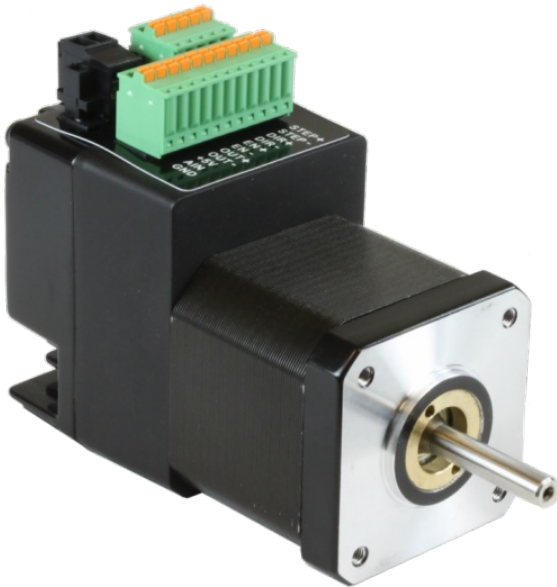


## STM17S-3RN

NEMA 17 Integrated Drive+Motor

1pc. - 270.00  
50pc. - 202.50



### Product Features

- Sophisticated current control
- Anti-resonance
- Torque ripple smoothing
- Microstep emulation
- NEMA 17 frame size
- Step & direction, CW/CCW pulse, and A/B quadrature pulse control modes
- Velocity (oscillator) control mode
- Streaming serial commands (SCL) control mode
- RS-485 port for programming and communications



### Description

The STM17S-3RN integrated stepper is a drive+motor unit, fusing a NEMA 17 step motor and a sophisticated 2.0 A/phase (peak-of-sine) stepper drive into a single device. Power to the drive, located at the rear of the motor, must be supplied by an external DC supply. See Related and Recommended Products below for compatible 24 and 48 volt DC [power supplies](#) .

The STM17S-3RN integrated stepper can operate in the following control modes: step (pulse) & direction, velocity (oscillator), and streaming serial commands (SCL). (*STM17 integrated steppers do not support operation with the Applied Motion 4-axis and 8-axis SiNet Hubs*). All STM17 units are setup and configured using Applied Motion's [ST Configurator™](#) software.





Each STM17 integrated stepper comes with 3 digital inputs, 1 digital output, and 1 analog input. The digital inputs accept signals of 5-24 VDC and can be used for connecting pulse & direction signals, end-of-travel limit switches, jog switches, quadrature encoder signals, PLC outputs, sensors, or many other signal types. The digital output can be connected to PLC inputs, counters, lights, relays, or other devices. The analog input accepts 0-5 VDC signals and can be used for velocity and position control.

The STM17S-3RN comes with an RS-485 port for programming and serial communications.

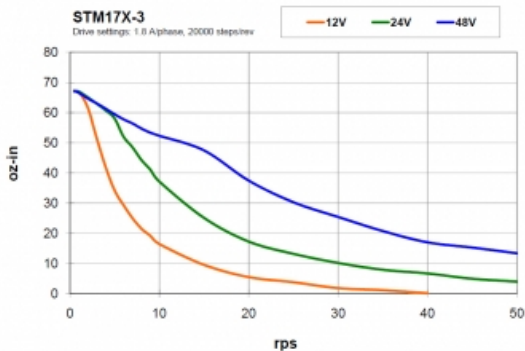
## Specifications

<b>Part Number:</b>	STM17S-3RN
<b>Supply Voltage:</b>	12-48 VDC
<b>Supply Voltage Type:</b>	DC
<b>Control Modes:</b>	Step & Direction Velocity (Oscillator) Streaming Commands
<b>Communication Ports:</b>	RS-485
<b>Encoder Feedback:</b>	No
<b>Step Resolution:</b>	Full Half Microstepping Microstep Emulation
<b>Idle Current Reduction:</b>	0-90%
<b>Setup Method:</b>	Software setup
<b>Digital Inputs:</b>	3
<b>Digital Outputs:</b>	1
<b>Analog Inputs:</b>	1 single-ended
<b>Circuit Protection:</b>	Short circuit Over-voltage Under-voltage Over-temp
<b>Status LEDs:</b>	1 red, 1 green
<b>Frame Size:</b>	NEMA 17
<b>Holding Torque:</b>	68 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Rotor Inertia:</b>	1.16E-03 oz-in-sec <sup>2</sup>
<b>Length:</b>	3.19 inches
<b>Weight:</b>	15.6 oz
<b>Operating Temperature Range:</b>	0-85 °C
<b>Ambient Temperature Range:</b>	0-40 °C
<b>Ambient Humidity:</b>	90% max, non-condensing
<b>Insulation Class:</b>	Class B (130 °C)

## Downloads

<b>Speed-Torque Curves:</b>	 <a href="#">STM17-3_torque_curves.pdf</a>
<b>Manuals:</b>	 <a href="#">STM17_Hardware_Manual.pdf</a>  <a href="#">STM17_Quick_Setup_Guide.pdf</a>  <a href="#">Host Command Reference Rev I.pdf</a>
<b>Datasheet:</b>	<a href="http://s3.amazonaws.com/applied-motion-pdf/STM17S-3RN.pdf">http://s3.amazonaws.com/applied-motion-pdf/STM17S-3RN.pdf</a>
<b>Family Datasheet:</b>	 <a href="#">STM-Datasheet-925-0009.pdf</a>
<b>2D Drawing:</b>	 <a href="#">STM17-3_RevA.pdf</a>  <a href="#">STM17S-3X_3D.pdf</a>  <a href="#">STM17X-3X_NEW_DESIGN_2D-drawing.pdf</a>
<b>3D Drawing:</b>	 <a href="#">STM17S-3X_Simple.igs</a>  <a href="#">STM17X-3X_NEW.igs</a>
<b>Agency Approvals:</b>	 <a href="#">STM17_23_24_CE_DOC.pdf</a>
<b>Application Notes:</b>	 <a href="#">APPN0018_EZ-Series-Touchpanel-HMI.zip</a>

## Torque Curves



## Software

<b>Software:</b>	<a href="#">SCL Utility</a> <a href="#">ST Configurator™</a>
<b>Sample Code:</b>	 <a href="#">scldemo.zip</a>

<b>STM17S-3RN</b> Part No. STM17S-3RN	
<b>1pc.</b>	\$270.00
<b>25pc.</b>	\$232.20
<b>50pc.</b>	\$202.50
<b>100pc.</b>	<a href="#">Contact us</a> for 100+ piece pricing.

## Products in the Series *STM17 Integrated Steppers*

Part Number	Frame Size	Supply Voltage	Control Modes	Holding Torque	Communication Ports	Encoder Feedback	1pc./50pc.
<a href="#">STM17C-3CE</a>	NEMA 17	12-48 VDC	CANopen	68	RS-232, CANopen	Yes	\$470.00 / \$352.50
<a href="#">STM17C-3CN</a>	NEMA 17	12-48 VDC	CANopen	68	RS-232, CANopen	No	\$408.00 / \$306.00
<a href="#">STM17Q-1AE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	31	RS-232	Yes	\$347.00 / \$260.25
<a href="#">STM17Q-1AN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	31	RS-232	No	\$272.00 / \$204.00
<a href="#">STM17Q-1RE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	31	RS-485	Yes	\$353.00 / \$264.75
<a href="#">STM17Q-1RN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	31	RS-485	No	\$278.00 / \$208.50
<a href="#">STM17Q-2AE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	54	RS-232	Yes	\$350.00 / \$262.50
<a href="#">STM17Q-2AN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	54	RS-232	No	\$275.00 / \$206.25
<a href="#">STM17Q-2RE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	54	RS-485	Yes	\$356.00 / \$267.00
<a href="#">STM17Q-2RN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	54	RS-485	No	\$281.00 / \$210.75
<a href="#">STM17Q-3AE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	68	RS-232	Yes	\$353.00 / \$264.75
<a href="#">STM17Q-3AN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	68	RS-232	No	\$288.00 / \$216.00
<a href="#">STM17Q-3RE</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	68	RS-485	Yes	\$360.00 / \$270.00
<a href="#">STM17Q-3RN</a>	NEMA 17	12-48 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	68	RS-485	No	\$295.00 / \$221.25
<a href="#">STM17R-3ND</a>	NEMA 17	12-48 VDC	Step & Direction	68	NA	No	\$118.00 / \$118.00
<a href="#">STM17R-3NE</a>	NEMA 17	12-48 VDC	Step & Direction	68	NA	Yes	\$192.00 / \$192.00
<a href="#">STM17R-3NN</a>	NEMA 17	12-48 VDC	Step & Direction	68	NA	No	\$117.00 / \$117.00
<a href="#">STM17S-1AE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	31	RS-232	Yes	\$317.00 / \$237.75
<a href="#">STM17S-1AN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	31	RS-232	No	\$242.00 / \$181.50
<a href="#">STM17S-1RE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	31	RS-485	Yes	\$325.00 / \$243.75
<a href="#">STM17S-1RN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	31	RS-485	No	\$250.00 / \$187.50
<a href="#">STM17S-2AE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	54	RS-232	Yes	\$324.00 / \$243.00
<a href="#">STM17S-2AN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	54	RS-232	No	\$249.00 / \$186.75
<a href="#">STM17S-2RE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	54	RS-485	Yes	\$331.00 / \$248.25
<a href="#">STM17S-2RN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	54	RS-485	No	\$256.00 / \$192.00
<a href="#">STM17S-3AE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	68	RS-232	Yes	\$328.00 / \$246.00

			Streaming Commands				\$246.00
<a href="#">STM17S-3AN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	68	RS-232	No	\$263.00 / \$197.25
<a href="#">STM17S-3RE</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	68	RS-485	Yes	\$335.00 / \$251.25
<a href="#">STM17S-3RN</a>	NEMA 17	12-48 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	68	RS-485	No	\$270.00 / \$202.50
<a href="#">TSM17C-1CG</a>	NEMA 17	12-48 VDC	Q Programming, CANopen	40	CANopen	Yes	\$547.00 / \$410.25
<a href="#">TSM17C-2CG</a>	NEMA 17	12-48 VDC	Q Programming, CANopen	59	CANopen	Yes	\$551.00 / \$413.25
<a href="#">TSM17C-3CG</a>	NEMA 17	12-48 VDC	Q Programming, CANopen	73	CANopen	Yes	\$554.00 / \$415.50
<a href="#">TSM17P-1AG</a>	NEMA 17	12-48 VDC	Step & Direction, Encoder Following	40	RS-232	Yes	\$378.00 / \$283.50
<a href="#">TSM17P-2AG</a>	NEMA 17	12-48 VDC	Step & Direction, Encoder Following	59	RS-232	Yes	\$380.00 / \$285.00
<a href="#">TSM17P-3AG</a>	NEMA 17	12-48 VDC	Step & Direction, Encoder Following	73	RS-232	Yes	\$383.00 / \$287.25
<a href="#">TSM17Q-1AG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	40	RS-232	Yes	\$412.00 / \$309.00
<a href="#">TSM17Q-1RG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	40	RS-485	Yes	\$418.00 / \$313.50
<a href="#">TSM17Q-2AG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	59	RS-232	Yes	\$415.00 / \$311.25
<a href="#">TSM17Q-2RG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	59	RS-485	Yes	\$391.00 / \$293.25
<a href="#">TSM17Q-3AG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	73	RS-232	Yes	\$418.00 / \$313.50
<a href="#">TSM17Q-3RG</a>	NEMA 17	12-48 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	73	RS-485	Yes	\$424.00 / \$318.00
<a href="#">TSM23C-2CG</a>	NEMA 23	12-70 VDC	Q Programming, CANopen	142	CANopen	Yes	\$562.00 / \$421.50
<a href="#">TSM23C-3CG</a>	NEMA 23	12-70 VDC	Q Programming, CANopen	212	CANopen	Yes	\$576.00 / \$432.00
<a href="#">TSM23C-4CG</a>	NEMA 23	12-70 VDC	Q Programming, CANopen	340	CANopen	Yes	\$631.00 / \$473.25
<a href="#">TSM23P-2AG</a>	NEMA 23	12-70 VDC	Step & Direction, Encoder Following	142	RS-232	Yes	\$392.00 / \$294.00
<a href="#">TSM23P-3AG</a>	NEMA 23	12-70 VDC	Step & Direction, Encoder Following	212	RS-232	Yes	\$403.00 / \$302.25
<a href="#">TSM23P-4AG</a>	NEMA 23	12-70 VDC	Step & Direction, Encoder Following	340	RS-232	Yes	\$445.00 / \$333.75
<a href="#">TSM23Q-2AG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	142	RS-232	Yes	\$507.00 / \$380.25
<a href="#">TSM23Q-2RG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	142	RS-485	Yes	\$514.00 / \$385.50
<a href="#">TSM23Q-3AG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	212	RS-232	Yes	\$521.00 / \$390.75
<a href="#">TSM23Q-3RG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	212	RS-485	Yes	\$529.00 / \$396.75
<a href="#">TSM23Q-4AG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	340	RS-232	Yes	\$576.00 / \$432.00

<a href="#">TSM23Q-4RG</a>	NEMA 23	12-70 VDC	Analog Torque / Velocity, Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Velocity Control, Modbus	340	RS-485	Yes	\$584.00 / \$438.00
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