

## SV7-IP-EE

Q Programmable Servo Drive w/ EtherNet/IP



### Product Features

- Programmable digital servo drive with built-in EtherNet/IP industrial networking
- 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
- EtherNet/IP communication protocol for network communications with PLCs and other devices
- Supports all SV7-S and SV7-Q control modes as well
- 8 digital inputs, 4 digital outputs, all optically isolated
- 2 analog inputs, +/-10 volt range
- Fast 10/100 Ethernet for programming and communications
- Ethernet TCP & UDP support

### 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

<b>Model Number:</b>	SV7-IP-EE
<b>Part Number:</b>	5000-185
<b>Supply Voltage:</b>	24-80 VDC
<b>Supply Voltage Type:</b>	DC
<b>Control Modes:</b>	Streaming Commands Analog Positioning Encoder Following Q Programming EtherNet/IP
<b>Output Current, Continuous:</b>	7.0
<b>Output Current, Peak:</b>	14.0
<b>Communication Ports:</b>	Ethernet EtherNet/IP
<b>Feedback:</b>	Halls + Incremental encoder
<b>Setup Method:</b>	Software setup
<b>Digital Inputs:</b>	8
<b>Digital Outputs:</b>	4
<b>Analog Inputs:</b>	1 differential or 2 single-ended
<b>Dimensions:</b>	5 x 3 x 1.78 inches
<b>Weight:</b>	10.0 oz
<b>Ambient Temperature Range:</b>	0 to 40 °C
<b>Ambient Humidity:</b>	90% max, non-condensing
<b>Status LEDs:</b>	1 red, 1 green
<b>Circuit Protection:</b>	Short circuit Over-voltage Under-voltage Over-temp

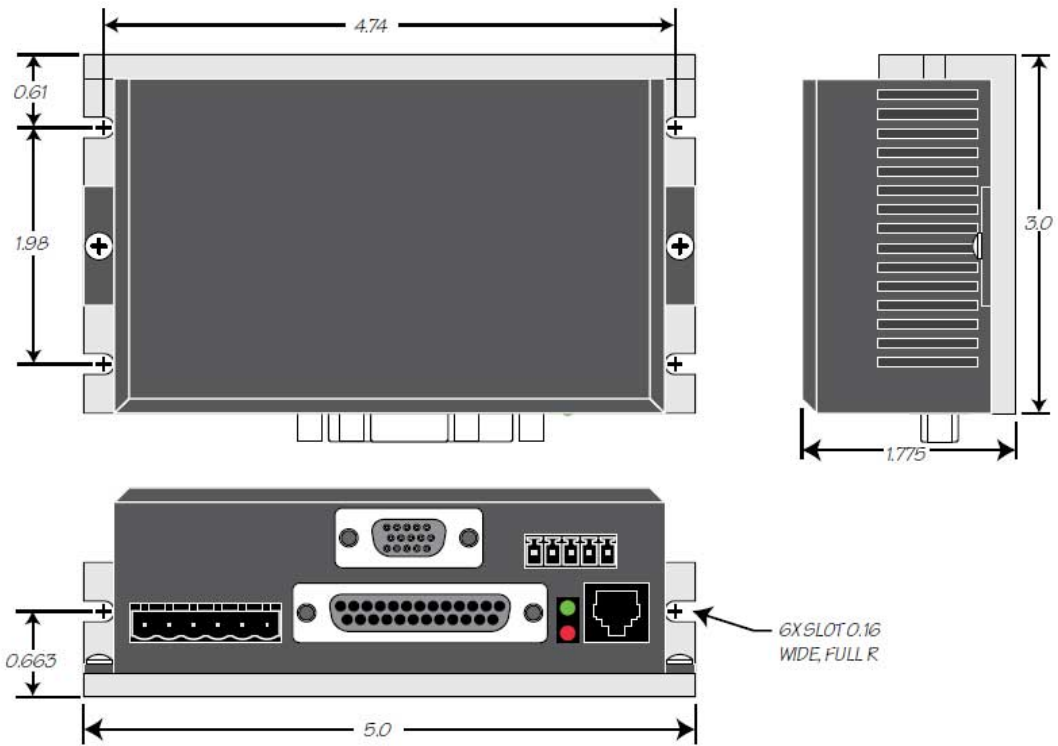
## Software

<b>Software:</b>	<a href="#">ARM Firmware Downloader</a> <a href="#">DSP Firmware Downloader</a> <a href="#">Q Programmer™</a> <a href="#">Quick Tuner™</a> <a href="#">SCL Utility</a>
<b>Sample Code:</b>	<a href="#">C_sharp_UDP_example.zip</a> <a href="#">VB6_UDP_example.zip</a> <a href="#">VB6_TCP_example.zip</a>

## Downloads

<b>Manuals:</b>	<a href="#">SV7_HardwareManual_920-0012-opt-.pdf</a> <a href="#">SV7-IP_QuickSetup_920-0053.pdf</a> <a href="#">Host-Command-Reference_920-0002R.pdf</a>
<b>Product PDF - S3 Link:</b>	<a href="http://s3.amazonaws.com/applied-motion-pdf/SV7-IP-EE.pdf">http://s3.amazonaws.com/applied-motion-pdf/SV7-IP-EE.pdf</a>
<b>Datasheet:</b>	<a href="#">Servo-Products-Datasheet-925-0008.pdf</a> <a href="#">EtherNet-IP-White-Paper_920-0050.pdf</a> <a href="#">EIP_EDS_FILES.zip</a>
<b>2D Drawing:</b>	<a href="#">SV7_simple_3D.pdf</a> <a href="#">SV7_2D_Drawing.pdf</a>
<b>3D Drawing:</b>	<a href="#">SV7-S-AE_solid.igs</a>
<b>Speed-Torque Curves:</b>	<a href="#">SV7_speed-torque.pdf</a>
<b>Agency Approvals:</b>	<a href="#">SV7-S_O_Si_CE_DOC.pdf</a>
<b>Application Notes:</b>	<a href="#">APPN0024_AOIs-for-RSLogix5000.zip</a> <a href="#">APPN0023_MicroLogix-to-EtherNet-IP-drive.zip</a> <a href="#">APPN0022_CompactLogix-to-EtherNet-IP-drive.zip</a> <a href="#">APPN0021_5V-Keepalive-Circuit.pdf</a> <a href="#">APPN0017_Wiring-integral-holding-brakes.pdf</a> <a href="#">APPN0016_Simple-25-pin-mating-connections.pdf</a>

### Mechanical Outline



# Products in the Series *EtherNet/IP Products*

Model Number	Supply Voltage	Control Modes	Output Current, Continuous	Output Current, Peak	Communication Ports	1pc.
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$690.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$642.00
	24-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$1291.00
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$702.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$552.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet	\$1028.00
	24-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$1362.00
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$714.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$751.00
		Step & Direction,				

	24-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$803.00
	24-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$1453.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$661.00
	24-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$874.00
	48-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$1555.00
	24-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$965.00
	48-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP, Ethernet, dual-port	\$1066.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$630.00
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$1025.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$540.00
		Step & Direction,				

	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$1078.00
<a href="#">ST10-IP-EE</a>	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$852.00
<a href="#">ST10-IP-EN</a>	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$791.00
<a href="#">ST5-IP-EE</a>	24-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$786.00
<a href="#">ST5-IP-EN</a>	24-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Modbus TCP	NA	NA	Ethernet, EtherNet/IP	\$728.00
<a href="#">STAC5-IP-E120</a>	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	NA	Ethernet, EtherNet/IP	\$852.00
<a href="#">STAC5-IP-E220</a>	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	NA	Ethernet, EtherNet/IP	\$852.00
<a href="#">STAC5-IP-N120</a>	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	NA	Ethernet, EtherNet/IP	\$791.00
<a href="#">STAC5-IP-N220</a>	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	NA	Ethernet, EtherNet/IP	\$791.00
<a href="#">STF03</a>	12-48 VDC	Streaming Commands, Q Programming, CANopen, EtherNet/IP, Modbus RTU, Modbus TCP, EtherCAT	NA	NA	RS-485, CANopen, Ethernet, EtherNet/IP, EtherCAT, Ethernet, dual-port	\$185.00
<a href="#">STF06</a>	12-48 VDC	Streaming Commands, Q Programming, CANopen, EtherNet/IP, Modbus RTU, Modbus TCP, EtherCAT	NA	NA	RS-485, CANopen, Ethernet, EtherNet/IP, EtherCAT, Ethernet, dual-port	\$198.00
<a href="#">STF10</a>	24-70 VDC	Streaming Commands, Q Programming, CANopen, EtherNet/IP, Modbus RTU, Modbus TCP, EtherCAT	NA	NA	RS-485, CANopen, Ethernet, EtherNet/IP, EtherCAT, Ethernet, dual-port	\$211.00
<a href="#">SV2A3-IP-DE</a>	78-139 VAC	Q Programming, EtherNet/IP	3.00	9.00	Ethernet, EtherNet/IP, Ethernet, dual-port	\$680.00
<a href="#">SV2A5-IP-DE</a>	78-139 VAC	Q Programming, EtherNet/IP	5.40	13.50	Ethernet, EtherNet/IP, Ethernet, dual-port	\$836.00
<a href="#">SV2B3-IP-DE</a>	156-264 VAC	Q Programming, EtherNet/IP	3.00	9.00	Ethernet, EtherNet/IP, Ethernet, dual-port	\$680.00
<a href="#">SV2B5-IP-DE</a>	156-264 VAC	Q Programming, EtherNet/IP	4.50	13.50	Ethernet, EtherNet/IP, Ethernet, dual-port	\$836.00
<a href="#">SV2D10-IP-DE</a>	24-60VDC	Q Programming, EtherNet/IP	10	20	Ethernet, EtherNet/IP, Ethernet, dual-port	\$478.00

## Products in the Series SV7 Servo Drives

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