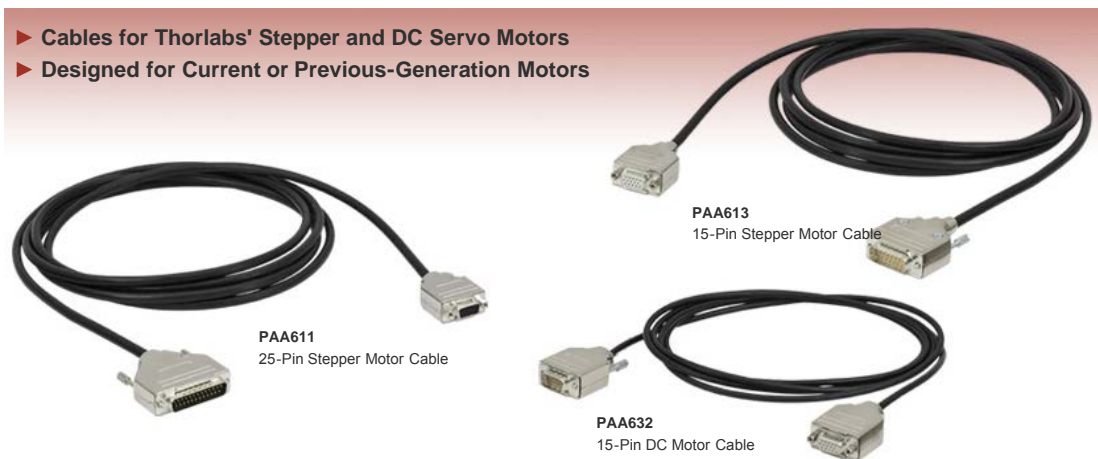


## PAA621 - June 12, 2015

Item # PAA621 was discontinued on June 12, 2015. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### STEPPER AND DC SERVO MOTOR DRIVE CABLES



[Hide Overview](#)

#### OVERVIEW

##### Stepper Motor Cables

Thorlabs offers a variety of cables to support several stepper motor actuator and controller combinations. Supported stepper motors include our ZST, ZFS, and DRV actuators; supported controllers include our BSC benchtop controllers, our TST101 T-Cube Controller, and our MST602 Rack Control Module. In order to see which cable is compatible with a given combination of stepper motor and controller, please see the table below. The pin assignment for each cable is given in the *Pin Diagrams* tab. Please note that these cables cannot be used with motors and controllers that do not match their pin assignment, even if the connectors are the same.

##### DC Motor Cables

The PAA632 is a 2.5 m cable for our Z8 series of DC motor actuators. This cable is intended to be used with the TDC001 T-Cube DC Servo Motor Controller. The pin assignment for this cable is given in the *Pin Diagrams* tab. Although it uses a 15-pin connector, this cable is not compatible with any of our stepper motors.

#### Controller

			-	-	
	BSC Benchtop Controller and MST602 Rack Controller	TST101 T-Cube Controller	Previous Generation Controller with Female DB25 Connector <sup>a</sup>	Previous Generation Controller with Female 8-Pin LEMO Connector <sup>a</sup>	TDC001 T-Cube Controller <sup>b</sup>
	PAA612 (1 m) or PAA613 (3 m)	PAA614 (1 m) <sup>c</sup>	PAA611 (3 m)	PAA621 (3 m)	-
<b>DRV Stepper Motor Actuators</b>					
	-	PAA614 (1 m)	-	-	-
<b>ZST and ZFS Stepper Motor Actuators</b>					
	-	-	-	-	PAA632 (2.5 m)
<b>Z8 DC Servo Motor Actuators</b>					
	-	-	PAA620 (3 m)	-	-
<b>Previous Generation Stepper Motor with Male 8-Pin LEMO Connector<sup>a</sup></b>					

a. Use our search engine at the top of this webpage to find information about previous generation motors and controllers. Consult the manual for these products to ensure compatibility with a given cable.

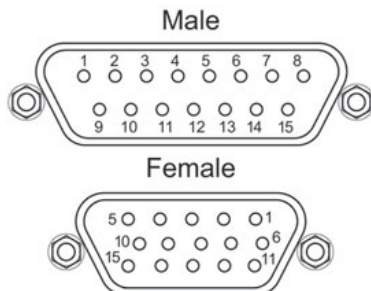
b. Green shading indicates hardware for DC servo motors.

c. The TST101 T-Cube Controller can be used to drive our DRV Stepper Motor Actuators at a reduced velocity.

PIN DIAGRAMS

**PAA612 and PAA613 Stepper Motor Cables**

DA15-Pin Male D-type to DE15-Pin Female D-Type



DA15 Male Pin	DE15 Female Pin	Description
9	3	Forward Limit Switch
10	2	Reverse Limit Switch
11 and 12	1	Limit Switch Ground
8	6	Motor Phase A-
15	7	Motor Phase A+
14	5	Motor Phase B+
7	4	Motor Phase B-
5	13	5 V

**PAA632 DC Servo Motor Cable**

DE15-Pin Male D-Type to DE15-Pin Female D-Type



DE15 Male Pin	DE15 Female Pin	Description
1	1	Ground
2	2	Forward Limit Switch
3	3	Reverse Limit Switch
5	5	Motor -
7	7	Motor +
10	10	5 V Encoder Supply
11	11	Encoder Channel A
13	13	Encoder Channel B

**PAA614 Stepper Motor Cable**

DE15-Pin Male D-Type to DE15-Pin Female D-Type

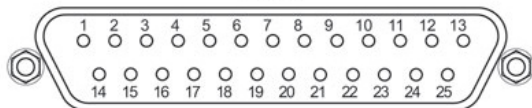


DE15 Male Pin	DE15 Female Pin	Description
1	1	Ground
2	2	CCW Limit Switch
3	3	CW Limit Switch
4	4	Motor Phase B -
5	5	Motor Phase B +
6	6	Motor Phase A-
7	7	Motor Phase A+
10	10	+5 V DC
15	15	Ground

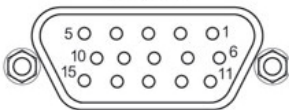
### PAA611 Legacy Stepper Motor Cable

DB25-Pin Male D-type to DE15-Pin Female D-Type

#### Male



#### Female

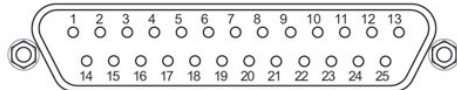


DB25 Male Pin	DE15 Female Pin	Description
2	13	+ 5V
7	3	Forward Limit Switch
8	2	Reverse Limit Switch
9	1	Limit Switch Ground
22	6	Motor Phase A-
23	7	Motor Phase A+
24	5	Motor Phase B+
25	4	Motor Phase B-

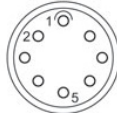
### PAA620 Legacy Stepper Motor Cable

DB25-Pin Male D-type to 8 Pin Female LEMO

#### Male



#### Female



DB25 Male Pin	Female LEMO Pin	Description
7	3	Forward Limit Switch
9	1	Limit Switch Ground
22	7	Motor Phase A-
23	6	Motor Phase A+
24	5	Motor Phase B+
25	4	Motor Phase B-

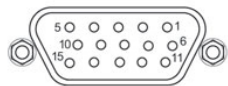
### PAA621 Legacy Stepper Motor Cable

8 Pin Male LEMO to DE15-Pin Female D-Type

#### Male



#### Female



Male LEMO Pin	DE15 Female Pin	Description
2	1	Limit Switch Ground
1	2	Limit Switch Ground
3	3	Forward Limit Switch
4	4	Motor Phase B-
5	5	Motor Phase B+
7	6	Motor Phase A-
6	7	Motor Phase A+
-	15	Ground (Braid)
8	-	Not Connected

[Hide Stepper and DC Servo Motor Drive Cables](#)

**Stepper and DC Servo Motor Drive Cables**

Part Number	Description	Price	Availability
PAA612	APT Stepper Motor Cable, DA15 Male to DE15 Female, 1 m	\$56.90	Today
PAA613	APT Stepper Motor Cable, DA15 Male to DE15 Female, 3 m	\$68.20	Today
PAA614	NEW! Customer Inspired! APT Stepper Motor Cable, DE15 Male to DE15 Female, 1 m	\$55.00	Today
PAA632	APT DC Servo Motor Cable for Z8 Motors, DE15 Male to DE15 Female, 2.5 m	\$54.40	Today

[Hide Stepper Motor Drive Cables for Previous Generation Components](#)

**Stepper Motor Drive Cables for Previous Generation Components**

Part Number	Description	Price	Availability
PAA611	APT Stepper Motor Cable, DB25 Male to DE15 Female, 3 m, Legacy	\$63.70	3-5 Days
PAA620	APT Stepper Motor Cable, DB25 Male to 8-Pin LEMO Female, 3 m, Legacy	\$96.30	3-5 Days
PAA621	APT Stepper Motor Cable, 8-Pin LEMO Male to DE15 Female, 3 m, Legacy	\$99.90	3-5 Days

Visit the [Stepper and DC Servo Motor Drive Cables](#) page for pricing and availability information:  
[http://www.thorlabs.com/newgrouppage9.cfm?objectgroup\\_id=1104](http://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=1104)