

# Linear Actuators

## SureStep® Linear Actuators Accessories

Replacement Parts for SureStep Series Linear Actuators			
Part Number	Price	Description	Drawing
<a href="#">STP-LA-NTFA</a>	\$21.00	SureStep lead screw flange nut, replacement, triangular, 0.25 in/rev, 0.25 inch lead screw diameter. For use with SureStep STP-LE series screw code A linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFB</a>	\$21.00	SureStep lead screw flange nut, replacement, triangular, 0.5 in/rev, 0.25 inch lead screw diameter. For use with SureStep STP-LE series screw code B linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFC</a>	\$21.00	SureStep lead screw flange nut, replacement, triangular, 3mm/rev, 6.5 mm lead screw diameter. For use with SureStep STP-LE series screw code C linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFD</a>	\$21.00	SureStep lead screw flange nut, replacement, triangular, 1.25 mm/rev, 8mm lead screw diameter. For use with SureStep STP-LE series screw code D linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFE</a>	\$21.00	SureStep lead screw flange nut, replacement, triangular, 8mm/rev, 8mm lead screw diameter. For use with SureStep STP-LE series screw code E linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFF</a>	\$24.00	SureStep lead screw flange nut, replacement, triangular, 10.5 mm/rev, 10mm lead screw diameter. For use with SureStep STP-LE series screw code F linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFG</a>	\$37.00	SureStep lead screw flange nut, replacement, triangular, 2mm/rev, 12mm lead screw diameter. For use with SureStep STP-LE series screw code G linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFH</a>	\$37.00	SureStep lead screw flange nut, replacement, triangular, 6mm/rev, 12mm lead screw diameter. For use with SureStep STP-LE series screw code H linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NTFK</a>	\$37.00	SureStep lead screw flange nut, replacement, triangular, 1in/rev, 0.5 inch lead screw diameter. For use with SureStep STP-LE series screw code K linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFA</a>	\$21.00	SureStep lead screw flange nut, round, 0.25 in/rev, 0.25 inch lead screw diameter. For use with SureStep STP-LE series screw code A linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFB</a>	\$21.00	SureStep lead screw flange nut, round, 0.5 in/rev, 0.25 in lead screw diameter. For use with SureStep STP-LE series screw code B linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFC</a>	\$21.00	SureStep lead screw flange nut, round, 3mm/rev, 6.5 mm lead screw diameter. For use with SureStep STP-LE series screw code C linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFD</a>	\$21.00	SureStep lead screw flange nut, round, 1.25 mm/rev, 8mm lead screw diameter. For use with SureStep STP-LE series screw code D linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFE</a>	\$21.00	SureStep lead screw flange nut, round, 8mm/rev, 8mm lead screw diameter. For use with SureStep STP-LE series screw code E linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFF</a>	\$24.00	SureStep lead screw flange nut, round, 10.5 mm/rev, 10mm lead screw diameter. For use with SureStep STP-LE series screw code F linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFG</a>	\$37.00	SureStep lead screw flange nut, round, 2mm/rev, 12mm lead screw diameter. For use with SureStep STP-LE series screw code G linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFH</a>	\$37.00	SureStep lead screw flange nut, round, 6mm/rev, 12mm lead screw diameter. For use with SureStep STP-LE series screw code H linear actuators.	<a href="#">PDF</a>
<a href="#">STP-LA-NRFK</a>	\$37.00	SureStep lead screw flange nut, round, 1in/rev, 0.5 inch lead screw diameter. For use with SureStep STP-LE series screw code K linear actuators.	<a href="#">PDF</a>

All STP-LA series nuts are formed from TECAFORM AD AF (a PTFE-infused polymer) and require no lubrication. Using any sort of lubricant is not recommended as it will eventually dry out and contaminate the screw.

SureStep Linear Actuators have a "Screw Code" built into the part number. Each screw has a specific diameter and lead (pitch). The "Y" variable in the Linear Actuator part numbers below represents the Screw Code:

STP-LE17-xYxxxxx

STP-LE23-xYxxxxx

To find a compatible nut, match the actuator's Screw Code to the nut screw code ("Y" below):

STP-LA-xxxY

Example: An [STP-LA-NTFB](#) nut will fit onto an [STP-LE17-3B06ADJ](#) actuator.



[STP-LA-NTFA](#)



[STP-LA-NRFK](#)

### NEMA 17 Linear Actuator Compatible Encoders

NEMA 17 Compatible Encoders	
CUI Devices Configurable Encoders	SureStep Encoders
<a href="#">AMT102-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC1</a> (1000ppr, Line Driver)
<a href="#">AMT103-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC3</a> (400ppr, Line Driver)
<a href="#">AMT112S-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC2</a> (1000ppr, Push-pull)
<a href="#">AMT112Q-V</a> (config. ppr, Line Driver)	<a href="#">STP-MTRA-ENC4</a> (400ppr, Push-pull)
<a href="#">AMT312D-V</a> (config. ppr, Line Driver)	<a href="#">STP-MTRA-ENC9</a> (config. ppr, Line Driver)
<a href="#">AMT312S-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC10</a> (config. ppr, Push-pull)

### NEMA 23 Linear Actuator Compatible Encoders

NEMA 23 Compatible Encoders	
CUI Devices Configurable Encoders	SureStep Encoders
<a href="#">AMT102-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC5</a> (1000ppr, Line Driver)
<a href="#">AMT103-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC7</a> (400ppr, Line Driver)
<a href="#">AMT112S-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC6</a> (1000ppr, Push-pull)
<a href="#">AMT112Q-V</a> (config. ppr, Line Driver)	<a href="#">STP-MTRA-ENC8</a> (400ppr, Push-pull)
<a href="#">AMT312D-V</a> (config. ppr, Line Driver)	<a href="#">STP-MTRA-ENC9</a> (config. ppr, Line Driver)
<a href="#">AMT312S-V</a> (config. ppr, Push-pull)	<a href="#">STP-MTRA-ENC10</a> (config. ppr, Push-pull)



# Stepping System Accessories

## AMT Series Stepping System Encoders

AMT Series Encoder Compatibility							
Part Number	Max PPR	Bore Diameter	Output Type	PLC Compatibility	Encoder Cable	Configuration Cable	Motor Compatibility
<a href="#">AMT102-V</a>	2048	2mm, 3mm, 1/8", 4mm, 3/16", 5mm, 6mm, 1/4", 8mm	push-pull (totem) (radial connector)	BRX <sup>1</sup> , CLICK C0-1xDxE-D2	CUI-3131-x CUI-3132-1FT	n/a	NEMA 14, 17, 23 dual-shaft
<a href="#">AMT103-V<sup>2</sup></a>	2048		push-pull (totem) (axial connector)		CUI-435-x CUI-3934-6FT		
<a href="#">AMT112S-V</a>	4096		push-pull (totem)		AMT-17C-1-x		
<a href="#">AMT112Q-V</a>	4096		line driver (differential)	P2-HSI, P3-HSI, BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-17C-1-x	AMT-PGRM-17C	
<a href="#">AMT312D-V</a>	4096		line driver (differential) encoder+commutation	P2-HSI, P3-HSI, BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-17C-1-x	AMT-PGRM-17C	
<a href="#">AMT312S-V</a>	4096		push-pull (totem) encoder+commutation	BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-17C-1-x	AMT-PGRM-18C	
<a href="#">AMT132S-V</a>	4096		push-pull (totem)		AMT-18C-3-x		
<a href="#">AMT132Q-V</a>	4096	9mm, 3/8", 10mm, 11mm, 12mm, 1/2", 13mm, 14mm, 5/8"	line driver (differential)	P2-HSI, P3-HSI, BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-18C-3-x	AMT-PGRM-18C	NEMA 34 and 42 <sup>3</sup> dual-shaft  (Does not fit STP-MTRAC-34 motors)
<a href="#">AMT332S-V</a>	4096		push-pull (totem) encoder+commutation	BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-18C-3-x		
<a href="#">AMT332D-V</a>	4096		line driver (differential) encoder+commutation	P2-HSI, P3-HSI, BRX <sup>1</sup> , CLICK C0-1xDxE-D2	AMT-18C-3-x		

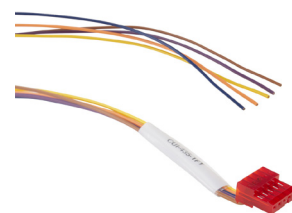
*Note: For specific AutomationDirect PLC and step motor model compatibility, please see Appendix A in the SureStep User Manual.*

1 - Requires FC-ISO-C (see wiring diagrams for DIP switch settings).

2 - For AMT103-V to maintain NEMA23 compatibility, CUI-KIT-2 must be purchased to use the standard wide base for mounting.

3 - For STP-MTRAC(H)-42 series motors, encoder mounting kit STP-MTRA-42ENC is required.

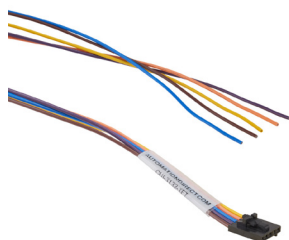
AMT Series Encoder Signal Cables			
Part Number	Price	Description	Drawing
<a href="#">CUI-3132-1FT</a>	\$5.00	CUI Devices encoder cable, 5-pin connector to pigtail, 1ft cable length. For use with CUI Devices AMT102 encoders.	<a href="#">PDF</a>
<a href="#">CUI-3131-6FT</a>	\$10.50	CUI Devices encoder cable, 5-pin connector to pigtail, shielded, twisted pair, 6ft cable length. For use with CUI Devices AMT102 encoders.	<a href="#">PDF</a>
<a href="#">CUI-3131-10FT</a>	\$30.00	CUI Devices encoder cable, 5-pin connector to pigtail, shielded, twisted pair, 10ft cable length. For use with CUI Devices AMT102 encoders.	<a href="#">PDF</a>
<a href="#">CUI-3131-20FT</a>	\$49.00	CUI Devices encoder cable, 5-pin connector to pigtail, shielded, twisted pair, 20ft cable length. For use with CUI Devices AMT102 encoders.	<a href="#">PDF</a>
<a href="#">CUI-435-1FT</a>	\$5.50	CUI Devices encoder cable, 5-pin connector to pigtail, 1ft cable length. For use with CUI Devices AMT103 encoders.	<a href="#">PDF</a>
<a href="#">CUI-3934-6FT</a>	\$26.50	CUI Devices encoder cable, 5-pin connector to pigtail, shielded, twisted pair, 6ft cable length. For use with CUI Devices AMT103 encoders.	<a href="#">PDF</a>
<a href="#">CUI-435-10FT</a>	\$22.00	CUI Devices encoder cable, 5-pin connector to pigtail, 10ft cable length. For use with CUI Devices AMT103 encoders.	<a href="#">PDF</a>
<a href="#">CUI-435-20FT</a>	\$30.00	CUI Devices encoder cable, 5-pin connector to pigtail, 20ft cable length. For use with CUI Devices AMT103 encoders.	<a href="#">PDF</a>



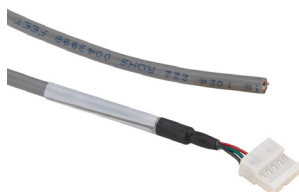
CUI-435-1FT  
CUI-435-10FT  
CUI-435-20FT



CUI-3131-6FT  
CUI-3131-10FT  
CUI-3131-20FT



CUI-3132-1FT



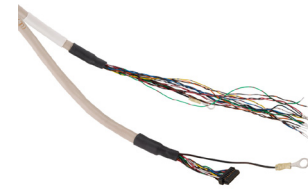
CUI-3934-6FT



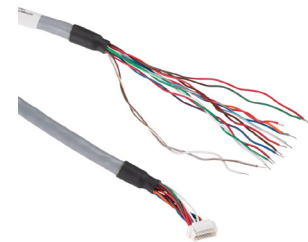
# Stepping System Accessories

## AMT Series Stepping System Encoders

AMT Series Encoder Signal Cables			
Part Number	Price	Description	Drawing
<a href="#"><u>AMT-17C-1-036</u></a>	\$40.00	CUI Devices encoder cable, 17-pin connector to pigtail, shielded, twisted pair, 3ft cable length. For use with CUI Devices AMT112 and AMT312 encoders.	<a href="#"><u>PDF</u></a>
<a href="#"><u>AMT-17C-1-072</u></a>	\$81.00	CUI Devices encoder cable, 17-pin connector to pigtail, shielded, twisted pair, 6ft cable length. For use with CUI Devices AMT112 and AMT312 encoders.	<a href="#"><u>PDF</u></a>
<a href="#"><u>AMT-17C-1-120</u></a>	\$121.00	CUI Devices encoder cable, 17-pin connector to pigtail, shielded, twisted pair, 10ft cable length. For use with CUI Devices AMT112 and AMT312 encoders.	<a href="#"><u>PDF</u></a>
<a href="#"><u>AMT-18C-3-036</u></a>	\$27.50	CUI Devices encoder cable, 18-pin connector to pigtail, shielded, twisted pair, 3ft cable length. For use with AMT13 and AMT33 encoders.	<a href="#"><u>PDF</u></a>
<a href="#"><u>AMT-18C-3-072</u></a>	\$67.00	CUI Devices encoder cable, 18-pin connector to pigtail, shielded, twisted pair, 6ft cable length. For use with AMT13 and AMT33 encoders.	<a href="#"><u>PDF</u></a>
<a href="#"><u>AMT-18C-3-120</u></a>	\$96.00	CUI Devices encoder cable, 18-pin connector to pigtail, shielded, twisted pair, 10ft cable length. For use with AMT13 and AMT33 encoders.	<a href="#"><u>PDF</u></a>



**AMT-17C-1-036  
AMT-17C-1-072  
AMT-17C-1-120**



**AMT-18C-3-036  
AMT-18C-3-072  
AMT-18C-3-120**

AMT Series Encoders Programming Cables		
Part Number	Price	Description
<a href="#"><u>AMT-PGRM-17C</u></a>	\$27.00	CUI Devices programming cable, miniB-USB to 17-pin connector, 1ft cable length. For use with CUI Devices AMT112 and AMT312 encoders.
<a href="#"><u>AMT-PGRM-18C</u></a>	\$24.50	CUI Devices programming cable, miniB-USB to 18-pin connector, 1ft cable length. For use with CUI Devices AMT13 and AMT33 encoders.



**AMT-PGRM-17C**



**AMT-PGRM-18C**



# Stepping System Accessories

## SureStep® Stepping System Encoders

Sure Step Series Encoder Compatibility						
Part Number	PPR	Bore Diameter	Output Type	Encoder Cable	PLC Compatibility	Motor Compatibility
<a href="#"><u>STP-MTRA-ENC1</u></a>	1000	5mm	Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	STP-MTRx-14xxxD STP-MTRx-14xxxE STP-MTRx-17xxxD STP-MTRx-17xxxE Standard STP-MTRD-xxxxE
<a href="#"><u>STP-MTRA-ENC2</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC3</u></a>	400		Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC4</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC5</u></a>	1000	0.25 inch	Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	STP-MTRx-23xxxD STP-MTRx-23xxxE STP-MTRAC-23xxxD
<a href="#"><u>STP-MTRA-ENC6</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC7</u></a>	400		Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC8</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC11</u></a>	1000	0.375 inch	Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	STP-MTRAC-34xxxD
<a href="#"><u>STP-MTRA-ENC12</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC13</u></a>	400		Line Driver	STP-CBL-EAxx	P2-HSI, P3-HSI, BRX*, CLICK C0-1xDxE-D*	
<a href="#"><u>STP-MTRA-ENC14</u></a>			Push-pull (totem)	STP-CBL-EDxx	BRX*, CLICK C0-1xDxE-D*	

\* Requires FC-ISO-C