

Soloist™ SC

High-Performance Spindle Controller

Single axis digital spindle controller with integral power supply and linear amplifier

Host-mode operation allows you to send commands with your PC via Ethernet or USB for immediate execution

Ethernet or USB provide network access

Velocity control for brushless spindles

Velocity commanded through CLK/DIR or via ASCII commands

Soloist SC



Introduction

Aerotech's Soloist™ SC is a single-axis spindle controller that combines a power supply, amplifier, and velocity controller in a single package. The Soloist SC achieves superior velocity control by combining a high performance control loop with a linear power amplifier. The controller is tuned to a specific spindle for optimal rate stability and can be set up to run in stand-alone mode or accept commands from a host controller. Motion parameters can be changed using the Configuration Manager.

The IDE software shares a common theme with other Aerotech software products providing the user with a clear, easy to use platform. This Windows®-based interface provides powerful diagnostic, development, and analysis tools for OEMs and end-users alike.

Total Solution

The controllers are fully tested and ready to run right out of the box. Aerotech can integrate the Soloist into a complete motion system, removing the burden of parameter setup and axis tuning.



Soloist SC is the ideal control for the Aerotech ABS2000 air-bearing spindle, or easily interfaces to third-party spindles.

Soloist SC FEATURES and SPECIFICATIONS

Soloist CL-SC Features

Features	Details
Main Input Voltage	56 VAC center tapped transformer
Bus Voltage	±40 VDC
Output Current	10 A peak; 5 A continuous
Output Type	Linear
Control Supply	85-240 VAC (always required)
Velocity Regulation	<0.0001% (encoder, motor dependent)
Speed Range	0 to 30,000 rpm (motor dependent)
Estop Sense Input	Yes
Ethernet	Yes
USB	Yes
Primary Encoder Input Frequency	32 MHz square wave standard
Secondary Encoder Input Frequency	32 MHz square wave
Square Wave Encoder Output	Yes
Clock and Direction Input	Yes
Standard Outputs	Fault; Brake Relay
Storage Temperature	-30 to 85°C
Operating Temperature	0 to 50°C
Minimum Load Inductance	0 mH

Soloist SC ORDERING-INFORMATION

Ordering Example

Soloist Hardware		
Package	Output Current, Peak	Options
SOLOIST SC	10	-IO

Ordering Example

Soloist Software	
Software	Options
SOLOIST-SOFTWARE	-IDE, -SUB

Example:
SOLOIST-SOFTWARE-IDE

Soloist Single-Axis Spindle Controller

SOLOIST SC 10 A peak, 5 A continuous, 115 VAC/230 VAC input digital drive with Ethernet interface; includes 4 digital outputs, 6 digital inputs, one analog output, one analog input, one 24 VDC 1-amp solid-state brake relay

Accessories

ENET-XOVER-9	0.9 m (3 ft) Ethernet cross-over cable
ENET-XOVER-15	1.5 m (5 ft) Ethernet cross-over cable
ENET-XOVER-30	3 m (9.8 ft) Ethernet cross-over cable
ENET-XOVER-45	4.5 m (14.7 ft) Ethernet cross-over cable
ENET-XOVER-75	7.5 m (24.6 ft) Ethernet cross-over cable
USB-AMBM-18	0.9 m (3 ft) USB cable A-male to B-male
USB-AMBM-30	3.05 m (10 ft) USB cable A-male to B-male
USB-AMBM-45	4.6 m (15 ft) USB cable A-male to B-male
J1	Industrial joystick with 1.5 m (5 ft) cable
C19791-30	Joystick extension cable, flying leads, 3 m (10 ft)