN<sup>®</sup>

## Programmable Indexer

This open-chassis, programmable motion controller features its own built-in power supply. It's your flexible, low-cost alternative for a wide variety of OEM, multi-axis and stand-alone applications

### SS2000 PCi



### Basic-Like Language for Easy Programming

Programmers have the competitive advantage of mixing powerful English-like text with time-saving, graphical "point and click" tools in MotionWriter™. For motion control developers familiar with Superior Electric's programming language used in the SLO-SYN family of MX2000 motion controls and TDC servo controllers, or familiar with BASIC, the PCi requires no new programming skills. New users will find the language easy to learn since it uses intuitive commands.

### MotionWriter™ Features

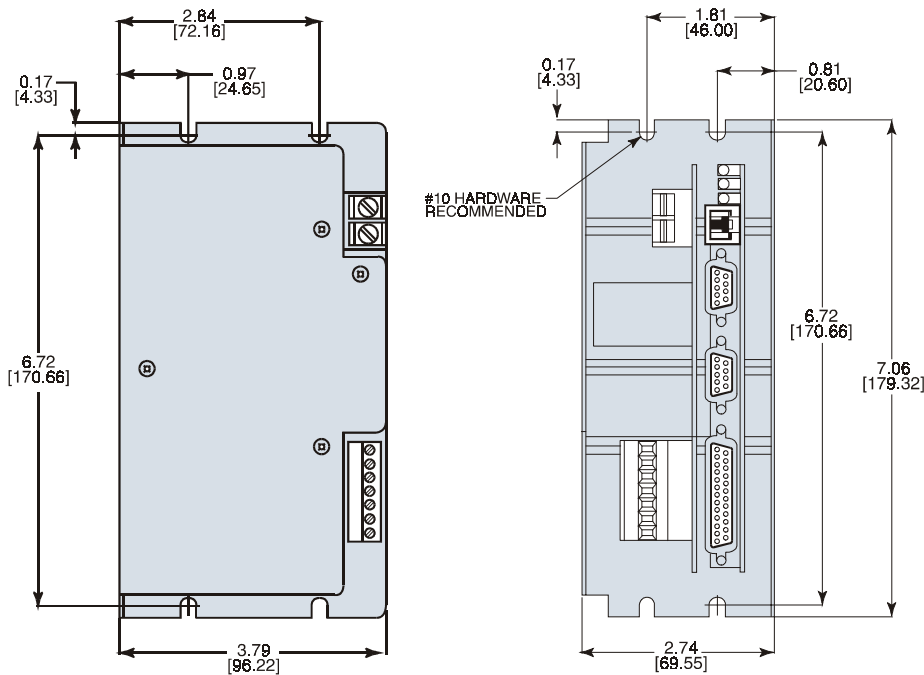
- ◆ "Point and Click" programming
- ◆ Eight program templates
- ◆ Four simple steps prepare system configuration
- ◆ Generates SEBasic code at a click of a "smart" button
- ◆ Automatic tuning for TDC Servo Systems



### Features:

- ◆ More I/O for greater versatility
- ◆ 8 inputs, 4 outputs optically isolated
- ◆ 8 inputs, 4 outputs non-isolated
- ◆ One 0-10V analog input (10 bits)
- ◆ Encoder input for closed loop operation (differential or single-ended)
- ◆ 12VDC I/O power supply
- ◆ 110-240V ± 10% AC Input
- ◆ 16-bit Micro-processor
- ◆ Built-in BCD interface with separate connector
- ◆ 2 serial ports, RS232/485 up to 38K baud
- ◆ RS485 daisy chaining, up to 32 units
- ◆ An RS232 communication cable used to program the PCi
- ◆ Built-in AC line filter and MOVs
- ◆ IEC 1000-4-4 standards for electrical noise compliant
- ◆ Graphical user interface software available
- ◆ UL Recognized and CE pending
- ◆ Optional terminal board for easy wiring
- ◆ All mounting hardware included
- ◆ Closed-loop modes for stall detection, position verification, and correction
- ◆ 3 LED indicators for Power, Fault, and Motion Busy

# Dimensions



## Mechanical

Size ----- 2.74 W x 7.06 H x 3.79 D  
 Weight ----- 7.75 lbs. (3.52 kg)  
 Environmental  
 Temperature  
 Operating ----- +32° F to +122° F  
 (0° C to +50° C)  
 Storage ----- -40° F to +167° F  
 (-40° C to +75° C)  
 Humidity ----- 95% maximum,  
 non-condensing  
 Altitude ---- 10,000 feet (3,048 meters) max.

## Serial Communications

**Port 1:** Configurable for RS-232C or RS-485 four wire communications via a switch. Port 1 is designated as the HOST communications port and can be used to daisy chain up to 32 units in RS485 mode.  
**Port 2:** Serial port 2 is used for differential RS485 four wire USER communications.

## Encoder Connections

Encoder connections provide power and inputs for a digital encoder Interface to indicate motor position to the controller.  
 Encoder +5VDC  
 Power Supply Output ----- +5VDC  
 (±5%) @ 100mA current.  
 Encoder Signal Inputs ----- TTL level  
 Single-ended or differential;  
 channels A and B in  
 phase quadrature  
 Input Current  
 A+, A-, B+, B-, Z+, Z- ----- ±5mA min.

## Analog Input

Voltage Range --- 0-10V referenced to GND  
 Resolution ----- 10 bits or 9.77mV  
 Absolute Accuracy ----- ±0.3V worst case  
 Sample Rate ----- 500 Hz min.  
 Bandwidth ----- 100 Hz max.

# Specifications

## Electrical

AC Input Range 95 to 265 VAC, 50/60 Hz  
 AC Current ----- 0.5 amperes  
 Fuse Rating ----- 250 volts, 2 amperes  
 Unit Power Dissipation  
 (worst case) ----- 10 watts

## Isolated Digital I/O

12V DC Internal  
 I/O Power -- 11.5 to 14VDC @ 100mA  
 or User Supplied  
 I/O Power ----- 5-24VDC

## Inputs (IN1 - IN8)

Sink Mode  
 On State Voltage  
 Range (+Vopto = 12VDC) -- .0V to +6VDC  
 Input Current (Vin = 0V) ----- -6mA  
 Source Mode  
 On State Voltage  
 Range (-Vopto = 0V) ----- 4.5V to 24V  
 Input Current (Vin = 12VDC) ----- 6mA  
 Response Time (sink or source)  
 Opto Turn On Delay ----- 10µS typical  
 Opto Turn Off Delay ----- 75µS typical

## Programmable Outputs (OUT1 - OUT4)

Sink Mode Only  
 Continuous Current Rating  
 per Output ----- 250mA max.  
 Maximum Collector Voltage ----- 25V  
 On State Voltage @ 250mA 1.5V max.

## Non-Isolated I/O (or BCD Interface)

**IN9 - IN16:** These Inputs may be used with open collector outputs without an external supply by connecting the output device common (ground) to signal ground on the unit, and the open collector to the input pin. An internal pullup resistor to +5VDC is provided.

Logic High  
 Input Level ---- 25V > Vsource > 4.5V,  
 or open circuit  
 Logic Low Input Level ----- 1.2V max.  
 Logic Low Current  
 with Input @ GND ----- -1mA max.

**OUT5 - OUTB:** These are open-collector, sink only TTL outputs, and are NOT isolated from the unit's +5V logic supply. Proper care must be taken to ensure noise is not injected onto these signals. The user's I/O supply must be referenced to GND on the controller.

Active Output Voltage -- 0.6V max. @ 20mA  
 Permissible Output Current ----- 20mA  
 Permissible Output Voltage ---- 24VDC

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