

# XPS Series

## Cable Kits for Direct Drive Motor Stages



# Warranty

Newport Corporation warrants this product to be free from defects in material and workmanship for a period of 1 year from the date of shipment. If found to be defective during the warranty period, the product will either be repaired or replaced at Newport's discretion.

To exercise this warranty, write or call your local Newport representative, or contact Newport headquarters in Irvine, California. You will be given prompt assistance and return instructions. Send the instrument, transportation prepaid, to the indicated service facility. Repairs will be made and the instrument returned, transportation prepaid. Repaired products are warranted for the balance of the original warranty period, or at least 90 days.

## Limitation of Warranty

This warranty does not apply to defects resulting from modification or misuse of any product or part.



### CAUTION

**Please return equipment in the original (or equivalent) packing.**

**You will be responsible for damage incurred from inadequate packaging if the original packaging is not used.**

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### CAUTION

**Warranty does not apply to damages resulting from an incorrect usage, an improper grounding or the modification of the motorized drive or any part thereof.**

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This warranty is in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular use. Newport Corporation shall not be liable for any indirect, special, or consequential damages.

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# Cable Kits for Direct Drive Motor Stages XPS Series

## 1.0 Introduction

This document describes the cable kits necessary to connect your Newport stage to your XPS-Q, XPS-RL or XPS-D controller.

### RECOMMENDATION

We recommend you call your Motion Control Newport representative if you are unsure of your choice.



### WARNING

The cables included in these kits are shielded correctly. For a correct operation, make sure to lock connectors (ground continuity provided by the cable).



### WARNING

Keep the motor cable at a safe distance from other electrical cables in your environment to avoid potential cross talk.

**2.0 Cable Kits**

**2.1 Selection Table**

Below is the table that allows you to find the cable kit for connecting your Newport stage to the XPS controllers, following the motor driver.



Stage	XPS-Q or XPS-RL &		XPS-DRV02	XPS-D &	
	XPS-DRV02	XPS-EDBL		XPS-DRV11	XPS-EDBL
ILS-LM-S	XPS-RK11	XPS-RK13	XPS-DK26	XPS-DK21	XPS-DK23
IMS-LM-S	XPS-RK12	XPS-RK14	–	XPS-DK22	XPS-DK24
RGV100BL-S	XPS-RK11	–	–	XPS-DK21	–
RGV100HL-S	XPS-RK11	XPS-RK13	–	XPS-DK21	XPS-DK23
RGV160BL-S	–	XPS-RK15	–	–	XPS-DK25
XML-S	XPS-RK12	XPS-RK14	–	XPS-DK22	XPS-DK24
XMS-S	XPS-RK12	–	–	XPS-DK22	–

**2.2 Kit Descriptions**

Each kit includes several cables that allow to connect the motor, encoder, end-of-runs,... to the controller. The table below indicates the reference of these cables.



Cable Kit	Cable References		
	Encoder + End-of-Runs	Motor (+ Thermistor)	End-of-Runs (+ Thermistor)
XPS-RK11	E3763x <sup>(1)</sup>	E4025x <sup>(1)</sup>	–
XPS-RK12	E3763x <sup>(1)</sup>	E3839x <sup>(1)</sup>	E3840x <sup>(1)</sup>
XPS-RK13	E3763x <sup>(1)</sup>	EDBCABLE-M2	–
XPS-RK14	E3763x <sup>(1)</sup>	EDBCABLE-M1	EDBCABLE-E1
XPS-RK15	E3763x <sup>(1)</sup>	E4949x <sup>(1)</sup>	–
XPS-DK21	E5775x <sup>(1)</sup>	E5777x <sup>(1)</sup>	–
XPS-DK22	E5775x <sup>(1)</sup>	E5776x <sup>(1)</sup>	–
XPS-DK23	E5775x <sup>(1)</sup>	EDBCABLE-M2	–
XPS-DK24	E5775x <sup>(1)</sup>	EDBCABLE-M1	EDBCABLE-E1
XPS-DK25	E5775x <sup>(1)</sup>	E4949x <sup>(1)</sup>	–
XPS-DK26	E5775x <sup>(1)</sup>	E4025x <sup>(1)</sup>	–

<sup>1)</sup> The low case letter "x" at the end of the reference represents the revision index of the cable and can therefore be modified at any time without notice.

**WARNING**



**A label sticked on the connectors of most cables indicates its function.**

**Be careful to properly connect each cable in the appropriate stage and controller connectors.**

**The cable diagrams in the following chapter indicate the stage and controller sides of the cable connectors.**

3.0 Cables



**WARNING**

Always turn the controller's power OFF before connecting to a stage.

**3.1 E3763x: Encoder Cable**



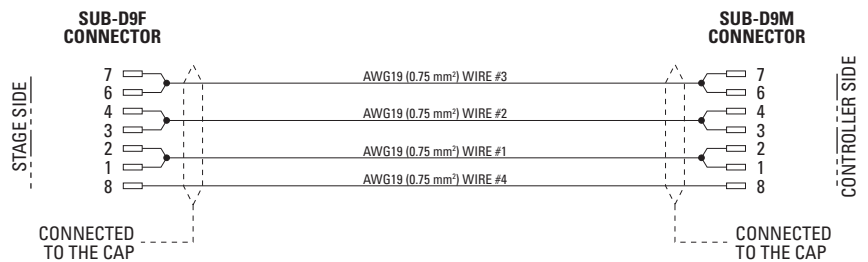
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D15F
  - Controller side: SUB-D15M
- Outer diameter: .24 in (6 mm)
- Min. static bending radius: .79 in (20 mm)
- Min. dynamic bending radius: 2.95 in (75 mm)



**3.2 E3839x: Motor Cable**



- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D9F
  - Controller side: SUB-D9M
- Outer diameter: .28 in (7 mm)
- Min. dynamic bending radius: 2.76 in (70 mm)



**3.3 E3840x: End-of-Run & Thermistor Cable**



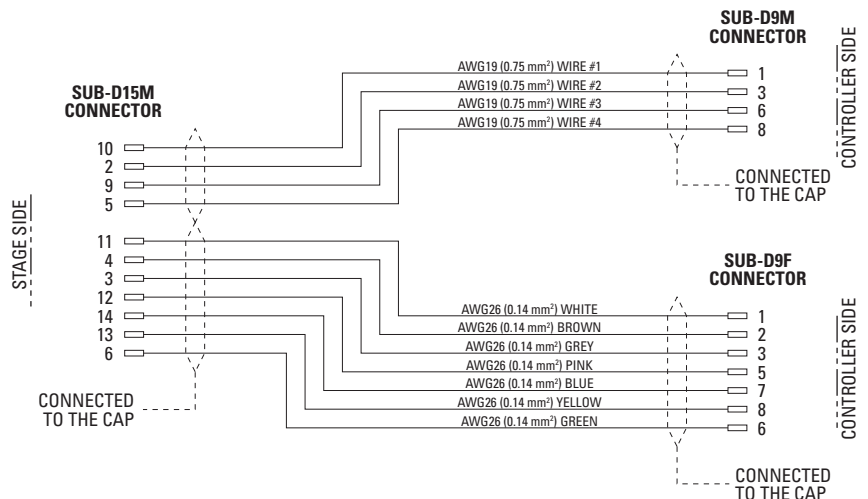
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D9M
  - Controller side: SUB-D9F
- Outer diameter: .28 in (7 mm)
- Min. dynamic bending radius: 1.77 in (45 mm)



**3.4 E4025x: Motor, End-of-Run & Thermistor Cable**



- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D15M
  - Controller side: SUB-D9M
  - Outer diameter: .28 in (7 mm)
  - Min. dynamic bending radius: 2.76 in (70 mm)
  - Controller side: SUB-D9F
  - Outer diameter: .28 in (7 mm)
  - Min. dynamic bending radius: 1.77 in (45 mm)





### 3.5 E4949x: Motor Cable



- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: DB9W4F
  - Controller side: DB9W4M
- Outer diameter: .45 in (11.5 mm)
- Min. static bending radius: 3.39 in (86 mm)
- Min. dynamic bending radius: 4.53 in (115 mm)



### 3.6 E5775x: Encoder Cable



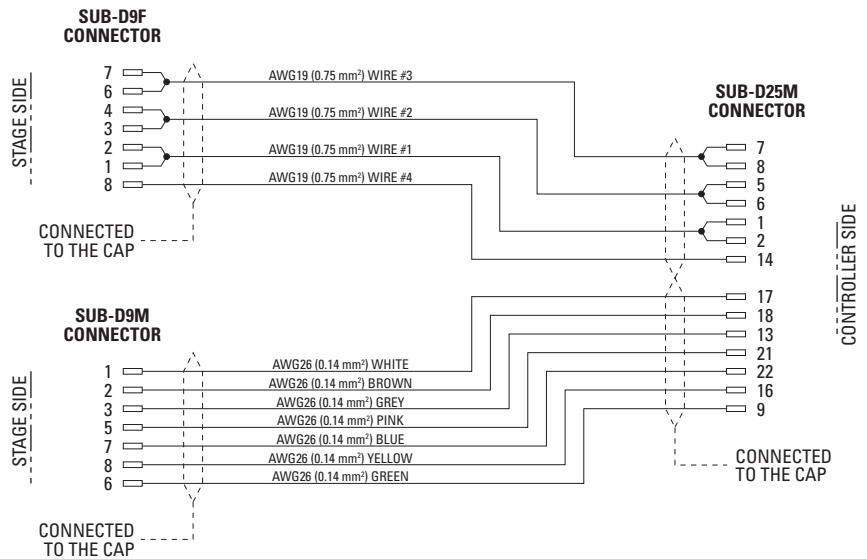
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D15F
  - Controller side: SUB-D26HDM
- Outer diameter: .24 in (6 mm)
- Min. static bending radius: .79 in (20 mm)
- Min. dynamic bending radius: 2.95 in (75 mm)



**3.7 E5776x: Motor, End-of-Run & Thermistor Cable**



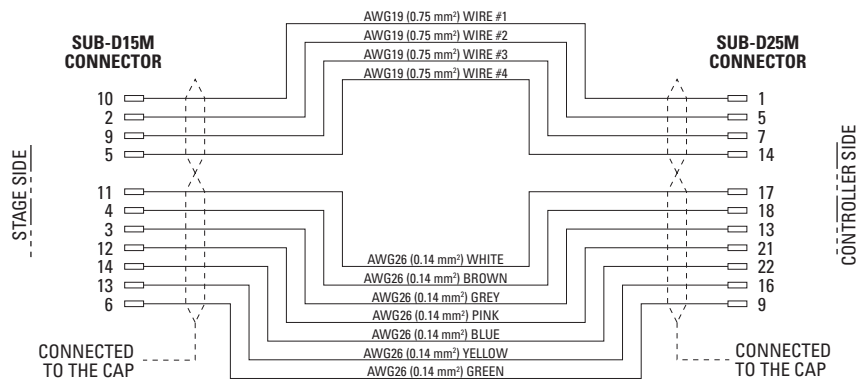
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D9F
    - Outer diameter: .28 in (7 mm)
    - Min. dynamic bending radius: 2.76 in (70 mm)
  - Stage side: SUB-D9M
    - Outer diameter: .28 in (7 mm)
    - Min. dynamic bending radius: 1.77 in (45 mm)
  - Controller side: SUB-D25M



**3.8 E5777x: Motor, End-of-Run & Thermistor Cable**



- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D15M
  - Controller side: SUB-D25M
- Outer diameter: 2 cables .28 in (7 mm)
- Min. dynamic bending radius: 2.76 in (70 mm)



### 3.9 EDBCABLE-E1: End-of-Run Cable



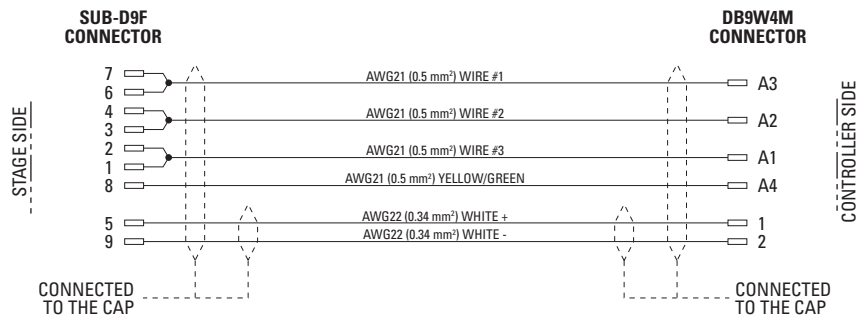
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D9M
  - Controller side: SUB-D9M
- Outer diameter: .24 in (6 mm)
- Min. dynamic bending radius: 1.77 in (45 mm)



### 3.10 EDBCABLE-M1: Motor Cable



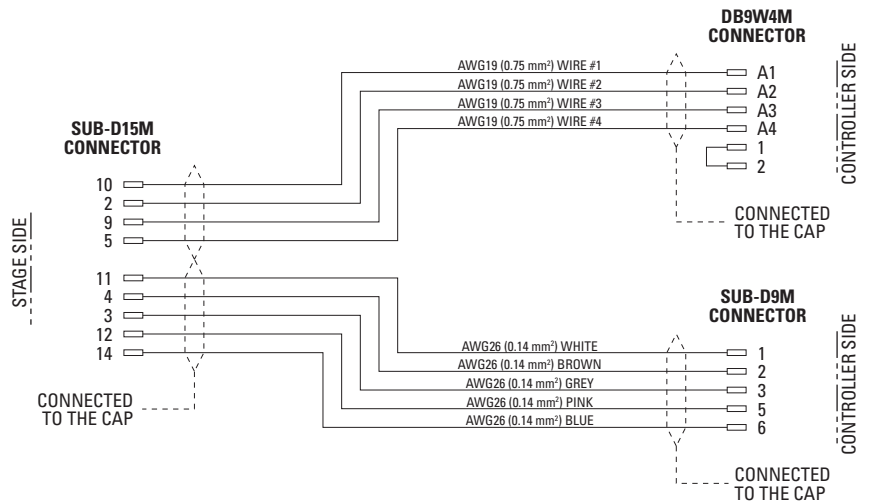
- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D9F
  - Controller side: DB9W4M
- Outer diameter: .32 in (8.2 mm)
- Min. dynamic bending radius: 3.15 in (80 mm)



**3.11 EDBCABLE-M2: Motor, End-of-Run & Thermistor Cable**



- Length: 16.4 ft (5 m)
- Connectors:
  - Stage side: SUB-D15M
  - Controller side: DB9W4M
    - Outer diameter: .28 in (7 mm)
    - Min. dynamic bending radius: 2.76 in (70 mm)
  - Controller side: SUB-D9M
    - Outer diameter: .28 in (7 mm)
    - Min. dynamic bending radius: 1.77 in (45 mm)



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# Service Form

**Your Local Representative**

Tel.: \_\_\_\_\_

Fax: \_\_\_\_\_

Name: \_\_\_\_\_

Return authorization #: \_\_\_\_\_

(Please obtain prior to return of item)

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

Country: \_\_\_\_\_

Phone Number: \_\_\_\_\_

P.O. Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

**Item(s) Being Returned:**

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

Description: \_\_\_\_\_

Reasons of return of goods (please list any specific problems): \_\_\_\_\_

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Visit Newport Online at:  
[www.newport.com](http://www.newport.com)

**North America & Asia**

Newport Corporation  
1791 Deere Ave.  
Irvine, CA 92606, USA

**Sales**

Tel.: (800) 222-6440  
e-mail: [sales@newport.com](mailto:sales@newport.com)

**Technical Support**

Tel.: (800) 222-6440  
e-mail: [tech@newport.com](mailto:tech@newport.com)

**Service, RMAs & Returns**

Tel.: (800) 222-6440  
e-mail: [service@newport.com](mailto:service@newport.com)

**Europe**

MICRO-CONTROLE Spectra-Physics S.A.S  
9, rue du Bois Sauvage  
91055 Évry CEDEX  
France

**Sales & Technical Support**

Tel.: +33 (0)1.60.91.68.68  
e-mail: [france@newport.com](mailto:france@newport.com)

**Service & Returns**

Tel.: +33 (0)2.38.40.51.55

