

Kinetix Motion Accessories Specifications

Bulletin 2090, 2094, 1394, 8720MC

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This document provides catalog numbers, product specifications, and dimensions for Allen-Bradley® servo drive accessories.

Use this publication along with the Kinetix® Motion Control Selection Guide, publication [KNX-SG001](#), and the drive-system design guides to help make decisions on the motion control products that are best suited for your system requirements. See Additional Resources on [page 133](#) for publication numbers.

Summary of Changes

This manual contains new and updated information as indicated in the following table.

Topic	Page
Added 2090-CSBM1DE-06AFxx and 2090-CSBM1DE-08AFxx single cable specifications	2...13
Added 2090-CSBM1E1-06AFxx and 2090-CSBM1E1-08AFxx single extension-cable specifications	
Added Bulletin VPC-Bxxxxx-Q (single connector) cable combinations	7
Added 2090-CSBM1DE-10AAxx (series B) cable specifications	12
Added 2090-CSBM1E1-10AAxx and 2090-CSBM1E1-14AAxx (series B) cable specifications	13
Added Bulletin VPC-Bxxxxx-S and VPC-Bxxxxx-Y (power and feedback connectors) cable combinations	21 and 22
Updated External Auxiliary Encoders with Bulletin 847H and 847T catalog numbers.	99



2090-Series Single Motor Cables

Allen-Bradley single motor cables combine motor power, feedback, and brake conductors all in a single shielded cable. Standard (non-flex) motor cables with rugged SpeedTec DIN connectors are designed for use with Kinetix 5500 and Kinetix 5700 drive systems, and intended for static applications. Continuous-flex rated cables, intended for rolling and reverse bending applications, are also available.

IMPORTANT Due to the unique characteristics of single-cable technology, which is designed for and tested with the Kinetix 5000 drive families and Kinetix VP motors, building your own cables or using third-party cable is not an option.

IMPORTANT Flying-lead motor power, feedback, and (optional) brake conductors terminate at the drive by using the 2198-KITCON-DSL feedback connector kit. Refer to the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#), for more information on the 2198-KITCON-DSL connector kit that is used with the Kinetix 5500 and Kinetix 5700 servo drives.

IMPORTANT Continuous-flex single motor cables have a minimum bend radius of 10 times the cable diameter.

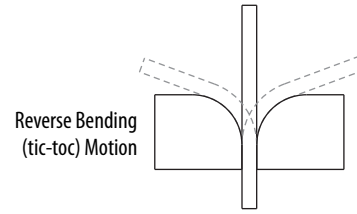
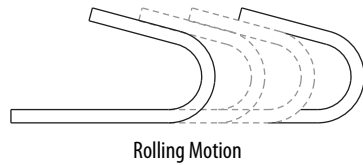


These 2090-Series motor cables with SpeedTec DIN connectors, designed by Rockwell Automation for optimal performance with Kinetix 5000 drive families and Kinetix VP servo motors, offer best-in-class features and standards compliance. The single-cable design includes power, feedback, and brake conductors. The continuous-flex cable option, cable lengths in 1 m (3.3 ft) increments, and SpeedTec connectors provide machine builders with complete control of the cable requirements in their machines.

Single Motor Cable Features

- NFPA-79 compliant
- UL Listings: 10, 8, and 6 AWG cable - Flexible VFD servo cable, 18 and 14 AWG cables - PLTC-ER
 - UL AWM, 1000V, 105 °C construction
 - cUR AWM I/II A/B, 600V, 105 °C construction for 6 and 8 AWG cables
- CSA AWM I/II A/B, 1000V, 105 °C construction for 10, 14, and 18 AWG cables
- Low capacitance design to maximize system power density
- 1/4-turn SpeedTec connection system
- Encoder communication data pair with state of the art noise rejection
- DESINA compliant jacket (orange) coloring for easy identification and separation of cables in a machine
- Rated flex-cycles in linear flexing applications
 - 10, 14, and 18 AWG continuous-flex cables and continuous-flex extension cables are suitable for 20 million flex-cycles and 10 million cycles in bending (tic-toc) applications (see illustration on [page 3](#))
 - 8 AWG continuous-flex cables and continuous-flex extension cables are suitable for 6.5 million flex-cycles
 - 6 AWG continuous-flex cables and continuous-flex extension cables are suitable for 5.0 million flex-cycles
- TPE jacket with superior mechanical and chemical properties
- Cable features overall tinned copper braid with aluminum/polyester tape, delivering 100% coverage for excellent EMC/EMI performance and permits power and signal conductors in a single cable
- Cables are included in the Rockwell Automation® servo system Declaration of Conformity (DoC)

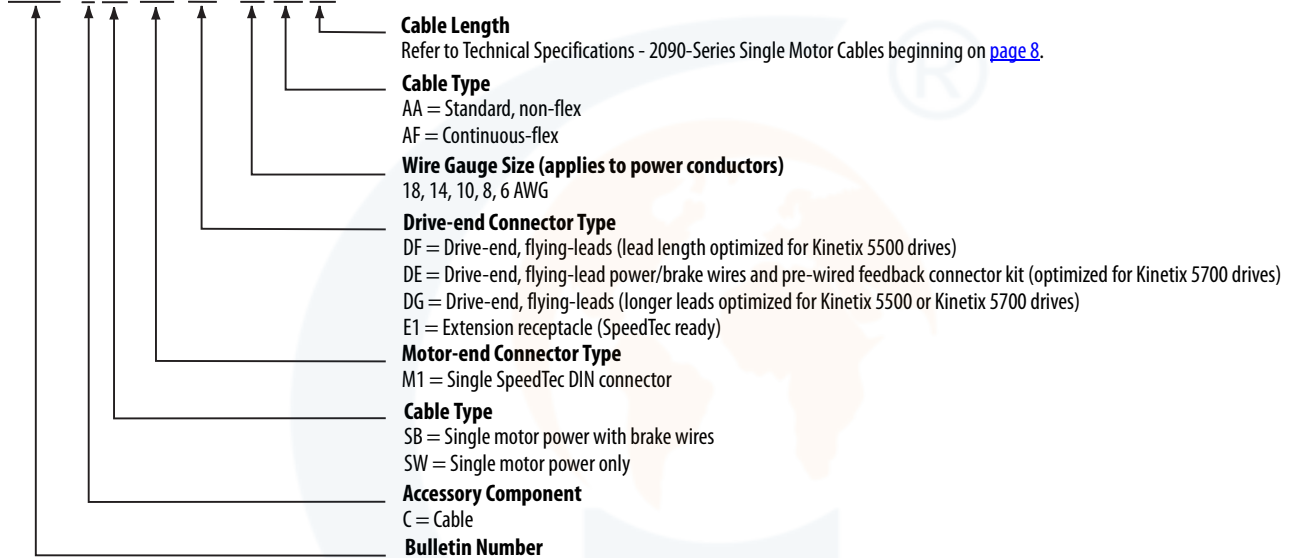
Types of Cable Flexing



Catalog Numbers - 2090-Series Single Motor Cables

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.

2090 - C Sx M1 Dx - xx Ax xx



Cable Length

Refer to Technical Specifications - 2090-Series Single Motor Cables beginning on [page 8](#).

Cable Type

- AA = Standard, non-flex
- AF = Continuous-flex

Wire Gauge Size (applies to power conductors)

18, 14, 10, 8, 6 AWG

Drive-end Connector Type

- DF = Drive-end, flying-leads (lead length optimized for Kinetix 5500 drives)
- DE = Drive-end, flying-lead power/brake wires and pre-wired feedback connector kit (optimized for Kinetix 5700 drives)
- DG = Drive-end, flying-leads (longer leads optimized for Kinetix 5500 or Kinetix 5700 drives)
- E1 = Extension receptacle (SpeedTec ready)

Motor-end Connector Type

M1 = Single SpeedTec DIN connector

Cable Type

- SB = Single motor power with brake wires
- SW = Single motor power only

Accessory Component

C = Cable

Bulletin Number

2090-Series Single Motor Cables Overview

2090-CSxM1DF and 2090-CSxM1DG single motor cables with flying leads provide power, feedback, and brake conductors in a single shielded cable. Refer to Technical Specifications - 2090-Series Single Motor Cables on [page 8](#) for cable descriptions, weights, and standard cable lengths.

Single Motor Cable Descriptions (flying leads)

Cable Cat. No.	Description	Cable Configuration		Motor Connector
		Motor End	Drive End	
2090-CSBM1DF-xxAAxx 2090-CSBM1DF-xxAFxx 2090-CSBM1DG-xxAAxx 2090-CSBM1DG-xxAFxx	<ul style="list-style-type: none"> • Drive-end flying-leads (DF) (DG = longer lead lengths) • Power/feedback/brake wires (SB) • Standard, non-flex (AA) • Continuous-flex (AF) 			SpeedTec DIN
2090-CSWM1DF-xxAAxx 2090-CSWM1DG-xxAAxx	<ul style="list-style-type: none"> • Drive-end flying-leads (DF) (DG = longer lead lengths) • Power/feedback wires only (SW) 			