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Product Datasheet

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SV7-S-AF

Motion Controller Compatible Servo Drive



Product Features

- *Digital servo drive in a compact package*
- *DSP-based current control, sinusoidal commutation and jerk filter*
- *Operates from 24-80 VDC*
- *Provides motor current up to 7.0 A rms continuous, 14.0 A rms peak*
- *Analog torque/velocity control*
- *Three pulse-based control modes: step & direction, A/B quadrature, CW/CCW pulse*
- *Streaming serial command mode (SCL) for commands sent from a host controller*
- *Buffered encoder outputs for connection to external motion controller or other devices*
- *8 digital inputs, 4 digital outputs, all optically isolated*
- *2 analog inputs, +/-10 volt range*
- *RS-232 port for programming and communications*

Description

The SV series servo drives are suitable for a wide range of motion applications. They are built around a powerful digital signal processor coupled to an efficient MOSFET PWM amplifier. The SV drives include 12 optically isolated I/O points plus analog inputs. A sophisticated, yet easy to tune position loop has independent digital settings for proportional, integral and derivative gains plus velocity feedback and velocity and acceleration feedforward.

All SV drives are capable of running brushless, brushed, and linear servo motors. A timing wizard automatically configures the encoder and commutation timing for virtually any brushless or brushed DC motor. Tuning is easy with our Quick Tuner™ software, featuring a built-in digital oscilloscope.

Specifications

Model Number:	SV7-S-AF
Part Number:	5000-169
Supply Voltage:	24-80 VDC
Supply Voltage Type:	DC
Control Modes:	Step & Direction Analog Torque / Velocity Streaming Commands
Output Current, Continuous:	7.0
Output Current, Peak:	14.0
Communication Ports:	RS-232
Feedback:	Halls + Incremental encoder
Setup Method:	Software setup
Digital Inputs:	8
Digital Outputs:	4
Analog Inputs:	1 differential or 2 single-ended
Dimensions:	5 x 3 x 1.78 inches
Weight:	10.0 oz
Ambient Temperature Range:	0 to 40 °C
Ambient Humidity:	90% max, non-condensing
Status LEDs:	1 red, 1 green
Circuit Protection:	Short circuit Over-voltage Under-voltage Over-temp

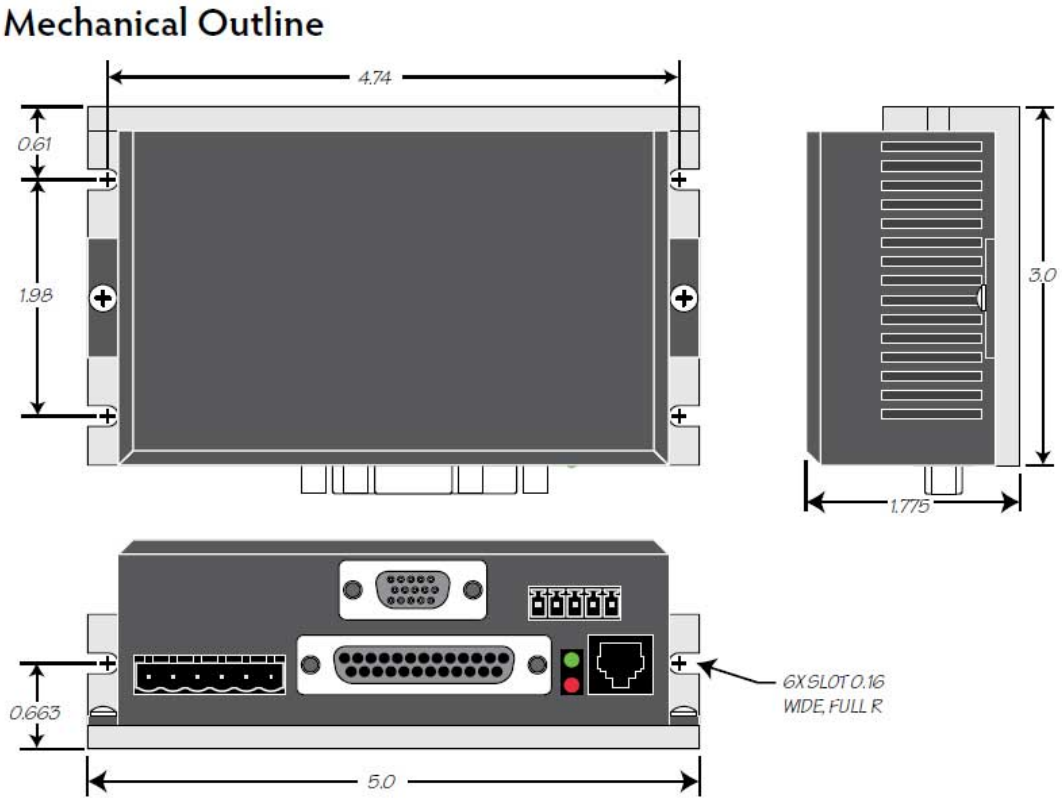
Software

Software:	DSP Firmware Downloader Quick Tuner™ SCL Utility
Sample Code:	scldemo.zip

Downloads

Manuals:	SV7-S_Q_QuickSetup_920-0062.pdf SV7_HardwareManual_920-0012G.pdf Host-Command-Reference_920-0002R.pdf
Product PDF - S3 Link:	http://s3.amazonaws.com/applied-motion-pdf/SV7-S-AF.pdf
Datasheet:	Servo-Products-Datasheet-925-0008.pdf
2D Drawing:	SV7-S-AF_simple3D.pdf SV7_2D_Drawing.pdf
3D Drawing:	SV7-S-AE_solid.igs
Speed-Torque Curves:	SV7_Speed_Torque_Curves_5-10-2018.pdf
Agency Approvals:	SV7-S_Q_Si_CE_DOC.pdf
Application Notes:	APPN0026B-LabVIEW-communication-using-streaming-commands.zip APPN0018_EZ-Series-Touchpanel-HMI.zip APPN0017_Wiring-integral-holding-brakes.pdf APPN0016_Simple-25-pin-mating-connections.pdf APPN0015_Make-a-serial-programming-cable.pdf

2D Drawings



Products in the Series *SV7 Servo Drives*

Model Number	Supply Voltage	Control Modes	Output Current, Continuous	Output Current, Peak	Communication Ports	1pc.
SV7-Q-AE	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	7.0	14.0	RS-232	$540.00
SV7-Q-AF	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	7.0	14.0	RS-232	$636.00
SV7-Q-EE	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	7.0	14.0	Ethernet	$716.00
SV7-Q-RE	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	7.0	14.0	RS-232, RS-485	$672.00
SV7-S-AE	24-80 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, SiNet Hub Compatible	7.0	14.0	RS-232	$506.00
SV7-S-AF	24-80 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands	7.0	14.0	RS-232	$574.00
SV7-S-RE	24-80 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands	7.0	14.0	RS-232, RS-485	$581.00
SV7-Si-AE	24-80 VDC	Si Programming	7.0	14.0	RS-232	$588.00
SV7-Si-AF	24-80 VDC	Si Programming	7.0	14.0	RS-232	$727.00