Applied Motion Products, Inc.
404 Westridge Dr.
Watsonville, CA 95076, USA

1-888-409-3551
Tel (831) 761-6555
Fax (831) 761-6544

Product Datasheet

www.Applied-Motion.com

STAC5-IP-N120

AC EtherNet/IP Advanced Microstep Drive

1pc. - 659.00
50pc. - 494.25



Product Features

- *Programmable, microstepping digital step motor driver in compact package*
- *Advanced anti-resonance algorithm*
- *Torque ripple smoothing*
- *Microstepping to 51,200 steps/rev*
- *Operates from 120 VAC*
- *Provides motor current up to 5 A/phase (peak of sine) with idle current reduction*
- *Fast 10/100 Ethernet for programming and communications*
- *EtherNet/IP communication protocol for network communications with PLCs and other devices*
- *Supports all STAC5-S and STAC5-Q control modes*
- *UDP & TCP support*
- *12 digital inputs, 6 digital outputs, all optically isolated*
- *1 analog input, +/-10 volt range*

Description

The STAC5-IP-N120 stepper drive employs sophisticated current control designed for optimal smoothness over a wide speed range. Anti-resonance, torque ripple smoothing, and microstepping work together to bring step motor performance to a new high. To complement the drive Applied Motion offers a specially matched set of low-loss NEMA 23 and 34 frame motors (see Related and Recommended Products below), all specifically designed with high voltage operation in mind. Power to the drive comes from single-phase 120 VAC, and the drive can output up to 5.0 A/phase (peak-of-sine) to the step motor. Protection features like over-voltage, over-temperature, and over-current prevent damage while running in adverse conditions.

The STAC5-IP-N120 incorporates EtherNet/IP network communications, the widely used industrial protocol for manufacturing automation applications. With EtherNet/IP users can control, configure and query the drive using an open, standards-based, industrial Ethernet connection at speeds up to 100 MBits/sec. The STAC5-IP drives run all of the same control modes as STAC5-Q drives, with the addition that all drive features can be accessed over EtherNet/IP, including more than 100 commands and 130 registers for controlling motion, I/O, configuration, polling, math, register manipulation, and Q programming.

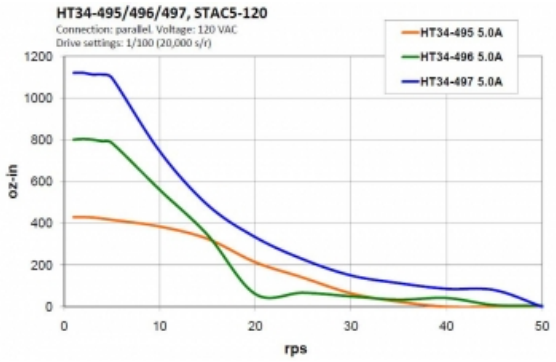
For connecting to external devices such as limit switches, proximity or photoelectric sensors, PLC I/O, lamps, and other devices, the drive comes with 12 digital inputs, 6 digital outputs, and 1 analog input. In addition to EtherNet/IP the drive supports Ethernet TCP and UDP protocols for sending commands from Applied Motion's proprietary Serial Command Language (SCL). The same 10/100 Mbit Ethernet port on the drive is also used for configuring and programming the drive using the *ST Configurator™* and *Q Programmer™* software applications, respectively.

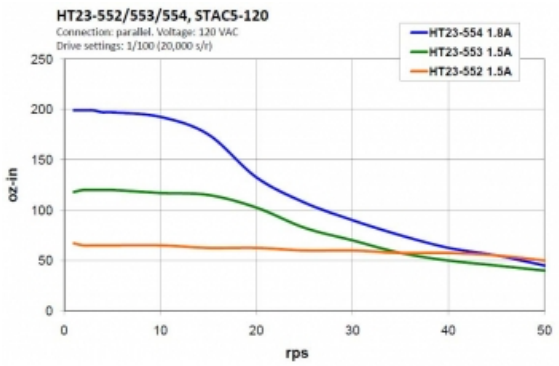
This step motor drive is UL Recognized (File No. E332730), CE approved, and RoHS compliant.

Specifications

Model Number:	STAC5-IP-N120
Part Number:	5000-196
Supply Voltage:	94-135 VAC
Supply Voltage Type:	AC
Control Modes:	Streaming Commands Analog Positioning Encoder Following Q Programming EtherNet/IP
Output Current:	0.5-5.0 A/phase
Communication Ports:	Ethernet EtherNet/IP
Encoder Feedback:	No
Step Resolution:	Full Half Microstepping Microstep Emulation
Idle Current Reduction:	0-90%
Setup Method:	Software setup
Digital Inputs:	12
Digital Outputs:	6
Analog Inputs:	1
Dimensions:	5.5 x 4.5 x 2.0 inches
Weight:	22.4 oz
Operating Temperature Range:	0-70 °C
Ambient Temperature Range:	0-40 °C
Ambient Humidity:	90% max, non-condensing
Status LEDs:	1 red, 1 green
Circuit Protection:	Short circuit Over-voltage Under-voltage Over-temp

Torque Curves





Software

Software:	SCL Utility ST Configurator™

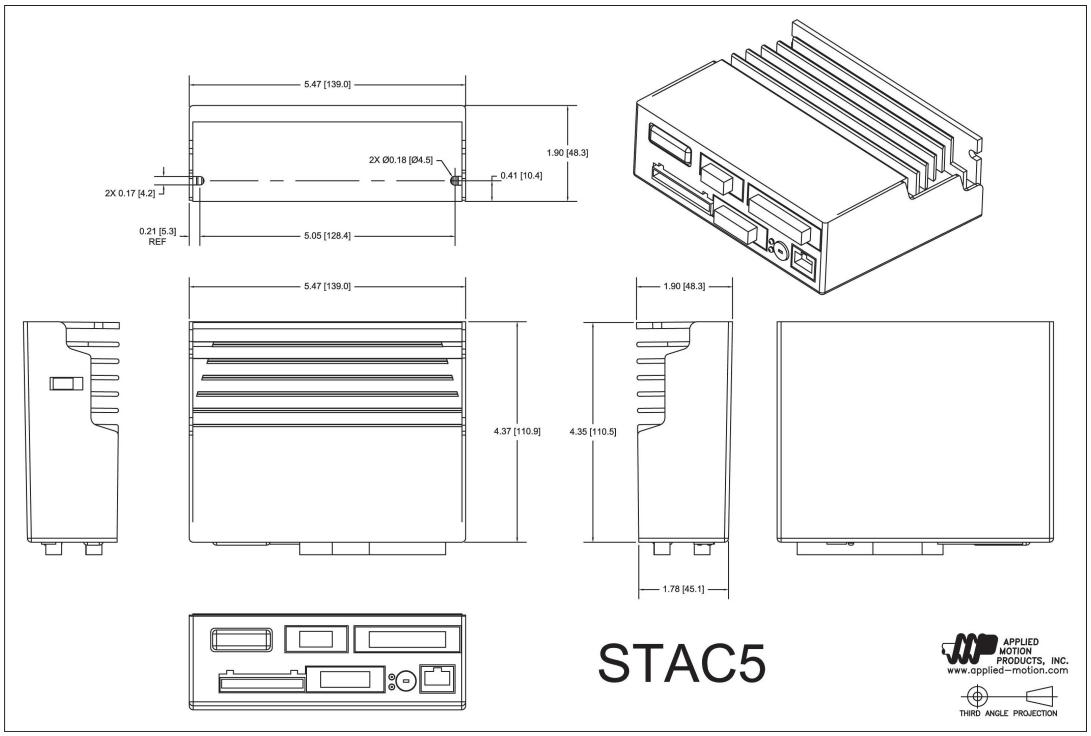
Downloads

Manuals:	STAC5_Hardware_Manual_920-0026C.pdf STAC5_QuickSetupGuide_920-0040_.pdf Host Command Reference Rev I.pdf
Datasheet:	http://s3.amazonaws.com/applied-motion-pdf/STAC5-IP-N120.pdf
Family Datasheet:	STAC5_Datasheet_925-0003.pdf EtherNet-IP-White-Paper_920-0050.pdf EIP_EDS_FILES.zip
2D Drawing:	STAC5.dxf STAC5-1.pdf STAC5_simple_3D.pdf
3D Drawing:	STAC5.igs
Speed-Torque Curves:	STAC5_speed-torque.pdf
Agency Approvals:	STAC5_SVAC3_CE_DOC.PDF
Application Notes:	APPN0024_AOIs-for-RSLogix5000.zip APPN0023_MicroLogix-to-EtherNet-IP-drive.zip APPN0022_CompactLogix-to-EtherNet-IP-drive.zip APPN0016_Simple-25-pin-mating-connections.pdf

Pricing

	STAC5-IP-N120 Part No. 5000-196
1pc.	$659.00
25pc.	$566.74
50pc.	$494.25
100pc.	Contact us for 100+ piece pricing.

2D Drawings


5.47 [139.0]
1.90 [48.3]
2X Ø0.18 [Ø4.5]
0.41 [10.4]
2X 0.17 [4.2]
0.21 [5.3]
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4.35 [110.5]
1.78 [45.1]
STAC5
APPLIED MOTION PRODUCTS, INC.
www.applied-motion.com
THIRD ANGLE PROJECTION

Products in the Series *EtherNet/IP Products*

Model Number	Supply Voltage	Control Modes	Output Current	Communication Ports	Encoder Feedback	1pc./50pc.
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control	NA	Ethernet, EtherNet/IP	Yes	$575.00 / $431.25
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	No	$551.00 / $413.25
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control	NA	Ethernet, EtherNet/IP	Yes	$585.00 / $438.75
	12-70 VDC	Step & Direction, Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP, Velocity Control	NA	Ethernet, EtherNet/IP	Yes	$595.00 / $446.25
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	Yes	$605.00 / $453.75
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	No	$495.00 / $371.25
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	Yes	$650.00 / $487.50
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	No	$540.00 / $405.00
	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	Yes	$706.00 / $529.50
ST10-IP-EE	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.1-10.0 A/Phase	Ethernet, EtherNet/IP	Yes	$710.00 / $532.50
ST10-IP-EN	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.1-10.0 A/Phase	Ethernet, EtherNet/IP	No	$659.00 / $494.25
ST5-IP-EE	24-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.1-5.0 A/Phase	Ethernet, EtherNet/IP	Yes	$655.00 / $491.25
ST5-IP-EN	24-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.1-5.0 A/Phase	Ethernet, EtherNet/IP	No	$607.00 / $455.25
STAC5-IP-E120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-5.0 A/Phase	Ethernet, EtherNet/IP	Yes	$710.00 / $532.50
STAC5-IP-E220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-2.55 A/Phase	Ethernet, EtherNet/IP	Yes	$710.00 / $532.50
STAC5-IP-N120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-5.0 A/Phase	Ethernet, EtherNet/IP	No	$659.00 / $494.25
STAC5-IP-N220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-2.55 A/Phase	Ethernet, EtherNet/IP	No	$659.00 / $494.25
SV7-IP-EE	24-80 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	NA	$597.00 / $447.75
SVAC3-IP-E120	108-132 VAC	Streaming Commands, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	NA	$710.00 / $532.50
SVAC3-IP-E220	108-242 VAC	Streaming Commands, Q Programming, EtherNet/IP	NA	Ethernet, EtherNet/IP	NA	$710.00 / $532.50

Products in the Series *STAC5 Stepper Drives*

Model Number	Supply Voltage	Control Modes	Output Current	Communication Ports	Encoder Feedback	1pc./50pc.
STAC5-IP-E120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-5.0 A/Phase	Ethernet, EtherNet/IP	Yes	$710.00 / $532.50
STAC5-IP-E220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-2.55 A/Phase	Ethernet, EtherNet/IP	Yes	$710.00 / $532.50
STAC5-IP-N120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-5.0 A/Phase	Ethernet, EtherNet/IP	No	$659.00 / $494.25
STAC5-IP-N220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	0.5-2.55 A/Phase	Ethernet, EtherNet/IP	No	$659.00 / $494.25
STAC5-Q-E120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	0.5-5.0 A/Phase	Ethernet	Yes	$726.00 / $544.50
STAC5-Q-E220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	0.5-2.55 A/Phase	Ethernet	Yes	$726.00 / $544.50
STAC5-Q-N120	94-135 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	0.5-5.0 A/Phase	Ethernet	No	$660.00 / $495.00
STAC5-Q-N220	94-265 VAC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	0.5-2.55 A/Phase	Ethernet	No	$660.00 / $495.00
STAC5-S-E120	94-135 VAC	Step & Direction, Velocity (Oscillator), Streaming Commands	0.5-5.0 A/Phase	Ethernet	Yes	$471.00 / $353.25
STAC5-S-E220	94-265 VAC	Step & Direction, Velocity (Oscillator), Streaming Commands	0.5-2.55 A/Phase	Ethernet	Yes	$471.00 / $353.25
STAC5-S-N120	94-135 VAC	Step & Direction, Velocity (Oscillator), Streaming Commands	0.5-5.0 A/Phase	Ethernet	No	$405.00 / $303.75
STAC5-S-N220	94-265 VAC	Step & Direction, Velocity (Oscillator), Streaming Commands	0.5-2.55 A/Phase	Ethernet	No	$405.00 / $303.75