

# PRODUCT PROFILE

## MP-SERIES STAINLESS STEEL MOTORS

### HIGH PERFORMANCE SERVO MOTORS FOR HYGIENIC ENVIRONMENTS

Environments like those found in food, beverage and pharmaceutical applications have special needs. Because of the stringent cleanliness requirements, servo motors used in these types of conditions must be able to withstand frequent wash downs with high pressures and caustic chemicals.

The MP-Series Stainless Steel (MPS) Motors are specifically designed to meet the unique needs of hygienic environments. With these servo motors, you gain the benefits of Kinetix Integrated Motion in a greater range of applications, using servo motors even in high pressure, highly caustic washdown environments. The MPS Motor extends the wide range of Allen-Bradley servo motors into new applications on food, beverage, brewing, dairy, pharmaceutical, and health and beauty manufacturing equipment.

Conventional servo motor solutions in these applications have had design and performance trade-offs. However, the new MP-Series Stainless Steel Motors combine the performance you expect from the dynamic Allen-Bradley MP-Series Motors with a package yielding lower total cost of ownership. Your cost savings is achieved in many ways, such as minimizing plant downtime and eliminating the need for expensive shielding, enclosures, and mechanical transmissions.

The motors are based on the industry-leading MP-Series Motor technology, and are tightly sealed in a 300-series stainless steel housing for maximum protection and corrosion resistance. Special attention has been given to the motor construction in accordance with best practices for food safety requirements.

The motors are compatible with the Allen-Bradley Kinetix 6000, Ultra3000 and Ultra5000 servo drives. They are available in three frame sizes: 100mm, 130mm, and 165mm.



*The MP-Series Stainless Steel Motors feature a smooth housing with a cylindrical shape to simplify cleaning. The housing is made of passivated 300 series stainless steel for corrosion resistance.*

### IDEAL FOR APPLICATIONS WITH DEMANDING CLEANLINESS REQUIREMENTS

- Motor NSF certification for use in food handling equipment. See back for details.
- Sealed. Meets IP66 and IP67, as well as IP69K for 1200 psi washdown requirements
- Standard features of industry-leading MP-Series Servo Motors
  - 230V and 460V supply; integral 24 volt brake option
  - High-resolution feedback for smooth operation, with an absolute feedback option for the elimination of frequent homing routines
- Simple to install – With factory sealed cable exit, there's no need to open motor to make connections
- Factory-sealed and leak-tested 3-meter cables with connectors. Easily move connectors to a location where they are protected. Used with food grade 2090 cables
- Lower system costs – eliminate mechanical transmissions and guards by installing motor where it's needed
- Provide peak torque from 11.1 to 27.1 Nm (98-240 lb-in).

# SPECIFICATIONS

Catalog Number	Rated Speed rpm	Rated Output kW	Rotor Inertia* kg-m <sup>2</sup> (lb-in.-s <sup>2</sup> )	Continuous Stall Torque Nm (lb-in.)	Peak Stall Torque Nm (lb-in.)	Continuous Stall Current Amperes (0-peak)	Peak Stall Current Amperes (0-peak)	
MPS-A330P	5000	1.3	0.00012 (0.0010)	3.6 (32)	11.1 (98)	9.8	38.0	230V
MPS-A4540F	3000	1.4	0.00052 (0.0046)	8.13 (72)	27.1 (240)	14.8	58.0	↓
MPS-B330P	5000	1.3	0.00012 (0.0010)	3.6 (32)	11.1 (98)	4.9	19.0	460V
MPS-B4540F	3000	1.4	0.00052 (0.0046)	8.13 (72)	27.1 (240)	7.4	29.0	↓
MPS-B560F	3000	3.5	0.00227 (0.020)	21.5 (190)	67.8 (600)	17.0	68.0	↓

\* Rotor inertia may vary slightly depending upon feedback and brake option.

## Typical Applications

- Food and beverage processing, packaging and handling, including applications that have incidental food contact, and are regularly “washed down” with high pressures and caustic chemicals. Typical uses include:
  - Food slicing and filling
  - Closing machinery
  - Raw food handling stages
  - Dairy, meat and poultry, soft drinks, beer, and fruits and vegetables product spaces
- Corrosive environments
- Hygiene or washdown applications
- Life sciences. Typical uses are:
  - Consumer goods
  - Health & Beauty
  - Pharmaceutical

## NSF International Information

The MP-Series Stainless Steel Motor is certified and listed to NSF/ANSI Standard 169 by NSF International, which means that it is compliant with food protection and sanitation requirements for the materials, design, fabrication, construction and performance of special purpose food handling and processing equipment.

## UL and CSA Information

The MP-Series Stainless Steel Motor is a recognized component to applicable UL and CSA standards.



The MP-Series Stainless Steel Motors are ideally suited for applications with stringent cleanliness requirements that involve wash down with high pressures and caustic chemicals.

- Optional positive air pressure kit provides an extra measure of protection against liquid ingress
- Hardened shaft wear sleeve for long-lasting shaft seal and shaft. PTFE shaft seal resists damage from chemicals and caustic substances
- Shaft slinger to protect shaft seal from high pressure spray and foreign material

[www.rockwellautomation.com](http://www.rockwellautomation.com)

## Power, Control and Information Solutions Headquarters

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# PRODUCT SELECTION, SPECIFICATIONS

Table text style sheet Description	For Use with	Max. AC-1 Current (690V)		Pkg. Qty.	Catalog Number
		IEC (@ 40°C)	IEC (@ 60°C)		
3-Pole Paralleling Link	100-C09...C23	100A	100A	2	100-CP23
	100-C30...C37	150A	135A	2	100-CP37

Table Header Style Sheet For applications according to UL/CSA standards

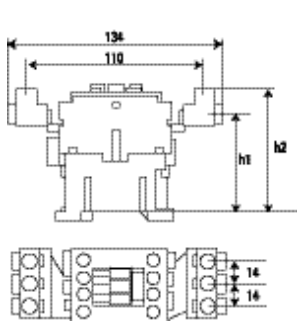
Table text style sheet Description	For Use with	Max. AC-1 Current (690V)		Pkg. Qty.	Catalog Number
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	100-C30...C37	150A	135A	2	100-CP37

## Terminal Specifications

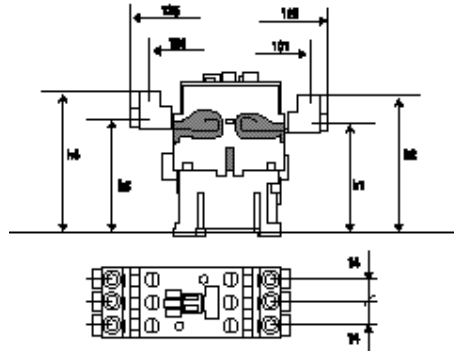
Cat. No.		100-CTN23/CTL23	100-CT37	100-CT43	100-CT85	100-CP23	100-CP37
Terminal Type		B7	B7	B9	B11	B11	B11
Wire Size IEC 60947-1	Fine Stranded w/Ferrule [mm <sup>2</sup> ] Coarse Stranded/Solid [mm <sup>2</sup> ]	4...16 4...25	4...16 4...25	6...35 6...50	6...35 6...50	6...35 6...50	6...35 6...50
Wire Size IEC 60947-1	[Nm]	2...3	2...3	2...3	2...3	2...3	2...3
Wire Size UL/CSA	Stranded/Solid [AWG]	10...4	10...4	10...4	10...4	10...4	10...4
Tightening Torque	[lb-in]	18...27	18...27	18...27	18...27	18...27	18...27

16 mm<sup>2</sup> max. according to IEC 60947; actual max. 25 mm<sup>2</sup>

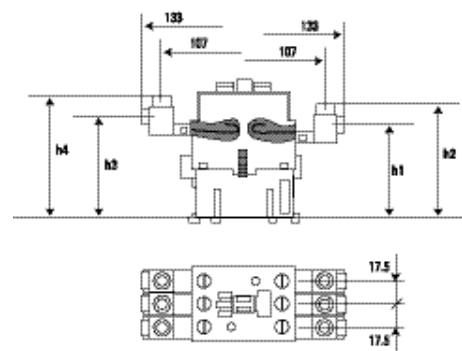
## DIMENSIONAL DIAGRAMS, NETWORK DIAGRAMS



100-CTN23/CTL23



100-CT37



100-CT43

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