RMC SSI Input/Output

for Synchronizing RMC100 Series Motion Controllers

The SSI Input/Output (SO) module allows for synchronizing multiple RMCs to a single SSI position transducer.

The SO module contains two ±10V drive outputs, one SSI input, and one SSI output. The drive outputs and the SSI input can be used for machine control. The SSI output retransmits the position data received from the SSI input as though it were itself an SSI transducer.

This allows the SSI output on one RMC's SO module to be fed into an SSI input on another RMC's SSI or SO module. Both RMCs will see the same SSI position data, although the retransmission incurs one loop time of delay in the position data on the second RMC. Any number of RMCs can be chained together in this way, with an additional delay introduced for each retransmission.

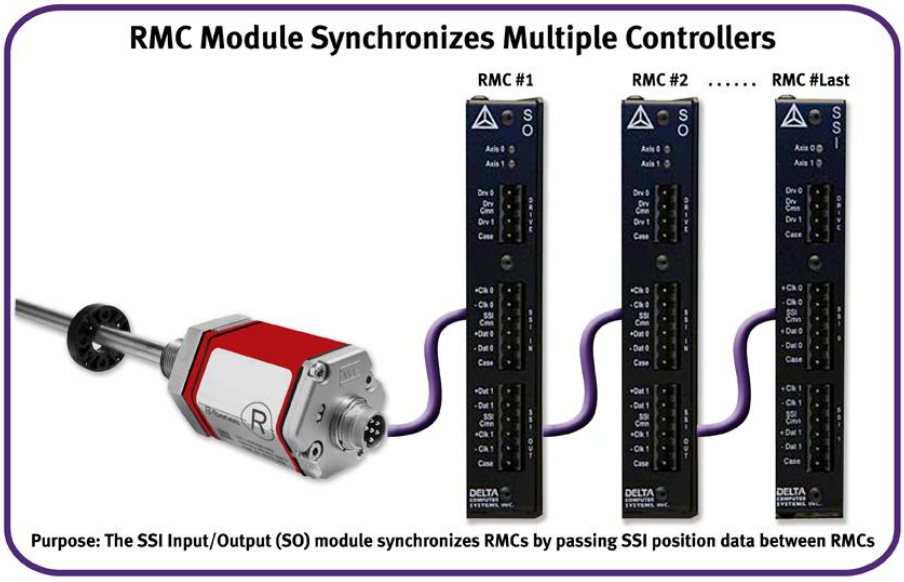
A typical application is gearing multiple axes to a feed chain.

Applications

- Presses
- Injection/RIM/blow molding
- Edgers/headrigs/veneer lathes
- Pinch rollers/winders/wrappers
- Casting/forging
- Palletizers/stackers
- Flying cutoff/curve sawing
- Cyclic testing
- Mechanical animation
- Tooling/tool handling
- Tube bending/forming

SSI Module Features

- One SSI input per module
- One SSI output per module
- Supports SSI devices with Binary or Gray Code data from 4 to 32 bits in length
- Differential RS-422 SSI interface
- Two isolated, ±10V, 12-bit drive outputs per module
- Current output up to ±200mA with VC2100 converter option



DELTA COMPUTER SYSTEMS, INC.

RMC SO

Specifications

SSI Input	Axes	One per module
	Input	RS-422 differential, 150 Ω input impedance
	Clock output	RS-422 differential
	Clock frequency	User-selectable 230kHz or 920kHz
	Cable type	Twisted pair, shielded
	Cable length maximum	Transducer dependent (approx. 300-600ft)
	Electrostatic Discharge (ESD) protection	15kV
	Resolution	Transducer dependent (up to 2µm or approximately 0.00008" for MDTs)
	Count encoding	Binary or Gray Code
	Count data length	4 to 32 bits
SSI Output	Axes	One per module
	Output	RS-422 differential
	Clock Input	RS-422 differential
Drive Interface	Outputs	Two ±10V, 5mA maximum, 12-bit DAC
	Isolation	750VDC
	Current Output Accessory	VC2100 voltage-to-current converter output range is adjustable from ±10mA to ±200mA in 10mA steps
Environment	Operating temperature	+32 to +140 °F (0 to +60 °C)
	Storage temperature	-40 to +185 °F (-40 to +85 °C)
	Agency compliance	CE, UL, CUL
Power Requirements	All RMC modules are powered from the RMC controller.	The user must supply power to the transducers. Refer to the manufacturer's specifications for the transducer power requirements.

SO Wiring

Axis 0:

Pin	Function
+Clk 0	Axis 0 + Clock Output
-Clk 0	Axis 0 - Clock Output
SSI Cmn	Transducer Common
+Dat 0	Axis 0 + Data Input
-Dat 0	Axis 0 - Data Input
Case	Controller Chassis Ground (shield)

Axis 1:

Pin	Function
+Dat 1	Axis 1 + Data Output
-Dat 1	Axis 1 - Data Output
SSI Cmn	Transducer Common
+Clk 1	Axis 1 + Clock Input
-Clk 1	Axis 1 - Clock Input
Case	Controller Chassis Ground (shield)

Drive Outputs:

Pin	Function
Drv 0	Axis 0 Drive
Drv Cmn	Drive Common
Drv 1	Axis 1 Drive
Case	Controller Chassis Ground (shield)

Ordering Information

To specify an SO module, insert **-SO*n*** into the part number, where ***n*** indicates the number of modules (4 maximum). For example:

- **RMC150E-S3-SO1-DI/O:** 7 axes of SSI position control, one SSI output, and a Communication DI/O module.

Company Profile

Delta Computer Systems, Inc. manufactures motion controllers, color sensors/sorters, and other industrial controls providing high-performance automation solutions to a wide range of industries.

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