

## 2090-Series Motor/Actuator Cables

A wide variety of motor/actuator cables with rugged DIN connectors are available for connecting your motion control system. Standard (non-flex) motor power and feedback cables are available for all Allen-Bradley servo motors and actuators. Continuous-flex rated cables, intended for moving applications, are also available. Continuous-flex extension and standard (non-flex) transition cables are also available for your applications that require them.

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**IMPORTANT** All flying-lead feedback cables require breakout components or connector kits for drive-end terminations. Refer to Breakout Components and Connector Kits beginning on [page 65](#) for catalog numbers and descriptions.

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**IMPORTANT** Standard (non-flex) cables have a regular maintenance and installation bend radius of 10 times the cable diameter. For flexing applications, continuous-flex cables have an operational bend radius of 12 times the cable diameter.

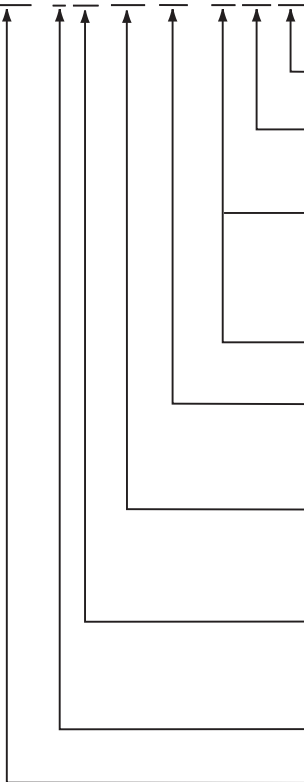
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### Catalog Numbers - 2090-Series Motor/Actuator Cable

Catalog numbers consist of various characters, each of which identifies a specific option for that component. Use the catalog numbering charts below to understand the configuration of your component. For questions regarding product availability, contact your Allen-Bradley distributor.

#### Motor Power/Brake, Feedback, and Extension Cables

**2090 - C xx Mx Dx - Cx Ax xx**



**Cable Length**

Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**Cable Type**

AA = Standard, non-flex

AF = Continuous-flex

**Encoder Type (applies to feedback cables)**

CB = Serial incremental/Serial absolute - battery backup

CC = Serial incremental/Incremental

CD = SIN/COS High-resolution/Incremental

CE = SIN/COS High-resolution/Resolver

**Wire Gauge Size (applies to power cables)**

16, 14, 12, 10, 8, 6, 4, and 2 AWG

**Drive-end Connector Type**

DF = Drive-end, flying-lead

DD = Drive-end, D-sub connector

E7 = Extension receptacle (SpeedTec ready)

**Motor-end Connector Type**

M6 = Circular plastic connector

M4 = Threaded DIN connector

M7 = SpeedTec DIN connector

**Cable Type**

PB = Motor power with brake wires

PW = Motor power only

FB = Motor feedback only

**Accessory Component**

C = Cable

**Power/Brake Cable Descriptions (standard, non-flex)**

Standard Cable Cat. No.	Description	Cable Configuration		Motor/Actuator Connector
		Motor/Actuator End	Drive End	
2090-CPBM7DF-xxAAxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power/brake wires (PB)</li> </ul>			SpeedTec DIN (M7)
2090-CPWM7DF-xxAAxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power wires only (PW)</li> </ul>			
2090-XXNPMF-xxSxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads</li> <li>• Power/brake wires</li> </ul>			Threaded DIN (M4)
2090-CPBM4E2-xxTR	<ul style="list-style-type: none"> <li>• Drive-end bayonet (E2), transition (TR) cable <sup>(1)</sup></li> <li>• Motor-end threaded DIN (M4)</li> <li>• Power/brake wires (PB)</li> </ul>			
2090-CPWM4E2-xxTR	<ul style="list-style-type: none"> <li>• Drive-end bayonet (E2), transition (TR) cable <sup>(1)</sup></li> <li>• Motor-end threaded DIN (M4)</li> <li>• Power wires only (PW)</li> </ul>			
2090-CPBM6DF-16AAxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power/brake wires (PB)</li> </ul>			Circular Plastic (M6)
2090-CPWM6DF-16AAxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power wires only (PW)</li> </ul>			
2090-DANPT-16Sxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads</li> <li>• Power wires only</li> </ul>			Rectangular Plastic
2090-DANBT-18Sxx	Drive-end flying-lead brake wires			

(1) Threaded DIN connector (motor end) and bayonet connector for 2090-XXNPMF-Sxx cable. Refer to 2090-Series Motor Power and Feedback Transition Cables on [page 17](#).

**Power/Brake Cable Descriptions (continuous-flex)**

Continuous-flex Cable Cat. No.	Description	Cable Configuration		Motor/Actuator Connector
		Motor/Actuator End	Drive End	
2090-CPBM7DF-xxAFxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power/brake wires (PB)</li> </ul>			SpeedTec DIN (M7)
2090-CPWM7DF-xxAFxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power wires only (PW)</li> </ul>			
2090-CPBM7E7-xxAFxx	<ul style="list-style-type: none"> <li>• Drive-end (male) connector, extension (E7) <sup>(1)</sup></li> <li>• Motor-end SpeedTec DIN cable plug (M7)</li> </ul>			Threaded DIN (M4)
2090-CPBM4DF-xxAFxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power/brake wires (PB)</li> </ul>			
2090-CPWM4DF-xxAFxx	<ul style="list-style-type: none"> <li>• Drive-end flying-leads (DF)</li> <li>• Power wires only (PW)</li> </ul>			

(1) SpeedTec DIN connector (motor end) and male connector for extending SpeedTec or threaded DIN cable. Refer to SpeedTec DIN Continuous-flex Extension Cables on [page 16](#).

## Circular DIN Connector Compatibility Overview

Motors equipped with either threaded or SpeedTec circular DIN connectors are listed below. Circular DIN motor connectors rotate up to 180° and combine power and brake wires in the same connector.

### Motor Connector/Cable Plug Compatibility

Motor/Actuator Cat. No.	Connector Type	Power-only or Power/Brake Cables	Feedback Cables
MPL-A/B15xxx and MPL-A/B2xxx MPL-A/B3xxx, MPL-A/B4xxx, MPL-A/B45xxx, MPL-A/B5xxx MPL-B6xxx, MPL-B8xxx, and MPL-B9xxx MPM-A/Bxxxx MPF-A/Bxxxx RDB-Bxxxx <sup>(1)</sup> LDAT-Sxxxxxx-xDx and LDAT-Sxxxxxx-xBx <sup>(1)</sup> MPAS-A/Bxxxx and MPMA-A/Bxxxx <sup>(1)</sup> MPAR-A/Bxxxx MPAI-A/Bxxxx LDC-Cxxxxxx and LDL-xxxxxx <sup>(1)</sup>	SpeedTec-ready DIN	2090-CPxM7DF-xxAAxx 2090-CPxM7DF-xxAFxx	2090-CFBM7DF-CEAAxx 2090-CFBM7DD-CEAAxx 2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx 2090-CFBM7DF-CDAFxx
MPS-A/Bxxxx	SpeedTec-ready DIN with 3 m (9.8 ft) cable extensions		
HPK-B/Exxxxx	SpeedTec-ready DIN	Customer supplied	2090-CFBM7DF-CEAAxx 2090-CFBM7DD-CEAAxx 2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx

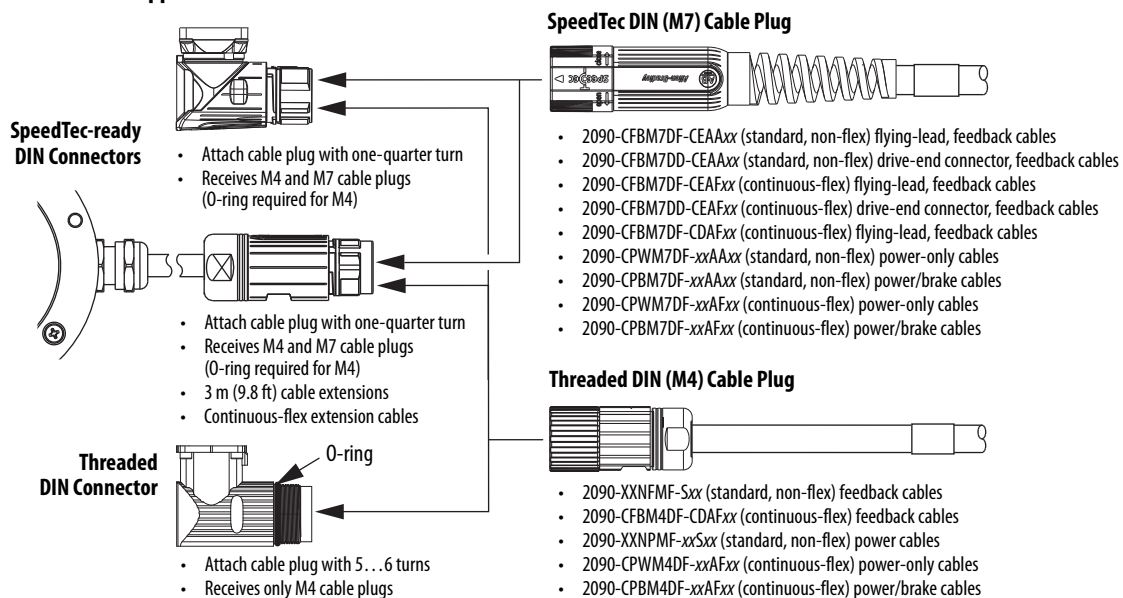
(1) The LDC-Series™ and LDL-Series™ linear motors, LDAT-Sxxxxxx-xBx linear thrusters, Bulletin MPAS and MPMA linear stages (direct-drive only), and Bulletin RDB direct-drive motors have SpeedTec-ready DIN (M7) motor connectors, but require the additional conductors included with 2090-CFBM7DF-CDAFxx (continuous-flex) and 2090-XXNFMF-Sxx standard (non-flex) cables.

### IMPORTANT

Motors equipped with SpeedTec-ready DIN (M7) connectors are fully compatible with threaded DIN (M4) cable plugs.

- SpeedTec-ready DIN motor connectors are also compatible with SpeedTec DIN (M7/E7) extension cable plugs.
- Motors equipped with threaded DIN (M4) connectors are compatible with only threaded DIN (M4) cable plugs.

### Typical Circular DIN Cable Applications



**RDD-Series Direct Drive Motors**

Motor Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
RDB-Bxxxx-7/3	2094-BCxx-Mxx-S or 2094-BMxx-S 2094-BCxx-Mxx-M or 2094-BMxx-M 2099-BMxx-S	Multi-turn High Resolution Absolute or Single-turn High Resolution Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	Shaft seal is N/A. IP65 with specified cables.

RDD-Series (400V-class) Direct Drive Motors			Power Cable Cat. No.	IP Rating
RDB-B21519, RDB-B21529			2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	Shaft seal is N/A. IP65 with specified cables.
RDB-B29014, RDB-B29016, RDB-B29024				
RDB-B2151C, RDB-B21539			2090-CPWM7DF-14AAxx (standard, non-flex) 2090-CPWM7DF-14AFxx (continuous-flex)	
RDB-B29019, RDB-B29034				
RDB-B2152C			2090-CPWM7DF-12AAxx (standard, non-flex)	
RDB-B29026				
RDB-B2153C			2090-CPWM7DF-10AAxx (standard, non-flex) 2090-CPWM7DF-10AFxx (continuous-flex)	
RDB-B29036, RDB-B41014				
RDB-B29029, RDB-B41016, RDB-B41024			2090-CPWM7DF-08AAxx (standard, non-flex) 2090-CPWM7DF-08AFxx (continuous-flex)	
RDB-B29039, RDB-B41018, RDB-B41026, RDB-B41035			2090-CPBM7DF-06AAxx (standard, non-flex)	

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).  
Cable length xx is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**HPK-Series Asynchronous Servo Motors**

Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
HPK-Bxxxx-M/S HPK-Exxxx-M/S	2198-Sxxx-ERS3 2099-BMxx-S	Multi-turn High Resolution Absolute or Single-turn High Resolution Encoder Feedback	2090-CFBM7DF-CEAAxx or 2090-CFBM7DD-CEAAxx (standard, non-flex)  2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx (continuous-flex)	Shaft seal is N/A. IP65 with specified cables.

HPK-Series Asynchronous Servo Motors			Power Cable Cat. No.
All HPK-Bxxxx or HPK-Exxxx motors			Customer Supplied

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).  
Cable length xx is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**MP-Series Integrated Linear Stages**

Actuator Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
MPAS-Axxxx-VxxSxA (ball screw) MPMA-A (ball screw)	2198-Hxxx-ERS or 2198-Hxxx-ERS2 2093-AC05-MPx or 2093-AMxx 2094-ACxx-Mxx-S or 2094-AMxx-S 2097-V3xPRx 2097-V34PRx-LM 2098-DSD-xxx	Multi-turn High Resolution Absolute Encoder Feedback	2090-CFBM7DF-CEAAxx or 2090-CFBM7DD-CEAAxx (standard, non-flex)  2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx (continuous-flex)	IP30
MPAS-Axxxx-ALMx2C (direct drive) MPMA-A (direct drive)	2093-AC05-MPx or 2093-AMxx 2094-ACxx-Mxx-S or 2094-AMxx-S 2097-V3xPRx 2098-DSD-xxx 2071-Axx	Incremental Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	
MPAS-Bxxxx-VxxSxA (ball screw) MPMA-B (ball screw)	2198-Hxxx-ERS or 2198-Hxxx-ERS2 2198-Dxxx-ERS3 2094-BCxx-Mxx-S or 2094-BMxx-S 2094-BCxx-Mxx-M or 2094-BMxx-M 2097-V3xPRx 2097-V34PRx-LM 2098-DSD-xxx	Multi-turn High Resolution Absolute Encoder Feedback	2090-CFBM7DF-CEAAxx or 2090-CFBM7DD-CEAAxx (standard, non-flex)  2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx (continuous-flex)	
MPAS-Bxxxx-ALMx2C (direct drive) MPMA-B (direct drive)	2198-Dxxx-ERS3 2094-BCxx-Mxx-S or 2094-BMxx-S 2094-BCxx-Mxx-M or 2094-BMxx-M 2097-V3xPRx 2098-DSD-xxx	Incremental Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	

MP-Series (200V-class) Integrated Linear Stages	Power Cable Cat. No.	IP Rating
MPAS-Axxxx-VxxSxA (ball screw) or MPMA-A	2090-CPxM7DF-16AAxx (standard, non-flex) 2090-CPxM7DF-16AFxx (continuous-flex)	IP30
MPAS-Axxxx-ALMx2C (direct drive) or MPMA-A	2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	

MP-Series (400V-class) Integrated Linear Stages	Power Cable Cat. No.	IP Rating
MPAS-Bxxxx-VxxSxA (ball screw) or MPMA-B	2090-CPxM7DF-16AAxx (standard, non-flex) 2090-CPxM7DF-16AFxx (continuous-flex)	IP30
MPAS-Bxxxx-ALMx2C (direct drive) or MPMA-B	2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).

Cable length xx is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**LDAT-Series Integrated Linear Thrusters**

Actuator Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
LDAT-Sxxxxxx-xDx (230V operation)	2198-Hxxx-ERS or 2198-Hxxx-ERS2 2097-V3xPRx	Absolute Linear Encoder Feedback	2090-CFBM7DF-CEAAxx or 2090-CFBM7DD-CEAAxx (standard, non-flex)	IP30
LDAT-Sxxxxxx-xDx (460V operation)	2198-Hxxx-ERS or 2198-Hxxx-ERS2 2198-Dxxx-ERS3 2097-V34PRx		2090-CFBM7DF-CEAFxx 2090-CFBM7DD-CEAFxx (continuous-flex)	
LDAT-Sxxxxxx-xBx (230V operation)	2093-AC05-MPx or 2093-AMxx 2094-ACxx-Mxx-S or 2094-AMxx-S 2097-V3xPRx 2098-DSD-xxx 2071-Axx	Incremental Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	
LDAT-Sxxxxxx-xBx (460V operation)	2198-Dxxx-ERS3 2094-BCxx-Mxx-S or 2094-BMxx-S 2094-BCxx-Mxx-M or 2094-BMxx-M 2097-V34PRx 2098-DSD-HVxxx			

LDAT-Series (230V or 460V operation) Linear Thrusters	Power Cable Cat. No.	IP Rating
LDAT-S031xxx, LDAT-S032xxx, LDAT-S033xxx	2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	IP30
LDAT-S051xxx, LDAT-S052xxx, LDAT-S053xxx, LDAT-S054xxx		
LDAT-S072xxx, LDAT-S073xxx, LDAT-S074xxx, LDAT-S076xxx-Exx		
LDAT-S102xxx, LDAT-S103xxx, LDAT-S104xxx, LDAT-S106xxx-Exx		
LDAT-S152xxx, LDAT-S153xxx, LDAT-S154xxx, LDAT-S156xxx-Exx		
LDAT-S076xxx-Dxx	2090-CPWM7DF-14AAxx (standard, non-flex) 2090-CPWM7DF-14AFxx (continuous-flex)	
LDAT-S106xxx-Dxx		
LDAT-S156xxx-Dxx		

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).

Cable length xx is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**TL-Series Electric Cylinders**

Actuator Cat. No.	Drive Compatibility	Feedback Type	Motor Feedback Cable	IP Rating
TLAR-Axxxxx	2093-AC05-MPx or 2093-AMxx 2097-V3xPRx or 2097-V3xPRx-LM 2071-Axx	Multi-turn High Resolution Absolute Encoder Feedback	2090-CFBM6DF-CBAAxx (flying-lead) standard, non-flex	IP40 <sup>(1)</sup>

TL-Series (200V-class) Electric Cylinders	Motor Power Cable	IP Rating
TLAR-Axxxxx	2090-CPBM6DF-16AAxx (power and brake) standard, non-flex  2090-CPWM6DF-16AAxx (power without brake) standard, non-flex	IP40 <sup>(1)</sup>

(1) Applies to complete unit, including rod-end seal and breather port.

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).

Cable length xx is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**LDC-Series Linear Motors**

Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
LDC-Cxxxxxx-xxTx1 (230V operation)	2093-AC05-MPx or 2093-AMxx 2094-ACxx-Mxx-S or 2094-AMxx-S 2097-V3xPRx 2098-DSD-xxx 2071-Axx	Sin/Cos or TTL Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	IP65
LDC-Cxxxxxx-xxTx1 (460V operation)	2198-Dxxx-ERS3 2094-BCxx-Mxx-S or 2094-BMxx-S 2094-BCxx-Mxx-M or 2094-BMxx-M 2097-V34PRx 2098-DSD-HVxxx			

LDC-Series (230V or 460V operation) Linear Motors		Power Cable Cat. No.	IP Rating
LDC-Cxxxxxx-xxTx1		2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	IP65

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).  
Cable length *xx* is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

**LDL-Series Linear Motors**

Cat. No.	Drive Compatibility	Feedback Type	Feedback Cable Cat. No.	IP Rating
LDL-xxxxxxx-xxTx1	2093-AC05-MPx or 2093-AMxx 2094-ACxx-Mxx-S or 2094-AMxx-S 2097-V3xPRx 2098-DSD-xxx 2071-Axx	Sin/Cos or TTL Encoder Feedback	2090-XXNFMF-Sxx (standard, non-flex) 2090-CFBM7DF-CDAFxx (continuous-flex)	IP65

LDL-Series Linear Motors		Power Cable Cat. No.	IP Rating
LDL-xxxxxxx-xxTx1		2090-CPWM7DF-16AAxx (standard, non-flex) 2090-CPWM7DF-16AFxx (continuous-flex)	IP65

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on [page 13](#).  
Cable length *xx* is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on [page 30](#).

## Technical Specifications - 2090-Series Motor/Actuator Cables

### Power Cable Specifications

Power Cables <sup>(1)</sup> Cat. No.	Cable Type/ Jacket Color	Description	Wire Size AWG	Weight, approx kg/m (lb/ft)	Standard Cable Lengths m (ft)
2090-XXNPMF-16Sxx	Standard (non-flex) cable, Industrial TPE, Black	Four conductor, 600V, shielded cable for three-phase power with additional four conductors, 18 AWG, shielded, for motor brake and spares.	16	0.276 (0.186)	01 (3.2) 07 (22.9) 25 (82.0) 02 (6.5) 09 (29.5) 30 (98.4) 03 (9.8) 12 (39.4) 40 (131.2) 04 (13.1) 15 (49.2) 60 (196.8) 05 (16.4) 20 (65.6) 90 (295.3)
2090-XXNPMF-14Sxx			14	0.315 (0.212)	
2090-CPBM7DF-16AAxx	Standard (non-flex) cable, Industrial TPE, Orange (DESINA, RAL 2003)	Four conductor, 600V, shielded cable for three-phase power with additional two conductors 18 AWG for motor brake.	16	0.212 (0.143)	
2090-CPBM7DF-14AAxx			14	0.261 (0.175)	
2090-CPBM7DF-12AAxx			12	0.349 (0.235)	
2090-CPBM7DF-10AAxx			10	0.492 (0.331)	
2090-CPBM7DF-08AAxx			8	0.708 (0.476)	
2090-CPBM7DF-06AAxx			6	1.038 (0.698)	
2090-CPBM7DF-04AAxx <sup>(2)</sup>			4	1.549 (1.041)	
2090-CPBM7DF-02AAxx <sup>(2)</sup>	2	2.166 (1.455)			
2090-CPWM7DF-16AAxx	Standard (non-flex) cable, Industrial TPE, Black	Four conductor, 600V, shielded cable for three-phase power.	16	0.136 (0.091)	
2090-CPWM7DF-14AAxx			14	0.185 (0.124)	
2090-CPWM7DF-12AAxx			12	0.248 (0.167)	
2090-CPWM7DF-10AAxx			10	0.418 (0.281)	
2090-CPWM7DF-08AAxx			8	0.644 (0.433)	
2090-CPWM6DF-16AAxx			16	0.138 (0.093)	
2090-DANPT-16Sxx	16	0.180 (0.121)	01 (3.2) 05 (16.4) 15 (49.2) 02 (6.5) 07 (22.9) 20 (65.6) 03 (9.8) 09 (29.5) 25 (82.0) 04 (13.1) 12 (39.4) 30 (98.4)		
2090-CPBM4DF-16AFxx	Continuous-flex cable	Four conductor, 600V, shielded cable for three-phase power with additional two conductors 18 AWG for motor brake.	16	0.228 (0.153)	
2090-CPBM7DF-16AFxx			16		
2090-CPBM7DF-14AFxx			14		0.289 (0.194)
2090-CPBM7DF-10AFxx	Industrial TPE, Orange (DESINA, RAL 2003)	Four conductor, 600V, shielded cable for three-phase power.	10	0.513 (0.345)	01 (3.2) 09 (29.5) 40 (131.2) 02 (6.5) 12 (39.4) 50 (164.0) 03 (9.8) 15 (49.2) 60 (196.8) 04 (13.1) 20 (65.6) 75 (264.0) 05 (16.4) 25 (82.0) 90 (295.3) 07 (22.9) 30 (98.4)
2090-CPBM7DF-08AFxx			8	0.697 (0.468)	
2090-CPWM4DF-16AFxx			16	0.154 (0.104)	
2090-CPWM7DF-16AFxx			16		
2090-CPWM7DF-14AFxx			14	0.196 (0.132)	
2090-CPWM7DF-10AFxx			10	0.452 (0.304)	
2090-CPWM7DF-08AFxx			8	0.666 (0.448)	

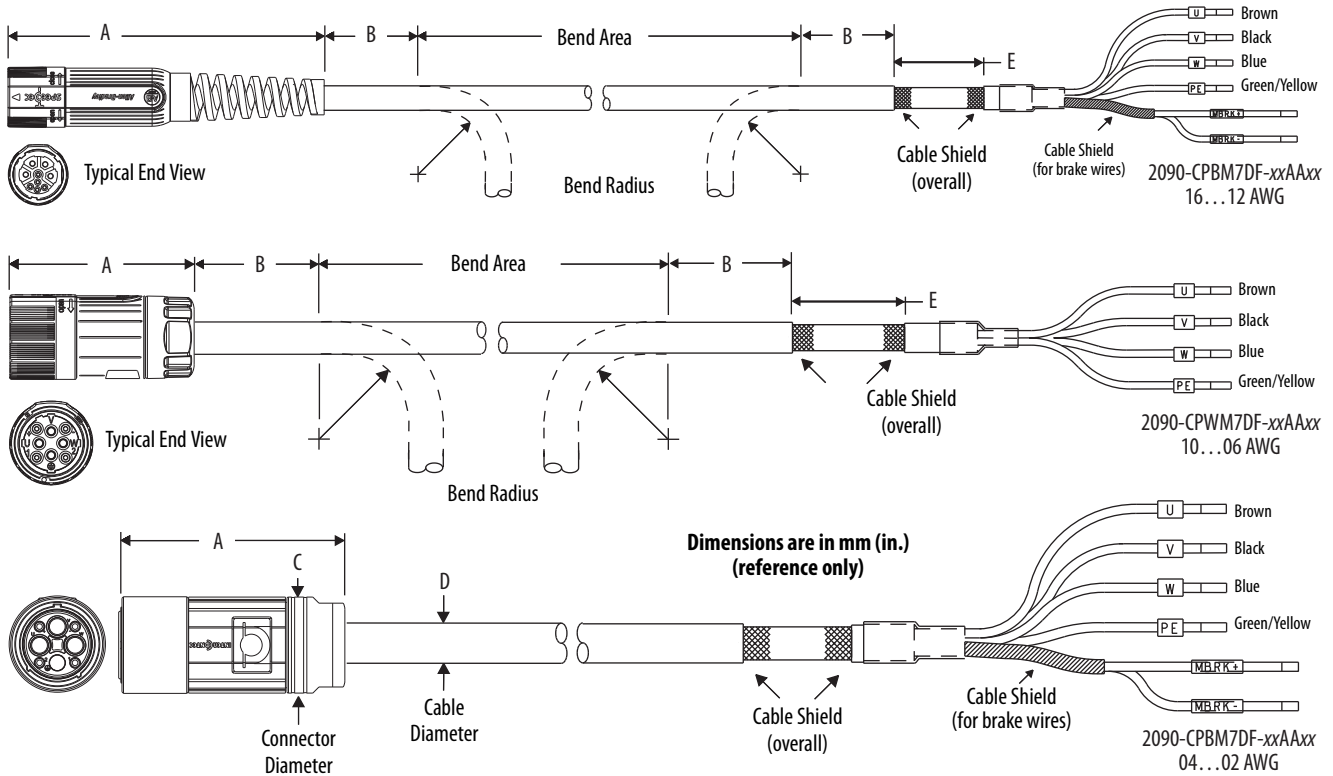
(1) 2090-CPxM4DF-xxAxxx and 2090-CPxM7DF-xxAxxx power cables are UL Listed, bulk cable, type TC-ER.

(2) For this cable, the 01 and 02 m (3.2 and 6.5 ft) standard lengths do not apply.



## Motor Power Cables

### Power Cable Dimensions, Standard, Non-flex (SpeedTec DIN connector)

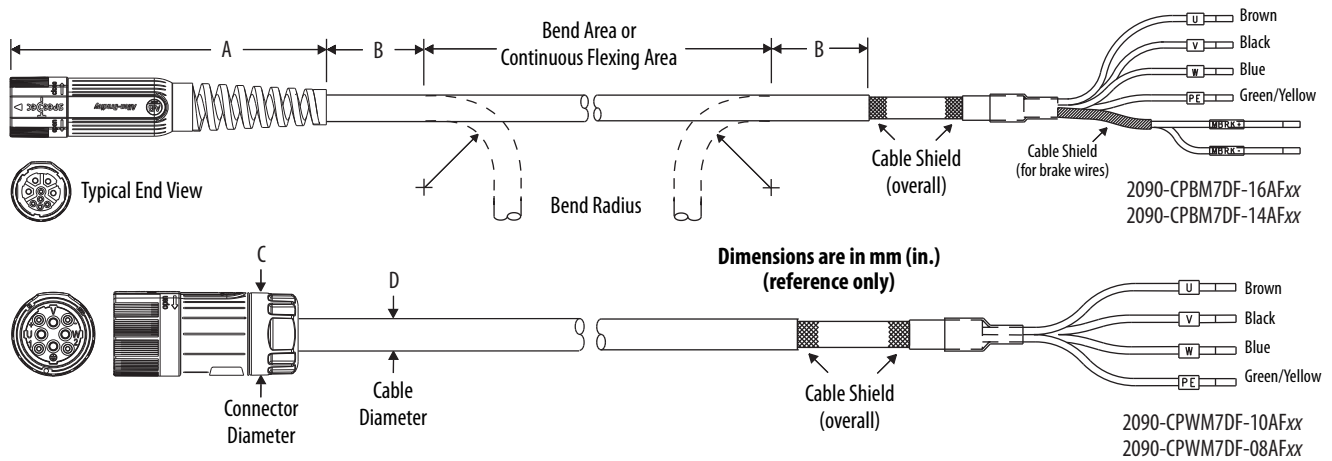


### Power Cable Dimensions (standard, non-flex)

Power Cable Cat. No.	A mm (in.)	B <sup>(1)</sup> mm (in.)	C mm (in.)	D mm (in.)	E mm (in.)
2090-CPBM7DF-16AAxx	147 (5.8)	81.2 (3.2)	28 (1.1)	11.6 (0.46)	150 (5.9)
2090-CPWM7DF-16AAxx		64.4 (2.5)		9.2 (0.36)	
2090-CPBM7DF-14AAxx		88.9 (3.5)		12.7 (0.50)	
2090-CPWM7DF-14AAxx		72.1 (2.8)		10.3 (0.40)	
2090-CPBM7DF-12AAxx	80 (3.15)	100 (3.9)		14.3 (0.56)	
2090-CPWM7DF-12AAxx		78.4 (3.1)		11.2 (0.44)	
2090-CPBM7DF-10AAxx	100 (3.9)	118 (4.6)	45 (1.8)	16.8 (0.66)	90 (3.5)
2090-CPWM7DF-10AAxx		107 (4.2)		15.3 (0.60)	
2090-CPBM7DF-08AAxx		141 (5.5)		20.1 (0.79)	
2090-CPWM7DF-08AAxx		131 (5.2)		18.7 (0.74)	
2090-CPBM7DF-06AAxx	150 (5.9)	170 (6.7)	63 (2.5)	24.3 (0.96)	
2090-CPBM7DF-04AAxx		202 (7.9)		28.8 (1.13)	
2090-CPBM7DF-02AAxx		229 (9.0)		32.7 (1.29)	

(1) Dimension B (static bend radius) is based on the cable diameter. Refer to Motor Power and Feedback Cable Bend Radius Definitions on [page 32](#) for more information.

**Power Cable Dimensions, Continuous-flex (SpeedTec DIN connector)**



**Power Cable Dimensions (continuous-flex rated)**

Power Cable Cat. No.	A mm (in.)	B <sup>(1)</sup> mm (in.)	Continuous Bend Radius <sup>(1)</sup> mm (in.)	C mm (in.)	D mm (in.)	E mm (in.)
2090-CPBM7DF-16AFxx	147 (5.8)	87.5 (3.4)	150 (5.9)	28.0 (1.1)	12.5 (0.49)	150 (5.9)
2090-CPWM7DF-16AFxx		67.9 (2.7)	116 (4.6)		9.7 (0.38)	
2090-CPBM7DF-14AFxx		95.9 (3.8)	164 (6.5)		13.7 (0.54)	
2090-CPWM7DF-14AFxx		72.8 (2.9)	125 (4.9)		10.4 (0.41)	
2090-CPBM7DF-10AFxx	100 (3.9)	125 (4.9)	214 (8.4)	45.0 (1.8)	17.8 (0.70)	90 (3.5)
2090-CPWM7DF-10AFxx		110 (4.3)	188 (7.4)		15.7 (0.62)	
2090-CPBM7DF-08AFxx		144 (5.7)	247 (9.7)		20.6 (0.81)	
2090-CPWM7DF-08AFxx		141 (5.5)	242 (9.5)		20.2 (0.79)	

(1) Dimension B (static bend radius) and Continuous Bend Radius are based on the cable diameter. Refer to Motor Power and Feedback Cable Bend Radius Definitions on [page 32](#) for more information.

## 2090-Series Bulkhead Adapter Kits

These bulkhead adapter kits let you secure your cables as they pass through the cabinet. Adapter kits apply to 2090-Series motor/actuator cables and 2090-Series integrated drive-motor hybrid cables.

### 2090-Series Motor/Actuator Power Cable Compatibility

Bulkhead Adapter Cat. No.	Standard (non-flex) Power Cable Cat. No.	Continuous-flex Power Cable Cat. No.	Description		Connector Diameter mm (in.)	
2090-KPB47-12CF	2090-CPWM7DF-16AAxx	2090-CPWM7DF-16AFxx	Power only	SpeedTec DIN	28.0 (1.1)	
	2090-CPWM7DF-14AAxx	2090-CPWM7DF-14AFxx				
	2090-CPWM7DF-12AAxx	N/A				
	2090-CPBM7DF-16AAxx	2090-CPBM7DF-16AFxx	Power/brake			
	2090-CPBM7DF-14AAxx	2090-CPBM7DF-14AFxx				
	2090-CPBM7DF-12AAxx	N/A				
	N/A	2090-CPBM7E7-16AAxx				
	N/A	2090-CPBM7E7-14AAxx	Power only			Threaded DIN
	N/A	2090-CPWM4DF-16AFxx	Power/brake			
	2090-XXNPMF-16Sxx	N/A				
N/A	2090-CPBM4DF-16AFxx					
2090-KPB47-06CF	2090-CPWM7DF-10AAxx	2090-CPWM7DF-10AFxx	Power only	SpeedTec DIN	45.0 (1.8)	
	2090-CPWM7DF-08AAxx	2090-CPWM7DF-08AFxx	Power/brake			
	2090-CPBM7DF-10AAxx	2090-CPBM7DF-10AFxx				
	2090-CPBM7DF-08AAxx	2090-CPBM7DF-08AFxx				
	2090-CPBM7DF-06AAxx	N/A				

### 2090-Series Motor/Actuator Feedback Cable Compatibility

Bulkhead Adapter Cat. No.	Standard (non-flex) Feedback Cable Cat. No.	Continuous-flex Feedback Cable Cat. No.	Description		Connector Diameter mm (in.)
2090-KPB47-12CF	2090-CFBM7DF-CEAAxx	2090-CFBM7DF-CEAFxx	Feedback	SpeedTec DIN	28.0 (1.1)
	2090-CFBM7DD-CEAAxx	2090-CFBM7DD-CEAFxx			
	N/A	2090-CFBM7DF-CDAFxx			
	N/A	2090-CFBM7E7-CDAFxx			
	N/A	2090-CFBM7E7-CEAFxx		Threaded DIN	
2090-CFBM4DF-CEAAxx	N/A				
N/A	2090-CFBM4DF-CDAFxx				
2090-KFB47-CF	2090-XXNFMF-Sxx	N/A			26.0 (1.0)

### 2090-Series Integrated Motor-Drive Hybrid Cable Compatibility

Bulkhead Adapter Cat. No.	Hybrid Cable Cat. No.	Description		Connector Diameter mm (in.)
2090-KPB47-12CF	2090-CHBIFS8-12AAxx	Hybrid	SpeedTec	25.4 (1.0)
	2090-CHBP8S8-12AAxx			