ASC

Advanced Seriplex™ Clock

Niobrara's ASC is an advanced module whose primary function is to provide a microprocessor-based clock signal for a Seriplex network operating without a host controller. Its advanced features make the ASC ideal for running a network of Niobrara DSD4 or Square D SPX4ZCXIO conveyor controllers.

"The ASC operates at either 12 or 24 VDC…an auxiliary relay is included for a network fault alarm."

The ASC operates at either 12 or 24 VDC and provides the 30 mA current necessary for the Seriplex data line. Power to the unit can be supplied from either the Seriplex network power supply or an existing 12 or 24 VDC power source. Small Seriplex networks (up to 1 A maximum) can be powered from the ASC.

An input is provided for RUN/STOP control of the network, and an auxiliary relay is included for a network fault alarm.

Advanced Features

The ASC provides features useful to those who desire a stand-alone I/O network with Seriplex simplicity. Benefits include:

- Powered by 12 or 24 VDC from Seriplex network or external source
- Seriplex clock rate is generated by microprocessor
- Mode 1 (peer-to-peer) or Mode 2 (master/slave) operation
- External RUN/STOP input
- Provides channel address in multiplexed host mode
- Provides CDR on channel address
- AUX relay energized in alarm conditions
- LED indicators for Power, Run, and Auxiliary on

ASC Configuration

"The Seriplex clock rate is microprocessor controlled…"

The ASC is configured via a 12-position DIP switch on the front panel. The configuration of the unit sets the clock rate, network size, multiplex channels, CDR status, and Seriplex mode.

The Seriplex clock rate is microprocessor controlled and can be set from 10 KHz to 200 KHz. The Seriplex network size can be configured from 16 to 256 bits. Multiplexing can be set up to 16 channels deep.

Effective 01 July 1999

Printed in USA

Specifications subject to change without notice.

Seriplex Connections

The ASC provides Phoenix terminal connectors for the Seriplex network OUT and IN connections. The Seriplex OUT connector provides clock and data outputs while the Seriplex IN connector provides feedback inputs for the Clock and Data lines. Typically the Seriplex IN connection is jumpered to the Seriplex OUT for a linear network (fig. 1) or connected from the I/O devices in a loop architecture (fig. 2). In a looped network, the ASC can halt the network when any of the following fault conditions are detected:

- Clock or Data linees shorted high or low
- Open Clock or Data lines
- Clock and Data lines shorted together
- Excessive Data line capacitance

"...the ASC can halt the network when...fault conditions are detected."

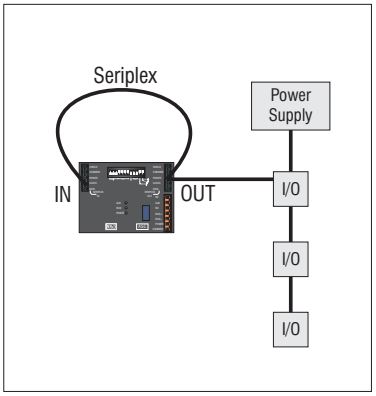

Figure 1 - Linear Network

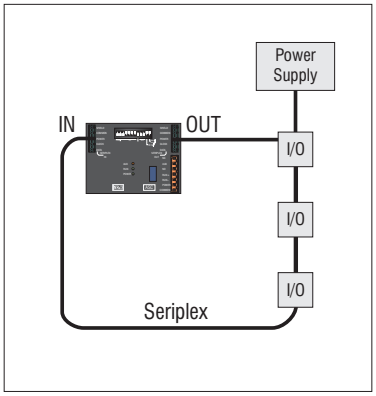

Figure 2 - Looped Network

The ASC Advanced Seriplex clock is shipped with all mating connectors and an instruction sheet, and carries a one year warranty.

SPECIFICATIONS:

Dimensions	DIN rail mount module, 2.8" wide x 3.7" high x 2.3" deep (71 x 94 x 59mm); approximately 4 oz. (114g) net. All connectors and indicators front mounted.
Power Requirements	12-30 VDC, 140 mA max. 1.0 A maximum between any two POWER terminals or any two COMMON terminals.
Seriplex Ports	5-position Phoenix terminal connector, standard Seriplex cabling.
Clock Rate	10, 16, 32, 50, 64, 100, 150, or 200 KHz.
Network Size	16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240, or 256 bits.
Multiplexed Channels	0, 4, 8, or 16 channels.
Seriplex Modes	Mode 1 (peer-to-peer) or Mode 2 (master/slave)
Relay	2 A maximum @ 30 V resistive; 0.5 A maximum @ 125 V resistive; 10 μA 10 mVDC minimum switching capacity.
Run Input	11.4-30 VDC, 3 mA max.
Configuration	12-position DIP switch sets Clock Rate, Network Size, Multiplexed Channels, CDR state, and Seriplex Mode.
Indicators	Green LEDs for Power and Run; Red LED for AUX relay. Three total indicators.
Operating Conditions	0 to 50 degrees C operating temperature; -40 to 80 degrees C storage. Humidity up to 90% noncondensing. Pressure altitude -200 to +10,000 feet MSL.