

	SureStep Series – Microstepping Drives Features Comparison									
				Standard M	licrosteppin	g Drives		Adv	anced Microst	epping Drives
Drive Model		<u>STP-</u> Drvac-24025	<u>STP-</u> DRV-4830	<u>STP-</u> DRV-4845	<u>STP-</u> DRV-6575	STP-MTRD-x	<u>STP-DRV-4035</u>	<u>STP-</u> DRV-4850	<u>STP-</u> <u>DRV-80100</u>	STP-MTRD-xR
Price		\$236.00	\$97.00	\$98.00	\$110.00	See Integrated Motor/Drives section	Retired	\$286.00	\$338.00	See Integrated Motor/ Drives section
Drive Type		Microst	epping drive	with pulse in	iput	Integrated stepper motor/ drive	Micro-stepping drive with pulse input	Advanced microstepping drive with pulse or analog input, serial communication;includes programming/communication cable <u>STP-232RJ11-CBL</u> Advanced integrated stepper motor/drive wil internal encoder		Advanced integrated stepper motor/drive with internal encoder
			enclos	ed		enclosed	open-frame	encl	osed	enclosed
Output Curre	ent	0.6–2.5 A/ phase	0.35–3.0 A/phase	0.8–4.5 A/ phase	1.0–7.5 A/ phase	-	0.4–3.5 A/phase	0.1–5 A/ phase	0.1–10 A/ phase	-
Input Voltage		nominal: 120/240 VAC range: 90–240 VAC	nominal: 12–48 VDC range: 10–53 VDC	nominal: 24–48 VDC range: 20–60 VDC	nominal: 24–75 VDC range: 20–85 VDC	nominal: 12-48 VDC (NEMA 17) 12-70 VDC (NEMA 23) range: 10-55 VDC (NEMA 17) 11-74 VDC (NEMA 23)	nominal: 12–32 VDC range: 12–42 VDC	nominal: 24–48 VDC range: 18– 53 VDC	nominal: 24–80 VDC range: 18–88 VDC	nominal: 12-48 VDC (NEMA 17) 12-70 VDC (NEMA 23, 24) range: 10-55 VDC (NEMA 17) 11-74 VDC (NEMA 23) 10-75 VDC (NEMA 24)
Configuration	n Method	rotary	dial, dip swit	tches, jumpe	rs	dip s	switches	SureMotion	Pro software (<u>S</u>	M-PRO: free download)
Amplifier Typ)e	М	OSFET, dua 4-quadi	l H-bridge, rant		Dual H-bridge, 4 quadrant	MOSFET, dual H-bridge, bipolar chopper	MOSFET, dual H-bridge, 4-quadrant Dual H-bridge, quadrant		Dual H-bridge, 4 quadrant
Current Cont	rol	4-state PWM @ 20 kHz	4-state PWM @ 16 kHz	4-state P kł	WM @ 20 Hz	4-state PWM @ 16 kHz		4-state PWM @ 20 kHz		
		dipswitch selectable						software se	lectable	
Microstep Re	solution	200 to 25,600	steps/rev	200 to 20,0	00 steps/rev	200 to 25,600 steps/rev	400 to 10,000 steps/rev		200 to 51200	steps/rev
	Step & Dir	YES	YES	YES	YES	YES	YES	YES	YES	YES
	CW/CCW	YES	YES	YES	YES	YES	n/a	YES	YES	YES
Modes of	A/B Quad	n/a	n/a	n/a	n/a	n/a	n/a	YES	YES	YES
operation	Oscillator	n/a	n/a	n/a	n/a	n/a	n/a	YES	YES	YES
Modes of Operation Digital Input	Serial Indexing	n/a	n/a	n/a	n/a	n/a	n/a	YES	YES	YES
Digital	Step/Pulse	step	& direction, C	CW/CCW ste	р	step & direction, CW/	step & direction	step & dire	ction, CW/CCW	step, A/B quadrature,
Input Signals	Enable		motor die	sable		CCW step	2 switches p switches MOSFET, dual H-bridge, bipolar chopper 400 to 10,000 steps/rev YES n/a n/a n/a // step & direction motor disable n/a n/a n/a N/a N/a N/a N/a N/a N/a N/a N	motor enab	le, alarm reset,	speed select (oscillator
									mode	e) signal range offset
Analog Input	-	n/a	n/a	n/a	n/a	n/a	n/a	speed	control	dead band, and filtering
Output Signa		fault	n/a	fault	fault	fault	n/a	fault, mo	tion, tach	brake, fault, motion, tach
Communicat	ion Interface	n/a	n/a	n/a	n/a	n/a	n/a	YES (progra	amming/commu	nication cable included)
Non-volatile Storage	Memory	n/a	n/a	n/a	n/a	n/a	n/a		YES	
Idle Current	Reduction						YES			
Self Test Additional Fe	eatures	Step pulse noise filter, accepts AC power input	Step pulse noise filter	Load inertia feature to i St	a (anti-resona improve moto iep pulse nois	ance & damping or performance) se filter	YES n/a	Anti-i (allows for fin Wavef	resonance (Elec Auto se Microstep er Torque ripple s te adjustment of to 1.5 r orm (command	stronic Damping) tup mulation smoothing phase in the range 0.25 ps) signal) smoothing

Refer to Specifications Tables for detailed specifications.



SureStep[®] Standard Microstepping Drives





	Sure	Step Series Specifications – Standard M	licrostepping Drives
Microstepp	ing Drive	<u>STP-DRV-4035</u>	<u>STP-DRV-4830</u>
Drive Typ	e	Microstepping drive with pulse input	Microstepping drive with pulse input
Drawing		PDF	PDF
Output C	urrent	Selectable from 0.4 to 3.5 A/phase (maximum output power is 140W)	Selectable from 0.35 to 3.0 A/phase (peak of sine)
Input Volt (external	tage p/s required)	Nominal: 12–32 VDC Range: 12–42 VDC (including ripple voltage)	Nominal: 12–48 VDC Range: 10–53 VDC
Configura	ation Method	DIP switches	DIP switches
Amplifier	Туре	MOSFET, dual H-bridge, bipolar chopper	MOSFET, dual H-bridge, 4-quadrant
Current C	Control	4-state PWM @ 20 kHz	4-state PWM @ 16 kHz
Protectio	n	n/a	n/a
Recomme	ended Input Fusing	Fuse: 4A fast-acting; ADC # AGC4; Holder: ADC # DN-F6L110	Fuse: 3A fast-acting; ADC #AGC3; Holder: ADC # DN-F6L110
	Input Circuit	Opto-coupler input with 440Ω resistance (5 to 15 mA input current); Logic Low is input 0.8 VDC or less; Logic High is input 4VDC or higher.	5 –24 VDC nominal (range: 4–30 VDC); (5mA @ 4V; 15 mA @ 30V); Optically isolated, differential
Input	Step/Pulse	Motor steps on falling edge of pulse and minimum pulse width is 0.5 μs (1MHz)	Minimum pulse width = 1µs. Maximum pulse frequency = 150kHz or 500kHz (user selectable).
Signais	Direction	Needs to change at least 2 microseconds before a step pulse is sent	FU NCTIONS: step & direction, CW/CCW step
	contestep Series Spectructures g Drive STP-DRV-4035 Microstepping drive with pul PDE rent Selectable from 0.4 to 3.5 A/phase (maximu ge Nominal: 12-32 VDC (including ri s required) Range: 12-42 VDC (including ri on Method DIP switches ype MOSFET, dual H-bridge, bipol ntrol 4-state PWM @ 20 kf ded Input Fusing Fuse: 4A fast-acting; ADC # AGC4; Hold opto-coupler input with 400 resistance (5 Logic Low is input 0.8 VDC or less; Logic put Circuit Opto-coupler input with duagresistance (5 input Circuit Motor steps on falling edge of pulse and n virection Needs to change at least 2 microseconds be inable Logic 1 will disable current to (current is enabled with no hook- nal n/a rest 400 (200x2), 1,000 (200x5), 2,000 (200x1) steps/rev 0.4 to 3.5 A/phase with 32 seler ficrostep Resolution n/a virest bild with AWG 18 n n/a s Screw terminal blocks with AWG 18 n s Screw terminal blocks with AWG 18 n	Logic 1 will disable current to the motor (current is enabled with no hook-up or logic 0)	FUNCTION: disable motor when closed
	Analog	n/a	n/a
Output Si	ignal	n/a	n/a
	Current Reduction	n/a	n/a
Idle Current Reduction		0% or 50% reduction (Idle current setting is active if motor is at rest for 1 second or more)	90% or 50% of running current. (Holding torque is reduced by the same %.)
	Microstep Resolution	400 (200x2), 1,000 (200x5), 2,000 (200x10), or 10,000 (200x50) steps/rev	200, 400, 800, 1000, 1600, 2000, 3200, 4000, 5000, 6000, 6400, 8000, 10000, 12800, 20000, 25600
Features	Phase Current Setting	0.4 to 3.5 A/phase with 32 selectable levels	(peak)(0.35–3.0) (0.25–2.3) RMS
	Self Test	Uses half-step to rotate 1/2 revolution in each direction at 100 steps/ second.	Automatically rotates the motor back and forth two turns in each direction in order to confirm that the motor is operational.
	Step Pulse Noise Filter	n/a	Select 150kHz or 500kHz
	Load Inertia	n/a	n/a
Connecto	ors	Screw terminal blocks with AWG 18 maximum wire size	DEGSON 15EDGK-5.08-02P-14-00AH 2-pin power connector DEGSON 15EDGK-3.1.04P-14-00A(H) 4-pin motor connector DEGSON 15EDGK-3.5-06P-14-00A(H) 6-pin I/O connector ADC part <u>STP-CON-5</u> contains replacement connectors
Maximum	n Humidity	90% non-condensing	90% non-condensing
Storage/A	Ambient Temperature	-20 to 80 °C [-4 to 176 °F]	0 to 40 °C [32 to 104 °F] (mount to suitable heat sink)
Operating	g Temperature	0 to 55 °C [32 to 131 °F] recommended; 70 °C [158 °F] maximum	0 to 85 °C [32 to 185 °F] (interior of electronics section)
Drive Cod	oling Method	Natural convection (mount drive to metal surface to dissipate heat)	Natural convection (mount drive to metal surface)
Mounting	1	(4) #4 screws to mount on wide side; (2) #4 screws to mount on narrow side	(2) #6 screws to mount to metal surface
Weight		9.3 oz. [264 g]	3.0 oz [85.9 g]
Agency A	pprovals	CE	CE

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Stepper Systems tSTP-25



SureStep[®] Standard Microstepping Drives, continued



	SureStep Series Specifications – Standard Microstepping Drives				
Microstepp	ing Drive	<u>STP-DRV-4845</u>	<u>STP-DRV-6575</u>		
Drive Typ	e	Microstepping driv	ve with pulse input		
Drawing		PDF	PDF		
Output C	urrent	Selectable from 0.8–4.5 A/phase (peak of sine)	Selectable from 1.0–7.5 A/phase (peak of sine)		
Input Volt (external	tage p/s required)	Nominal: 24–48 VDC Range: 20–60 VDC	Nominal: 24–65 VDC Range: 20–85 VDC		
Configura	ation Method	Rotary dial, DIP s	switches, jumpers		
Amplifier	Туре	MOSFET, dual H-	bridge, 4-quadrant		
Current C	Control	4-state PWI	M @ 20 kHz		
Protectio	n	n	/a		
Recomme	ended Input Fusing	Fuse: 4A fast-acting; ADC # <u>AGC4;</u> Holder: ADC # <u>DN-F6L110</u>	Fuse: 7A fast-acting; ADC #AGC7; Holder: ADC # DN-F6L110		
	Input Circuit	5 –24 VDC nominal (range: 4–30 VDC); (5mA @	4V; 15 mA @ 30V); Optically isolated, differential		
Input	Step/Pulse	Minimum pulse width = 1µs. Maximum pulse frequency = 150kHz or 2MHz (user selectable).			
Signals	Direction	FUNCTIONS: step & d	lirection, CW/CCW step		
	Enable	FUNCTION: disable	e motor when closed		
	Analog	n/a			
Output Si	gnal	30 VDC / 80 mA max, optica sinking or Function = close	ally isolated photodarlington, · sourcing. əs on drive fault.		
	Current Reduction	Reduce power consumption and heat generation by limiting motor running current to 100%, 90%, 80%, or 70% of maximum. Current should be increased to 100% if microstepping. (Torque is reduced/increased by the same %.)	Reduce power consumption and heat generation by limiting motor running current to 100%, 90%, or 80% of maximum. Current should be increased to 120% if microstepping. (Torque is reduced/increased by the same %.)		
	Idle Current Reduction	90% or 50% of running current. (Holding torque is reduced by the same %.)			
Features	Microstep Resolution	200, 200 smooth, 400, 400 smo	poth, 2000, 5000, 12800, 20000		
	Phase Current Setting	(peak)(1.1–4.5) x 70%–100% DIP switch selectable (0.79–3.2) RMS	(1.3–6.3) x 80%–120% DIP switch selectable		
	Self Test	Automatically rotates the motor back and forth two turns in e	ach direction in order to confirm that the motor is operational.		
Features M Si Si	Step Pulse Noise Filter	Select 150k	Hz or 2MHz		
	Load Inertia	Set motor and load inertia	a range to 0–4x or 5–10x.		
Connectors		Removable screw terminal blocks. Motor & Power Supply: 30–12 AWG; Signals: 30–14 AWG ADC part <u>STP-CON-1</u> contains replacement connectors			
Maximum	Humidity	90% non-c	condensing		
Storage/A	Multion Comperature	0 to 50 °C [32 to 122 °F] (mount to suitable heat sink)		
Operating	g Temperature	0 to 85 °C [32 to 185 °F] (ii	nterior of electronics section)		
Drive Coo	oling Method	Natural convection (mou	nt drive to metal surface)		
Mounting		(2) #6 screws to mo	unt to metal surface		
Weight		10.8 oz	z [306g]		
Agency A	pprovals	CE, _C UR _{US}			

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Stepping System Drives

SureStep[®] Advanced Microstepping Drives



	SureSt	ep Series Specifications – Advanced Mi	crostepping Drives				
Mic	rostepping Drive	<u>STP-DRV-4850</u>	<u>STP-DRV-80100</u>				
Dri	ve Type	Advanced microstepping drive with pulse or analog input, serial com	munication (serial communication allows indexing capability)				
Dra	wing	PDF	PDF				
Output Current		0.1-5.0 A/phase (in 0.01A increments)	0.1-10.0 A/phase (in 0.01A increments)				
Input Voltage (external p/s required)		24-48 VDC (nominal) (range: 18-53 VDC)	24-80 VDC (nominal) (range: 18-88 VDC)				
Col	nfiguration Method	SureMotion Pro software (included)					
Am	plifier Type	MOSFET, dual H-bridg	je, 4-quadrant				
Cu	rrent Control	4-state PWM @	20 kHz				
Pro	tection	Over-voltage, under-voltage, over-temperature, external output fault	s (phase-to-phase & phase-to-ground), inter-amplifier shorts				
Red	commended Input Fusing	Fuse: 4A 3AG delay (ADC # <u>MDL4)</u> Fuse Holder: ADC # <u>DN-F6L110</u>	Fuse: 6.25A 3AG delay (ADC # <u>MDL6-25)</u> Fuse Holder: ADC # <u>DN-F6L110</u>				
	Input Circuit	Opto-coupler input with 5 to 15 mA input current; Logic Low is in	put 0.8 VDC or less; Logic High is input 4 VDC or higher.				
sls	Step/Pulse	Optically isolated, differe	ential, 5V, 330Ω;				
put Signa	Direction	Min pulse width – 250 hs Max pulse frequency = 2MHz Adjustable bandwidth digital noise rejection feature FUNCTIONS: step & direction, CW/CCW step, A/B quadrature, run/stop & direction, jog CW/CCW, CW/CC					
2	Enable	Optically isolated, 5-12V, 680Ω; FUNCTIONS: motor enable, alarm reset, speed select (oscillator mode)					
	Analog	Range: 0–5 VDC; Resolution: 12 bit	; FUNCTION: speed control				
Ou	tput Signal	JNCTIONS: fault, motion, tach					
Communication Interface		RS-232; RJ11 (6P4C) receptacle					
Non-volatile Memory Storage		Configurations are saved in FLASH	memory on-board the DSP.				
	Idle Current Reduction	Reduction range of 0-90% of running current after delay selectable in ms					
	Microstep Resolution	Software selectable from 200 to 51200 ste	ps/rev in increments of 2 steps/rev				
	Modes of Operation	Step & direction, CW/CCW, A/B quadrature,	oscillator, joystick, serial commands				
res	Phase Current Setting	0.1-5.0 A/phase (in 0.01A increments)	0.1-10.0 A/phase (in 0.01A increments)				
atu	Self Test	Checks internal & external power supply volt	ages, diagnoses open motor phases				
Ϋ́	Additional Features	Anti-resonance (Electronic Damping) Auto setup Microstep emulation Torque ripple smoothing (allows for fine adjustment of phase in the range 0.25 to 1.5 rps) Waveform (command signal) smoothing					
Connectors		Communication: RJ11 (6P4C); programming/communication cable <u>STP-232RJ11-CBL</u> included Other: removable screw terminal blocks; Motor & Power Supply: 26–12 AWG; Signals: 28–16 AWG					
Ma	ximum Humidity	90% non-cond	ensing				
Sto	rage Temperature	-20 to 80 °C [-4 t	o 176 °F]				
Ор	erating Temperature	0 to 55 °C [32 to 131 °F]; (mou	nt to suitable heat sink)				
Dri	ve Cooling Method	Natural convection (mount to	o suitable heat sink)				
Мо	unting	#6 mounting screws (mount	to suitable heat sink)				
We	ight	8 oz [227g] (app	roximate)				
Age	ency Approvals	CE					

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SureStep[®] High Bus Voltage Microstepping Drives



	SureStep Se	eries Specifications – Standard Microstepping Drives				
Microstepp	ing Drive	<u>STP-DRVAC-24025</u>				
Price		\$236.00				
Drawing		PDF				
Drive Typ	e	Microstepping drive with pulse input				
Output C	urrent	Selectable from 0.6–2.5 A/phase (peak of sine)				
Input Vol	tage	90–240 VAC				
Configura	ation Method	Rotary dial, DIP switches, jumpers				
Amplifier	Туре	MOSFET, dual H-bridge, 4-quadrant				
Current C	Control	4-state PWM @ 20 kHz				
Protectio	n	Over temp, over voltage, under voltage, over current, excess regen, open circuit				
Recomm	ended Input Fusing	Fuse: 4A fast-acting; ADC # <u>AGC4;</u> Holder: ADC # <u>DN-F6L110</u>				
	Input Circuit	5–24 VDC nominal (range: 4–28 VDC); optically isolated, differential.				
Input	Step/Pulse	Minimum pulse width = 1µs. Maximum pulse frequency = 150kHz or 2MHz (user selectable).				
Signals	Direction	FUNCTIONS: step & direction, CW/CCW step				
	Enable	FUNCTION: disable motor when closed				
	Analog	n/a				
Output Signal		30 VDC / 100 mA max, optically isolated photodarlington, sinking or sourcing. Function = closes on drive fault.				
Current Reduction		n/a				
	Idle Current Reduction	90% or 50% of running current. (Holding torque is reduced by the same %.)				
	Microstep Resolution	200, 400, 800, 1000, 1600, 2000, 3200, 4000, 5000, 6000, 6400, 8000, 10000, 12800, 20000, 25600				
Features Phase Current Setting		0.6–2.5 Amps RMS				
	Self Test	Automatically rotates the motor back and forth two turns in each direction in order to confirm that the motor is operational.				
	Step Pulse Noise Filter	Select 150kHz or 2MHz				
	Load Inertia	Set motor and load inertia range to 0–4x or 5–10x.				
Connectors		DEGSON 2EDGK-7.62-02P-14-00A(H) 2-pin power connector DEGSON 2EDGK-5.08-04P-14-00A(H) 4-pin motor connector DEGSON 15EDGK-3.81-08P-14-00A(H) 8-pin I/O connector ADC part STP-CON-6 contains replacement connectors				
Maximum	Humidity	90% non-condensing				
Storage/A	Ambient Temperature	0 to 40 °C [32 to 104 °F]				
Operating	g Temperature	0 to 85 °C [32 to 185 °F] (interior of electronics section)				
Drive Cod	oling Method	Natural convection (mount drive to metal surface)				
Mounting		(2) M4 screws to mount to metal surface				
Weight		1 lb 15 oz [0.88 kg]				
Agency A	pprovals	CE, CRUS				

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SureStep[®] Microstepping Drives Dimensions

Dimensions = in [mm]

STP-DRV-4830





STP-DRV-4845 & STP-DRV-6575



0.18 [4.5]

0.18 [4.5]

STP-DRV-4850 & STP-DRV-80100



STP-DRVAC-24025

- 0.24 [6.0]

0.41









SureStep[®] Microstepping Drives Dimensions

Dimensions = in [mm]

STP-DRV-4035





Stepping System Accessories

SureStep[®] Microstepping Drives Accessories

Braking Accessories

As a load rapidly decelerates from a high speed, much of the kinetic energy of that load is transferred back to the motor. This energy is then pushed back to the drive and power supply, resulting in increased system voltage. If there is enough overhauling load on the motor, the DC voltage will go above the drive and/or power supply limits. In general, the more torque the motor is capable of producing then the more energy it can push back into the drive.

When using a regulated/switching power supply, this can trip the overvoltage protection of the power supply or drive, and cause it to shut down.

To solve this problem, AutomationDirect offers a regeneration clamp as an optional accessory. The regen clamp has a built-in 50W braking resistor. The STP-DRVA-RC-050A does not have the ability to use an external resistor.

Regeneration Clamp Features

STP-DRVA-RC-050A

- Built-in 50W power resistor for more continuous current handling
- Mounted on a heat sink
- Voltage range: 24-80 VDC; no user adjustments required
- Power: 50W continuous; 800W peak
- Indicators (LED): Green = power supply voltage is present Red = clamp is operating (usually when stepper is decelerating)
- Protection: The external power supply is internally connected to an "Input Diode" in the regen clamp that protects the power supply from high regeneration voltages. This diode protects the system from connecting the power supply in reverse. If the clamp circuit fails, the diode will continue to protect the power supply from over-voltage.

SureStep Damper

A step motor inertia damper can smooth out steps in a typical step motor resulting in a quieter and smoother motion when rotating between steps. Reducing the resonance and possible micro oscillations when moving from step to step is the main purpose of a "hockey puck" style damper, but it can also be used as a hand wheel to directly rotate the position of the rotor when power is removed from the motor. The damper is a properly sized machined piece of aluminum encased in plastic. It is sized and weighted for general damping of the respective frame size motor.



Regeneration Clamp STP-DRVA-RC-050A

- Three drive connections, 7A max per channel, 15A total output current
- Removable terminal blocks (replacement kit STP-CON-4)
- Uses 18-20 AWG wire for connections



Sure Step Series Specifications – Microstepping Drives Optional Accessories							
Part Number	Price	Description	Drawing				
STP-DRVA-RC-050A*	\$91.00	Regen Clamp: 50W, for DC input stepper and servo drives, enclosed	PDF				
STP-MTRA-17DMP	\$16.50	SureStep damper, metal body. For use with NEMA 17 stepper motors with 5mm shafts. Mounting set screw included.	PDF				
STP-MTRA-23DMP	\$37.50	SureStep damper, metal body. For use with NEMA 23 stepper motors with 1/4 inch shafts. Mounting set screw included.	PDF				

* Do not use the regeneration clamp in an atmosphere containing corrosive gases.

0.20 [5.0]



Stepping System Accessories

SureStep[®] Microstepping Drives Accessories

Dimensions = in [mm]

STP-DRVA-RC-050A





Stepping System Accessories

SureStep[®] Microstepping Drives Accessories

USB to RS-485 Adapter

The <u>STP-USB485-4W</u> is a USB to RS-232/RS-485 converter that can be used in 2-wire or 4-wire serial networks. Serial communication can be wired up via the 9-pin D-sub connector or through the 6-screw terminals.

The STP-USB485-4W can be set for several different configurations. These modes are set up by the 4 DIP switches on the outside of the case (RS-232/RS-485, full/half duplex) and by the 7 jumpers located inside the case (termination/bias resistors).

SureStep Advanced Drives communicate via RS-232 (for control and for configuration via SureMotion Pro).

The Advanced Integrated motor/drives use RS-485. While the Advanced Integrated motor/drives can be wired for either 2- or 4-wire networks, 4-wire is require for use with SureMotion Pro due to the Firmware Download utility and the Status Monitor Screen.

Depending on the host controller's RS-485 implementation, either 2- or 4-wire RS-485 can be used for control. All RS-485 PLCs that have 2-wire capability (Productivity, BRX, Click, DirectLogic, etc.) can control the Advanced Integrated steppers.



SureStep PC Adapter - STP-USB485-4W					
Price	\$132.00				
Drawing	PDF				
Communications	2-wire RS-232 2- or 4-wire RS-485				
Configure With	Internal jumpers and external DIP switches				
Compatible Cables	STP-232RJ11-CBL STP-485DB9-CBL-2 USB				

Dimensions = in [mm]





SureStep[®] Cables

SureStep Series – Stepping System Cables								
Cable	Price	Purpose	Length	Use With	Cable End Connectors	Drawing		
STP-EXT-006	\$16.00		6 ft			PDF		
<u>STP-EXT-010</u>	\$18.00		10 ft	STP-MTR-xxxxx(x)	pigtail / Molex 43020-0401 connector	PDF		
<u>STP-EXT-020</u>	\$25.00		20 ft			PDF		
STP-EXTH-006	\$31.00		6 ft			PDF		
STP-EXTH-010	\$36.00		10 ft	STP-MTR H -xxxxx(x)	pigtail / Molex 39-01-2041 connector	PDF		
<u>STP-EXTH-020</u>	\$45.50		20 ft			PDF		
STP-EXTHW-006	\$62.00		6 ft			PDF		
<u>STP-EXTHW-010</u>	\$78.00	motor to drive extension	10 ft	STP-MTR HW -xxxxx(x)	Bulgin # PXP4011/06P/6065	PDF		
<u>STP-EXTHW-020</u>	\$113.00		20 ft			PDF		
STP-EXTL-006	\$13.00		6 ft			PDF		
<u>STP-EXTL-010</u>	\$16.50		10 ft	STP-MTRL-xxxxx(x)	connector	PDF		
<u>STP-EXTL-020</u>	\$21.00		20 ft			PDF		
STP-EXTW-006	\$61.00		6 ft		_	PDF		
<u>STP-EXTW-010</u>	\$76.00		10 ft	STP-MTR W -xxxxx(x)	Bulgin # PXP4011/06P/6065	PDF		
<u>STP-EXTW-020</u>	\$107.00		20 ft			PDF		
<u>STP-EXT42-006</u>	\$28.50		6 ft		_	PDF		
<u>STP-EXT42-010</u>	\$34.00		10 ft	STP-MTRAC-42xxxx		PDF		
<u>STP-EXT42-020</u>	\$50.00	motor to drive extension	20 ft		10-pin / pigtail	PDF		
<u>STP-EXT42H-006</u>	\$28.50		6 ft	Stepping System Cables uit Use With ft STP-MTR-xxxx(x) ft STP-MTR-xxxx(x) ft STP-MTRH-xxxx(x) ft STP-MTRH-xxxx(x) ft STP-MTRH-xxxx(x) ft STP-MTRH-xxxx(x) ft STP-MTRHW-xxxxx(x) ft STP-MTRL-xxxx(x) ft STP-MTRL-xxxx(x) ft STP-MTRW-xxxx(x) ft STP-MTRAC-42xxxx ft STP-MTRA-ENC5, STP-MTRA-ENC3		PDF		
<u>STP-EXT42H-010</u>	\$34.00		10 ft	STP-MTRACH-42xxxxx		PDF		
<u>STP-EXT42H-020</u>	\$50.00		20 ft			PDF		
<u>STP-232RJ11-CBL</u> *	\$19.00	programming/ communication	10 ft	STP-DRV-4850, STP-DRV-80100	DB9 female / RJ11(6P4C)	PDF		
<u>STP-232HD15-CBL-2</u> **	\$19.00	communication	6.6 ft	STP-DRV-4850, STP-DRV-80100 DL06, D2-250-1, D2-260	HD 15-pin male / RJ12 6-pin plug	n/a		
<u>STP-232RJ12-CBL-2</u> **	\$12.00	communication	6.6 ft	STP-DRV-4850, STP-DRV-80100 DL05, CLICK	RJ11 (6P4C) plug / RJ12 6-pin plug	n/a		
STP-CBL-CA6	\$42.00	control cable	6 ft	STD MTDD 17029	11-pin / pigtail	PDF		
STP-CBL-CA10	\$60.00	control cable	10 ft	STP-MTRD-17038 STP-MTRD-17038E	11-pin / pigtail	PDF		
STP-CBL-CA20	\$108.00	control cable	20 ft		11-pin / pigtail	PDF		
<u>STP-CBL-EA6</u>	\$39.00	encoder cable	6 ft	STP-MTRD-xxxxxE STP-MTRA-ENC1_STP-MTRA-ENC3	10-pin / pigtail	PDF		
STP-CBL-EA10	\$40.00	encoder cable	10 ft	STP-MTRA-ENC5, STP-MTRA-ENC7 STP-MTRA-FNC11 STP-MTRA-FNC13	10-pin / pigtail	PDF		
STP-CBL-EA20	\$69.00	encoder cable	20 ft	(for line driver encoders)	10-pin / pigtail	PDF		
<u>STP-CBL-EB3</u>	\$67.00	encoder cable	3 ft	AMT1120-V	17-pin / pigtail	PDF		
<u>STP-CBL-EB6</u>	\$94.00	encoder cable	6 ft	AMT112G-V	17-pin / pigtail	PDF		
<u>STP-CBL-EB10</u>	\$131.00	encoder cable	10 ft	(for both line driver and push-pull (totem) encoders)	17-pin / pigtail	PDF		
<u>STP-CBL-EB20</u>	\$221.00	encoder cable	20 ft	STP-MTRL-xxxxx(x)Pisture and connectorSTP-MTRW-xxxxx(x)Bulgin # PXP4011/06P/6065STP-MTRAC-42xxxx10-pin / pigtailSTP-MTRACH-42xxxxx10-pin / pigtailSTP-DRV-4850, STP-DRV-80100DB9 female / RJ11(6P4C)STP-DRV-4850, STP-DRV-80100HD 15-pin male / RJ12 6-pinDL06, D2-250-1, D2-260plugSTP-DRV-4850, STP-DRV-80100RJ11 (6P4C) plug / RJ12STP-DRV-4850, STP-DRV-80100RJ11 (6P4C) plug / RJ12STP-DRV-4850, STP-DRV-80100RJ11 (6P4C) plug / RJ12STP-MTRD-1703811-pin / pigtailSTP-MTRA-ENC1, STP-MTRA-ENC310-pin / pigtailSTP-MTRA-ENC1, STP-MTRA-ENC310-pin / pigtail(for line driver encoders)17-pin / pigtailAMT112Q-V17-pin / pigtailAMT112Q-V17-pin / pigtailSTP-MTRA-ENC2, STP-MTRA-ENC45-pin / pigtailSTP-MTRA-ENC35-pin / pigtailSTP-DRV-4845 & -6575-STP-DRV-4850 & 80100-20868.	PDF			
STP-CBL-ED6	\$42.00	encoder cable	6 ft	STP-MTRA-ENC2, STP-MTRA-ENC4	5-pin / pigtail	PDF		
STP-CBL-ED10	\$57.00	encoder cable	10 ft	STP-MTRA-ENC6, STP-MTRA-ENC8 STP-MTRA-ENC12, STP-MTRA-ENC14	5-pin / pigtail	<u>PDF</u>		
STP-CBL-ED20	\$68.00	encoder cable	20 ft	(tor push-pull (totem) encoders)	5-pin / pigtail	<u>PDF</u>		
<u>STP-CON-1</u>	\$37.00	replacement connector kit	n/a	STP-DRV-4845 & -6575	-	n/a		
STP-CON-2	\$37.00	replacement connector kit	n/a	STP-DRV-4850 & 80100	-	n/a		
* Programming/communication cabl (One cable is included with each so	e STP-232RJ11 oftware progra	1-CBLis available for spare or rep mmable drive.)	lacement purp	oses.				

** Refer to the ZIPLinks Wiring Solutions section for complete information regarding cables STP-232HD15-CBL-2 and STP-232RJ12-CBL-2.

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Stepping System Cables

SureStep[®] Cables, continued

SureStep Series – Stepping System Cables							
Cable	Price	Purpose	Length	Use With	Cable End Connectors	Drawing	
STP-CON-3	\$62.00	replacement connector kit	n/a	STP-MTRD-xxxxR	-	n/a	
STP-CON-4	\$35.00	replacement connector kit	n/a	STP-DRVA-RC-050A	-	n/a	
STP-CON-5	\$35.00	replacement connector kit	n/a	STP-DRV-4830	-	PDF	
STP-CON-6	\$38.00	replacement connector kit	n/a	STP-DRVAC-24025	-	n/a	
STP-485DB9-CBL-2	\$64.00	4-wire programming cable	6.5 ft	STP-MTRD-xxxxR	DB9 / Phoenix 5-conductor plug	PDF	

STP-EXT(x)-0xx Extension Cable Wiring Diagram



STP-EXTW-0xx and STP-EXTHW-0xx Extension Cable Wiring Diagram





SureStep[®] Cables, continued

STP-232RJ11-CBL Programming Cable Wiring Diagram



STP-485DB9-CBL-2 4-wire Programming Cable Wiring Diagram

CONNECTION CHART								
DB-9 CONN			PHOENIX	PHOENIX				
PIN	DB9 SIGNAL	WIRE COLOR	PIN	SIGNAL				
2	TX+	RED	5	RX+				
1	TX-	ORANGE	4	RX-				
3	RX+	BLACK	3	TX+				
4 RX-		BROWN	2	TX-				
5 GND Y		YELLOW	1	GND				
METAL HOUSING	SHIELD	SHIELD	N/C	N/C				





SureStep[®] Cables, continued

STP-CBL-CAxx Control Cable Wiring Diagram



STP-CBL-EAxx Encoder Cable Wiring Diagram



WIRE: 24AWG, CABLE: UL2464.

STP-CBL-EBxx Encoder Cable Wiring Diagram





SureStep[®] Cables, continued

STP-CBL-EDxx Encoder Cable Wiring Diagram



SPECIAL LABEL: PANDUIT# LJSL5-Y3-2.5

STP-EXT42(H)-xxx Cable Wiring Diagram



B-

B+

A-

A+