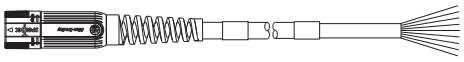
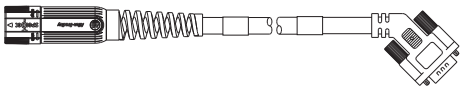
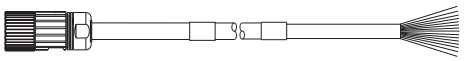
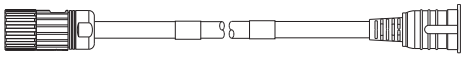
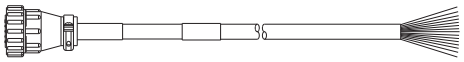
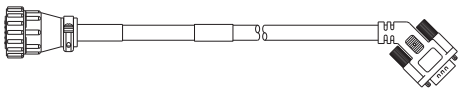
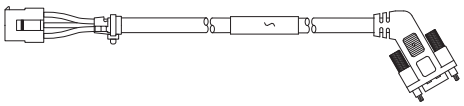
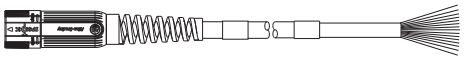
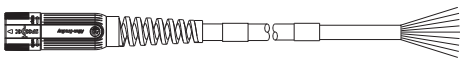
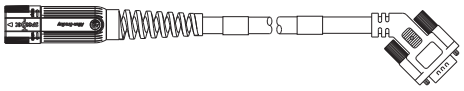
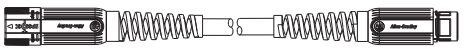
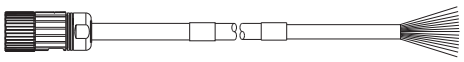
2090-Series Motor/Actuator Cables Overview

Feedback Cable Descriptions (standard, non-flex)

Standard Cable Cat. No.	Description	Cable Configuration	Motor/Actuator Connector
		Motor/Acutator End — Drive End	
2090-CFBM7DF-CEAA*xx*	• Drive-end flying-leads (DF) • High-resolution or resolver applications (CE)		SpeedTec DIN (M7)
2090-CFBM7DD-CEAA*xx*	• Drive-end 15-pin connector (DD) • High-resolution or resolver applications (CE)		
2090-XXNFMF-S*xx*	• Drive-end flying-leads • High-resolution or incremental applications		Threaded DIN (M4)
2090-CFBM4E2-CATR	• Drive-end bayonet (E2), transition (TR) cable (1) • Motor-end threaded DIN (M4) • All feedback types (CA)		
2090-CFBM6DF-CBAA*xx*	• Drive-end flying-leads (DF) • High-resolution, battery backup or Incremental applications (CB)		Circular Plastic (M6)
2090-CFBM6DD-CCAA*xx*	• Drive-end 15-pin connector (DD) • Incremental applications only (CC)		
2090-DANFCT-S*xx*	• Drive-end 20-pin connector • High-resolution applications		Rectangular Plastic

(1) Threaded DIN connector (motor end) and bayonet connector for 2090-XXNFMP-S*xx* cable. Refer to 2090-Series Motor Power and Feedback Transition Cables on page 15.

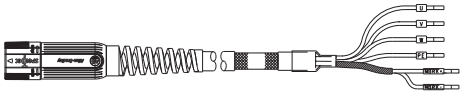
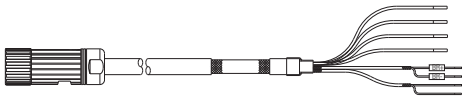
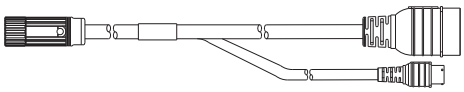
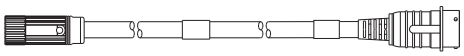
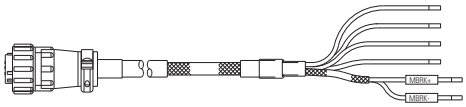
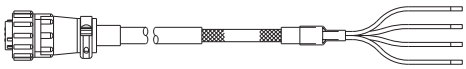
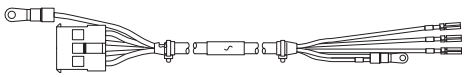
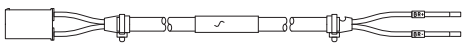
Feedback Cable Descriptions (continuous-flex)

Continuous-flex Cable Cat. No.	Description	Cable Configuration	Motor/Actuator Connector
		Motor/Acutator End — Drive End	
2090-CFBM7DF-CDAF*xx*	• Drive-end flying-leads (DF) • High-resolution or incremental applications (CD)		SpeedTec DIN (M7)
2090-CFBM7DF-CEAF*xx*	• Drive-end flying-leads (DF) • High-resolution or resolver applications (CE)		
2090-CFBM7DD-CEAF*xx*	• Drive-end 15-pin connector (DD) • High-resolution or resolver applications (CE)		
2090-CFBM7E7-CDAF*xx*	• Drive-end (male) connector, extension (E7) (1) • Motor-end SpeedTec DIN cable plug (M7)		
2090-CFBM7E7-CEAF*xx*			
2090-CFBM4DF-CDAF*xx*	• Drive-end flying-leads • High-resolution or incremental applications		Threaded DIN (M4)

(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 14.

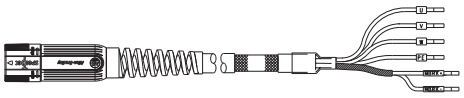
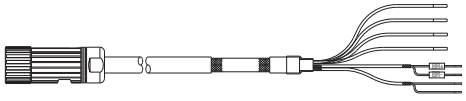
IMPORTANT Feedback cables with the CE designation, for example 2090-CFBM7DF-CEAA*xx*, are intended for high-resolution encoder or resolver applications and have fewer conductors than feedback cables with the CD designation, for example 2090-CFBM7DF-CDAF*xx* that are intended for high-resolution or incremental encoder applications.

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

Standard Cable Cat. No.	Description	Cable Configuration		Motor/Actuator Connector
		Motor/Acutator End	Drive End	
2090-CPBM7DF-*xx*AA*xx*	• Drive-end flying-leads (DF) • Power/brake wires (PB)			SpeedTec DIN (M7)
2090-CPWM7DF-*xx*AA*xx*	• Drive-end flying-leads (DF) • Power wires only (PW)			
2090-XXNPMF-*xx*S*xx*	• Drive-end flying-leads • Power/brake wires			Threaded DIN (M4)
2090-CPBM4E2-*xx*TR	• Drive-end bayonet (E2), transition (TR) cable (1) • Motor-end threaded DIN (M4) • Power/brake wires (PB)			
2090-CPWM4E2-*xx*TR	• Drive-end bayonet (E2), transition (TR) cable (1) • Motor-end threaded DIN (M4) • Power wires only (PW)			
2090-CPBM6DF-16AA*xx*	• Drive-end flying-leads (DF) • Power/brake wires (PB)			Circular Plastic (M6)
2090-CPWM6DF-16AA*xx*	• Drive-end flying-leads (DF) • Power wires only (PW)			
2090-DANPT-16S*xx*	• Drive-end flying-leads • Power wires only			Rectangular Plastic
2090-DANBT-18S*xx*	Drive-end flying-lead brake wires			

(1) Threaded DIN connector (motor end) and bayonet connector for 2090-XXNFMP-S*xx* cable. Refer to 2090-Series Motor Power and Feedback Transition Cables on page 15.

Power/Brake Cable Descriptions (continuous-flex)

Continuous-flex Cable Cat. No.	Description	Cable Configuration		Motor/Actuator Connector
		Motor/Acutator End	Drive End	
2090-CPBM7DF-*xx*AF*xx*	• Drive-end flying-leads (DF) • Power/brake wires (PB)			SpeedTec DIN (M7)
2090-CPWM7DF-*xx*AF*xx*	• Drive-end flying-leads (DF) • Power wires only (PW)			
2090-CPBM7E7-*xx*AF*xx*	• Drive-end (male) connector, extension (E7) (1) • Motor-end SpeedTec DIN cable plug (M7)			
2090-CPBM4DF-*xx*AF*xx*	• Drive-end flying-leads (DF) • Power/brake wires (PB)			Threaded DIN (M4)
2090-CPWM4DF-*xx*AF*xx*	• Drive-end flying-leads (DF) • Power wires only (PW)			

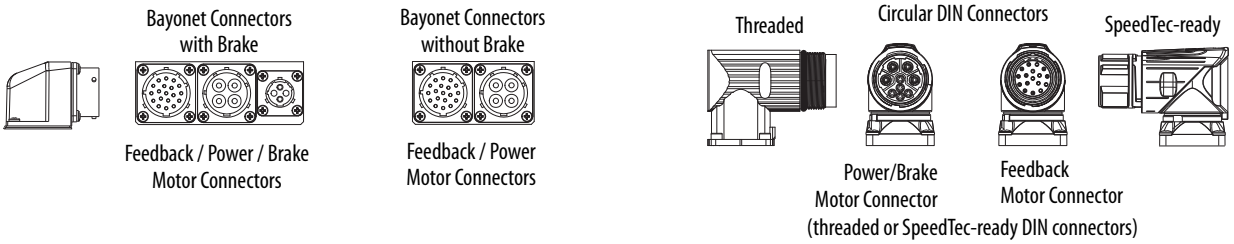
(1) SpeedTec DIN connector (motor end) and male connector for extending SpeedTec or threaded DIN cable. Refer to SpeedTec DIN Continuous-flex Extension Cables on page 14.

2090-Series Motor Power and Feedback Transition Cables

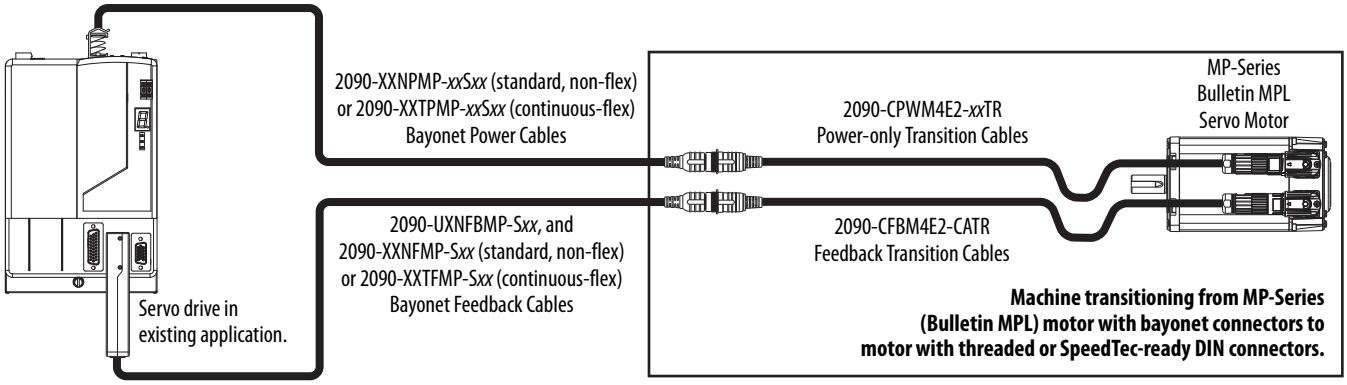
Motor power/brake and feedback transition cables support installations where MP-Series™ (Bulletin MPL) motors with bayonet connectors were recently replaced by the same motor with circular DIN connectors. These 0.5 m (19.7 in.) cables provide a seamless transition between your new motor and existing power, brake, and feedback cables.

TIP Brake contacts for motors with bayonet connectors are in a separate connector. Power/brake cables with circular DIN connectors (either threaded or SpeedTec) include brake contacts in the power/brake connector.

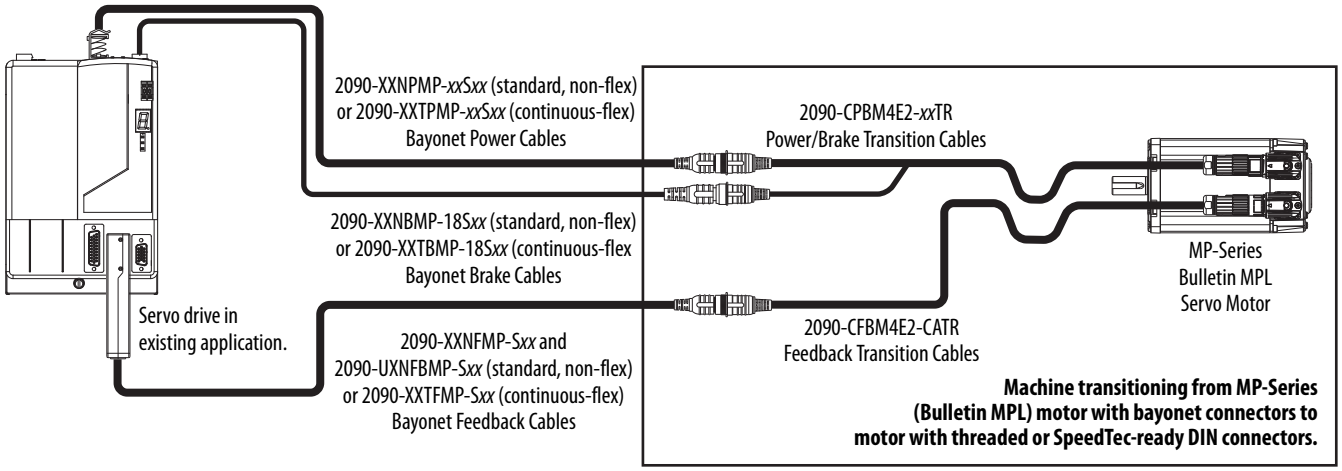
Bayonet and Circular DIN Motor Connectors



Transition Cable Application (power-only cable)



Transition Cable Application (power/brake cable)



Refer to the transition cable selection tables on page 19 for cable catalog numbers for the specific Bulletin MPL or Bulletin MPM motor you are transitioning to.

2090-Series Motor/Actuator Cable Selection

These tables provide flying-lead motor cable catalog numbers for drive/motor combinations. Most motor brake wires are in the power cable, so a separate brake cable is not required (except where noted) The IP rating is dependant on the use of Allen-Bradley Bulletin 2090 cables as listed in these tables.

IMPORTANT The MP-Series low-inertia motors on this page are equipped with DIN connectors (specified by 7 in the catalog number) and are not compatible with cables designed for motors equipped with bayonet connectors (specified by 2 in the catalog number). The motors with bayonet connectors (for example, MPL-A310P-*xx*2*x*AA) are being discontinued and require 2090-XXNFMP-S*xx* (bayonet) cables. For help with migration or to select bayonet cables, contact your Rockwell Automation sales representative.

MP-Series (Bulletin MPL) Motor Feedback Cables

Motor Cat. No.	Compatible Drive Cat. No.	Feedback Type	Feedback Cable Cat. No.	IP Rating
MPL-A15*xxx*-V/E*x*7*x*AA, MPL-A2*xxx*-V/E*x*7*x*AA	2093-AC05-MP*x* or 2093-AM*xx* 2094-AC*xx*-M*xx*-S or 2094-AM*xx*-S 2097-V3*x*PR*x* or 2097-V3*x*PR*x*-LM 2098-DSD-*xxx*	Multi-turn High-resolution Absolute or Single-turn High-resolution Encoder Feedback	2090-CFBM7DF-CEAA*xx* or 2090-CFBM7DD-CEAA*xx* (standard, non-flex) 2090-CFBM7DF-CEAF*xx* 2090-CFBM7DD-CEAF*xx* (continuous-flex)	Shaft seal is optional: • IP50 without shaft seal • IP66 with shaft seal
MPL-B15*xxx*-V/E*x*7*x*AA, MPL-B2*xxx*-V/E*x*7*x*AA	2094-BC*xx*-M*xx*-S or 2094-BM*xx*-S 2094-BC*xx*-M*xx*-M or 2094-BM*xx*-M 2097-V34PR*x* or 2097-V34PR*x*-LM 2098-DSD-HV*xxx*			
MPL-A3*xxx*-M/S*x*7*x*AA, MPL-A4*xxx*-M/S*x*7*x*AA, MPL-A45*xxx*-M/S*x*7*x*AA, MPL-A5*xxx*-M/S*x*7*x*AA	2093-AC05-MP*x* or 2093-AM*xx* 2094-AC*xx*-M*xx*-S or 2094-AM*xx*-S 2097-V3*x*PR*x* or 2097-V3*x*PR*x*-LM 2098-DSD-*xxx*			
MPL-B3*xxx*-M/S*x*7*x*AA, MPL-B4*xxx*-M/S*x*7*x*AA, MPL-B45*xxx*-M/S*x*7*x*AA, MPL-B5*xxx*-M/S*x*7*x*AA, MPL-B6*xxx*-M/S*x*7*x*AA, MPL-B8*xxx*-M/S*x*7*x*AA, MPL-B9*xxx*-M/S*x*7*x*AA	2094-BC*xx*-M*xx*-S or 2094-BM*xx*-S 2094-BC*xx*-M*xx*-M or 2094-BM*xx*-M 2097-V34PR*x* or 2097-V34PR*x*-LM 2098-DSD-HV*xxx* 2099-BM*xx*-S			
MPL-A15*xxx*-H*x*7*x*AA, MPL-A2*xxx*-H*x*7*x*AA	2093-AC05-MP*x* or 2093-AM*xx* 2094-AC*xx*-M*xx*-S or 2094-AM*xx*-S 2097-V3*x*PR*x* or 2097-V3*x*PR*x*-LM 2098-DSD-*xxx*	Incremental [1] Feedback	2090-XXNFMF-S*xx* (standard, non-flex) 2090-CFBM7DF-CDAF*xx* (continuous-flex)	Shaft seal is optional: • IP50 without shaft seal • IP66 with shaft seal
MPL-B15*xxx*-H*x*7*x*AA, MPL-B2*xxx*-H*x*7*x*AA	2094-BC*xx*-M*xx*-S or 2094-BM*xx*-S 2094-BC*xx*-M*xx*-M or 2094-BM*xx*-M 2097-V34PR*x* or 2097-V34PR*x*-LM 2098-DSD-HV*xxx*			
MPL-A3*xxx*-H*x*7*x*AA, MPL-A4*xxx*-H*x*7*x*AA, MPL-A45*xxx*-H*x*7*x*AA	2093-AC05-MP*x* or 2093-AM*xx* 2094-AC*xx*-M*xx*-S or 2094-AM*xx*-S 2097-V3*x*PR*x* or 2097-V3*x*PR*x*-LM 2098-DSD-*xxx*		2090-XXNFMF-S*xx* (standard, non-flex) 2090-CFBM7DF-CDAF*xx* (continuous-flex)	
MPL-B3*xxx*-H*x*7*x*AA, MPL-B4*xxx*-H*x*7*x*AA, MPL-B45*xxx*-H*x*7*x*AA	2094-BC*xx*-M*xx*-S or 2094-BM*xx*-S 2094-BC*xx*-M*xx*-M or 2094-BM*xx*-M 2097-V34PR*x* or 2097-V34PR*x*-LM 2098-DSD-HV*xxx*			
MPL-B*xxxx*-R*x*7*x*AA	2094-BC*xx*-M*xx*-S or 2094-BM*xx*-S	Resolver Feedback [1]	2090-CFBM7DF-CEAA*xx* (standard, non-flex) 2090-CFBM7DF-CEAF*xx* (continuous-flex)	

(1) Not all MP-Series low-inertia motors are available with incremental and resolver feedback options.

For cable configuration illustrations and feature descriptions, by catalog number, refer to 2090-Series Motor/Actuator Cables Overview beginning on page 11.

Cable length *xx* is in meters. Refer to Technical Specifications - 2090-Series Motor/Actuator Cables beginning on page 28.