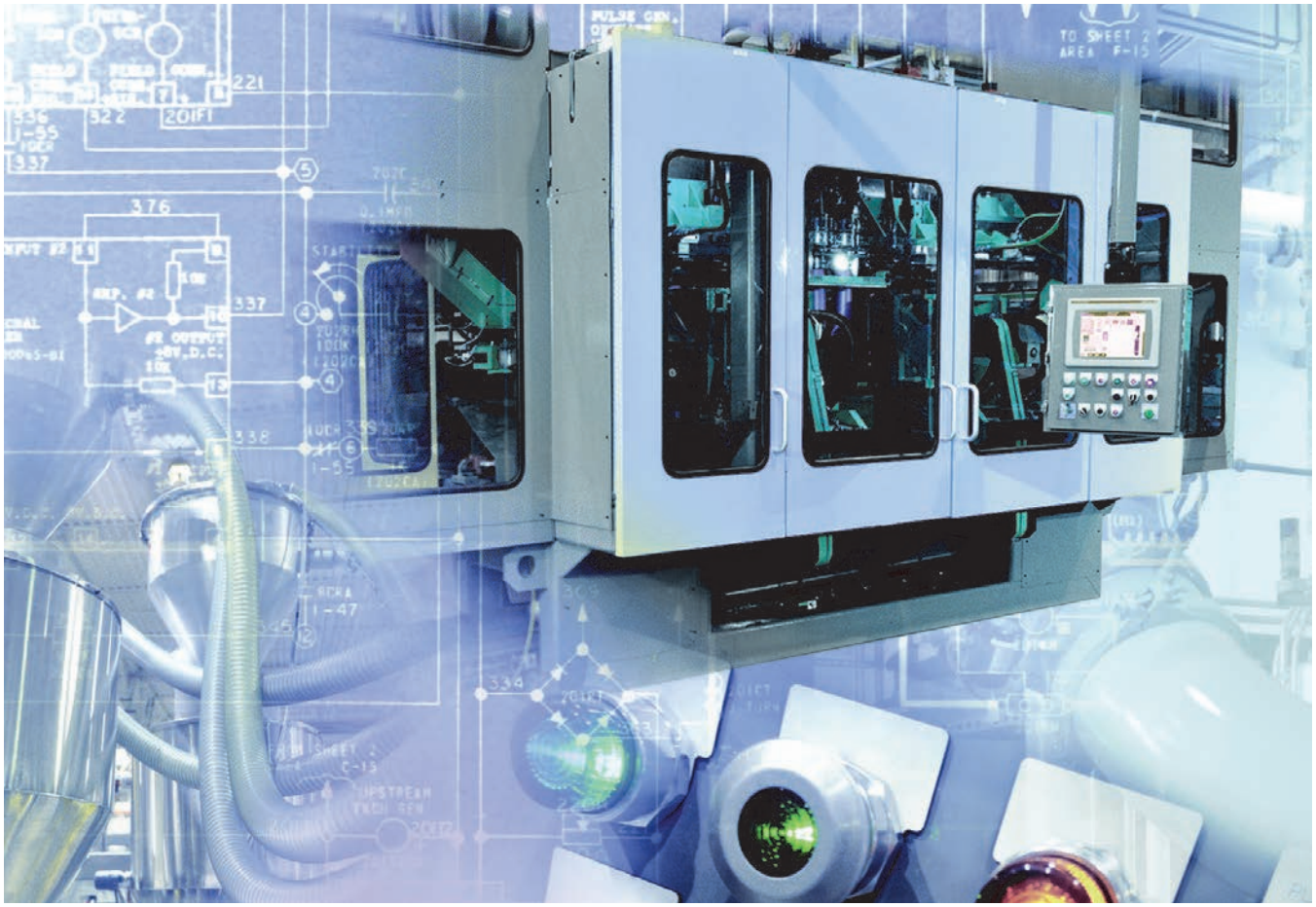
Selection Guide

Allen-Bradley

Kinetix Motion Control

Rotary Servo Motors
Linear Motors
Linear Actuators
Servo Drives
Logix5000 Motion Modules
Motion Accessories



Product Specifications

Kinetix Rotary Motion
Kinetix Linear Motion
Kinetix Servo Drives
Kinetix Motion Accessories

Design Guides

Kinetix 5500 Drive Systems
Kinetix 6000 and Kinetix 6200/6500 Drive Systems
Kinetix 300/350 Drive Systems
Kinetix 3 Drive Systems

LISTEN. THINK. SOLVE.®

What's Inside

Rockwell Automation offers additional products and options that are not covered in this selection guide. For additional product information, see the documentation links provided on the front cover, the selection suite summary on page 3, and the links in Additional Resources on page 19, and throughout this selection guide.

Kinetix motion control products not included in this selection guide, but supported with product specifications, selection examples, and system performance curves include the following:

- Kinetix 2000 Multi-axis Servo Drives
- Kinetix 7000 High Power Servo Drives
- Ultra™ 3000 Digital Servo Drives

For assistance and validation in making final product selections, consider using the Integrated Architecture™ Builder tool that is available at http://www.rockwellautomation.com/en/e-tools/configuration.html.

Additional product options are available through Encompass™, our third-party product referencing program. For more information about the Encompass program, see http://www.rockwellautomation.com/encompass.

Kinetix Motion Control Selection Suite

Each publication in the suite is designed to meet a specific need. Use this selection guide to help make initial decisions for the motion control products best suited for your system requirements. This publication provides an overview of Kinetix servo drives, motors, actuators, and motion accessories. Refer to the information below to find the publications that provide detailed product specifications, system examples, cable combinations, and performance curves for your motion control system.

Product Specifications?

These technical data publications provide dimensions, certifications, and electrical, environmental, and weight specifications.

Kinetix Rotary Motion Specifications Technical Data, publication GMC-TD001

- Kinetix VP (Bulletin VPL and VPS) Servo Motors
- MP-Series™ (Bulletin MPL, MPM, MPF, and MPS) Servo Motors
- Kinetix 6000M (Bulletin MDF) Integrated Drive-Motor Systems
- RDD-Series™ Direct Drive Servo Motors
- HPK-Series™ Asynchronous Servo Motors
- TL-Series™ Servo Motors

Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002

- LDAT-Series Integrated Linear Thrusters
- MP-Series (Bulletin MPAS and MPMA) Linear Stages
- MP-Series (Bulletin MPAR and TLAR) Electric Cylinders
- MP-Series (Bulletin MPAI) Heavy Duty Electric Cylinders
- LDC-Series™ Iron Core Linear Motors
- LDL-Series™ Ironless Linear Motors

Kinetix Servo Drives Specifications Technical Data, publication GMC-TD003

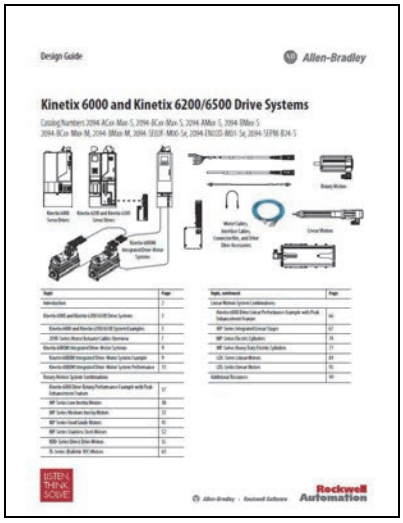
- Kinetix 5500 Servo Drives
- Kinetix 6200 and Kinetix 6500 Modular Servo Drives
- Kinetix 6000 Multi-axis Servo Drives
- Kinetix 300 and Kinetix 350 EtherNet/IP Servo Drives
- Kinetix 3 Component Servo Drives
- Kinetix 2000 Multi-axis Servo Drives
- Kinetix 7000 High Power Servo Drives
- Ultra3000 Digital Servo Drives

Kinetix Motion Accessories Specifications Technical Data, publication GMC-TD004

- Motor and interface cables
- Drive and motor/actuator cable combinations
- Connector kits and breakout components
- Power components

System-focused Catalog Numbers, Examples, and Performance Curves?

System design guide publications help you select the required (drive specific) drive module, power accessory, connector kit, motor cable, and interface cable catalog numbers for your drive and motor/actuator motion control system. Included are system performance specifications and torque/speed curves (rotary motion) and force/velocity curves (linear motion).



Drive Family System Design Guide Publications

- Kinetix 5500 Drive Systems Design Guide, publication GMC-RM009
- Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003
  - Includes Kinetix 6000M Integrated Drive-Motor Systems
- Kinetix 300/350 Drive Systems Design Guide, publication GMC-RM004
- Kinetix 3 Drive Systems Design Guide, publication GMC-RM005
- Kinetix 2000 Drive Systems Design Guide, publication GMC-RM006
- Kinetix 7000 Drive Systems Design Guide, publication GMC-RM007
- Ultra3000 Drive Systems Design Guide, publication GMC-RM008

What's Inside Each Publication

- Determine What You Need (catalog numbers)
  - Drive components
  - Required accessories
  - Optional accessories
- Drive System Examples
- Motor/actuator cable combinations
- Drive and motor/actuator performance data
- Rotary and linear performance curves

Notes:

Kinetix Integrated Motion

The Kinetix Integrated Motion offerings are part of the Rockwell Automation® Integrated Architecture system. The Integrated Architecture system brings together a wide range of high-performance products that are integrated into RSLogix™ 5000 software and the Studio 5000 Logix Designer™ application for simplified and enhanced machine design, operation, and maintenance.

Integrated Motion on the EtherNet/IP network uses CIP Motion and CIP Sync technology from ODVA, all built on the Common Industrial Protocol (CIP). Global standards help ensure consistency and interoperability. The standard, unmodified Ethernet network allows you to effectively manage real-time control and information flow for improved plant-wide optimization, more informed decision-making and better business performance. Time synchronization of drives, I/O, and other EtherNet/IP compliant devices provides the performance to help solve the most challenging applications.

Integrated Motion on sercos (serial real-time communications system) is a controller/drive interface that uses noise-immune, fiber-optic cables. A single fiber-optic ring serves as the sole interface between control and drive. It replaces costly command and feedback wiring, reducing both installation time and wiring costs. Advanced diagnostics and process reporting is provided via the sercos interface.

With Kinetix Integrated Motion, you'll benefit from the seamless integration of Allen-Bradley® Logix5000™ controllers (ControlLogix® and CompactLogix™), high-performance networks (EtherNet/IP and sercos), and a broad range of Allen-Bradley AC and servo drives, linear and rotary motors, and linear actuator options. RSLogix 5000 software and the Logix Designer application offer an extensive set of advanced motion tools for programming, configuration, commissioning, diagnostics, and maintenance support. Catalog number driven configuration makes motion system commissioning fast and simple, and an extensive library of motion instructions provide the right functionality for any application.

Kinetix Integrated Motion offers a variety of servo drive, motor, and actuator families for single-axis and multi-axis applications. These systems offer the following:

- Servo drive power ranges from 50 W…149 kW
  - Kinetix 5500 servo drive family
  - Kinetix 350 single-axis EtherNet/IP servo drive family
  - Kinetix 6000 and Kinetix 6200 (sercos interface) and Kinetix 6500 (EtherNet/IP network) multi-axis servo drive families
  - Kinetix 6000M integrated drive-motor systems
- Choice of sercos interface or EtherNet/IP networks
- Wide range of rotary motors, rotary direct drive motors, linear motors, and linear actuators/stages.
  - Motors offer continuous torque as low as 0.10 N•m (0.85 lb•in) and up to 955 N•m (8452 lb•in)
  - Linear actuators offer peak forces of up to 14,679 N (3300 lb)
- Smart Motor Technology provides automatic motor identification for fast, easy configuration and commissioning
- Use of a single software package, RSLogix 5000 or Studio 5000™ environment, for complete support of drive configuration, programming, commissioning, diagnostics, and maintenance
- Powerful online motion tools including real-time data trending, graphical PCAM and TCAM profile editor, auto and manual drive tuning, and advanced drive diagnostics
- Automatic Device Replacement (ADR) plug-and-run drive/motor/actuator support
- Motion Analyzer software for comprehensive motion-application sizing and analysis, optimization, selection, and validation of your Kinetix motion control system

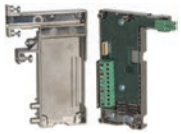
Connected Components Platform

Part of the Rockwell Automation Machine Solutions offering, Connected Components is a preferred control solution for machine builders who provide stand-alone machines at low cost. Connected Components provides just enough control to meet machine and end-user requirements while helping to improve operating efficiencies. Engineering and application tool sets allow easy design and installation with preferred interoperability of the broad range of component-class products.

The Kinetix 3 component servo drive provides a motion control solution for machine builders producing low-cost equipment at high volumes. The component servo drive can apply the appropriate level of control for the application without the added complexity. Systems can include serial commands from MicroLogix™ or Micro800® controllers, or discrete wiring directly to the sensor or controller with TL-Series low-inertia motors.

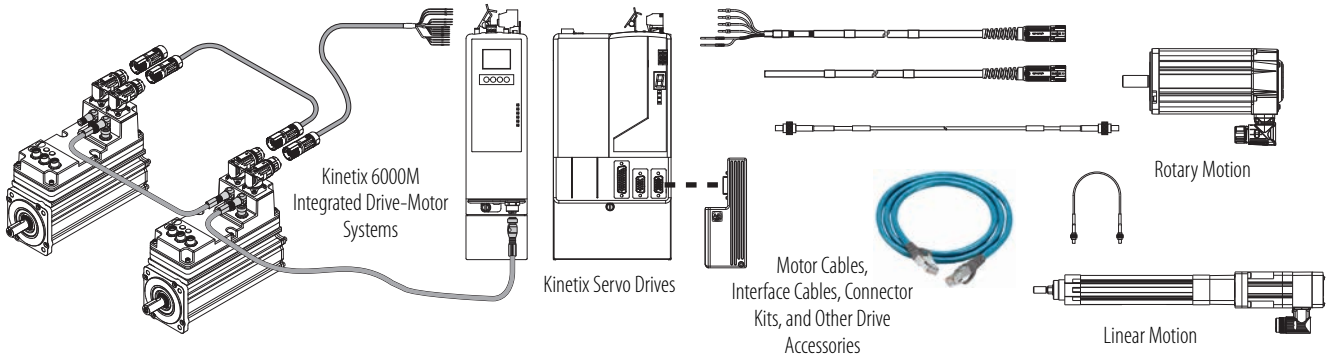
What's New?

The new Kinetix motion control products include the following.

Motion Control Products	Description	Refer to
 **Kinetix 5500 Servo Drives and Kinetix VP Servo Motors**	The Kinetix 5500 servo drives and Kinetix VP low-inertia servo motors provide a cost-effective motion solution that delivers high performance and scalability with motor windings matched to drive ratings for optimized system sizing. One cable between motor and drive yields simplification and reduces cost. • High performance in a smaller footprint and optimized power density • Single-axis operation for low-cost simplicity • Flexible power connectivity in multi-axis bus-sharing configurations – Shared AC – Shared DC – Shared AC/DC and hybrid configurations • Integrated motion on the EtherNet/IP network • Safe torque-off control, ISO-13849-1 certified, PLd, category 3 • Capability to run servo and induction motors	• Page 10 for an overview of the Kinetix VP low-inertia motors. • Page 31 for an overview of the Kinetix 5500 servo drives. • Page 41 for Kinetix 5500 drives and Bulletin VPL motor performance specifications. • VPL-A063*xx* and VPL-A075*xx* small-frame motors. • VPL-B063*xx* and VPL-B075*xx* small-frame motors.
 **Kinetix VP (Bulletin VPS) Stainless Steel Servo Motors**	Kinetix VP (Bulletin VPS) stainless-steel servo motors are based on proven MP-Series technology for use in washdown environments such as those found in food, beverage, brewing, dairy, pharmaceutical, and health and beauty manufacturing equipment. • Specifically designed for sanitary environments for use with high-pressure, highly-caustic washdown applications • IP69K for 1200 psi motor washdown, IP66/IP67 shaft seal and environmentally sealed connector • Smooth, passivated 300 series stainless-steel cylindrical exterior • Single cable technology • Low rotor inertia	• Page 10 for an overview of the Bulletin VPS stainless-steel motors. • Page 44 for Kinetix 5500 drives and Bulletin VPS motor performance specifications.
 **Hiperface-to-DSL Feedback Converter Kit**	The 2198-H2DCK Hiperface-to-DSL feedback kit converts 15-pin Hiperface encoder feedback signals to 2-pin DSL feedback signals. Use this converter kit for new installations with Kinetix 5500 servo drives and compatible motors and actuators or existing motor/actuator installations when upgrading with Kinetix 5500 servo drives. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.	• Page 41 for Kinetix 5500 drives with MP-Series rotary motor performance specifications. • Page 48 for Kinetix 5500 drives with MP-Series linear actuator performance specifications.
 **LDAT-Series Integrated Linear Thrusters**	LDAT-Series Integrated Linear Thrusters are reliable, high-speed linear actuators with an integrated linear guide capable of pushing, pulling, or carrying a load. They are available with continuous force ratings from 81 N (18 lb) to 1997 N (449 lb) and with stroke lengths from 100 mm (3.94 in.) to 900 mm (35.43 in.).	LDAT-Series integrated linear thrusters performance specifications with: • Kinetix 6500/6200 drives on Page 68 • Kinetix 6000 drives on Page 96 • Kinetix 300 drives on Page 124 • Kinetix 3 drives on Page 146

Select a Kinetix Motion Control System

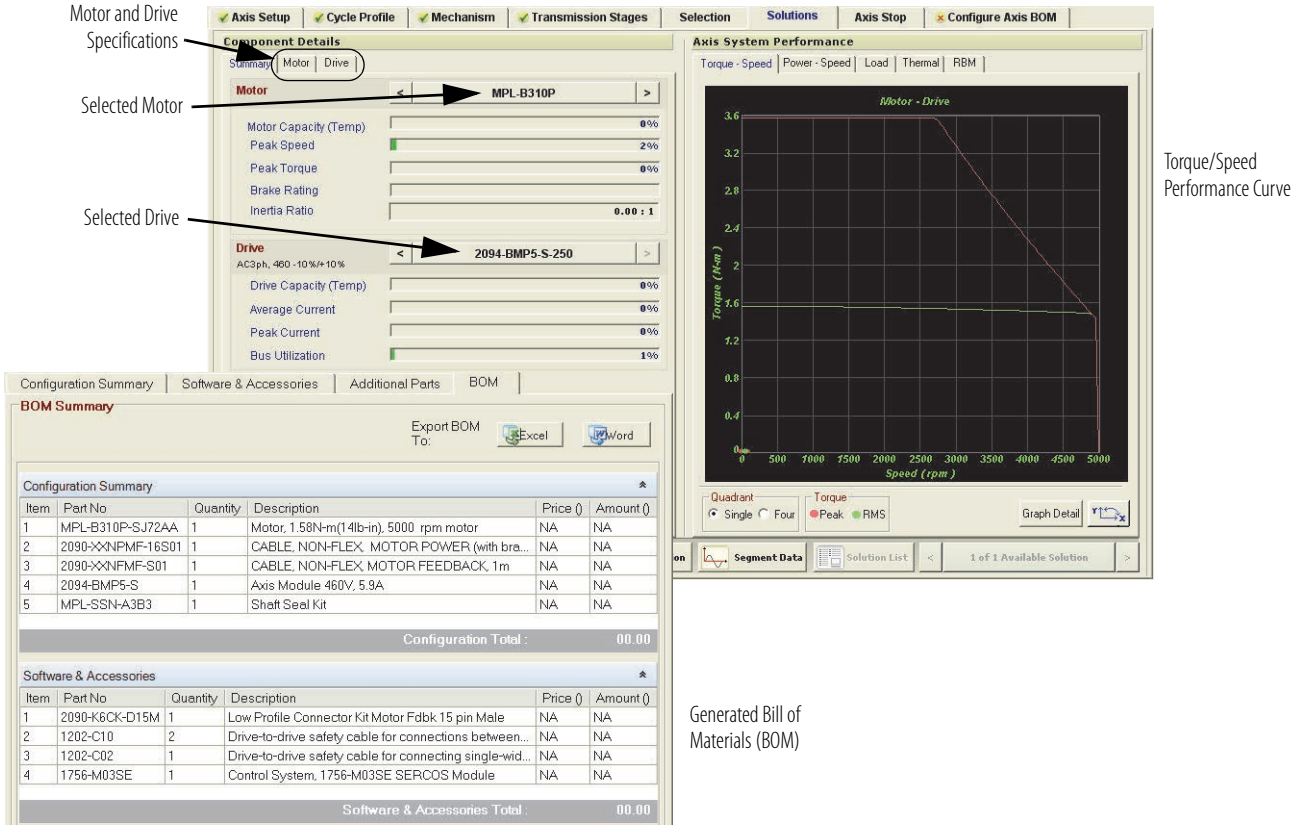
Typical motion control systems require selections from several categories of Allen-Bradley motion control products.



Use Motion Analyzer Software

Motion Analyzer software is a comprehensive sizing tool used for analysis, optimization, selection, and validation of your Kinetix Motion Control system. Given any drive and compatible motor/actuator, Motion Analyzer software provides you with the data to determine the optimum drive and motor/actuator combination for your application.

You can also use Motion Analyzer software to build your bill of materials and receive an itemized list of system components with catalog numbers and product descriptions.



To download the software, go to http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

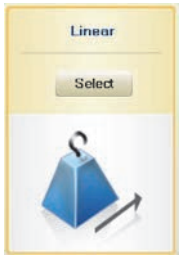
Motion Analyzer Software Features

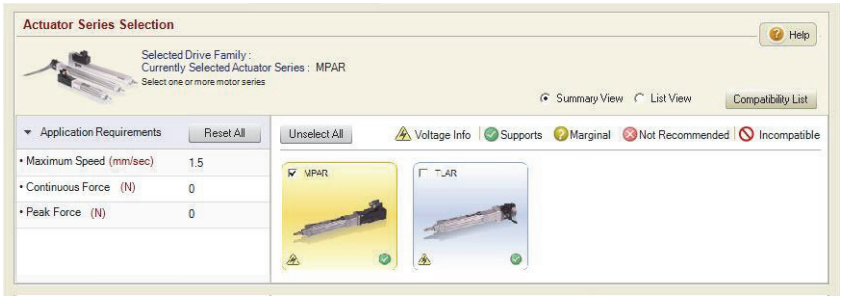
Motion Analyzer software facilitates the machine design and investigation process by making it fast, simple, and accurate. Motion Analyzer software offers a fact-based decision path and design optimization approach that enables machine builders to:

- reduce motion system design risk.
- reduce time from machine design to shipment.
- optimize motion control system cost and size.
- enhance machine performance and reliability.
- create a bill of materials.

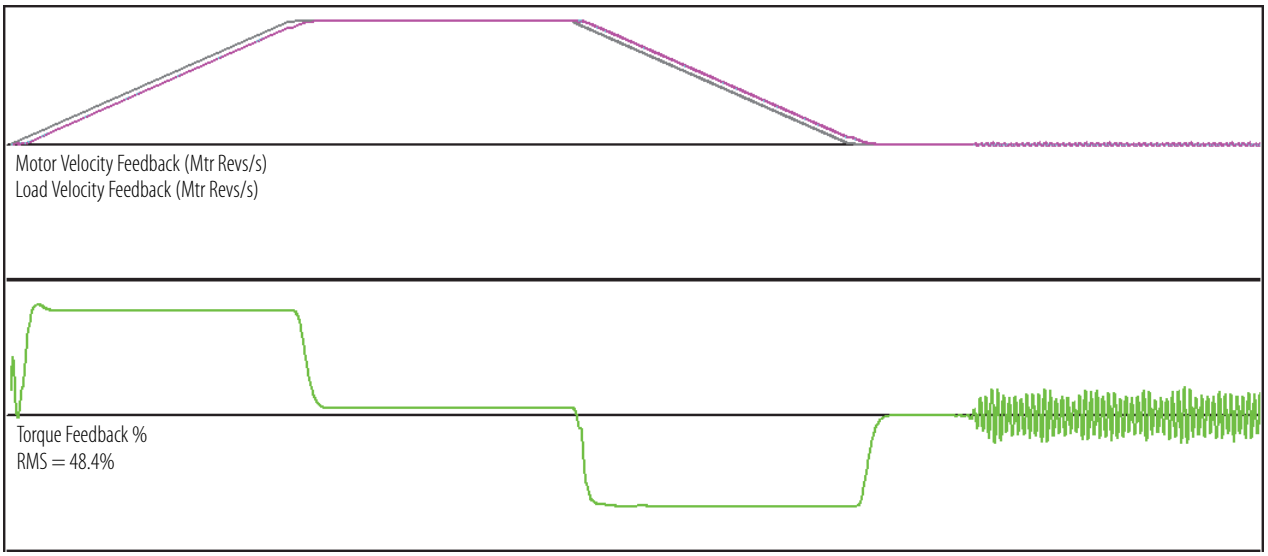
Motion Analyzer software includes the full range of Kinetix Motion Control products and features.

MP-Series Electric Cylinders - deliver off-the-shelf linear motion without the need to search through catalogs looking for suitable ballscrews, timing belts, pulleys, and bearings. No mechanical data to enter, just input load information and move profile. Output even includes an L_{10} life estimate.

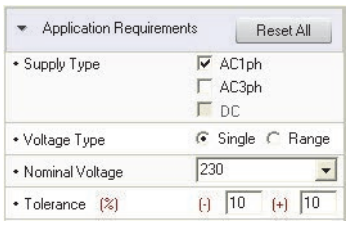




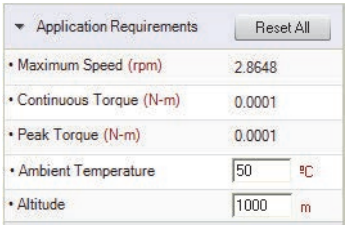
Tuning simulation - is a tool to help predict how your machine performs under real-world conditions. Emulates tuning an axis in RSLogix 5000 software or the Logix Designer application (including Auto-tune) and then simulates the behavior of the load, motor, and drive. Factors-in the mechanical compliance or backlash to give a realistic simulation.



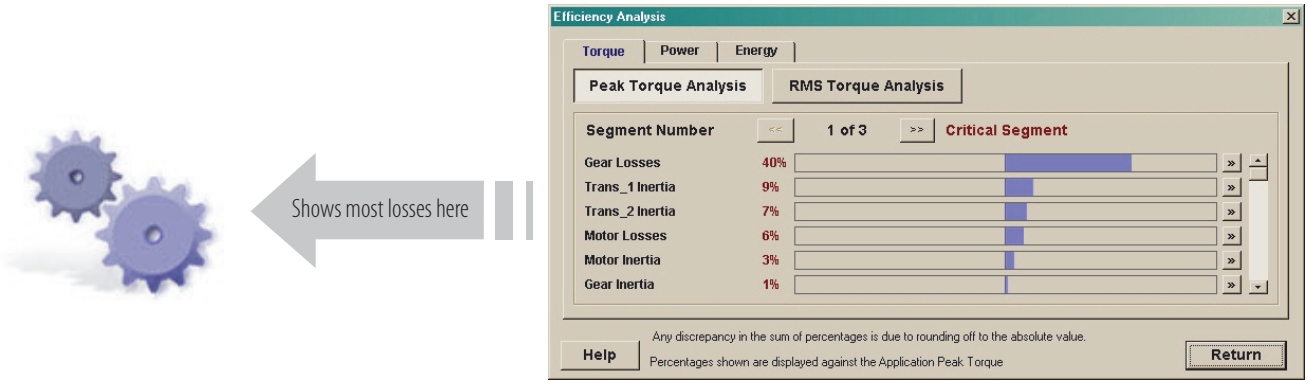
Variable mains supply analysis - is especially useful for machine builders exporting machines overseas.



Motor thermal performance prediction - takes into account the motor ambient temperature to verify performance in extreme-heat conditions.



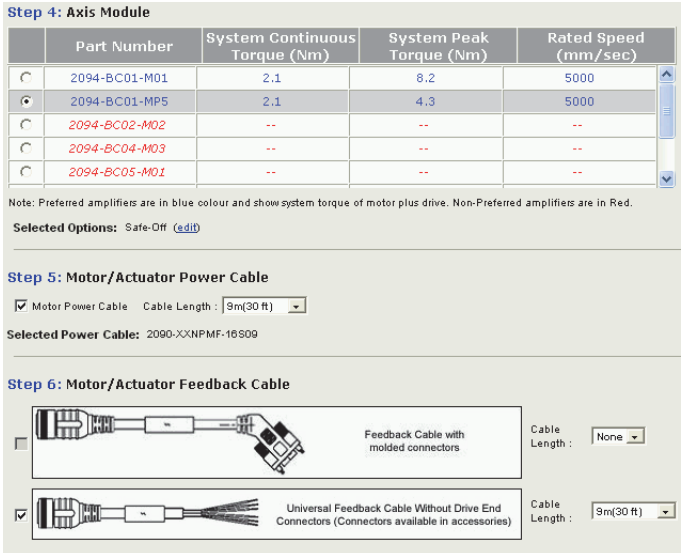
Efficiency analysis - provides an understanding of where the torque produced by the motor is consumed.



Motion Analyzer software also helps generate a bill of materials (BOM). With its rule-based approach, selecting the right drive, motor, cables, I/O connectors, and other accessory items is fast and error free.

You can have a system specified as a BOM or have selections based on the results of motor/actuator and drive sizing calculated by Motion Analyzer software.

Once finished, you can printout the BOM or export the BOM file to Microsoft Word or Excel application files.

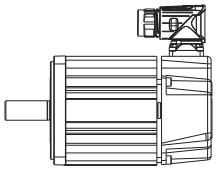


To download Motion Analyzer software, go to http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Select a Rotary Motion Family

Kinetix VP Servo Motors

- Developed to match Kinetix 5500 drive ratings for optimized system sizing
- Single cable technology
- 200V and 400V-class motors
- Shaft-end threaded hole
- Multi-turn and single-turn high-resolution absolute position encoders

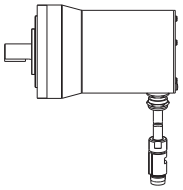


Kinetix VP (Bulletin VPL) low-inertia servo motors are based on proven MP-Series technology for dynamic performance, increased reliability, and leverages high volume production.

- High-energy rare-earth magnets
- SpeedTec DIN connector, rotates 325°
- IP66 with optional shaft seal and environmentally sealed connector
- 0.46…33 N•m (4…292 lb•in) continuous stall torque

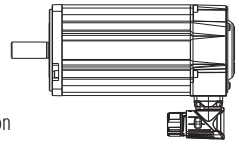
Kinetix VP (Bulletin VPS) stainless-steel motors for high-pressure washdown environments.

- Specifically designed for sanitary environments for use with high-pressure, highly caustic washdown applications
- Smooth passivated 300-series stainless-steel cylindrical exterior
- Complies with NSF/ANSI Standard 169
- Cable extensions, 5 m (16.4 ft)
- IP69K for 1200 psi motor washdown, IP66/IP67 shaft seal (standard) and environmentally sealed connector
- 8.1 and 21.0 N•m (72 and 186 lb•in) continuous stall torque



MP-Series Servo Motors

- 200V and 400V-class motors
- Shaft-end threaded hole
- Multi-turn and single-turn high-resolution absolute position encoders



MP-Series (Bulletin MPF) food-grade motors with improved sealing techniques for food environments.

- Combined characteristics of MP-Series low-inertia motors and features specifically designed for food and beverage applications
- Epoxy coated
- IP66/IP67 shaft seal (standard) and environmentally sealed connectors
- 1.6…19.4 N•m (14…172 lb•in) continuous stall torque

MP-Series (Bulletin MPL) low-inertia motors offer a reduced motor size while delivering significantly higher torque to meet the demanding requirements of high-performance motion system.

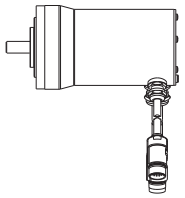
- High-energy, rare-earth magnets
- IP66 with optional shaft seal and environmentally sealed connectors
- 0.26…163 N•m (2.3…1440 lb•in) continuous stall torque

MP-Series (Bulletin MPM) medium-inertia motors for higher inertia applications.

- Multiple winding speed options
- High-energy, rare-earth magnets
- IP67 with optional shaft seal and environmentally sealed connectors
- 2.18…62.8 N•m (19.3…556 lb•in) continuous stall torque

MP-Series (Bulletin MPS) stainless-steel motors for high-pressure washdown environments.

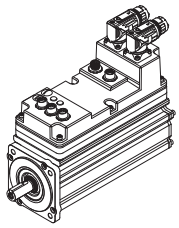
- Specifically designed for sanitary environments for use with high-pressure, highly caustic washdown applications
- Smooth passivated 300-series stainless-steel cylindrical exterior
- Certified and listed to NSF/ANSI Standard 169
- Cable extensions, 3 m (9.8 ft)
- IP69K for 1200 psi motor washdown, IP66/IP67 shaft seal (standard) and environmentally sealed connectors
- 3.6…21.5 N•m (32…190 lb•in) continuous stall torque



Kinetix 6000M Integrated Drive-Motor Systems

Kinetix 6000M Integrated Drive-Motor systems combine the reliable high-performance MP-Series food-grade servo motor and Kinetix 6000 servo drive technologies into a single, compact package.

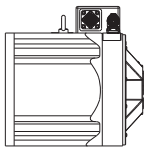
- USDA compliant food-grade paint, IP66 shaft seal, and same environmentally sealed connectors as the MP-Series food-grade motors
- Standard MP-Series flange and shaft dimensions (of the same frame size) for easy upgrades
- Hybrid and network cables connect to as many as 16 Kinetix 6000M integrated drive-motor units
- 460V windings
- 3.0…7.5 N•m (26.5…64.2 lb•in) continuous stall torque
- Multi-turn high-resolution absolute position encoders



RDD-Series Direct Drive Servo Motors

Bulletin RDB direct-drive motors provide direct coupling to the load, eliminating mechanical transmission devices and improving system performance and efficiency.

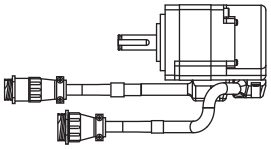
- Direct coupling to the load
- Bearingless housed configuration
- 460V windings, multiple winding speed options
- IP65 with use of environmentally sealed connectors
- 32.7…426 N•m (289…3770 lb•in) continuous stall torque
- Multi-turn and single-turn high-resolution Heidenhain EnDat 2.2 encoders



TL-Series Servo Motors

Bulletin TL and TLY high-performance servo motors combine compact size with high-torque density to provide substantial power in a small footprint.

- Compact size, high-torque density, high-energy (rare-earth) magnets
- 230V windings in metric and NEMA frame sizes
- IP65 with optional shaft seal
- 0.086…5.42 N•m (0.76…48 lb•in) continuous stall torque
- Multi-turn (battery-backed) high-resolution absolute position or incremental encoder options



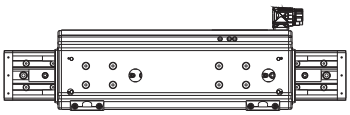
To compare features across motor families, refer to Rotary Servo Motors on page 21. Refer to the Kinetix Rotary Motion Technical Data, publication GMC-TD001, for product specifications.

Select a Linear Motion Family

LDAT-Series Integrated Linear Thrusters

The LDAT-Series linear thruster is a reliable, high-speed linear actuator with an integrated linear guide that is capable of pushing, pulling, or carrying a load.

- Increased reliability due to direct-drive technology with single linear guide, single wear item, caged-ball linear bearings, and elimination of wear items associated with rotary to linear motion conversion
- Integrated linear bearing provides the ability to carry a load without having to mount and align external bearings
- Multiple mounting surfaces and methods for ease of mounting into your machine
- Couples directly to the item that needs to be moved
- High velocities, up to 5 m/s (16 ft/s), and acceleration, 49 m/s^2 (160 ft/s^2) standard
- Peak forces ranging from 168…5469 N (38…1229 lb)

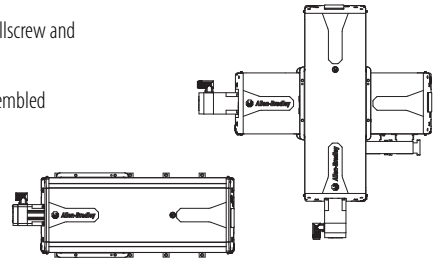


MP-Series Integrated Linear Stages

Bulletin MPAS integrated linear stages extend the performance and reliability of MP-Series servo motors technology to ballscrew and direct-drive linear slide-type actuators.

Bulletin MPMA integrated multi-axis linear stages extend the Allen-Bradley actuator portfolio into predefined and pre-assembled multi-axis configurations to suit a variety of manufacturing needs.

- 200/230V and 400/460V operation (200/230V for only 150 mm direct-drive frame size)
- High-energy, (rare-earth) magnets
- Carriage and base mounting design allows 200 and 250 mm frame sizes to be stacked
- IP30 rating with unique, long life strip seal system
- 83…521 N (19…117 lb) continuous stall force

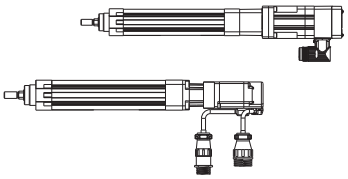


To compare features across linear actuator families, refer to Linear Actuators on page 26.

MP-Series and TL-Series Electric Cylinders

With Bulletin MPAR and TLAR electric cylinders, your applications experience flexible servo motor control ideal for solutions requiring forces to be built up quickly and positions that need to be approached accurately. Available in three ISO 15552 pneumatic-class frame sizes (32, 40, and 63 mm), these durable, quiet, and energy efficient non-rotating stainless steel piston rod actuators are an excellent upgrade for pneumatic systems.

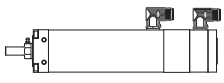
- 200/230V operation (Bulletin TLAR)
- 200/230V and 400/460V operation (Bulletin MPAR)
- State of the art design features ballscrew construction driven by TL-Series (Bulletin TLY) and MP-Series (Bulletin MPL) motors
- Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, wiring, and commissioning time
- IP40 rating (Bulletin MPAR and TLAR) complete unit, IP66 (Bulletin MPAR) for electronic components with the use of environmentally sealed (Bulletin 2090) cable connectors
- 240…2000 N (54…450 lb) continuous stall force



MP-Series Heavy Duty Electric Cylinders

Bulletin MPAI heavy-duty electric cylinders are compact, lightweight, high-force actuators that serve as a cost-effective alternative to fluid power solutions.

- 200/230V and 400/460V operation
- State of the art design features ballscrew and roller screw construction driven by MP-Series (Bulletin MPL) motors
- Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, wiring, and commissioning time
- Available in standard (front-face and front-trunnion) mount and food-grade paint (front-face and rear-clevis) mount configurations
- IP67 rating with the use of environmentally sealed (Bulletin 2090) cable connectors
- Available in 64, 83, 110, and 144 mm frame sizes with 706…13,122 N (159…2950 lb) continuous stall force

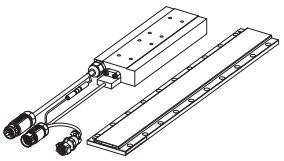


To compare features across electric cylinder families, refer to Linear Actuators on page 26.

LDC-Series Iron Core Linear Motors

LDC-Series linear motors technology provides cost-effective options to help you improve machine throughput while reducing maintenance and downtime.

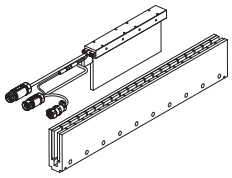
- 200/400V and 460V AC operation (LDC-Series)
- Cogging torque <5% of the continuous force (LDC-Series)
- Speed capabilities to 10 m/s (32.8 ft/s) to increase machine productivity
- IP65 rating and RoHS compliant
- 74…2882 N (17…648 lb) continuous stall force (LDC-Series)



LDL-Series Ironless Linear Motors

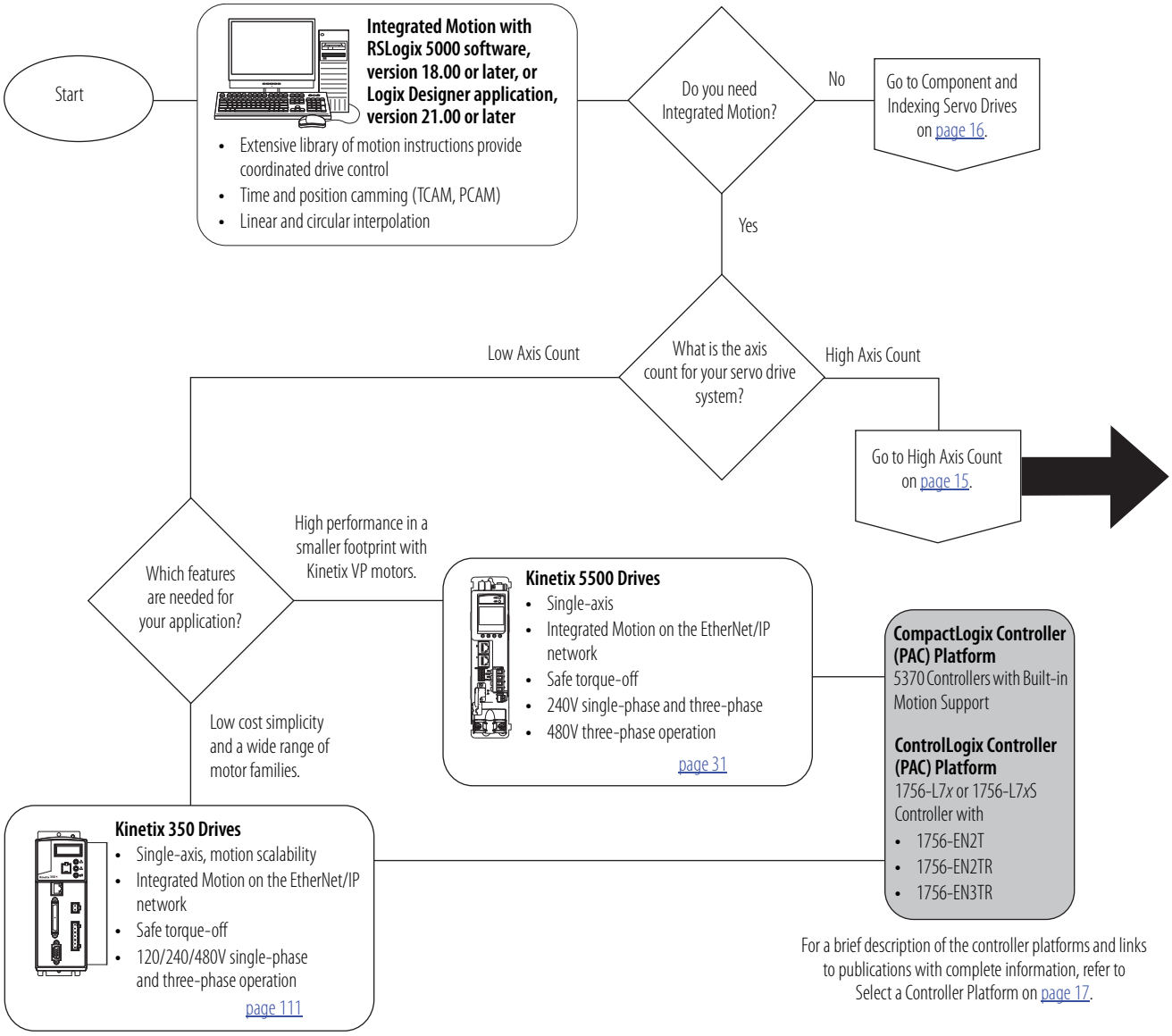
LDL-Series linear motors technology provides cost-effective options to help you improve machine throughput while reducing maintenance and downtime.

- 230V AC operation (LDL-Series)
- Non-cogging technology for smooth motion (LDL-Series)
- Speed capabilities to 10 m/s (32.8 ft/s) to increase machine productivity
- IP65 rating and RoHS compliant
- 63…596 N (14…134 lb) continuous stall force (LDL-Series)



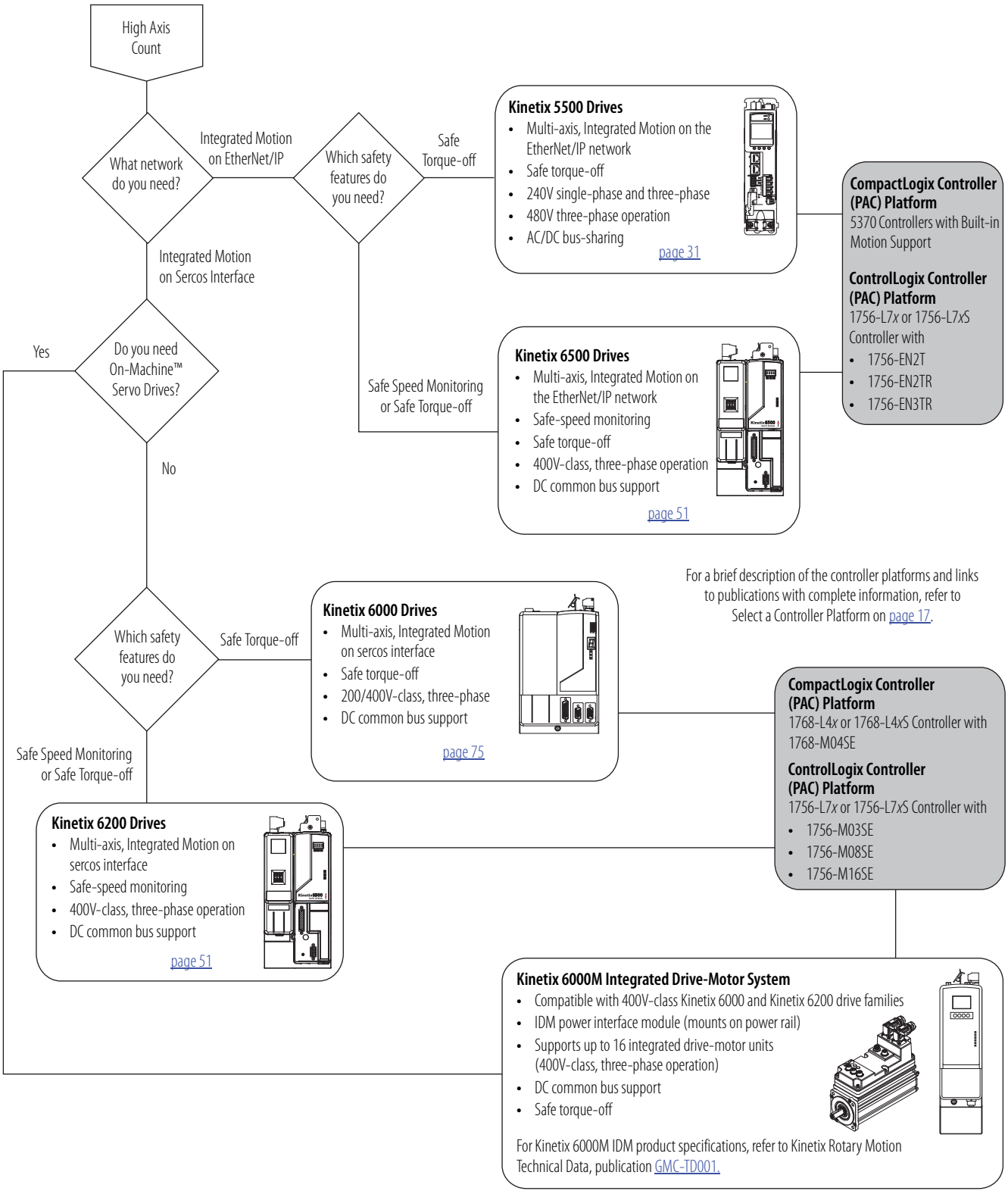
To compare features across linear motor families, refer to Linear Servo Motors on page 25. Refer to the Kinetix Linear Motion Technical Data, publication GMC-TD002, for product specifications.

Select a Servo Drive System



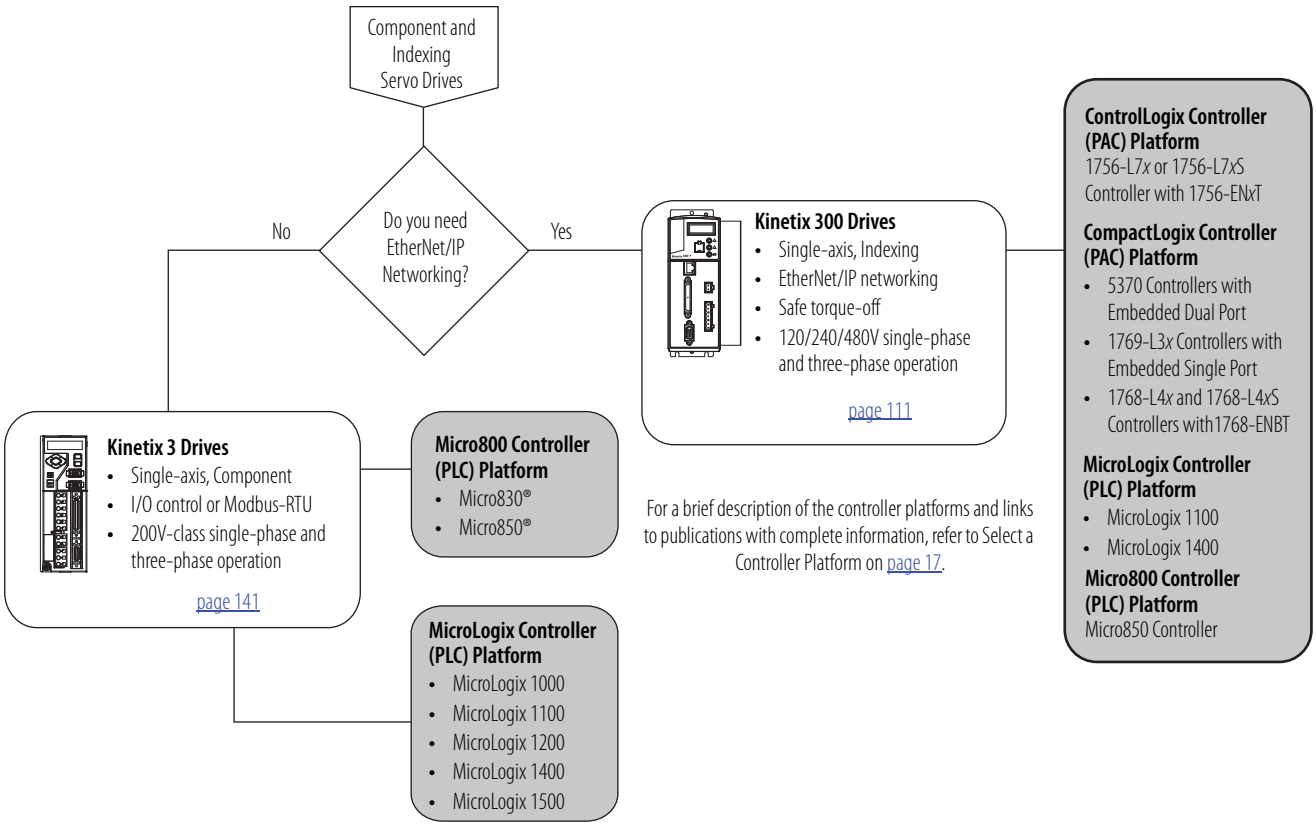
To compare features across servo drive families, refer to Servo Drives beginning on page 28. Refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003, for product specifications.

For compatible rotary motion and linear motion products, refer to Compatible Motors and Actuators on page 16.



For a brief description of the controller platforms and links to publications with complete information, refer to Select a Controller Platform on page 17.

To compare features across servo drive families, refer to Servo Drives beginning on page 28. Refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003, for product specifications.



To compare features across servo drive families, refer to Servo Drives beginning on page 28. Refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003, for product specifications.

Compatible Motors and Actuators

Rotary Motion	Kinetix 5500	Kinetix 6500	Kinetix 350	Kinetix 6000	Kinetix 6200	Kinetix 300	Kinetix 3
Kinetix VP (Bulletin VPL)	X	–	–	–	–	–	–
Kinetix VP (Bulletin VPS)	X	–	–	–	–	–	–
MP-Series (Bulletin MPL)	X (5)	X	X	X	X	X	–
MP-Series (Bulletin MPM)	X (5)	X	X	X	X	X	–
MP-Series (Bulletin MPF)	X (5)	X	X	X	X	X	–
MP-Series (Bulletin MPS)	X (5)	X	X	X	X	X	–
Kinetix 6000M (Bulletin MDF)	–	–	–	X	X	–	–
RDD-Series (Bulletin RDB)	–	X	–	X	X	–	–
TL-Series (Bulletin TLY)	–	–	X	X (6)	X	X	X
TL-Series (Bulletin TL)	–	–	–	–	–	–	X (7)

Linear Motion	Kinetix 5500	Kinetix 6500	Kinetix 350	Kinetix 6000	Kinetix 6200	Kinetix 300	Kinetix 3
LDAT-Series	–	X (1)	–	X (1)	X (1)	X (2)	X (1)
MP-Series (Bulletin MPAS)	X (3) (5)	X	X (3)	X	X	X	X (4)
MP-Series (Bulletin MPMA)	X (3) (5)	X	X (3)	X	X	X	–
MP-Series (Bulletin MPAR)	X (5)	X	X	X	X	X	–
MP-Series (Bulletin MPAI)	X (5)	X	X	X	X	X	–
TL-Series (Bulletin TLAR)	–	–	X	–	–	X	X
LDC-Series Iron-core	–	X	–	X	X	X	X
LDL-Series Ironless	–	X	–	X	X	X	X

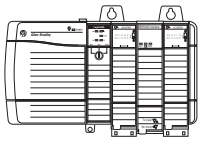
(1) LDAT-S*xxxxxx*-x*Bx* linear thrusters (incremental encoders) only.
(2) LDAT-S*xxxxxx*-x*Bx* (incremental) or LDAT-S*xxxxxx*-x*Dx* (high-resolution absolute) linear thrusters.
(3) MP-Series (ballscrew) linear stages only.
(4) MP-Series (direct-drive) linear stages only.
(5) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.
(6) TLY-A*xxxx*-H rotary motors (incremental encoders) only.
(7) TL-A*xxxx*-B rotary motors (high-resolution encoders) only.

Select a Controller Platform

Either ControlLogix or CompactLogix controllers are required for Coordinated Motion.

Programmable Automation Controllers

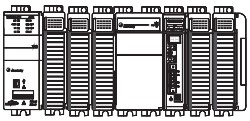
ControlLogix Controller Platform



The ControlLogix programmable automation controller (PAC) is a modular system capable of handling your most intensive applications. Modules are inserted into slots on the ControlLogix chassis.

- ControlLogix chassis
- Integrated motion on the EtherNet/IP network
- Integrated safety controllers
- Integrated motion on sercos interface
- Indexing on the EtherNet/IP network

CompactLogix Controller Platform

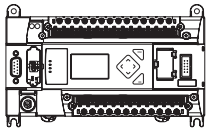


The CompactLogix programmable automation controller (PAC) is a modular system that provides cost-effective control for smaller applications. Modules snap together side-by-side on a DIN rail.

- CompactLogix DIN rail
- Integrated motion on the EtherNet/IP network
- Integrated safety controllers
- Integrated motion on sercos interface
- Indexing on the EtherNet/IP network

Programmable Logic Controllers

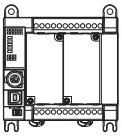
MicroLogix Controller Platform



The MicroLogix programmable logic controllers (PLC) with Modbus-RTU or PTO signals provide simple PLC-based motion solutions.

- Indexing on the EtherNet/IP network
- Pulse train output (PTO)

Micro800 Controller Platform



The Micro800 programmable logic controllers (PLC) with I/O control or Modbus-RTU signals provide simple PLC-based motion solutions with the Kinetix 3 component servo drive.

- Indexing on the EtherNet/IP network
- Pulse train output (PTO)

For more information on controller platforms and the interface/network modules required for motion control applications, refer to the publications listed in the table below.

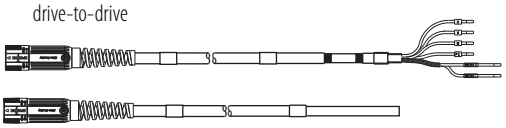
Controller Platform	Resource
ControlLogix	ControlLogix Selection Guide, publication 1756-SG001
EtherNet/IP communication modules	1756 ControlLogix Communication Modules Specifications, publication 1756-TD003
Sercos interface modules	1756 ControlLogix Integrated Motion Modules Specifications, publication 1756-TD004
Analog servo modules	
CompactLogix	CompactLogix Selection Guide, publication 1769-SG001
Sercos interface modules	1768 CompactLogix Integrated Motion Module Specifications, publication 1768-TD001
MicroLogix	MicroLogix Programmable Controllers Selection Guide, publication 1761-SG001
Micro800	Micro800 Programmable Controllers Selection Guide, publication 2080-SG001

For more information on technical publications available for Integrated Architecture products, refer to the Integrated Architecture Recommended Literature Reference Manual, publication IASIMP-RM001.

Select Servo Drive Accessories

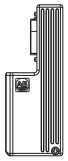
Motor and Interface Cables

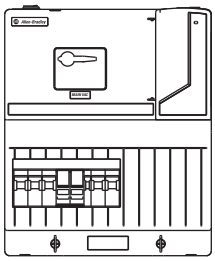
- Single Cable Technology for Kinetix VP rotary motors
- Motor power and feedback cables for your motor/actuator
- Interface cables for sercos and Ethernet communication modules
- Interface cables for I/O control and cascading safe-off signals from drive-to-drive



Connector Kits, Converter Kits, and Breakout Components

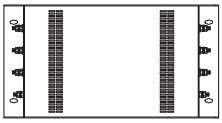
- Connector kits for motor feedback, I/O, and safety signals
- Feedback converter kits for Hiperface-to-DSL and EnDat to Hiperface
- Breakout components for motor feedback and I/O signals
- Safe-off components for cascading safe-off signals from drive-to-drive





Power Components

- Bulletin 2094 power rail, shunt module, or slot-filler module for Kinetix 6000, Kinetix 6200, Kinetix 6500 drives
- Bulletin 2094 line interface modules, designed to replace many of the common input power devices required for your servo drive system
- Bulletin 2090 AC line filters
- Bulletin 2090 and 1394 external shunt modules



For more information on accessories, refer to Motion Control Accessories Technical Data, publication GMC-TD004.

Verify System Combinations and Accessory Items

Each of these publications focus on a drive family and provide the drive accessory catalog numbers required for a typical system. Included are tables and examples listing the required motor/actuator cables, interface cables, and connector kits required for a system. Also included are performance specification tables and torque/speed curves (rotary motion) and force/velocity curves (linear motion) for the optimum drive/motor or drive/actuator combination. Use the drive systems publication and the Motion Accessories publication to complete your bill of materials.

Resource	Publication
Kinetix 5500 Drive Systems Design Guide	GMC-RM009
Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide	GMC-RM003
Kinetix 300 and Kinetix 350 Drive Systems Design Guide	GMC-RM004
Kinetix 3 Drive Systems Design Guide	GMC-RM005
Kinetix 2000 Drive Systems Design Guide	GMC-RM006
Kinetix 7000 Drive Systems Design Guide	GMC-RM007
Ultra3000 Drive Systems Design Guide	GMC-RM008
Kinetix Motion Accessories Technical Data	GMC-TD004

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Kinetix Rotary Motion Specifications, publication GMC-TD001	Product specifications for MP-Series (Bulletin MPL, MPM, MPF, MPS), Kinetix 6000M (Bulletin MDF), TL-Series, RDD-Series, and HPK-Series rotary motors.
Kinetix Linear Motion Specifications, publication GMC-TD002	Product specifications for Bulletin MPAS and MPMA linear stages, Bulletin MPAR, MPAI, and TLAR electric cylinders, and LDC-Series and LDL-Series linear motors.
Kinetix Servo Drives Specifications, publication GMC-TD003	Product specifications for Kinetix Integrated Motion on the EtherNet/IP network, Integrated Motion on sercos interface, EtherNet/IP networking, and component servo drive families.
Kinetix Motion Accessories Specifications, publication GMC-TD004	Product specifications for Bulletin 2090 motor and interface cables, low-profile connector kits, drive power components, and other servo drive accessory items.
Kinetix 5500 Drive Systems, publication GMC-RM009	System design guide to determine and select the required (drive specific) drive module, power accessory, connector kit, motor cable, and interface cable catalog numbers for your drive and motor/actuator motion control system. Included are system performance specifications and torque/speed curves (rotary motion) and force/velocity curves (linear motion) for your motion application.
Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003	
Kinetix 300/350 Drive Systems Design Guide, publication GMC-RM004	
Kinetix 3 Drive Systems Design Guide, publication GMC-RM005	
Kinetix 2000 Drive Systems Design Guide, publication GMC-RM006	
Kinetix 7000 Drive Systems Design Guide, publication GMC-RM007	
Ultra3000 Drive Systems Design Guide, publication GMC-RM008	
Kinetix 6200 and Kinetix 6500 Safe Speed Monitoring Servo Drives Safety Reference Manual, publication 2094-RM001	Information on wiring, configuring, and troubleshooting the safe-speed features of your Kinetix 6200 and Kinetix 6500 drives.
Kinetix 6200 and Kinetix 6500 Safe Torque-off Servo Drives Safety Reference Manual, publication 2094-RM002	Information on wiring, configuring, and troubleshooting the safe torque-off features of your Kinetix 6200 and Kinetix 6500 drives.
Kinetix Safe-off Feature Safety Reference Manual, publication GMC-RM002	Information on wiring and troubleshooting your Kinetix 6000 and Kinetix 7000 servo drives with the safe-off feature.
System Design for Control of Electrical Noise Reference Manual, publication GMC-RM001	Information, examples, and techniques designed to minimize system failures caused by electrical noise.
EMC Noise Management DVD, publication GMC-SP004	
ControlLogix Selection Guide, publication 1756-SG001	Information to determine the ControlLogix controller that fits your application and the product specifications to help design a ControlLogix system and select the appropriate components.
CompactLogix Selection Guide, publication 1769-SG001	Information to determine the CompactLogix controller that fits your application and the product specifications to help design a CompactLogix system and select the appropriate components.
MicroLogix Programmable Controllers Selection Guide, publication 1761-SG001	Information to determine the MicroLogix controller that fits your application and the product specifications to help you select the appropriate components.
Micro800 Programmable Controllers Selection Guide, publication 2080-SG001	Information to determine the Micro800 controller that fits your application and the product specifications to help you select the appropriate components.
Integrated Architecture Recommended Literature Reference Manual, publication IASIMP-RM001	This document provides lists of technical publications for Integrated Architecture products. These lists are not all-inclusive, but they do include the most-commonly accessed publications for the related products.
Industrial Ethernet Media Brochure, publication 1585-BR001	Information to determine the Bulletin 1585 Ethernet cable that fits your application and the product specifications to help select the appropriate components.
Motion Analyzer software download from http://www.ab.com/motion/software/analyzer.html	Comprehensive motion application sizing tool used for analysis, optimization, selection, and validation of your Kinetix Motion Control system.
Rockwell Automation Configuration and Selection Tools, website http://www.ab.com	Online product selection and system configuration tools, including AutoCad (DXF) drawings.

You can view or download publications at http://www.rockwellautomation.com/literature/. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Notes:

Rotary Servo Motors

Rotary motors (except TL-Series) are UL Recognized components to applicable UL and CSA standards. CE marked for all applicable directives. Refer to http://www.ab.com for more information.

Kinetix VP Servo Motors

Motor Features	Kinetix VP (Bulletin VPL) Low Inertia Motors	Kinetix VP (Bulletin VPS) Stainless Steel Motors
Main characteristics	• Developed to match Kinetix 5500 drive ratings for optimized system sizing • Single-cable technology • High torque to size ratio • Low rotor inertia	• Specifically designed for sanitary environments for use with high-pressure, highly-caustic washdown applications • Single cable technology • Low rotor inertia
Features	• 200V and 400V-class windings • High-energy rare-earth magnets • Shaft-end threaded hole • SpeedTec DIN connector, rotates 325° • Standard IEC 72-1 mounting dimensions	• Smooth, passivated 300 series stainless-steel cylindrical exterior • Complies with NSF/ANSI Standard 169 • 400V-class windings • Shaft-end threaded hole • Cable extended 5 m (16.4 ft) from motor to protect connector • Standard IEC 72-1 mounting dimensions
Motor type	Brushless AC synchronous servo motors	Brushless AC synchronous servo motors
Environmental ratings	• IP50 minimum, without shaft seal (standard) • IP66 with optional shaft seal and use of environmentally sealed cable connector	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector • IP69K for 1200 psi motor washdown
Continuous stall torque	0.46…33 N•m (4…292 lb•in)	8.1 and 21.0 N•m (72 and 186 lb•in)
Peak stall torque	1.33…79 N•m (12…702 lb•in)	27.1 and 67.8 N•m (240 and 600 lb•in)
Rated speed	Up to 8000 rpm	3000 rpm
Motor rated output	0.19…5.55 kW (0.25…7.44 Hp)	1.4 and 3.3 kW (1.9 and 4.4 Hp)
Feedback options	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position	Multi-turn, high-resolution absolute position
Motor options	• 24V DC brake • Shaft seal kit • Keyless shaft (limited frame sizes)	• Shaft seal kit with slinger • Positive air pressure kit
Compatible drives	Kinetix 5500	Kinetix 5500
Typical applications	• Packaging • Converting • Material handling • Electronic assembly • Automotive • Metal forming	• Meat and poultry • Food slicing and filling • Raw food handling • Processing • Life science • Consumer products

Kinetix 6000M Integrated Drive-Motor System

Motor Features	MDF-SB1003P		MDF-SB1153H		MDF-SB1304F	
Main characteristics	• Combines the reliable high-performance MP-Series servo motors and Kinetix 6000 servo drives • Compatible with 400V-class Kinetix 6000 and Kinetix 6200 drive systems • Integrated SIL2/PLd safe torque-off capability • Motor mounting flanges and shaft dimensions same as MP-Series motors • Low rotor inertia					
Features	• As many as 4 Kinetix 6000M IPIM modules on a single 2094 power rail. • As many as 16 Kinetix 6000M integrated drive-motor (IDM) units connect to a single IPIM module • USDA compliant food-grade paint • 180° rotatable hybrid cable connectors					
Motor type	Brushless AC synchronous servo motors					
Environmental rating	• IP66 with shaft seal (standard) and use of environmentally sealed cable connectors • Food grade grease on shaft seal					
Digital inputs	Each IDM unit includes these digital inputs: • Home, overtravel ± • High speed registration (2/axis) IPIM module includes Enable digital input (for all IDM units connected to the IPIM module)					
Continuous torque	3.0 (26.5)		4.8 (42.5)		7.25 (64.2)	
Peak torque	10.5 (92.9)		18.5 (164)		21.75 (192)	
Speed	3000 rpm		3500 rpm		5000 rpm	
Motor rated output	1.10 kW (non-brake)	1.02 kW (brake)	1.15 kW (non-brake)	1.0 kW (brake)	1.39 kW (non-brake)	1.24 kW (brake)
Feedback option	Multi-turn high-resolution absolute position encoder					
Motor options	• Holding brake • Shaft seal kit • Positive air pressure kit					
Compatible servo drives	• Kinetix 6200 (400V-class) drives • Kinetix 6000 (400V-class) drives					
Typical applications	• Food packaging • Volumetric filling • Form, fill, seal • Food handling • For meat and poultry applications, the MP-Series Stainless Steel motors are recommended					

MP-Series Servo Motors

Motor Features	MP-Series (Bulletin MPL) Low Inertia Motors	MP-Series (Bulletin MPM) Medium Inertia Motors	MP-Series (Bulletin MPF) Food Grade Motors	MP-Series (Bulletin MPS) Stainless Steel Motors
Main characteristics	• High torque to size ratio • Smart Motor Technology • Low rotor inertia	• High torque to size ratio • Smart Motor Technology • Medium rotor inertia • Easy migration from 1326AB motors	• Combined characteristics of MP-Series low-inertia motors and features specifically designed for food and beverage applications • Low rotor inertia	• Specifically designed for sanitary environments for use with high pressure, highly caustic washdown applications • Low rotor inertia
Features	• 230V and 460V windings • High-energy rare-earth magnets • Shaft end threaded hole • DIN connectors, rotates 180° • Standard IEC 72-1 mounting dimensions	• 230V and 460V windings • Multiple winding speed options • High-energy rare-earth magnets • Shaft end threaded hole • SpeedTec-ready DIN connectors, rotates 180° • Standard IEC 72-1 mounting dimensions	• Epoxy coated • 230V and 460V windings • Shaft end threaded hole • SpeedTec-ready DIN connectors, rotates 180° • Standard IEC 72-1 mounting dimensions	• Smooth, passivated 300 series stainless-steel cylindrical exterior • Certified and listed to NSF/ANSI Standard 169 • 230V and 460V windings • Shaft end threaded hole • Cable extensions, 3 m (9.8 ft) • Standard IEC 72-1 mounting dimensions
Motor type	Brushless AC synchronous servo motors			
Environmental ratings	• IP50 minimum, without shaft seal (standard) • IP66 with optional shaft seal and use of environmentally sealed cable connectors.	• IP50 minimum, without shaft seal (standard). • IP67 with optional shaft seal and use of environmentally sealed cable connectors.	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connectors. • Food grade grease on shaft seal	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connectors. • IP69K for 1200 psi motor washdown
Continuous torque	0.26…163 N•m (2.3…1440 lb•in)	2.18…62.8 N•m (19.3…556 lb•in)	1.6…19.4 N•m (14…172 lb•in)	3.6…21.5 N•m (32…190 lb•in)
Peak torque	0.74…278 N•m (6.6…2460 lb•in)	6.6…154.2 N•m (58…1365 lb•in)	3.61…48.6 N•m (32…430 lb•in)	11.1…98 N•m (67.8…600 lb•in)
Speed	Up to 8000 rpm	Up to 7000 rpm	Up to 5000 rpm	3000 and 5000 rpm
Motor rated output	0.16…18.6 kW	0.75…7.50 kW	0.73…4.1 kW	1.3…3.5 kW
Feedback options	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position • Resolver	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position	
Motor options	• 24V DC brake • Shaft seal kit • Keyless shaft (limited frame sizes)	• 24V DC brake • Shaft seal kit • Positive air pressure kit	• 24V DC brake • Shaft seal kit • Positive air pressure kit	• 24V DC brake • Shaft seal kit with slinger • Positive air pressure kit
Compatible drives (1) (2)	• Kinetix 5500 (3) • Kinetix 6200/Kinetix 6500 • Kinetix 6000 • Kinetix 7000 • Kinetix 300/350 • Kinetix 2000 • Ultra3000 • PowerFlex® 755		• Kinetix 5500 (3) • Kinetix 6200/Kinetix 6500 • Kinetix 6000 • Kinetix 300/350 • Kinetix 2000 • Ultra3000	
Typical applications	• Packaging • Converting • Material handling • Electronic assembly • Automotive • Metal forming	• Printing • Web handling • Converting • Automotive • Metal forming	• Food packaging • Volumetric filling • Form, fill, seal • Food handling • For meat and poultry applications, the MP-Series Stainless Steel motors are recommended	• Meat and poultry • Food slicing and filling • Raw food handling • Processing • Life science • Consumer products

(1) For Kinetix 2000 and Ultra3000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

(2) For PowerFlex 755 drive specifications, refer to the PowerFlex Low Voltage Drives Selection Guide, publication PFLEX-SG002.

(3) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

RDD-Series Direct Drive Servo Motors

Motor Features	RDD-Series Motors
Main characteristics	• Smart Motor Technology • Direct coupling to the load • Bearingless housed configuration
Features	• 460V windings • Multiple winding speed options • SpeedTec-ready DIN connectors, rotates 180° • Standard IEC 72-1 mounting dimensions
Motor type	Direct-drive rotary servo motor
Environmental rating	IP65 with use of environmentally sealed cable connectors
Continuous torque	32.7…426 N•m (289…3770 lb•in)
Peak torque	86.5…1050 N•m (766…9293 lb•in)
Speed	Base speeds between 177…1836 rpm
Motor rated output	1.97…8.69 kW
Feedback options	• Multi-turn, high-resolution Heidenhain EnDat 2.2 • Single-turn, high-resolution Heidenhain EnDat 2.2
Motor options	N/A
Compatible drives (1) (2)	• Kinetix 6200/6500 • Kinetix 6000 • Kinetix 7000 • PowerFlex 755
Typical applications	• Use to replace mechanical gear reduction (gear boxes, belts, pulleys) • Tight space constraints • Axes with high-power and high-performance requirements

(1) For Kinetix 7000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

(2) For PowerFlex 755 drive specifications, refer to the PowerFlex Low Voltage Drives Selection Guide, publication PFLEX-SG002.

TL-Series Low Inertia Servo Motors

Motor Features	TL-Series (Bulletin TL and TLY) Motors
Main characteristics	• Compact size, high torque density • Metric and NEMA frame sizes • Smart Motor Technology • Low rotor inertia
Features	• 230V windings • High-energy (rare-earth) magnets • Cable extensions, 1 m (3.2 ft) • 17-bit serial communication
Motor type	Brushless AC synchronous servo motors
Environmental rating	IP65 with optional shaft seal
Continuous torque	0.086…5.42 N•m (0.76…48 lb•in)
Peak torque	0.22…13 N•m (1.94…115 lb•in)
Speed	4500, 5000, and 6000 rpm
Motor rated output	0.037…2.0 kW
Feedback options	• Multi-turn, (battery-backed) high-resolution absolute position • Incremental (2000 counts)
Motor options	• 24V DC brake • Shaft seal kit
Compatible drives (1)	• Kinetix 6000 (Bulletin TLY) • Kinetix 300/350 (Bulletin TLY) • Kinetix 3 (Bulletin TL and TLY) • Kinetix 2000 (Bulletin TLY) • Ultra3000 (Bulletin TLY)
Typical applications	• Robotics • Material handling • X-Y tables • Specialty machinery • Semiconductor manufacturing • Medical/laboratory equipment • Light packaging machines • Office machinery

(1) For Kinetix 2000 and Ultra3000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

Linear Servo Motors

Linear motors are UL Recognized components to applicable UL and CSA standards. CE marked for all applicable directives. Refer to http://www.ab.com for more information.

LDC-Series and LDL-Series Linear Servo Motors

Linear Motor Features	LDC-Series Linear Servo Motors	LDL-Series Linear Servo Motors
Main characteristics	• High thrust force to cost ratio for less costly solutions • Cogging torque < 5% of the continuous force • 230/400 and 460V AC operation	• Non-cogging technology for super smooth motion • No magnetic attraction between the coil and magnet channel allows for the use of smaller, less expensive linear bearings • No external magnetic field to have to shield in magnetic sensitive applications • 230V AC operation
Features	• Speed capabilities to 10 m/s (32.8 ft/s) to increase machine productivity • Direct drive technology for extreme servo responsiveness • No wear parts to increase machine productivity through less maintenance and replacement • Standard MP-Series motor power and feedback connectors to easily combine with Allen-Bradley extension and flex cables	
Motor type	Iron core coil and magnet track	Ironless coil and magnet channel
Environmental rating	IP65 and RoHS compliant	
Continuous forces	74…2882 N (17…648 lb)	63…596 N (14…134 lb)
Peak forces	188…5246 N (42…1179 lb)	209…1977 N (47…444 lb)
Peak velocity	10 m/s (32.8 ft/s)	10 m/s (32.8 ft/s)
Cogging torque	< 5% of the continuous force	Zero
Field-installable accessories	• Cooling plates • Bulkhead connector kit • Encoder connector kit • Hall sensor for connectorized coil • Hall sensor for flying-lead coil	• Bulkhead connector kit • Encoder connector kit • Hall sensor for connectorized coil • Hall sensor for flying-lead coil
Compatible drives (1)	• Kinetix 6200/6500 • Kinetix 6000 • Kinetix 300 • Kinetix 3 • Kinetix 2000 • Ultra3000	• Kinetix 6000 • Kinetix 300 • Kinetix 3 • Kinetix 2000 • Ultra3000
Typical applications	• Form-fill and seal packaging machines • Large format gantries (pick and place, scribing and palletizing) • Material handling (pallet movers and sheet glass) • Plasma, laser and water jet cutting machines • Machine tools • Flying cut off machines • Coordinate measuring machines • Large format routers • Large format printers (step axis)	• Wafer cutting, handling and marking • Computer-to-plate printing machines • Large format printing (print head axis) • Solar and flat panel scribing (scribe head axis) • Axis requiring extremely smooth/constant velocity

(1) For Kinetix 2000 and Ultra3000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

Linear Actuators

Actuators are UL Recognized components to applicable UL and CSA standards and CE marked for all applicable directives. Refer to http://www.ab.com for more information.

Integrated Linear Actuators

Actuator Features	MP-Series (Bulletin MPAS) Integrated Linear Stages	MP-Series (Bulletin MPMA) Integrated Multi-axis Linear Stages	LDAT-Series Integrated Linear Thrusters
Main characteristics	• Rugged linear stages with integrated direct-drive linear motor or ballscrew with MP-Series servo motor • Available in three frame sizes (base widths) to accommodate a variety of load requirements for general automation • Smart Motor Technology (ballscrew) • Very high linear speeds (direct drive)	• Out of box alignment of 30 arc seconds • Field replaceable quick change cable management for ease of maintenance • Caged ball-type linear guides that retain lubrication for longer bearing life and provide lower noise levels • Absolute encoders on ballscrew axis and incremental encoders on direct-drive linear motor axis • MP-Series motor power and feedback connectors for connection to Allen-Bradley extension cables and drives • Access holes for easy lubrication	Precise, high-speed, iron-core linear actuators with a built-in linear guide. As a pre-engineered solution, the integrated linear thrusters can help: • Reduce engineering, design, and documentation time • Decrease the amount of mechanisms and components needed to build a custom solution • Reduce the time to install the axis into a machine • Increase reliability due to direct-drive technology with single linear guide, single wear item, caged-ball linear bearings, and elimination of wear items associated with rotary to linear motion conversion
Features	• 200/230V and 400/460V operation (only 230V operation for direct-drive 150 mm frame size) • High-energy (rare-earth) magnets • Heavy duty connectors • Operation without limit and home switches • Carriage and base mounting design allows 200 mm and 250 mm frame sizes to be stacked • Standard MP-Series motor power and feedback connectors • Optional air purge kit for added protection against ingress of foreign substances		• Integrated linear bearing provides the ability to carry a load without having to mount and align external bearings • Optimal strip cover for added bearing protection in harsh environments • Multiple mounting surfaces and methods for ease of mounting into your machine • Couples directly to the item that needs to be moved
Actuator type	• Direct-drive linear stage • Ballscrew-drive linear stage		• Direct-drive linear thrusters • Frame sizes 30, 50, 75, 100 and 150 mm
Environmental rating	Unique, long life strip seal system provides IP30 environmental rating to prevent debris, larger than 2.5 mm (0.1 in.) diameter, from entering the linear stage		IP30 (with strip cover option)
Continuous forces	83…521 N (19…117 lb)		81…1997 N (18…449 lb)
Peak forces	312…1212 N (70…273 lb)		168…5469 N (38…1229 lb)
Peak velocities	200…5000 mm/s (7.9…196.9 in/s)		Up to 5 m/s (16 ft/s), and acceleration, 49 m/s^2 (160 ft/s^2) std.
Stroke lengths (1)	120…1940 mm (4.7…76.4 in.)		100…900 mm (4.0…35.0 in.)
Feedback options	• Multi-turn, high-resolution absolute position (ballscrew) • 5 micron resolution incremental magnetic linear encoder (direct drive)		• Incremental, magnetic scale, 5 µm resolution • Absolute, magnetic scale, Hiperface, compatible with only Kinetix 300 servo drives
Field-installable accessories	• Cable track module replacement kit • Strip seal replacement kit • Top cover • Side cover • Coupling • T-nut kit (package of 10) • Toe-clip kit (package of 10) • Grease gun kit • Grease replacement cartridge	• Cable track module replacement kit • Strip seal replacement kits • Top cover kits (for only Y or Z-axis) • Side cover kits • Coupling kits (for only Y or Z-axis) • Tee-nut kit (package of 10) • Tee-nut bar kit • Grease gun kit • Grease replacement cartridge • Rotary servo motor (for only Y or Z-axis)	Mounting Attachments: • Foot mounting • Clevis (male) flange • Clevis (female) swivel flange Slider-end Attachments: • Rod-eye kit • Rod-clevis kit • Rod-coupler kit • Horizontal payload mounting bracket • Counterbalance kit
Compatible drives (2)	• Kinetix 5500 (ball screw only) (3) • Kinetix 6000 and Kinetix 6200/6500 • Kinetix 300 (ball screw and direct-drive) • Kinetix 350 (ball screw only) • Kinetix 3 (direct-drive only) • Kinetix 2000 • Ultra3000	• Kinetix 5500 (ball screw only) (3) • Kinetix 6000 and Kinetix 6200/6500 • Kinetix 300 (ball screw and direct-drive) • Kinetix 350 (ball screw only) • Kinetix 2000 • Ultra3000	• Kinetix 6000 and Kinetix 6200/6500 • Kinetix 300 • Kinetix 3 • Kinetix 2000 • Ultra3000
Typical applications	• Electronic assembly • Pick and place • Robots • Inspection • Labeling • Dispensing • Micro-arraying	• Material handling • Pick and place • Dispensing • Scanning • Contouring • Contoning • Flying shape cutting	Applications that currently use a custom-designed belt actuator or linkage device that converts rotary motion into linear, including cartoners, stackers, case packers, case and tray formers, in-out feeds, diverters, ejectors, drop gates, and horizontal conveyors.

(1) Applies to Bulletin MPAS linear stages. Not all Bulletin MPAS stroke lengths (travels) are available with Bulletin MPMA multi-axis linear stages.

(2) For Kinetix 2000 and Ultra3000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

(3) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

MP-Series and TL-Series Electric Cylinders

Actuator Features	TL-Series (Bulletin TLAR) Electric Cylinders	MP-Series (Bulletin MPAR) Electric Cylinders	MP-Series (Bulletin MPAI) Heavy Duty Electric Cylinders
Main characteristics	State-of-the-art design features ball screw construction driven by TL-Series (Bulletin TLY) servo motors	State-of-the-art design features ball screw construction driven by MP-Series (Bulletin MPL) servo motors	• State-of-the-art design features ball screw and roller screw construction driven by MP-Series (Bulletin MPL) servo motors • Front flange-mount, front trunnion-mount, and rear clevis-mount cylinders • Food-grade (paint) option with epoxy coating and corrosion resistant stainless steel fasteners and accessories
	• Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, wiring, and commissioning time • Smart Motor Technology • Very high linear speeds		
Features	• 200/230V operation • Absolute, high-resolution feedback options consistent with TL-Series (Bulletin TLY) servo motors • Standard TL-Series motor power and feedback connectors	• 200/230V and 400/460V operation • Absolute, high-resolution feedback options consistent with MP-Series servo motors • Standard MP-Series motor power and feedback connectors	
	• Rated for 100% duty cycle and designed for repeatable, reproducible performance over the actuator's operating life • Absolute feedback allows operation without limit and home switches • No piping, valving, air, or oil supply required		
	ISO 15552 pneumatic-class frame sizes 32, 40, and 63 mm		Frame sizes 64, 83, 110, and 144 mm
Actuator type	Ball-screw driven electric cylinders		Ball screw and roller screw electric cylinders
Environmental rating	IP40 (complete unit) includes rod-end seal and breather port	• IP40 (complete unit) includes rod-end seal and breather port • IP66 for electronic components with the use of environmentally sealed (Bulletin 2090) cable connectors	IP66 and IP67 with the use of environmentally sealed (Bulletin 2090) cable connectors
Continuous stall force	240…2000 N (54…450 lb)		706…13,122 N (159…2950 lb)
Max feed force	300…2500 N (67…562 lb)		1446…14,679 N (325…3300 lb)
Peak velocities	0.15…1.0 m/s (5.9…39.4 in/s)		176…610 mm/s (6.9…24.0 in/s)
Stroke lengths (1)	100…800 mm (4.0…32.0 in.)		076, 150, 300, 450 mm (3.0, 6.0, 12.0, 18.0 in.)
Optional equipment	24V DC holding brakes		24V DC holding brakes
Field-installable accessories	• Foot mounting • Flange mounting • Trunnion mounting kit • Trunnion support • Mounting attachments (clevis foot, right-angle clevis foot) • Piston-rod attachments (rod eye, rod clevis, rod coupler, coupling piece) • Guide rod		• Mounting plates • Front flange mount • Rear clevis mount • Rod-end attachments (rod eye, rod clevis) • Anti-rotation option
Compatible drives (2)	• Kinetix 300/350 • Kinetix 3 • Kinetix 2000	• Kinetix 5500 (3) • Kinetix 6200/6500 • Kinetix 6000 • Kinetix 300/350 • Kinetix 2000 • Ultra3000	
Typical applications	• Material handling (loading, unloading, lifts, pick and place, diverters, transfers, gantries) • Volumetric filling and process control (web guides, valve, nozzle, van, and gate positioning) • Fabrication (adjustments for machine backstops and cutting tools, works alignment)		• Push, pull, eject, press, or clamp parts • Packaging (consumer products, automotive, medical) • Electronic assembly • Insertion systems • Inspection and test equipment

(1) Not all stroke lengths (travels) are available with all frame sizes.

(2) For Kinetix 2000 and Ultra3000 drive specifications, refer to Additional Resources on page 19 for links to the applicable technical data and design guide publications.

(3) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Servo Drives

Servo drives meet CE compliance and are UL Listed to U.S. and Canadian safety standards. Refer to http://www.ab.com for more information.

Integrated Motion on the EtherNet/IP Network Servo Drives

Drive Features	Kinetix 5500	Kinetix 6500	Kinetix 350
Main characteristics	• High performance in a smaller footprint and optimized power density • Single motor cable that includes power, feedback, and brake conductors with SpeedTec connector • Digital feedback device provides real-time motor performance information to the control circuitry • Capability to run servo and induction motors	• Multi-axis • Common bus • Modular design	• Single-axis integrated motion drive optimized for low axis count • Supports complete motion command set • 120V input models drive 240V motors at full speed (catalog numbers 2097-V31PR*x*) • 240V, single-phase input modules include integrated AC line filter (catalog numbers 2097-V32PR*x*) • Memory module for Automatic Device Replacement (ADR)
	Integrated motion on the EtherNet/IP network		
	• Safe torque-off control • ISO-13849-1 TÜV certified, SIL CL2, PLd, cat 3	• Safe speed monitoring • Safe torque-off control • ISO-13849-1 TÜV certified SIL CL3, PLe, cat 4	• Safe torque-off control • ISO-13849-1 TÜV certified SIL CL3, PLd, cat 3
Drive configuration	• Single-axis operation for low-cost simplicity • Multi-axis bus-sharing configurations	1…8 Axes on Bulletin 2094 power rail	Single-axis
Input voltage	195…264V AC, single-phase 195…264V AC, three-phase 324…528V AC, three-phase	324…528V AC, three-phase (400V-class)	• 120/240V AC, single-phase • 240V AC, three-phase • 480V AC, three-phase
Common-bus follower input voltage	276…747V DC	458…747V DC (400V-class)	N/A
Continuous output power (inverter)	0.2…1.0 kW (195…264V, single-phase input)	1.8…22 kW (400V-class)	0.4…1.7 kW (single-phase input)
	0.3…7.2 kW (195…264V, three-phase input)		0.5…3.0 kW (single-phase or three-phase input)
	0.6…14.6 kW (324…528V, three-phase input)		1.0…3.0 kW (three-phase input)
Continuous output current (inverter)	1.0…23.0 A rms	2.8…34.6 A rms (400V-class)	2.0…12.0 A rms
Drive digital inputs	• Home/Registration1 (dual function) • High speed registration (1)	• Enable, home, overTravel ± • High speed registration (2/axis)	• Enable, home, overTravel ± • High speed registration (1)
Drive digital outputs	Motor brake relay output (with suppression)		
Programming	Logix Designer application	RSLogix 5000 software	
	Version 21.00.00 or later	Version 18.00.00 or later	Version 20.00 or later
	Ladder logic, structured text, and sequential function charts		
Logix5000 module compatibility	• 1756-EN2T, 1756-EN2TR, 1756-EN3TR ControlLogix modules • CompactLogix 5370 controllers		
I/O control	EtherNet/IP		
Feedback	• High-resolution absolute, multi-turn and single-turn encoder feedback • Hiperface encoder support with 2198-H2DCK converter kit	• High-resolution absolute multi-turn and single-turn encoder • Incremental encoder • EnDat 2.1 and 2.2 encoders	• High-resolution absolute multi-turn and single-turn encoder • Incremental encoder
	Feedback-only axis with Bulletin 842E-CM encoders	Feedback-only auxiliary axis	Auxiliary axis for master gearing mode
Rotary motors compatibility	• Kinetix VP (Bulletin VPL/VPS) • MP-Series (Bulletin MPL/MPM/MPF/MPS) (1)	• MP-Series (Bulletin MPL/MPM/MPF/MPS) • MP-Series RDD-Series Direct Drive (Bulletin RDB)	• MP-Series (Bulletin MPL/MPM/MPF/MPS) • TL-Series (Bulletin TLY)
Linear motors compatibility	N/A	LDC-Series Iron Core	N/A
Linear actuator compatibility	• MP-Series Electric Cylinders (1) (Bulletin MPAR/MPAI) • MP-Series Linear Stages (1) (Bulletin MPAS and MPMA ballscrew only)	• MP-Series Linear Stages (Bulletin MPAS/MPMA) • LDAT-S*xxxxxx*-*xBx* Integrated Linear Thrusters • MP-Series Electric Cylinders (Bulletin MPAR/MPAI)	• MP-Series Electric Cylinders (Bulletin MPAR/MPAI) • TL-Series Electric Cylinders (Bulletin TLAR) • MP-Series Linear Stages (Bulletin MPAS and MPMA ballscrew only)
Accessory compatibility	• 2198 capacitor module • 2198 AC (EMC) line filters • 2198 shared-bus connector kits • 2097 shunt resistors	• 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 external passive shunts	• 2097 I/O terminal expansion block • 2097 memory module programmer • 2097 AC (EMC) line filters • 2097 shunt resistors

(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Integrated Motion on Sercos Interface Servo Drives

Drive Features	Kinetix 6200	Kinetix 6000	Kinetix 6000M (IDM system)
Main characteristics	• Multi-axis • Common bus • Modular design	• Multi-axis • Common bus • Enhanced peak performance	• Integrated drive-motor technology • Multi-axis • Common bus
	Integrated motion on sercos interface		
	• Safe speed monitoring • Safe torque-off control • TÜV certified SIL CL3, PLe, category 4	• Safe torque-off control • TÜV certified SIL CL3, PLe, category 3	• Safe torque-off control • TÜV certified SIL CL2, PLd, category 3
Drive configuration	1…8 Axes on Bulletin 2094 power rail		• 1…4 IPIM modules/2094 power rail • 1…16 IDM units/each IPIM module
Input voltage	324…528V AC, three-phase (400V-class)	195…265V AC, three-phase (200V-class) 324…528V AC, three-phase (400V-class)	324…528V AC, three-phase (400V-class)
Common-bus follower input voltage	458…747V DC (400V-class)	275…375V DC (200V-class) 458…747V DC (400V-class)	458…747V DC (400V-class)
Continuous output power (inverter)	1.8…22 kW (400V-class)	1.2…11 kW (200V-class) 1.8…22 kW (400V-class)	1.0…1.4 kW (400V-class)
Continuous output current (inverter)	2.8…34.6 A rms (400V-class)	3.7…34.6 A rms (200V-class) 2.8…34.6 A rms (400V-class)	N/A
Drive digital inputs	• Enable, home, overTravel ± • High speed registration (2/axis)		Each IDM unit includes these digital inputs: • Home, overtravel ± • High speed registration (2/axis) IPIM module includes Enable digital input
Drive digital outputs	Motor brake relay output (with suppression)		N/A
DPI connector	N/A	DriveExplorer software or DPI HIM module	N/A
Programming	RSLogix 5000 software		
	Version 17.00.00 or later	Version 11.00.00 or later	Version 20.01 or later
	Ladder logic, structured text, and sequential function charts		
Logix5000 module compatibility	1756-M03SE, 1756-M08SE, 1756-M16SE 1768-M04SE		
I/O control	Fiber-optic sercos		Fiber-optic sercos (controller to IPIM)
Feedback	• High-resolution absolute multi-turn and single-turn encoder • Incremental encoder • EnDat 2.1 and 2.2 encoders	• High-resolution absolute multi-turn and single-turn encoder • Incremental encoder • EnDat 2.1 and 2.2 encoder support with 2090-K6CK-KENDAT module • Resolver	High-resolution absolute multi-turn encoder
	Feedback-only Auxiliary Axis		N/A
Rotary motors compatibility	• Kinetix 6000M IDM system • MP-Series (Bulletin MPL/MPM) • MP-Series (Bulletin MPF/MPS) • MP-Series RDD-Series Direct Drive (Bulletin RDB)	• Kinetix 6000M IDM system • MP-Series (Bulletin MPL/MPM) • MP-Series (Bulletin MPF/MPS) • RDD-Series Direct Drive (Bulletin RDB) (1) • TL-Series (Bulletin TLY-A*xxxx*-H)	Kinetix 6000M integrated drive-motor (IDM unit)
Linear motors compatibility	LDC-Series Iron Core	• LDC-Series Iron Core • LDL-Series Ironless	N/A
Linear actuator compatibility	• MP-Series Linear Stages (Bulletin MPAS) • LDAT-S*xxxxxx*-*xBx* Integrated Linear Thrusters • MP-Series Multi-axis Linear Stages (Bulletin MPMA) • MP-Series Electric Cylinders (Bulletin MPAR and MPAI)	• MP-Series (Bulletin MPAS) • LDAT-S*xxxxxx*-*xBx* Integrated Linear Thrusters • MP-Series (Bulletin MPMA) • MP-Series (Bulletin MPAR and MPAI)	N/A
Accessory compatibility	• 2094 Power Interface Module (IPIM) • 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 External Passive Shunt	• 2094 Power Interface Module (IPIM) • 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 External Passive Shunt	• 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 External Passive Shunt

(1) Requires 2090-K6CK-KENDAT EnDat feedback converter kit.

Indexing and Component Servo Drives

Drive Features	Kinetix 300	Kinetix 3
Main characteristics	• Single-axis solution for low-complexity motion applications • Flexible control architecture for simple analog, PTO, or EtherNet/IP Indexing control	• Single-axis solution for low-complexity motion applications, with or without a PLC • Indexing, analog, preset velocity, and pulse-train command modes • Performs indexing on up to 64 points
	• 120V input models drive 240V motors at full speed (catalog numbers 2097-V31PR*x*) • 240V, single-phase input modules include integrated AC line filter (catalog numbers 2097-V32PR*x*) • Memory module for Automatic Device Replacement (ADR)	
	Low-cost EtherNet/IP network solution	Modbus-RTU or I/O control
	• Safe torque-off control • ISO-13849-1 certified, PLd, category 3	N/A
Drive configuration	Single-axis	
Input voltage	• 120/240V AC, single-phase • 240V AC, three-phase • 480V AC, three-phase	170…264V AC, (230V nom) single-phase or three-phase
Continuous output power	0.4…1.7 kW (single-phase input)	50 W…1.50 kW
	0.5…3.0 kW (single-phase or three-phase input)	
	1.0…3.0 kW (three-phase input)	
Continuous output current	2.0…12.0 A rms	0.61…9.90 A rms
Drive digital inputs	• Enable, home, overTravel ± • High speed registration (1) • Eight configurable inputs	• Pulse train and analog inputs • Dedicated E-stop input • Ten configurable inputs
Drive digital outputs	• Ready • Four configurable outputs	• Servo alarm • Six configurable outputs
Programming	• Built-in Web server for configuration and diagnostics • RSLogix 5000 software, version 17.00.00 or later (ladder logic, structured text, and sequential function charts)	• Ultraware software (version 1.80 or later) for drive configuration • RSLogix 500 software if using Modbus-RTU control • Connected Components Workshop Software if using Micro800 controllers
Logix5000 module/controller compatibility	• 1756-L7*x* or 1756-L7*x*S with 1756-EN*x*T • 5370 controllers with embedded dual port • 1769-L3*x* controllers with embedded single port • 1768-L4*x* and 1768-L4*x*S controllers with 1768-ENBT • MicroLogix 1100 and 1400 • Micro850	• MicroLogix 1000, 1100, 1200, 1400, 1500 • Micro850 • Micro830
I/O control	EtherNet/IP	Digital inputs
Feedback	• High-resolution absolute multi-turn and single-turn encoder • Incremental encoder	
	Auxiliary axis for master gearing mode	N/A
Rotary motors compatibility	• MP-Series (Bulletin MPL/MPM/MPF/MPS) • TL-Series (Bulletin TLY)	TL-Series (Bulletin TL and TLY)
Linear motors compatibility	• LDC-Series Iron Core • LDL-Series Ironless	• LDC-Series Iron Core • LDL-Series Ironless
Linear actuator compatibility	• MP-Series Electric Cylinders (Bulletin MPAR) • MP-Series Heavy-duty Electric Cylinders (Bulletin MPAI) • TL-Series Electric Cylinders (Bulletin TLAR) • MP-Series Linear Stages (Bulletin MPAS and MPMA) • LDAT-S*xxxxxx-xBx* (incremental encoder) Integrated Linear Thrusters • LDAT-S*xxxxxx-xDx* (high-resolution, absolute encoder) Integrated linear thrusters	• TL-Series Electric Cylinders (Bulletin TLAR) • MP-Series Linear Stages (Bulletin MPAS direct-drive only) • LDAT-S*xxxxxx-xBx* (incremental encoder) Integrated Linear Thrusters
Accessory compatibility	• LDAT-CONKIT-DSL connector kit for LDAT-S*xxxxxx-xDx* Linear Thrusters • 2097 I/O terminal expansion block • 2097 memory module programmer • 2097 AC (EMC) line filters • 2097 shunt resistors	• 2071 I/O breakout board • 2090 I/O breakout cable • 2071 motor feedback breakout board • 2090 control and configuration cables

Kinetix 5500 Servo Drives

The Kinetix 5500 servo drives and Kinetix VP low-inertia servo motors provide a cost-effective motion solution that delivers high performance and scalability with motor windings matched to drive ratings for optimized system sizing.

Enhancing the current midrange architecture portfolio, this motion system is designed to connect and operate with the new family of CompactLogix 5370 controllers by using the Studio 5000 environment and supporting Integrated Motion on the EtherNet/IP network. With the benefits of this motion system, you can now run motion applications on a single control platform by using a single network – simplifying the design, operation, and maintenance of equipment.

Kinetix 5500 Servo Drive Features

- High performance in a smaller footprint and optimized power density
- Single motor cable that includes power, feedback, and brake conductors with SpeedTec connector
- Single-axis operation for low-cost simplicity
- Flexible power connectivity in multi-axis bus-sharing configurations
  - Shared AC
  - Shared DC
  - Shared AC/DC and hybrid configurations
- Integrated motion on the EtherNet/IP network
- Safe torque-off control, ISO-13849-1 certified, PLd, category 3
- Versatile AC input voltage range:
  - 195…264V rms, single-phase
  - 195…264V rms, three-phase
  - 324…528V rms, three-phase
- Bulletin VPL winding options that match the drive ratings for optimized system sizing
  - 0.2…14.6 kW continuous output power
  - 1.4…32.5 A 0-pk, continuous output current (inverter)
- Bulletin 2198 capacitor module and Bulletin 2097 shunt resistor for energy absorption management
- Digital (DSL) feedback device provides real-time motor performance information to the control circuitry
  - High-resolution absolute, multi-turn and single-turn encoder feedback
- Capability to run servo and induction motors

To compare drive features across drive families, refer to Servo Drives beginning on page 28.

Kinetix 5500 Servo Drive Components

Kinetix 5500 servo drive systems consist of these required components:

- One 2198-H0*xx*-ERS servo drive
- One Kinetix VP servo motor, induction motor, or MP-Series (400V-class) rotary motor or linear actuator
  - MP-Series compatibility requires 2198-H2DCK converter kit
- One 2090-CS*x*M1DF-*xx*AA*xx* motor cable for power, feedback, and brake connections
- One 1606-XL*xxx* 24V power supply for control and motor brake power
- 1585J-M8CBJM-*x* (shielded) Ethernet cable

Kinetix 5500 servo drive systems can also include any of these optional components:

- One 2198-CAPMOD-1300 capacitor module
- One 2198-DB*xx*-F AC line filter
- One 2097-R*x* shunt resistor
- Bulletin 2198 shared-bus connection system

For detailed Kinetix 5500 drive system requirements, refer to the Kinetix 5500 Drive Systems Design Guide, publication GMC-RM009.

Kinetix 5500 Servo Drive Selection

Kinetix 5500 Drive Cat. No.	Frame Size	Input Voltage	Continuous Output Power kW	Continuous Output Current A 0-pk
2198-H003-ERS	1	195…264V rms, single-phase 195…264V rms, three-phase 324…528V rms, three-phase	0.2 kW 0.3 kW 0.6 kW	1.4
2198-H008-ERS			0.5 kW 0.8 kW 1.6 kW	3.5
2198-H015-ERS	2		1.0 kW 1.5 KW 3.2 kW	7.1
2198-H025-ERS		195…264V rms, three-phase 324…528V rms, three-phase	2.4 kW 5.1 kW	11.3
2198-H040-ERS			4.0 kW 8.3 kW	18.4
2198-H070-ERS	3		7.0 kW 14.6 kW	32.5

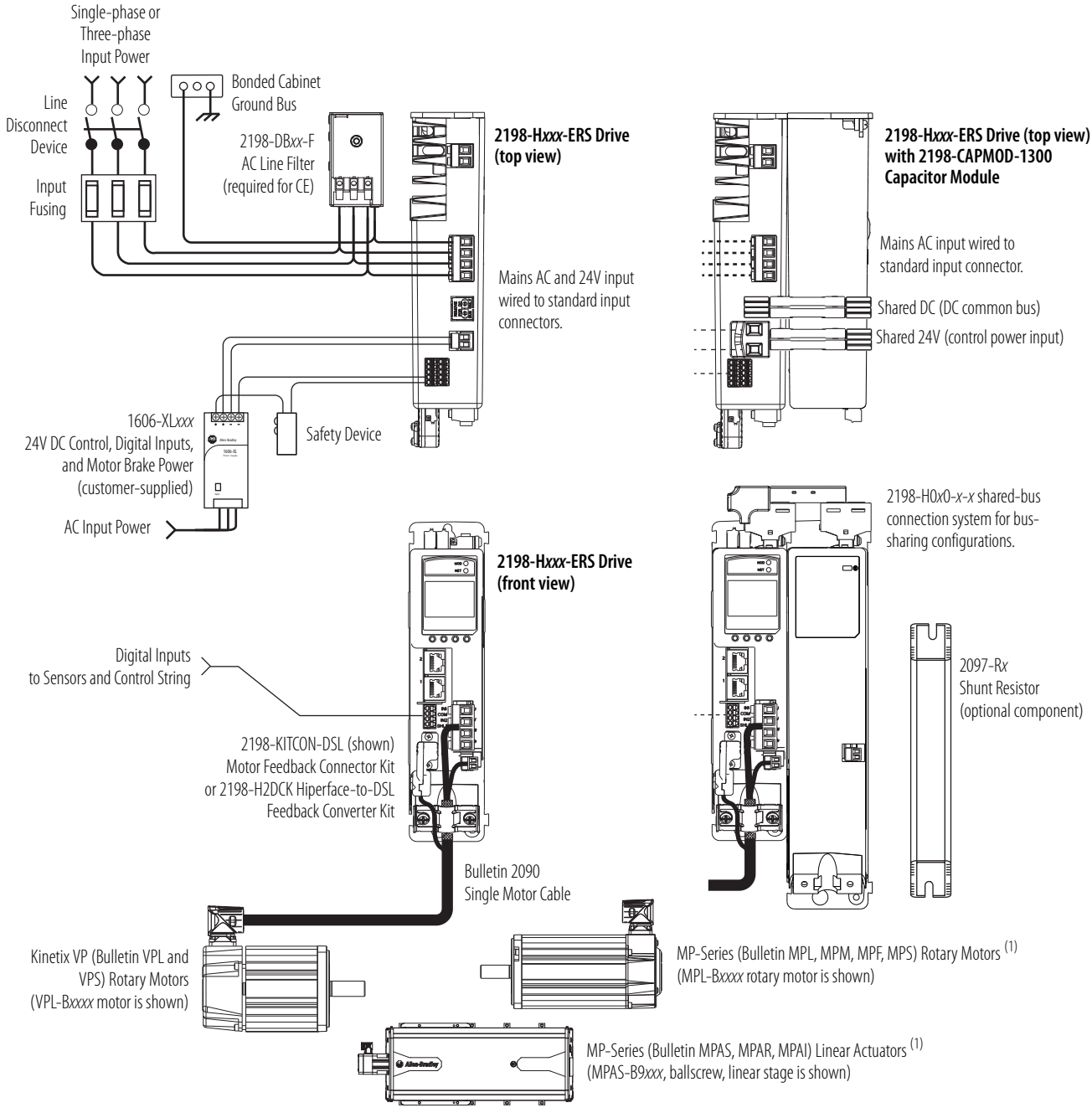
For Kinetix 5500 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003.

Typical Hardware Configurations

These typical hardware configurations illustrate the use of servo drives, motors, and motion accessories available for Kinetix 5500 drive systems.

Standalone Configurations

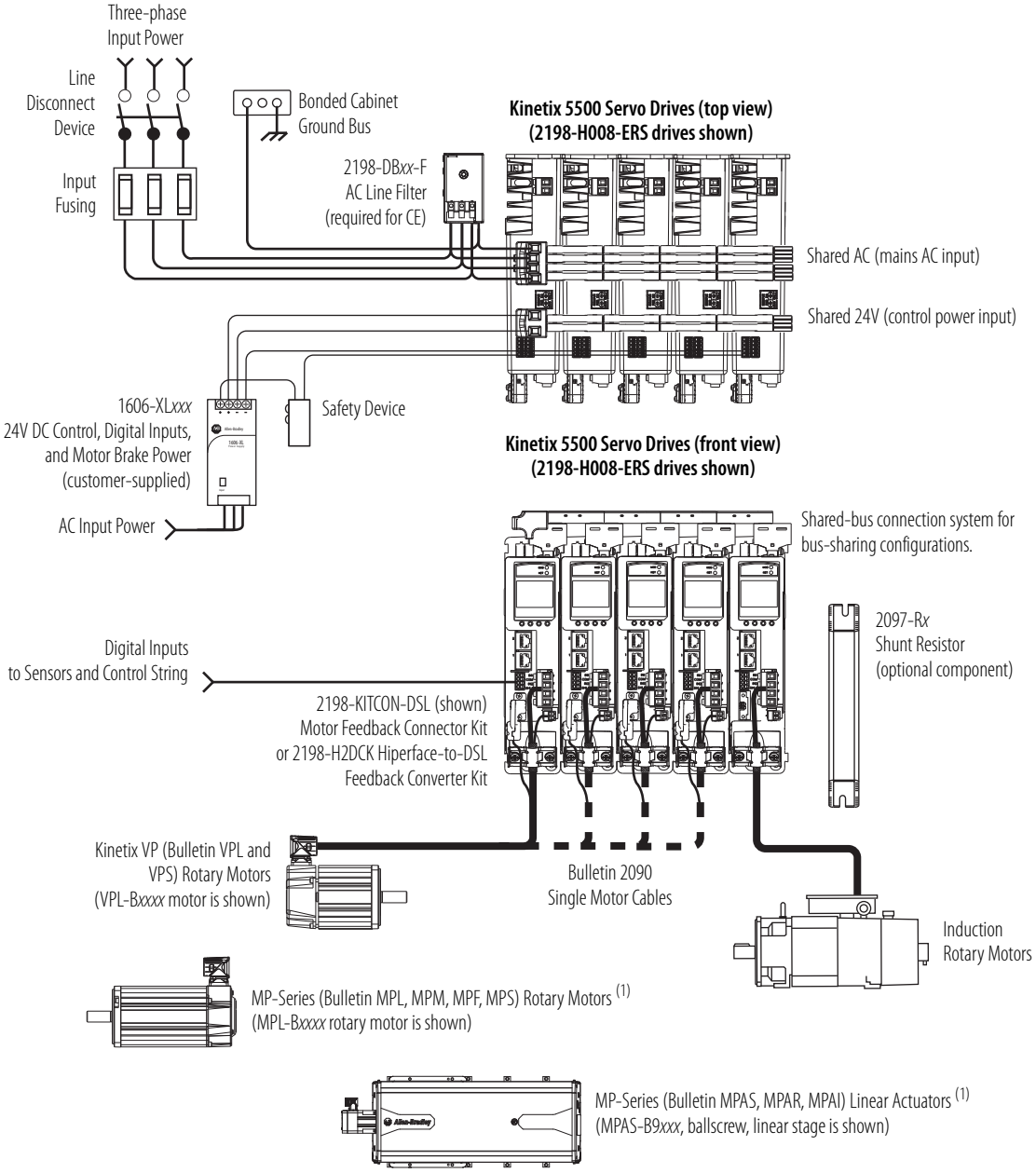
In these examples, a single standalone drive is shown with and without the Bulletin 2198 capacitor module.



(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Shared AC Configurations

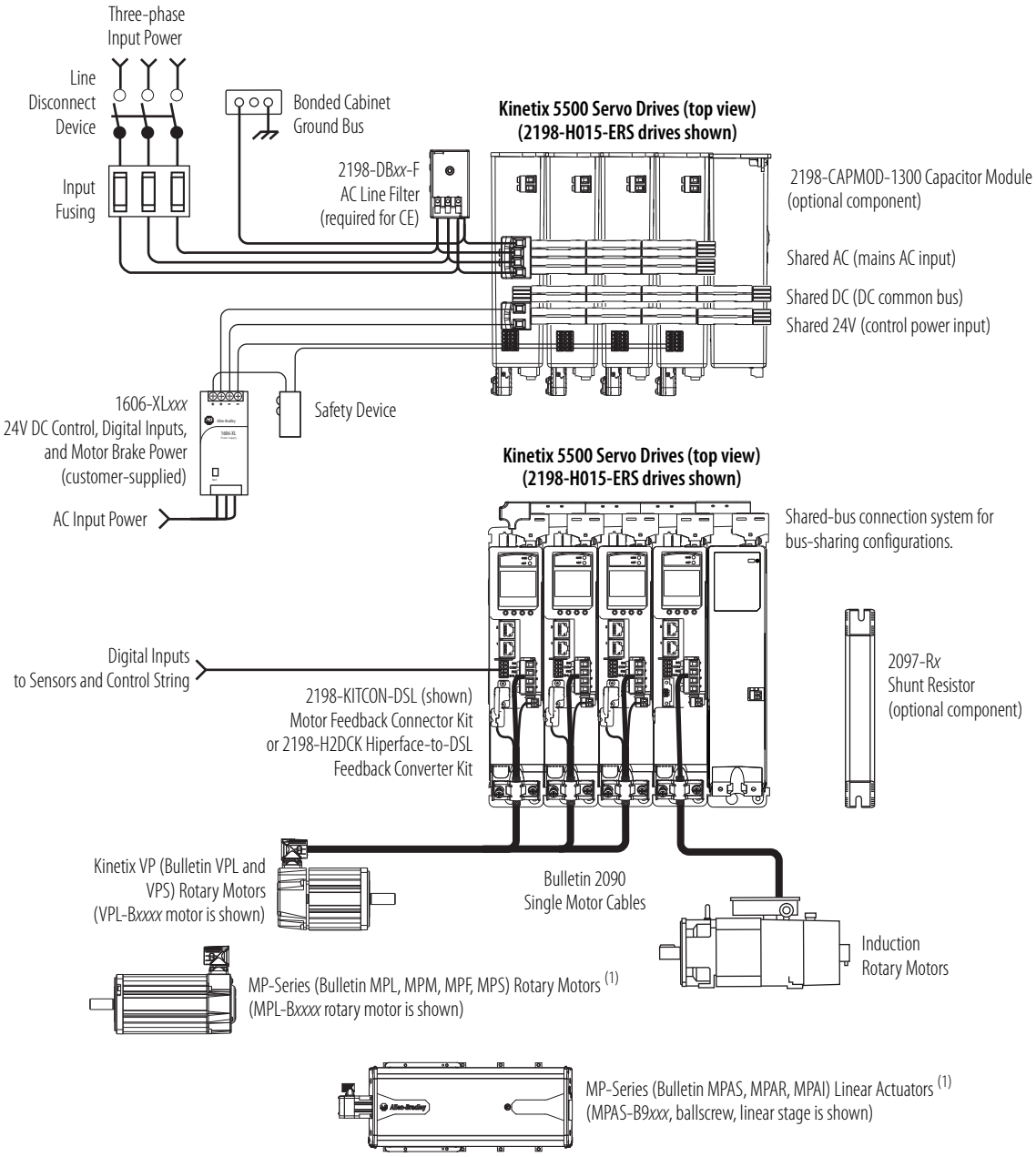
In this example, three-phase AC power and 24V control power is shared in a multi-axis configuration. All drives must have the same power rating (catalog number). Capacitor modules are not supported.



(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Shared AC/DC Configurations

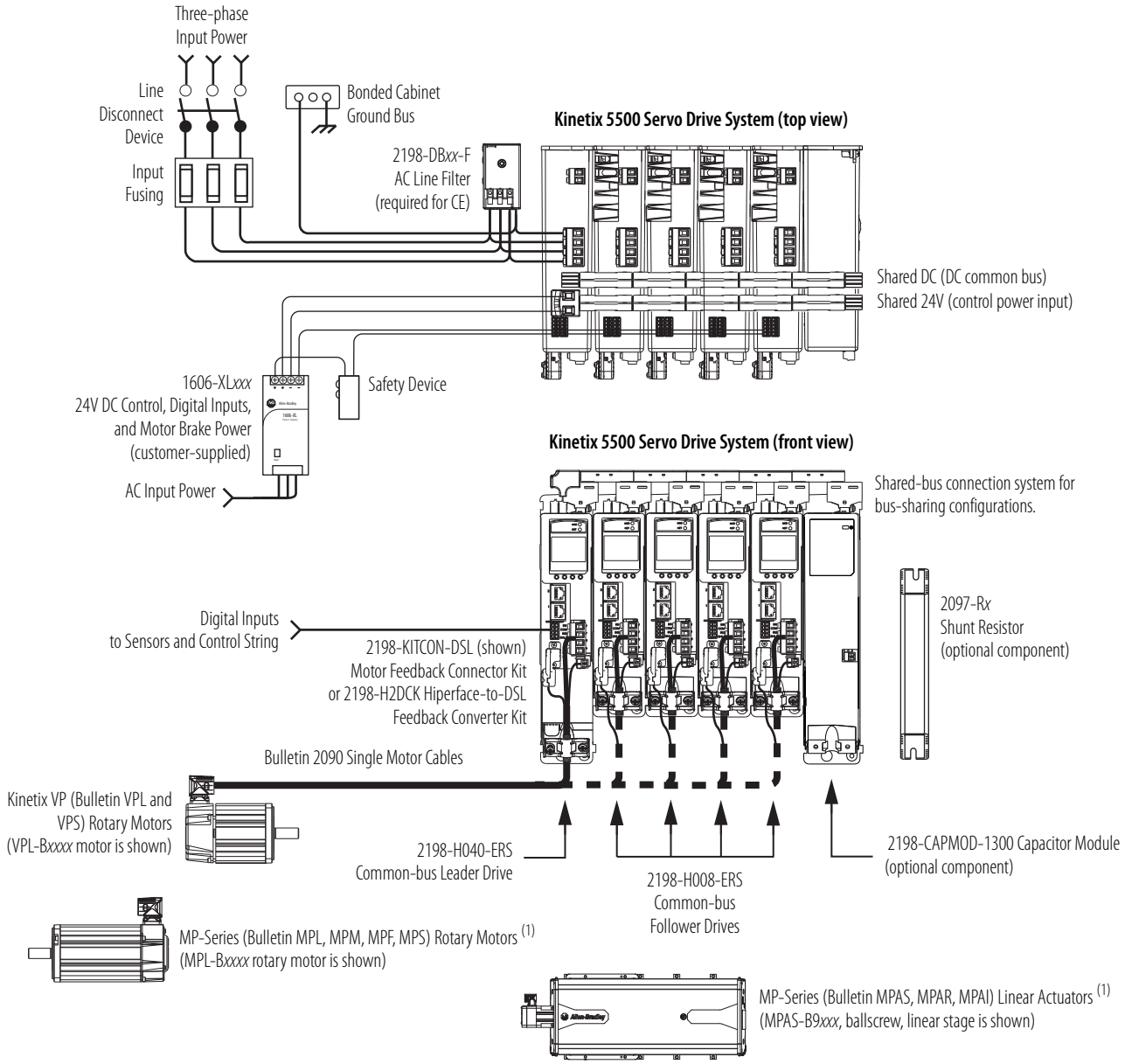
In this example, three-phase AC input power, 24V control power, and DC bus power are shared in a multi-axis configuration. All drives must be the same power rating (catalog number).



(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Shared DC (common-bus) Configurations

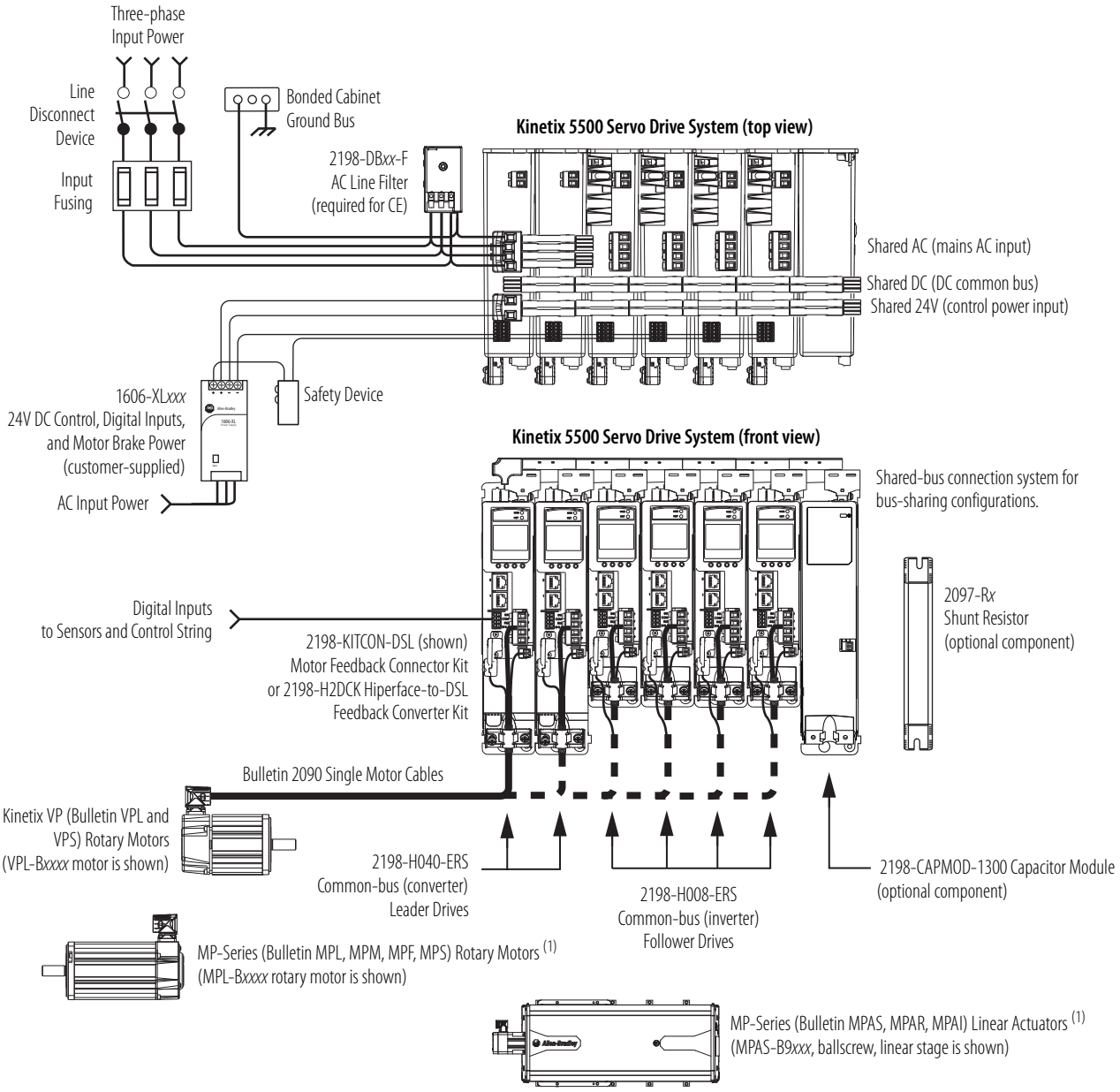
In this multi-axis example, the common-bus leader (sourcing) drive receives three-phase AC input power and supplies DC power to common-bus follower (sinking) drives. The common-bus leader drive power rating is greater than or equal to the power rating of each follower drive.



(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Shared AC/DC Hybrid Configuration

In this multi-axis example, three-phase AC input power is supplied to two converter drives. The converter drive ratings must be the same, and greater than or equal to the power ratings of the inverter drives. This parallel converter configuration increases the DC power supplied to the inverter drives.



(1) Requires 2198-H2DCK Hiperface-to-DSL feedback converter kit. Converter kit is currently compatible with only 400V-class motors and actuators.

Typical Communication Configurations

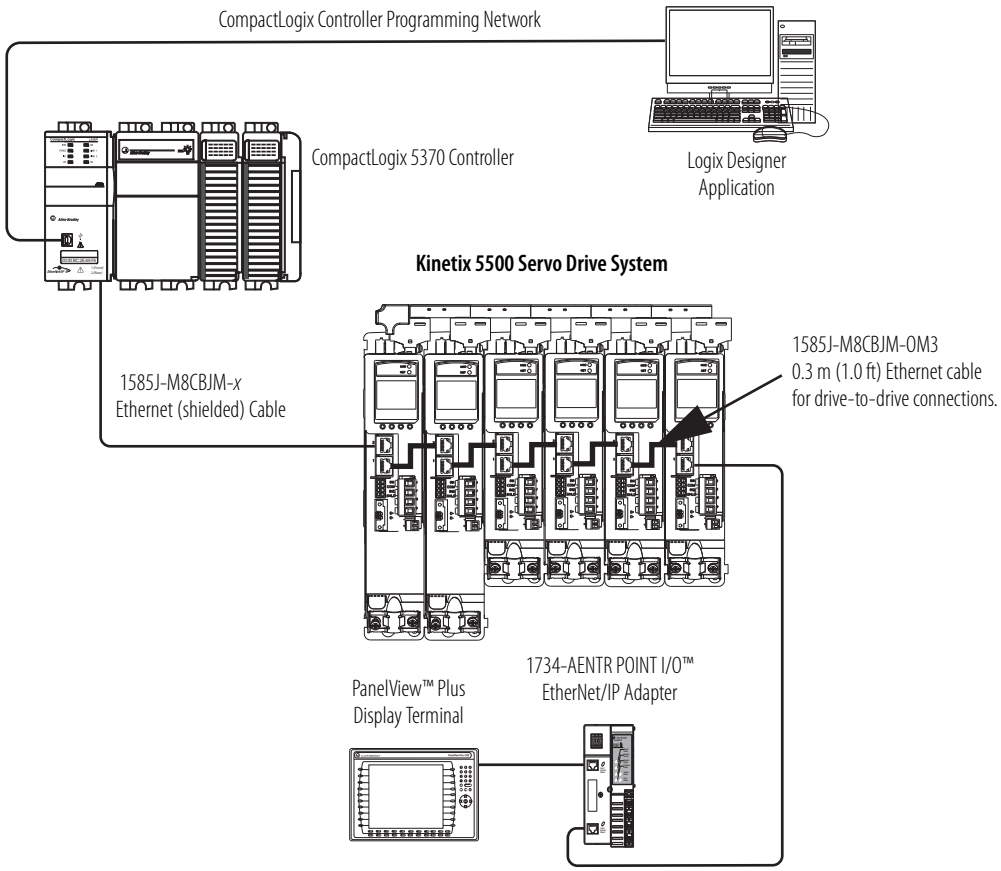
The Kinetix 5500 servo drives use the EtherNet/IP network for configuring the Logix5000 controller/module. Any Ethernet topology can be used, including star, linear, and ring. These examples feature the CompactLogix 5370 programmable automation controllers (catalog number 1769-L36ERM) with support for Integrated Motion on the EtherNet/IP network. Controller features include the following:

- Supports up to 16 axes
- Supports up to 48 devices in linear configurations
- Dual-port connectivity to support device-level ring (DLR) topology

IMPORTANT Shielded Ethernet cable, catalog number 1585J-M8CBJM-*x*, is available in lengths up to 78 m (256 ft). However, the total length of Ethernet cable connecting drive-to-drive, drive-to-controller, or drive-to-switch must not exceed 100 m (328 ft).

In this example, all devices are connected in linear topology. The Kinetix 5500 drives include dual-port connectivity, however, if any device becomes disconnected, all devices downstream of that device lose communication. Devices without dual ports must include the 1783-ETAP module or be connected at the end of the line.

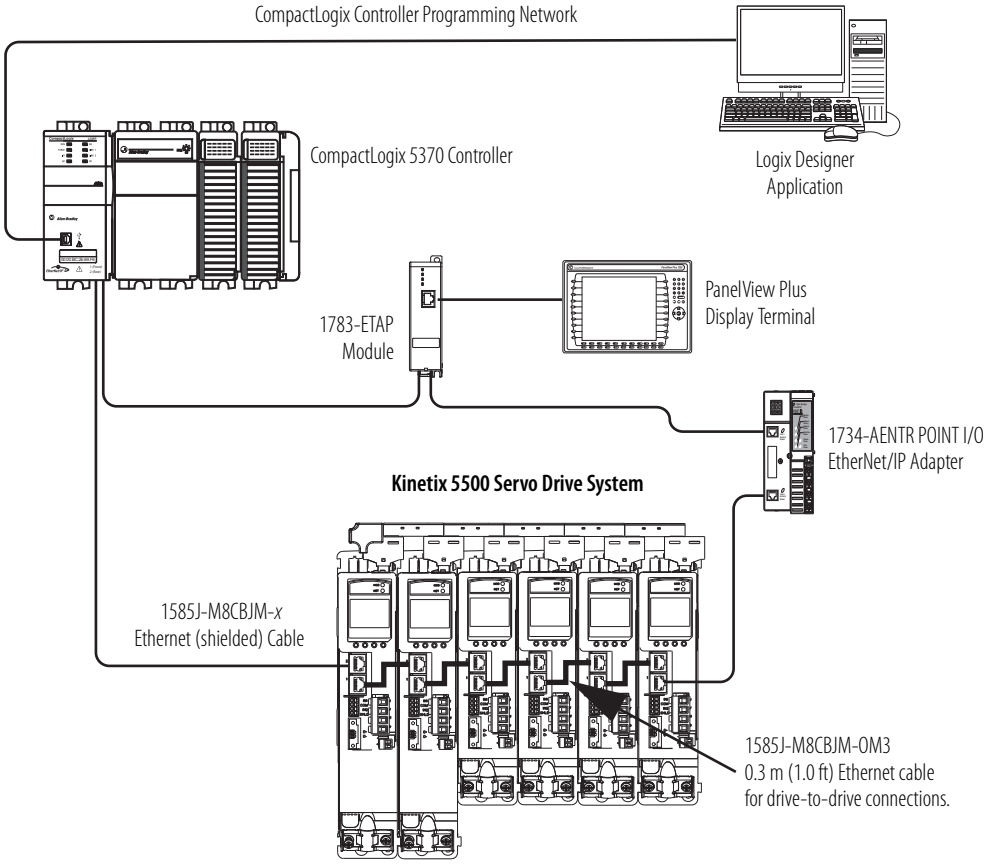
Kinetix 5500 Linear Communication



In this example, the devices are connected by using ring topology. If one device in the ring is disconnected, the rest of the devices continue to communicate. For ring topology to work correctly, a device level ring (DLR) supervisor is required (for example, the Bulletin 1783 ETAP device). DLR is an ODVA standard.

Devices without dual ports must include, for example, the 1783-ETAP module.

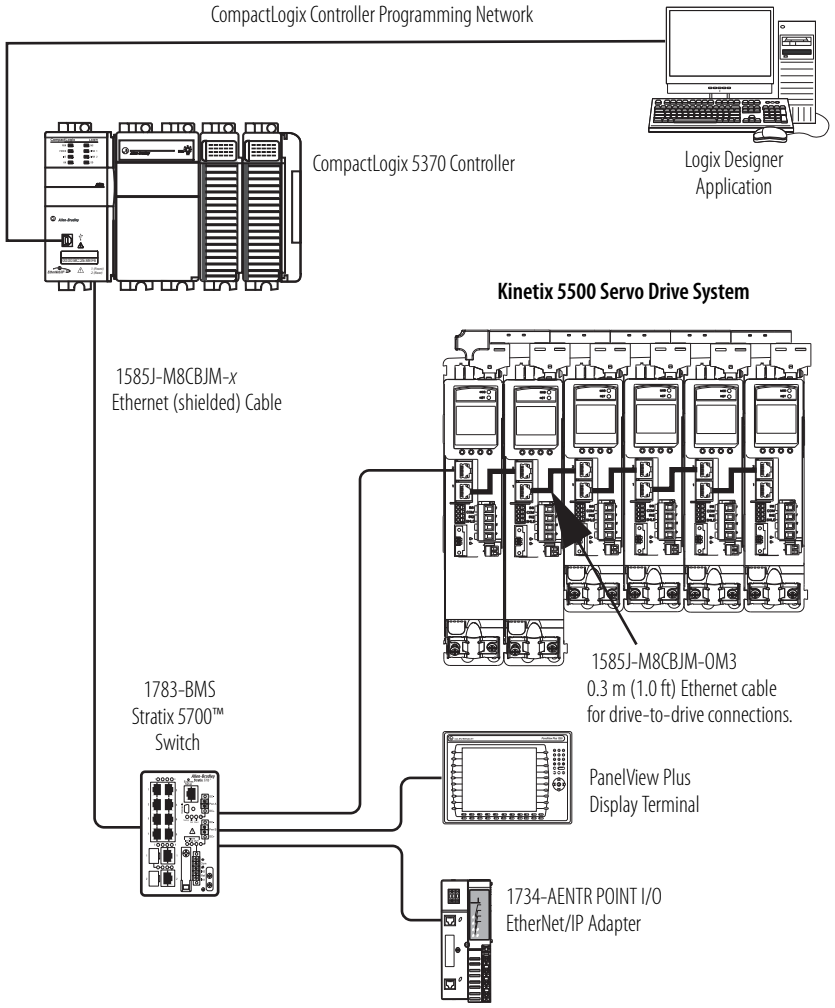
Kinetix 5500 Ring Communication



In this example, the devices are connected by using star topology. Each device is connected directly to the switch.

Kinetix 5500 drives have dual ports, so linear topology is maintained from drive-to-drive, but Kinetix 5500 drives and other devices operate independently. The loss of one device does not impact the operation of other devices.

Kinetix 5500 Star Communication



Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 5500 servo drives.

For Kinetix 5500 drive and Kinetix VP motor combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 5500 Drive Systems Design Guide, publication GMC-RM009.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin VPL Motor Performance Specifications with Kinetix 5500 Drives

Performance Specifications with Kinetix 5500 (200V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Speed at Motor Rated Output rpm	Kinetix 5500 Drives (240V AC input)
VPL-A0631E	4500	1.20	0.46 (4.0)	3.50	1.12 (9.91)	0.19 (0.25)	4500	2198-H003-ERS
				4.20	1.33 (12.0)			2198-H008-ERS
VPL-A0631M	7200	1.92	0.46 (4.0)	6.48	1.33 (12.0)	0.28 (0.38)	7200	2198-H008-ERS
VPL-A0632F	4800	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.39 (0.52)	4800	2198-H008-ERS
VPL-A0633C	3000	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.37 (0.50)	3000	2198-H008-ERS
VPL-A0633F	4500	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.44 (0.59)	4500	2198-H008-ERS
				12.60	4.09 (36.0)			2198-H015-ERS
VPL-A0751E	4800	2.90	1.01 (9.0)	8.80	2.20 (19.0)	0.50 (0.67)	4800	2198-H008-ERS
				9.12	2.27 (20.0)			2198-H015-ERS
VPL-A0752C	3300	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.49 (0.66)	3300	2198-H015-ERS
VPL-A0752E	4800	4.90	1.61 (14.0)	17.70	4.10 (36.0)	0.66 (0.88)	4800	2198-H015-ERS
				18.90	4.39 (39.0)			2198-H025-ERS
VPL-A0753C	3300	4.90	2.16 (19.0)	17.70	6.55 (58.0)	0.59 (0.79)	3300	2198-H015-ERS
				18.90	7.02 (62.0)			2198-H025-ERS
VPL-A0753E	4600	6.12	2.28 (20.0)	17.70	5.13 (45.0)	0.80 (1.07)	4600	2198-H015-ERS
				25.34	7.35 (65.0)			2198-H025-ERS
VPL-A1001C	2800	3.61	1.93 (17.0)	10.38	3.22 (28.0)	0.56 (0.75)	2800	2198-H008-ERS
					3.78 (33.0)			2198-H015-ERS
VPL-A1001M	6500	7.15	1.95 (17.0)	20.20	3.31 (29.0)	1.29 (1.73)	6500	2198-H015-ERS
					3.78 (33.0)			2198-H025-ERS

Performance Specifications with Kinetix 5500 (200V-class operation) Drives (continued)

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Speed at Motor Rated Output rpm	Kinetix 5500 Drives (240V AC input)
VPL-A1002C	3000	6.24	3.39 (30.0)	20.33	6.80 (60.0)	1.03 (1.38)	3000	2198-H015-ERS
					7.82 (69.0)			2198-H025-ERS
VPL-A1002F	5000	10.04	3.26 (29.0)	34.30	6.77 (60.0)	1.60 (2.14)	5000	2198-H025-ERS
					7.82 (69.0)			2198-H040-ERS
VPL-A1003C	2250	6.14	4.18 (37.0)	20.20	9.76 (86.0)	0.87 (1.17)	2250	2198-H015-ERS
					11.15 (99.0)			2198-H025-ERS
VPL-A1003E	3750	9.58	4.18 (37.0)	28.80	9.76 (86.0)	1.31 (1.76)	3750	2198-H025-ERS
					11.15 (99.0)			2198-H040-ERS
VPL-A1003F	5500	15.62	4.18 (37.0)	50.0	10.25 (90.0)	1.90 (2.55)	5500	2198-H040-ERS
					11.15 (99.0)			2198-H070-ERS
VPL-A1152B	2150	6.17	5.10 (45.0)	21.19	10.95 (96.0)	1.02 (1.37)	2150	2198-H015-ERS
					13.12 (116)			2198-H025-ERS
VPL-A1152E	3300	10.60	5.08 (45.0)	32.10	12.14 (107)	1.47 (1.97)	3300	2198-H025-ERS
					13.12 (116)			2198-H040-ERS
VPL-A1152F	5000	13.56	4.70 (42.0)	45.80	13.12 (116)	2.16 (2.90)	5000	2198-H040-ERS
VPL-A1153C	2300	8.88	6.55 (58.0)	33.0	18.30 (162)	1.35 (1.81)	2300	2198-H025-ERS
					20.33 (180)			2198-H040-ERS
VPL-A1303B	1950	10.34	8.80 (78.0)	31.0	19.85 (175)	1.61 (2.16)	1950	2198-H025-ERS
					20.72 (183)			2198-H040-ERS
VPL-A1303F	4000	18.60	7.75 (69.0)	62.0	15.36 (136)	2.50 (3.35)	4000	2198-H040-ERS
					20.72 (183)			2198-H070-ERS
VPL-A1304A	1600	9.43	10.29 (91.0)	33.76	25.03 (221)	1.55 (2.08)	1600	2198-H025-ERS
					28.45 (252)			2198-H040-ERS
VPL-A1304D	3000	18.40	10.20 (90.0)	58.0	21.48 (190)	2.60 (3.50)	3000	2198-H040-ERS
					27.10 (240)			2198-H070-ERS
VPL-A1306C	2000	14.78	13.38 (118)	55.83	28.50 (252)	2.13 (2.86)	2000	2198-H040-ERS
					34.62 (306)			2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Speed at Motor Rated Output rpm	Kinetix 5500 Drives (480V AC input)
VPL-B0631T	8000	1.20	0.46 (4.0)	3.50	1.12 (10.0)	0.31 (0.42)	8000	2198-H003-ERS
				4.20	1.33 (12.0)			2198-H008-ERS
VPL-B0631U	8000	1.92	0.46 (4.0)	6.48	1.33 (12.0)	0.31 (0.42)	8000	2198-H008-ERS
VPL-B0632F	4600	1.20	0.93 (8.0)	3.50	2.26 (20.0)	0.37 (0.50)	4600	2198-H003-ERS
				4.20	2.69 (24.0)			2198-H008-ERS
VPL-B0632T	8000	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.54 (0.72)	8000	2198-H008-ERS
VPL-B0633M	6700	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.57 (0.76)	6500	2198-H008-ERS
VPL-B0633T	8000	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.57 (0.76)	6500	2198-H008-ERS
				12.60	4.09 (36.0)			2198-H015-ERS
VPL-B0751M	8000	2.90	1.01 (9.0)	8.80	2.20 (19.0)	0.54 (0.72)	8000	2198-H008-ERS
				9.12	2.27 (20.0)			2198-H015-ERS
VPL-B0752E	4900	2.70	1.61 (14.0)	8.80	4.10 (36.0)	0.67 (0.90)	4900	2198-H008-ERS
				9.45	4.39 (39.0)			2198-H015-ERS
VPL-B0752F	7000	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.80 (1.07)	7000	2198-H015-ERS
VPL-B0752M	8000	4.90	1.61 (14.0)	17.70	4.10 (36.0)	0.81 (1.09)	8000	2198-H015-ERS
				18.90	4.39 (39.0)			2198-H025-ERS
VPL-B0753E	4500	3.80	2.28 (20.0)	13.30	7.35 (65.0)	0.81 (1.09)	4500	2198-H015-ERS
VPL-B0753F	6600	4.90	2.16 (19.0)	17.70	6.55 (58.0)	0.65 (0.87)	4500	2198-H015-ERS
				18.90	7.02 (62.0)			2198-H025-ERS
VPL-B0753M	8000	6.12	2.28 (20.0)	17.70	5.13 (45.0)	0.82 (1.10)	6000	2198-H015-ERS
				25.34	7.35 (65.0)			2198-H025-ERS
VPL-B1001M	6000	3.61	1.93 (17.0)	10.38	3.22 (28.0)	1.14 (1.53)	6000	2198-H008-ERS
					3.78 (33.0)			2198-H015-ERS
VPL-B1002E	3300	3.44	3.39 (30.0)	10.69	6.47 (57.0)	1.12 (1.50)	3300	2198-H008-ERS
					7.82 (69.0)			2198-H015-ERS
VPL-B1002M	6000	6.24	3.39 (30.0)	20.33	6.80 (60.0)	1.86 (2.49)	6000	2198-H015-ERS
					7.82 (69.0)			2198-H025-ERS
VPL-B1003C	2500	3.41	4.18 (37.0)	10.61	9.29 (82.0)	0.96 (1.29)	2500	2198-H008-ERS
					11.15 (99.0)			2198-H015-ERS
VPL-B1003F	4750	6.14	4.18 (37.0)	20.20	9.76 (86.0)	1.65 (2.21)	4750	2198-H015-ERS
					11.15 (99.0)			2198-H025-ERS
VPL-B1003T	7000	9.58	4.18 (37.0)	28.80	9.76 (86.0)	1.77 (2.37)	7000	2198-H025-ERS
					11.15 (99.0)			2198-H040-ERS
VPL-B1152C	2250	3.13	5.10 (45.0)	10.74	10.80 (95.0)	1.06 (1.42)	2250	2198-H008-ERS
					13.12 (116)			2198-H015-ERS
VPL-B1152F	4500	6.17	5.10 (45.0)	21.19	10.95 (97.0)	1.40 (1.88)	4000	2198-H015-ERS
					13.12 (116)			2198-H025-ERS
VPL-B1152T	6500	10.81	5.08 (45.0)	32.10	12.14 (107)	2.29 (3.07)	6500	2198-H025-ERS
					13.12 (116)			2198-H040-ERS
VPL-B1153E	3200	6.13	6.55 (58.0)	21.33	16.85 (149)	1.75 (2.35)	3200	2198-H015-ERS
					20.33 (180)			2198-H025-ERS

Performance Specifications with Kinetix 5500 (400V-class operation) Drives (continued)

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Speed at Motor Rated Output rpm	Kinetix 5500 Drives (480V AC input)
VPL-B1153F	5000	8.88	6.55 (58.0)	33.0	18.30 (162)	2.30 (3.08)	5000	2198-H025-ERS
					20.33 (180)			2198-H040-ERS
VPL-B1303C	2250	6.30	8.80 (78.0)	18.47	19.83 (175)	1.83 (2.45)	2250	2198-H015-ERS
					20.72 (183)			2198-H025-ERS
VPL-B1303F	4000	10.10	8.80 (78.0)	31.0	19.85 (175)	2.82 (3.78)	4000	2198-H025-ERS
					20.72 (183)			2198-H040-ERS
VPL-B1304C	2150	7.0	10.29 (91.0)	22.3	22.55 (199)	1.75 (2.35)	2150	2198-H015-ERS
					28.45 (252)			2198-H025-ERS
VPL-B1304E	3500	9.44	10.29 (91.0)	33.76	25.03 (221)	2.82 (3.78)	3500	2198-H025-ERS
					28.45 (252)			2198-H040-ERS
VPL-B1306C	2500	10.80	13.38 (118)	32.94	31.21 (276)	2.46 (3.30)	2500	2198-H025-ERS
					34.62 (306)			2198-H040-ERS
VPL-B1306F	4250	14.78	13.38 (118)	55.83	28.50 (252)	2.95 (3.95)	4250	2198-H040-ERS
					34.62 (306)			2198-H070-ERS
VPL-B1651C	2750	10.21	11.50 (102)	29.29	21.68 (192)	2.32 (3.11)	2750	2198-H025-ERS
					22.45 (199)			2198-H040-ERS
VPL-B1651F	4750	17.60	11.43 (101)	57.27	18.02 (159)	4.38 (5.87)	4750	2198-H040-ERS
					22.45 (199)			2198-H070-ERS
VPL-B1652C	2700	16.0	19.40 (172)	49.88	44.78 (396)	4.18 (5.60)	2700	2198-H040-ERS
					48.60 (430)			2198-H070-ERS
VPL-B1652F	4000	18.60	17.60 (156)	60.00	48.60 (430)	4.77 (6.40)	4000	2198-H070-ERS
VPL-B1653C	2300	17.75	25.76 (228)	45.90	55.14 (488)	4.38 (5.87)	2300	2198-H040-ERS
				55.60	66.70 (590)			2198-H070-ERS
VPL-B1653D	3000	18.60	24.20 (214)	68.00	67.80 (600)	5.50 (7.30)	3000	2198-H070-ERS
VPL-B1654B	1850	15.54	32.97 (292)	45.90	65.38 (578)	5.55 (7.44)	1850	2198-H040-ERS
				55.75	79.30 (702)			2198-H070-ERS
VPL-B1654D	3000	24.47	32.0 (283)	81.30	75.30 (666)	7.16 (9.60)	3000	2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin VPS Motor Performance Specifications with Kinetix 5500 Drives

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Speed at Motor Rated Output rpm	Kinetix 5500 Drives (480V AC input)
VPS-B1304D	3000	7.1	8.1 (72.0)	17.7	17.9 (158)	1.40	3000	2198-H015-ERS
				26.0	27.1 (240)			2198-H025-ERS
VPS-B1653D	3000	17.0	21.0 (186)	45.9	50.1 (443)	3.29	3000	2198-H040-ERS
				68.0	67.8 (600)			2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPL Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Kinetix 5500 Drives (480V AC input)
MPL-B1510V	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2198-H003-ERS
MPL-B1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2198-H008-ERS
MPL-B1530U	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	2198-H008-ERS
MPL-B210V	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2198-H008-ERS
MPL-B220T	6000	3.30	1.61 (14.2)	8.80	3.67 (32.5)	0.62	2198-H008-ERS
				11.3	4.74 (41.9)		2198-H015-ERS
MPL-B230P	5000	2.60	2.10 (18.6)	8.80	6.39 (56.6)	0.86	2198-H008-ERS
				11.3	8.20 (73.0)		2198-H015-ERS
MPL-B310P	5000	2.4	1.6 (14.1)	7.10	3.6 (32)	0.77	2198-H008-ERS
MPL-B320P	5000	4.5	3.10 (27)	14.0	8.2 (72.5)	1.5	2198-H015-ERS
MPL-B330P	5000	6.1	4.18 (37)	17.7	10.4 (92.0)	1.8	2198-H015-ERS
				19.0	11.1 (98)		2198-H025-ERS
MPL-B420P	5000	6.3	4.74 (42)	17.7	11.3 (100)	1.9	2198-H015-ERS
				22.0	13.5 (119)		2198-H025-ERS
MPL-B430P	5000	9.2	6.55 (58)	28.3	17.6 (156)	2.2	2198-H025-ERS
				32.0	19.8 (175)		2198-H040-ERS
MPL-B4530F	3000	6.7	8.36 (74)	17.7	17.7 (157)	2.1	2198-H015-ERS
				21.0	20.3 (180)		2198-H025-ERS
MPL-B4530K	4000	9.9	8.25 (73)	28.3	18.7 (166)	2.6	2198-H025-ERS
				31.0	20.3 (179)		2198-H040-ERS
MPL-B4540F	3000	9.1	10.20 (90)	28.3	26.2 (232)	2.6	2198-H025-ERS
				29.0	27.1 (240)		2198-H040-ERS
MPL-B4560F	3000	11.3	13.85 (123)	28.3	28.4 (251)	3.2	2198-H025-ERS
		11.8	14.0 (124)	36.0	34.4 (304)		2198-H040-ERS
MPL-B520K	4000	11.3	10.4 (92)	28.3	20.6 (182)	3.5	2198-H025-ERS
		11.5	10.7 (95)	33.0	23.2 (205)		2198-H040-ERS
MPL-B540D	2000	10.5	19.4 (172)	23.0	41.0 (362)	3.4	2198-H025-ERS
MPL-B540K	4000	20.4	19.4 (171)	60.0	48.6 (430)	5.4	2198-H070ERS
MPL-B560F	3000	20.6	26.8 (237)	68.0	67.8 (600)	5.5	2198-H070-ERS
MPL-B580F	3000	26.0	34.0 (300)	81.3	78.9 (698)	7.1	2198-H070-ERS
MPL-B580J	3800	32.0	34.0 (301)	81.3	71.52 (633)	7.9	2198-H070-ERS
MPL-B640F	3000	32.0	36.7 (325)	65.0	72.3 (640)	6.1	2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPM Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 5500 Drives (480V AC input)
MPM-B1151F	3000	5000	2.71	2.3 (20.3)	8.8	6.0 (53.1)	0.75	2198-H008-ERS
					9.9	6.6 (58.0)		2198-H015-ERS
MPM-B1151T	6000	7000	5.62	2.3 (20.3)	17.7	5.3 (46.9)	0.90	2198-H015-ERS
					20.5	5.9 (52.2)		2198-H025-ERS
MPM-B1152C	1500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2198-H015-ERS
MPM-B1152F	3000	5200	6.17	5.0 (44.2)	17.7	11.7 (103)	1.40	2198-H015-ERS
					21.1	13.5 (119)		2198-H025-ERS
MPM-B1152T	6000	7000	11.02	5.0 (44.2)	28.3	10.7 (94.7)	1.40	2198-H025-ERS
					37.9	13.5 (119)		2198-H040-ERS
MPM-B1153E	2250	3500	6.21	6.5 (57.5)	17.7	16.9 (149)	1.40	2198-H015-ERS
					21.6	19.8 (175)		2198-H025-ERS
MPM-B1153F	3000	5500	9.20	6.5 (57.5)	28.3	17.9 (158)	1.40	2198-H025-ERS
					32.0	19.8 (175)		2198-H040-ERS
MPM-B1153T	6000	7000	15.95	6.5 (57.5)	45.9	14.8 (131)	1.45	2198-H040-ERS
					55.5	16.5(146)		2198-H070-ERS
MPM-B1302F	3000	4500	8.57	6.6 (58.4)	22.1	13.5 (119)	1.65	2198-H025-ERS
MPM-B1302M	4500	6000	12.57	6.6 (58.4)	32.4	13.5 (119)	1.65	2198-H040-ERS
MPM-B1302T	6000	7000	16.83	6.7 (59.3)	43.4	13.5 (119)	1.65	2198-H040-ERS
MPM-B1304C	1500	2750	7.00	10.3 (91.1)	17.7	22.8 (202)	2.00	2198-H015-ERS
					21.5	27.1 (240)		2198-H025-ERS
MPM-B1304E	2250	4000	10.75	10.2 (90.3)	28.3	23.4 (207)	2.20	2198-H025-ERS
					34.2	27.1 (240)		2198-H040-ERS
MPM-B1304M	4500	6000	19.02	10.4 (92.0)	60.6	27.1 (240)	2.20	2198-H070-ERS
MPM-B1651C	1500	3500	10.21	11.4 (101)	28.3	22.7 (201)	2.50	2198-H025-ERS
					29.2	23.2 (205)		2198-H040-ERS
MPM-B1651F	3000	5000	17.75	11.4 (101)	45.9	21.9 (194)	2.50	2198-H040-ERS
					50.9	23.2 (205)		2198-H070-ERS
MPM-B1651M	4500	5000	22.46	11.4 (101)	56.8	23.2 (205)	2.50	2198-H070-ERS
MPM-B1652C	1500	2500	11.51	16.0 (142)	33.6	40.0 (354)	3.80	2198-H040-ERS
MPM-B1652E	2250	3500	20.94	21.1 (187)	60.5	48.0 (425)	4.30	2198-H070-ERS
MPM-B1652F	3000	4500	28.74	21.1 (187)	84.1	48.0 (425)	4.30	2198-H070-ERS
MPM-B1653C	1500	2500	20.05	26.7 (236)	59.2	67.8 (600)	4.60	2198-H070-ERS
MPM-B1653E	2250	3500	27.00	26.8 (237)	72.9	62.0 (549)	5.10	2198-H070-ERS
MPM-B2152C	1500	2500	27.40	36.7 (325)	55.4	72.3 (640)	5.60	2198-H070-ERS
MPM-B2153B	1250	2000	24.06	48.0 (425)	60.0	101.1 (895)	6.80	2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPF Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Kinetix 5500 Drives (480V AC input)
MPF-B310P	5000	2.30	1.60 (14)	7.10	3.6 (32)	0.77	2198-H008-ERS
MPF-B320P	5000	4.24	3.10 (27)	14.0	7.8 (69)	1.5	2198-H015-ERS
MPF-B330P	5000	5.70	4.18 (37)	17.7	10.4 (92.0)	1.6	2198-H015-ERS
				19.0	11.1 (98)		2198-H025-ERS
MPF-B430P	5000	9.20	6.55 (58)	28.3	17.6 (156)	2.0	2198-H025-ERS
				32.0	19.8 (175)		2198-H040-ERS
MPF-B4530K	4000	9.90	8.25 (73)	28.3	18.7 (165)	2.4	2198-H025-ERS
				31.0	20.3 (179)		2198-H040-ERS
MPF-B4540F	3000	9.10	10.20 (90)	28.3	26.2 (232)	2.5	2198-H025-ERS
				29.0	27.1 (240)		2198-H040-ERS
MPF-B540K	4000	20.5	19.4 (171)	60.0	48.6 (430)	4.1	2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPS Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Bulletin MPS Motor Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW (Hp)	Kinetix 5500 Drives (480V AC input)
MPS-B330P	5000	4.9	3.60 (32)	17.7	10.5 (92.9)	1.3	2198-H015-ERS
				19.0	11.0 (97.2)		2198-H025-ERS
MPS-B4540F	3000	7.1	8.1 (72)	17.7	19.2 (170)	1.4	2198-H015-ERS
				26.0	27.1 (240)		2198-H025-ERS
MPS-B560F	3000	17.0	21.5 (190)	45.9	49.7 (440)	3.5	2198-H040-ERS
				68.0	67.8 (600)		2198-H070-ERS

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 5500 servo drives.

Linear Motion Family	Page
MP-Series (Bulletin MPAS, ballscrew) integrated linear stages	48
MP-Series (Bulletin MPAR) electric cylinders	49
MP-Series (Bulletin MPAI) heavy-duty electric cylinders	49

For Kinetix 5500 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 5500 Drive Systems Design Guide, publication GMC-RM009.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin MPAS Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 5500 Drives (480V AC input)
MPAS-B*xxxx*1-V05S*x*A	200 (7.9) (1)	1.75	521 (117)	3.50	1212 (272)	0.37	2198-H008-ERS
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	6.60	968 (218)	0.62	2198-H008-ERS

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAR Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 5500 Drives (480V AC input)
MPAR-B1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2198-H003-ERS
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	2198-H003-ERS
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	2198-H003-ERS
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2198-H008-ERS
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	2198-H015-ERS
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2198-H015-ERS

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAI Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit. At launch, the converter kit is compatible with only 400V-class motors and actuators. Kits with 200V-class compatibility are coming soon.

Performance Specifications for (ball screw cylinders) and Kinetix 5500 (400V-class operation) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 5500 Drives (480V AC input)
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B2076CV1	305 (12)	0.90	890 (200)	706 (159)	2.30	1446 (325)	0.22	2198-H003-ERS
MPAI-B2150CV3		1.29	1446 (325)	1147 (258)	3.25		0.25	
MPAI-B2300CV3								
MPAI-B3076CM1	305 (12)	1.35	1624 (365)	1290 (290)	4.57	4448 (1000)	0.27	2198-H008-ERS
MPAI-B3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-B3150CM3	279 (11)	2.81	4003 (900)	3176 (714)	4.30	4448 (1000)	0.39	2198-H008-ERS
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		2198-H008-ERS
MPAI-B3300EM3								
MPAI-B3450EM3	376 (15)							
MPAI-B4150CM3	279 (11)	5.61	7784 (1750)	6179 (1389)	8.68	8896 (2000)	0.43	2198-H015-ERS
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		2198-H015-ERS
MPAI-B4300EM3								
MPAI-B4450EM3	491 (19)							
MPAI-B5*xxx*CM3	200 (7.8)	6.62	13,123 (2950)	10,415 (2341)	8.48	13,345 (3000)	0.55	2198-H015-ERS
MPAI-B5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	16.70	13,122 (2950)		

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications for (roller screw cylinders) and Kinetix 5500 (400V-class operation) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 5500 Drives (480V AC input)
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B3076RM1	305 (12)	1.45	1557 (350)	1237 (278)	4.57	4862 (1093)	0.27	2198-H008-ERS
MPAI-B3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-B3150RM3	279 (11)	2.81	3781 (850)	3003 (675)	7.07	7562 (1700)	0.39	2198-H008-ERS
MPAI-B3300RM3								
MPAI-B3450RM3	176 (6.9)							
MPAI-B3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-B3300SM3								
MPAI-B3450SM3	353 (14)							
MPAI-B4150RM3	279 (11)	5.61	7340 (1650)	5827 (1310)	14.14	14,679 (3300)	0.43	2198-H015-ERS
MPAI-B4300RM3								
MPAI-B4450RM3	196 (7.6)							
MPAI-B4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-B4300SM3								
MPAI-B4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Kinetix 6200 and Kinetix 6500 Modular Servo Drives

These multi-axis safe-speed servo drives help increase productivity and protect personnel with embedded safety features. Modular design and control provides ease of maintenance and greater flexibility as the drive easily transitions from safe torque-off to safe speed.

The Kinetix 6500 servo drives provide Integrated Motion capability over the EtherNet/IP network by using CIP Motion and CIP Sync technology from ODVA, all built on the Common Industrial Protocol (CIP).

The Kinetix 6200 servo drives provide Integrated Motion capability through sercos interface and compatibility with Kinetix 6000 drives, letting you migrate to the enhanced features exactly when and where you need them.

Kinetix 6200 and Kinetix 6500 Servo Drive Features

- Multi-axis modular design for communication and safety options
  - Integrated Motion on the EtherNet/IP network (Kinetix 6500 control modules)
  - Integrated Motion on sercos interface (Kinetix 6200 control modules)
  - Bulletin 2094 IAM/AM power modules
- TÜV certified, SIL CL3, PLe, category 4 safety performance
  - Safe speed monitoring control
  - Safe torque-off control
- 324…528V AC three-phase (400V-class input) to IAM/AM power modules
  - 1.8…22 kW continuous output power (inverter)
  - 2.8…34.6 A rms continuous output current (inverter)
- RSLogix 5000 software or the Logix Designer application for programming (ladder logic, structured text, and sequential function charts)
- Kinetix Integrated Motion with ControlLogix or CompactLogix controllers
- High-resolution absolute, multi-turn and single-turn encoder feedback, feedback-only auxiliary axis

To compare drive features across drive families, refer to Servo Drives beginning on page 28.

Kinetix 6200 and Kinetix 6500 Servo Drive Components

Kinetix 6200 and Kinetix 6500 modular servo drive systems consist of these required components:

- One integrated axis power module (IAM or leader IAM)
- Up to seven axis power modules (AM)
- Up to eight control modules, (sercos interface or EtherNet/IP network)
- One power rail
- One to eight rotary motors, linear motors, or linear actuators
- One to eight motor power and feedback cables
- Low-profile connector kits (required for flying-lead cables)
- Two to nine sercos fiber-optic cables (Kinetix 6200 control modules only)
- Ethernet cables for the Logix5000 controller (Kinetix 6500 control modules only)
- Ethernet cables for programming the safety configuration (Kinetix 6200 and Kinetix 6500 control modules)

Kinetix 6200 and Kinetix 6500 systems can also include one or more IAM power modules used as a follower IAM (and associated axis modules, power rails, motors, cables, and connector kits as required for the application).

Kinetix 6000M integrated drive-motor (IDM) systems are an option with Kinetix 6200 servo drives

- One Kinetix 6000M IDM power interface module (IPIM) per IDM system
- As many as 4 IPIM modules on the Bulletin 2094 power rail
- As many as 16 integrated drive-motor (IDM) units connect to each IPIM module

These components are also optional:

- One Kinetix 6000 shunt module, 2094-BSP2 with optional Bulletin 1394 external passive shunt module
- 2094-PRF slot-filler modules
- Bulletin 2094 line interface module (LIM)
- Bulletin 2090 resistive brake module (RBM)
- 2090-XXLF AC line filters (required for CE)

For detailed Kinetix 6200 and Kinetix 6500 drives system requirements, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

Kinetix 6200 and Kinetix 6500 Servo Drive Selection

Drive Module	Drive Cat. No.	Continuous Output Ratings	
		Converter (A_{DC})	Inverter (A, 0-pk)
Integrated Axis Module (IAM) power module, 400V-class	2094-BC01-MP5-M	6 kW, 9 A	1.8 kW, 4.0 A
	2094-BC01-M01-M	6 kW, 9 A	3.9 kW, 8.6 A
	2094-BC02-M02-M	15 kW, 23 A	6.6 kW, 14.6 A
	2094-BC04-M03-M	28 kW, 42 A	13.5 kW, 30 A
	2094-BC07-M05-M	45 kW, 68 A	22.0 kW, 49 A
Axis Module (AM) power module, 400V-class	2094-BMP5-M	N/A	1.8 kW, 4.0 A
	2094-BM01-M		3.9 kW, 8.6 A
	2094-BM02-M		6.6 kW, 14.6 A
	2094-BM03-M		13.5 kW, 30 A
	2094-BM05-M		22.0 kW, 49 A
Kinetix 6200 control module (sercos)	2094-SE02F-M00-S0, Safe torque-off		
	2094-SE02F-M00-S1, Safe speed monitoring		
Kinetix 6500 control module (EtherNet/IP)	2094-EN02D-M01-S0, Safe Torque-off		
	2094-EN02D-M01-S1, Safe speed monitoring		
2094 power rail	2094-PRS*x*	Available for 1, 2, 3, 4, 5, 7, and 8-axis systems	
2094 IDM power interface module	2094-SEPM-B24-S	400V-class, 24 A rms, 15 kW, sercos, supports up to 16 integrated drive-motor units	
2094 shunt module	2094-BSP2	200/400V-class, 200 W shunt module (mounts on power rail)	
2094 slot-filler module	2094-PRF	200/400V-class, covers unused slots on power rail	

For Kinetix 6200 and Kinetix 6500 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Specifications Technical Data, publication GMC-TD003.

Kinetix 6000 Drive Component Compatibility

The 2094-BC*xx*-M*xx*-M and 2094-BM*xx*-M power modules contain the same power structure as the 2094-BC*xx*-M*xx*-S and 2094-BM*xx*-S drives. Because of this, the 2094-BSP2 shunt module, 2094-PRF slot-filler module, and 2094-PRS*x* power rails are all supported by both drive families.

In addition, 2094-BM*xx*-M AM power modules with sercos interface are supported on power rails with a 2094-BC*xx*-M*xx*-S IAM module. Conversely, 2094-BM*xx*-S AM drives are supported on power rails with a 2094-BC*xx*-M*xx*-M IAM power module with sercos interface.

IMPORTANT Kinetix 6500 EtherNet/IP control modules (catalog numbers 2094-EN02D-M01-S*x*) are not compatible with IAM/AM modules on the same Bulletin 2094 power rail where sercos interface is used.

IAM/AM Module Compatibility

IAM Module	Control Module	2094-BM*xx*-S Kinetix 6000 AM Module	2094-BM*xx*-M AM Power Modules	
			2094-SE02F-M00-S*x* Kinetix 6200 Control Module	2094-EN02D-M01-S*x* Kinetix 6500 Control Module
2094-BC*xx*-M*xx*-S (series B and C)	N/A	Fully compatible	Fully compatible	Not compatible
2094-BC*xx*-M*xx*-M (IAM power module)	2094-SE02F-M00-S*x* sercos interface			
	2094-EN02D-M01-S*x* EtherNet/IP network	Not compatible	Not compatible	Fully compatible

For more information on the Kinetix 6000 IAM and AM modules, catalog numbers 2094-*x*C*xx*-M*xx*-S and 2094-*x*M*xx*-S, refer to Kinetix 6000 Multi-axis Servo Drives on page 75.

Kinetix 6000M Integrated Drive-Motor System Compatibility

Bulletin 2094 power rails with Kinetix 6000 (series B) or Kinetix 6200 drives are compatible with Kinetix 6000M integrated drive-motor (IDM) systems. The integrated drive-motor power interface module (IPIM) mounts to the power rail and connects to as many as 16 IDM units.

IMPORTANT Kinetix 6500 EtherNet/IP control modules (catalog numbers 2094-EN02D-M01-S*x*) are not compatible with Kinetix 6000M integrated drive-motor systems.

IAM Module Compatibility

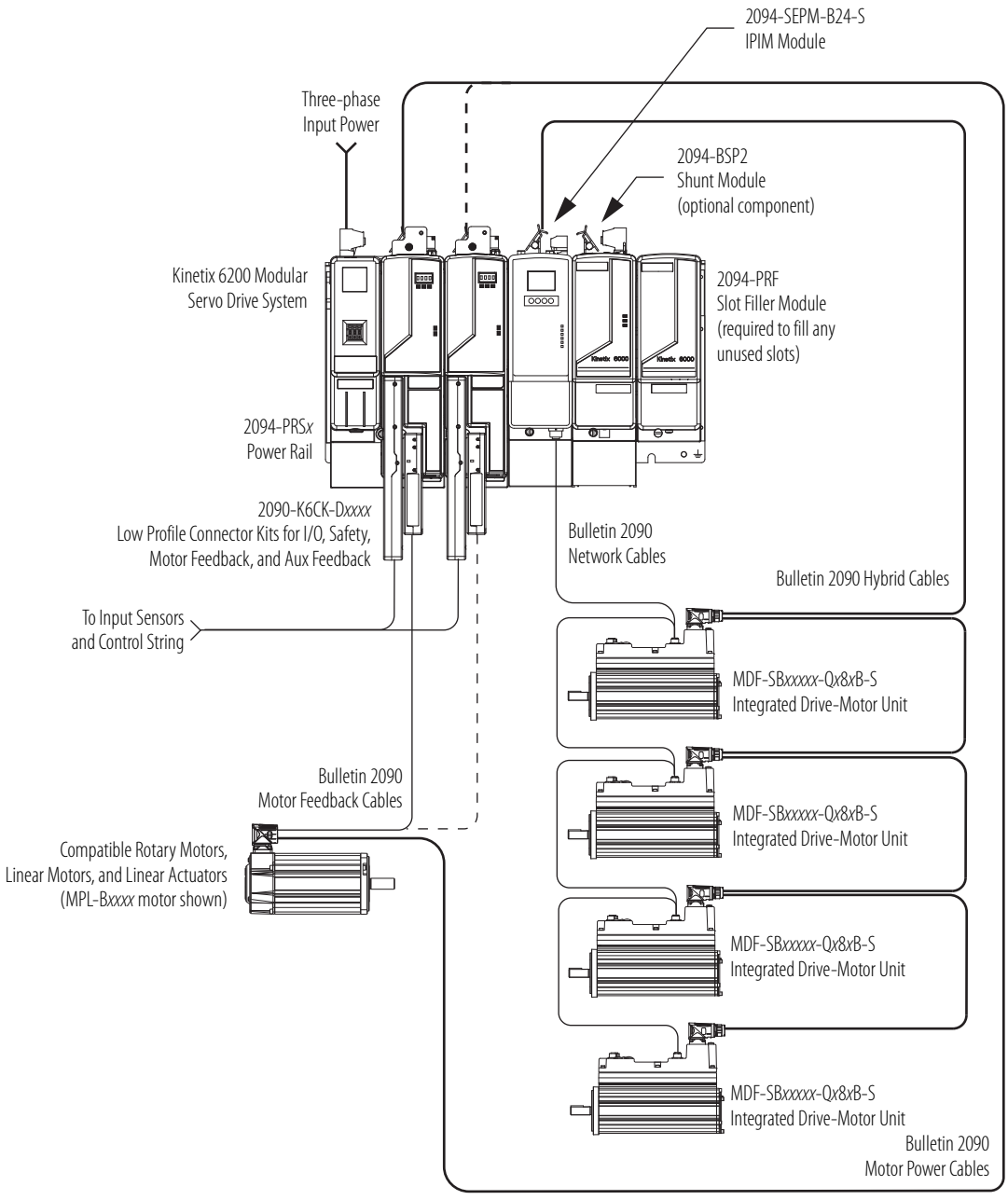
IAM Module	Control Module	2094-SEPM-B24-S IDM Power Interface Module (IPIM)
2094-BC*xx*-M*xx*-S (series B and C)	N/A	Fully compatible
2094-BC*xx*-M*xx*-M (IAM power module)	2094-SE02F-M00-S*x* sercos interface	
	2094-EN02D-M01-S*x* EtherNet/IP network	Not compatible

For more information on the Kinetix 6000M integrated drive-motor systems, refer to Typical Kinetix 6000M Integrated Drive-Motor Configuration on page 55.

Typical Kinetix 6000M Integrated Drive-Motor Configuration

This configuration illustrates the use of Kinetix 6200 servo drives with the Kinetix 6000M integrated drive-motor (IDM) system. The IDM power interface module (IPIM) is included in the fiber-optic sercos ring configuration along with the axis modules. Refer to Typical Communication Configurations on page 59 for examples.

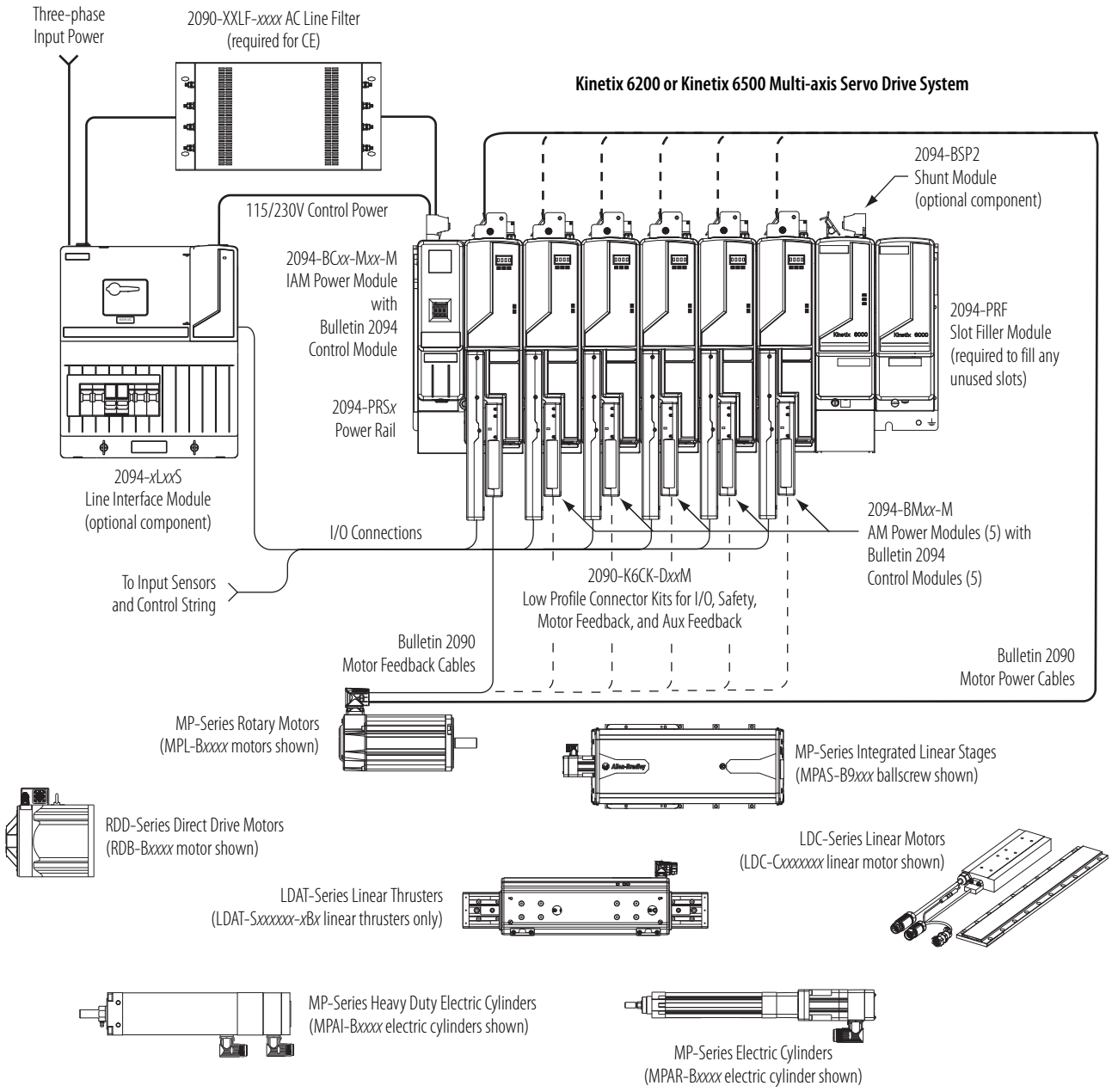
Modular Drive System (with Kinetix 6000M IDM system)



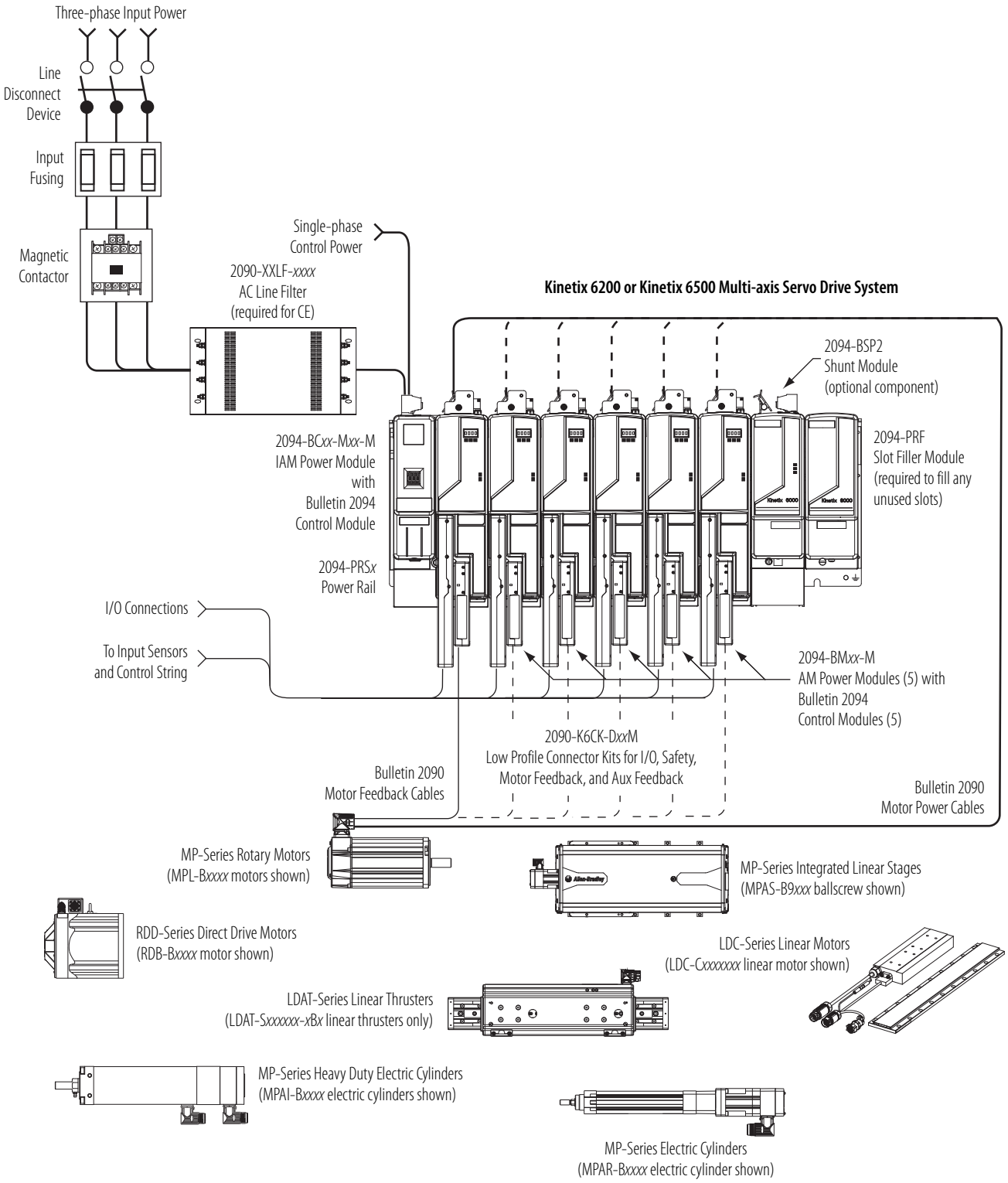
Typical Hardware Configurations

These typical hardware configurations illustrate the use of servo drives, motors, actuators, and motion accessories available for Kinetix 6200 and Kinetix 6500 modular drive systems.

Modular Drive System (with LIM module)



Modular Drive System (without LIM module)

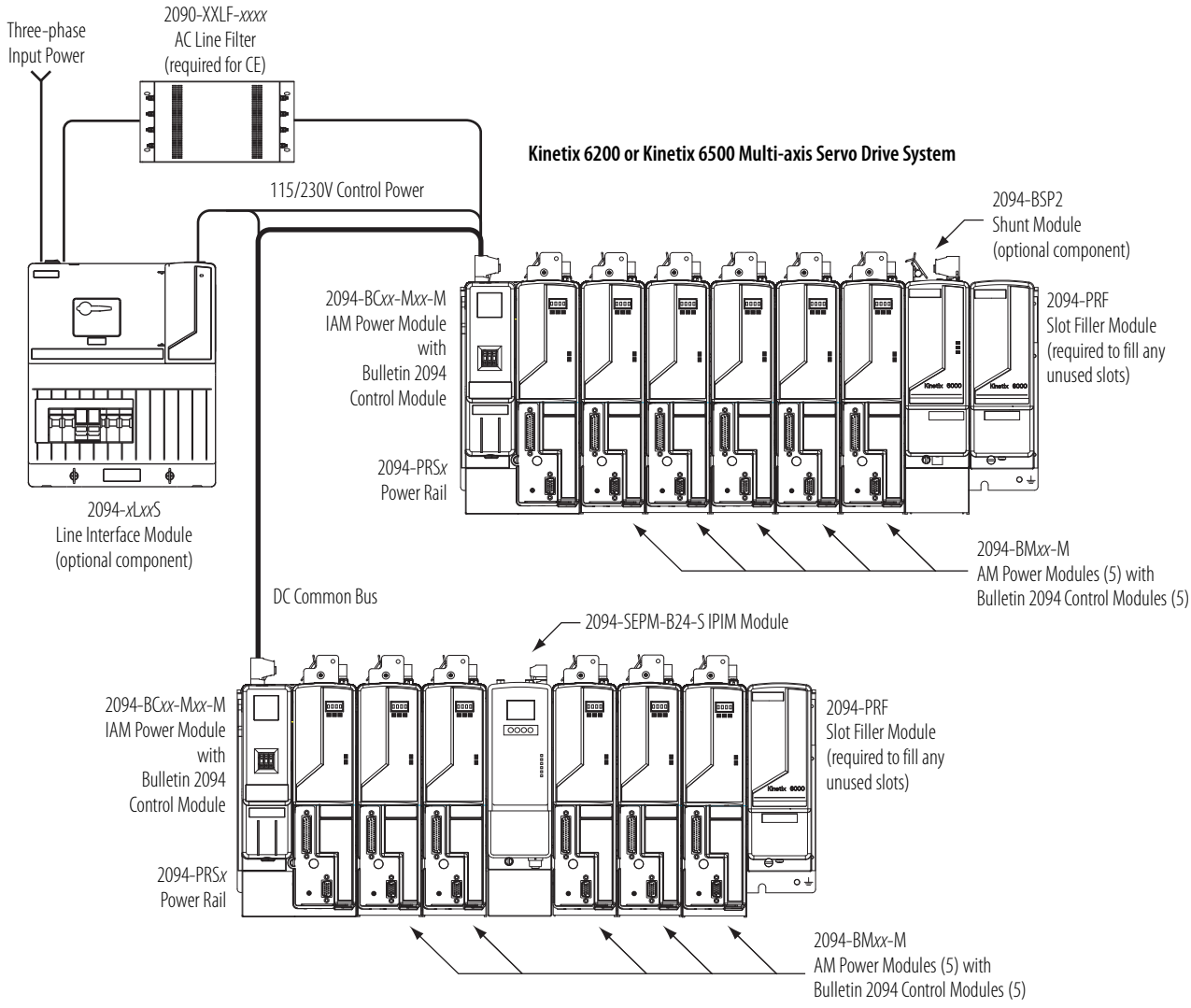


In this system configuration, the leader IAM power module is connected to the follower IAM module via the DC common bus. When planning your panel layout, you must calculate the total bus capacitance of your DC common bus system to make sure that the leader IAM power module is sized sufficiently to pre-charge the entire system. Refer to the Kinetix 6200 and Kinetix 6500 Modular Servo Drive User Manual, publication 2094-UM002, when making this calculation.

IMPORTANT If total bus capacitance of your system exceeds the leader IAM power module pre-charge rating, the IAM module four-character display scrolls a power cycle user limit condition. If input power is applied, the display scrolls a power cycle fault limit condition.

To correct this condition, you must replace the leader IAM power module with a larger module or decrease the total bus capacitance by removing AM power modules.

Modular Drive System (DC Common Bus)



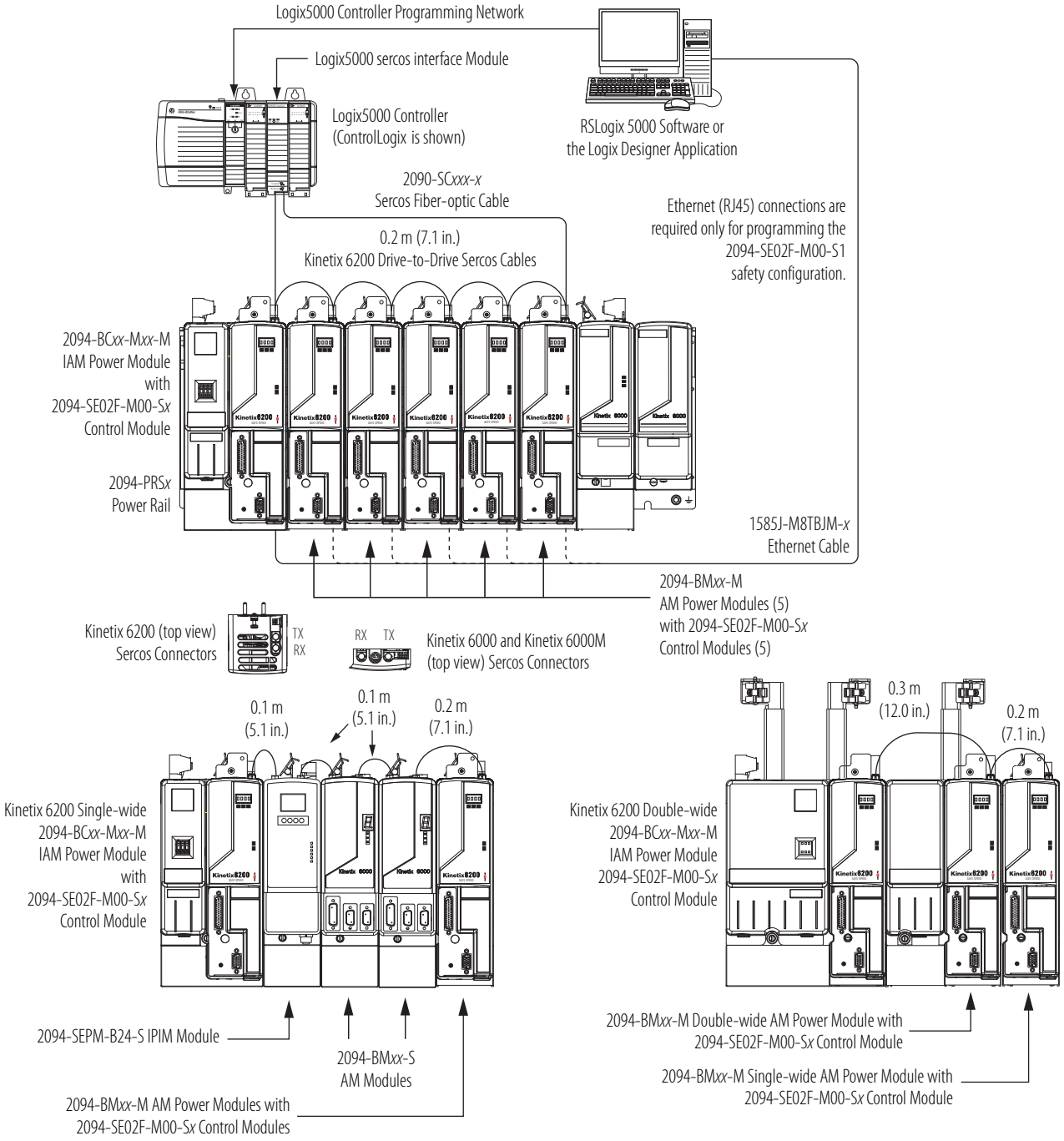
Motors and other details common to both three-phase AC and DC common-bus configurations are removed.

Typical Communication Configurations

The Kinetix 6200 control modules use sercos interface for configuring the Logix5000 module and EtherNet/IP network for access to the safety configuration tool.

In this example, an ethernet cable is connected to each control module when programming the safety configuration. EtherNet/IP network connectivity is not required during runtime. Also shown are drive-to-drive sercos cable lengths and catalog numbers when Kinetix 6000 and Kinetix 6200 drive modules exist on the same power rail.

Kinetix 6200 Drive Communication (sercos)



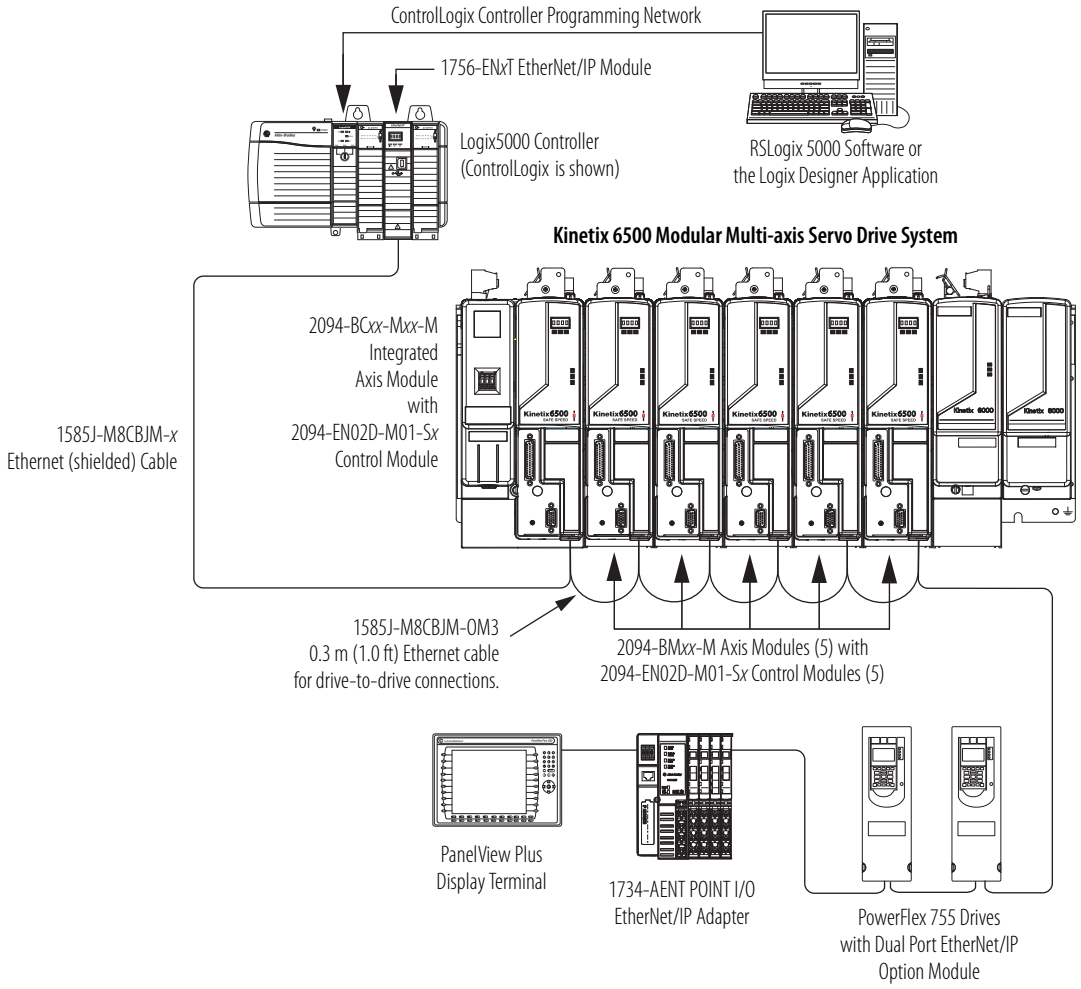
The Kinetix 6500 control modules can use any Ethernet topology including star, linear, and device-level ring (DLR). DLR is an ODVA standard and provides fault tolerant connectivity.

IMPORTANT Shielded Ethernet cable, catalog number 1585J-M8CBJM-*x*, is available in lengths up to 78 m (256 ft). However, the total length of Ethernet cable connecting drive-to-drive, drive-to-controller, or drive-to-switch must not exceed 100 m (328 ft).

In this example, all devices are connected in linear topology. The Kinetix 6500 control module includes dual-port connectivity. Devices without dual ports must include the 1783-ETAP module or be connected at the end of the line.

- Linear configurations support up to 64 devices.
- No redundancy. If any device becomes disconnected, all the devices downstream loose communication.

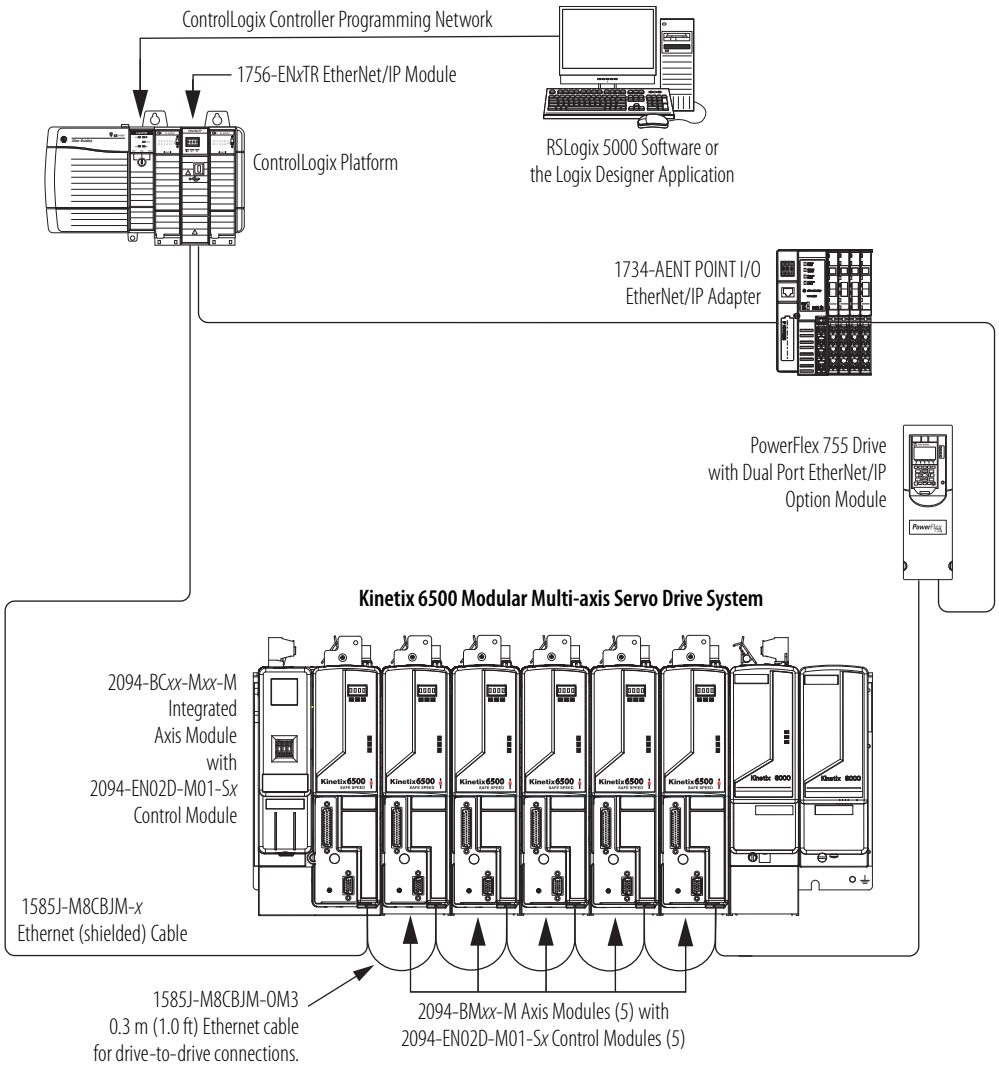
Kinetix 6500 Linear Communication (EtherNet/IP network)



In this example, devices are connected by using device-level ring (DLR) topology. DLR topology is fault tolerant. For example, if a device in the ring is disconnected, the rest of the devices in the ring continue to maintain communication.

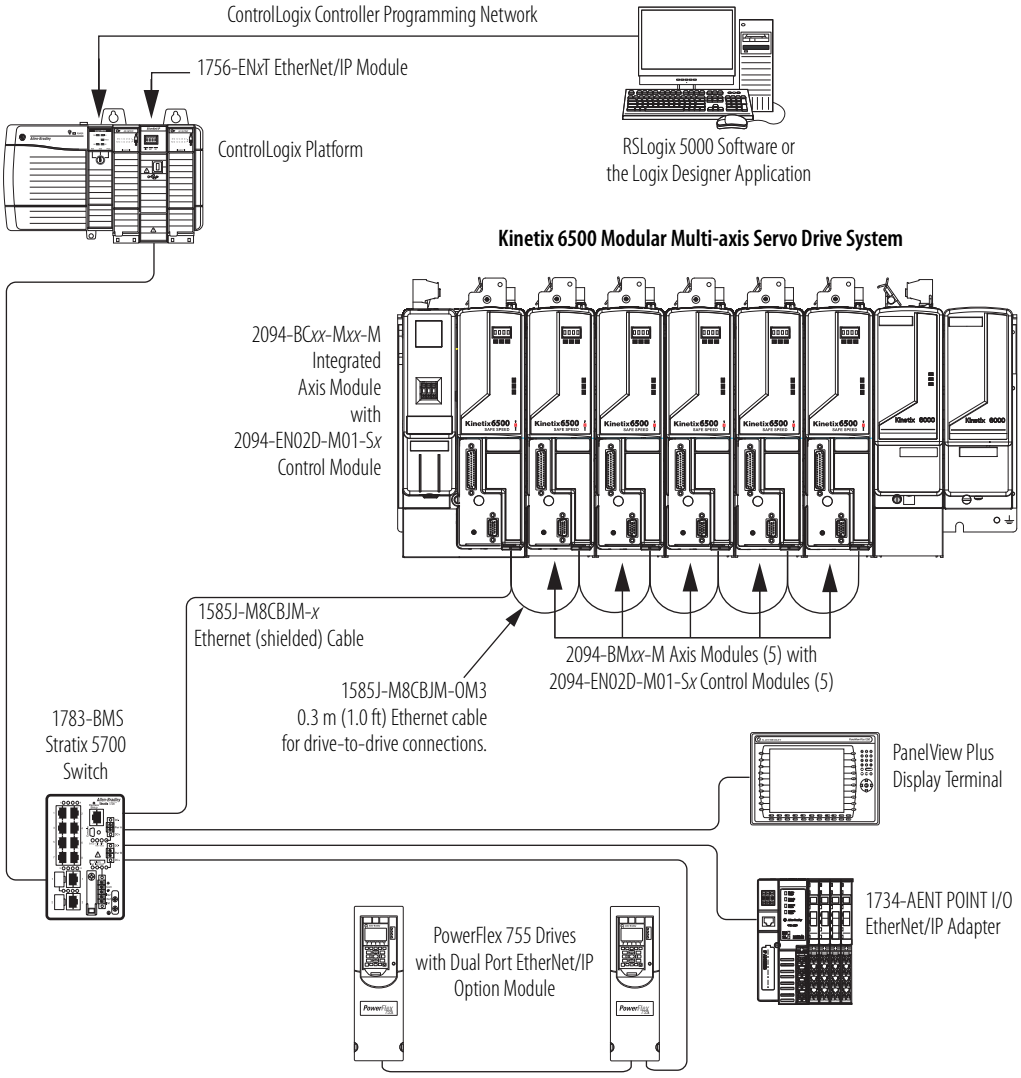
- DLR configurations support up to 64 devices.
- All devices in a DLR ring must have dual-port connectivity or be connected in the ring by using a 1783-ETAP module.

Kinetix 6500 Ring Communication (EtherNet/IP network)



In this example, devices are connected by using star topology. Each device is connected directly to the switch, making this topology fault tolerant. The 2094 power rail modules and other devices operate independently. The loss of one device does not impact the operation of the other devices.

Kinetix 6500 Star Communication (EtherNet/IP network)



Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 6200 and Kinetix 6500 servo drives.

For Kinetix 6200 and Kinetix 6500 drive system combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin MPL Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
MPL-B1510V	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2094-BMP5-M
MPL-B1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2094-BMP5-M
MPL-B1530U	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	2094-BMP5-M
MPL-B210V	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2094-BMP5-M
MPL-B220T	6000	3.30	1.61 (14.2)	9.90	4.12 (36.4)	0.62	2094-BMP5-M
				11.3	4.74 (41.9)		2094-BM01-M
MPL-B230P	5000	2.60	2.10 (18.6)	9.90	7.24 (64.0)	0.86	2094-BMP5-M
				11.3	8.20 (73.0)		2094-BM01-M
MPL-B310P	5000	2.4	1.6 (14.1)	7.10	3.6 (32)	0.77	2094-BMP5-M
MPL-B320P	5000	4.0	2.7 (23.9)	9.90	5.9 (52.2)	1.5	2094-BMP5-M
		4.5	3.10 (27)	14.0	8.2 (72.5)		2094-BM01-M
MPL-B330P	5000	4.0	2.7 (23.9)	9.90	6.8 (60.2)	1.8	2094-BMP5-M
		6.1	4.18 (37)	19.0	11.1 (98)		2094-BM01-M
MPL-B420P	5000	6.3	4.74 (42)	21.6	13.1 (116)	1.9	2094-BM01-M
				22.0	13.5 (119)		2094-BM02-M
MPL-B430P	5000	8.6	6.2 (54.9)	21.6	13.9 (123)	2.2	2094-BM01-M
		9.2	6.55 (58)	32.0	19.8 (175)		2094-BM02-M
MPL-B4530F	3000	4.0	4.9 (43.3)	9.90	11.0 (97.3)	2.1	2094-BMP5-M
		6.7	8.36 (74)	21.0	20.3 (180)		2094-BM01-M
MPL-B4530K	4000	8.6	7.1 (62.8)	21.6	15.1 (133)	2.6	2094-BM01-M
		9.9	8.25 (73)	31.0	20.3 (179)		2094-BM02-M

Bulletin MPL Performance Specifications with Kinetix 6200/6500 Drives (continued)

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
MPL-B4540F	3000	8.6	9.5 (84.1)	21.6	20.9 (185)	2.6	2094-BM01-M
		9.1	10.20 (90)	29.0	27.1 (240)		2094-BM02-M
MPL-B4560F	3000	8.6	10.5 (92.9)	21.6	22.7 (201)	3.2	2094-BM01-M
		11.8	14.0 (124)	36.0	34.4 (304)		2094-BM02-M
MPL-B520K	4000	8.6	7.9 (69.9)	21.6	16.6 (147)	3.5	2094-BM01-M
		11.5	10.7 (95)	33.0	23.2 (205)		2094-BM02-M
MPL-B540D	2000	8.6	15.8 (139)	21.6	37.9 (335)	3.4	2094-BM01-M
		10.5	19.4 (172)	23.0	41.0 (362)		2094-BM02-M
MPL-B540K	4000	20.4	19.4 (171)	60.0	48.6 (430)	5.4	2094-BM03-M
MPL-B560F	3000	20.6	26.8 (237)	68.0	67.8 (600)	5.5	2094-BM03-M
MPL-B580F	3000	26.0	34.0 (300)	75.0	74.6 (660)	7.1	2094-BM03-M
				94.0	87.0 (770)		2094-BM05-M
MPL-B580J	3800	30.0	31.7 (280)	75.0	67.0 (592)	7.9	2094-BM03-M
		32.0	34.0 (301)	94.0	81.0 (716)		2094-BM05-M
MPL-B640F	3000	30.0	34.4 (304)	65.0	72.3 (640)	6.1	2094-BM03-M
		32.0	36.7 (325)				2094-BM05-M
MPL-B660F	3000	38.5	48.0 (425)	96.0	101 (895)	6.1	2094-BM05-M
MPL-B680D	2000	30.0	55.4 (490)	75.0	125 (1105)	9.3	2094-BM03-M
		34.0	62.8 (556)	94.0	154 (1365)		2094-BM05-M
MPL-B680F	3000	47.9	60.0 (531)	96.0	108 (960)	7.5	2094-BM05-M
MPL-B680H	3500	48.9	58.0 (513)	97.8	107 (947)	7.5	2094-BM05-M
MPL-B860D	2000	47.3	83.0 (735)	95.5	152 (1350)	12.5	2094-BM05-M
MPL-B880C	1500	47.5	110 (973)	97.5	203 (1800)	12.6	2094-BM05-M
MPL-B880D	2000	48.9	79.9 (706)	96.0	147 (1300)	12.6	2094-BM05-M
MPL-B960B	1200	42.5	130 (1150)	94.0	231 (2050)	12.7	2094-BM05-M
MPL-B980B	1000	40.0	162 (1440)	94.0	278 (2460)	15.2	2094-BM05-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPM Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
MPM-B1151F	3000	5000	2.71	2.3 (20.3)	9.9	6.6 (58.4)	0.75	2094-BMP5-M
MPM-B1151T	6000	7000	5.62	2.3 (20.3)	20.5	5.8 (51.3)	0.90	2094-BM01-M
MPM-B1152C	1500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2094-BM02-M
MPM-B1152F	3000	5200	6.17	5.0 (44.2)	21.1	13.3 (118)	1.40	2094-BM01-M
MPM-B1152T	6000	7000	11.02	5.0 (44.2)	36.5	13.1 (116)	1.40	2094-BM02-M
MPM-B1153E	2250	3500	6.21	6.5 (57.5)	21.6	19.7 (174)	1.40	2094-BM01-M
MPM-B1153F	3000	5500	9.20	6.4 (56.6)	32.0	19.7 (174)	1.40	2094-BM02-M
MPM-B1153T	6000	7000	15.95	6.4 (56.6)	45.0	14.5 (128)	1.45	2094-BM03-M
MPM-B1302F	3000	4500	8.57	6.6 (58.4)	21.5	13.0 (115)	1.65	2094-BM01-M
MPM-B1302M	4500	6000	12.57	6.6 (58.4)	32.4	13.3 (118)	1.65	2094-BM02-M
MPM-B1302T	6000	7000	16.83	6.7 (59.3)	43.4	13.3 (118)	1.65	2094-BM03-M
MPM-B1304C	1500	2750	7.00	10.3 (91.1)	21.5	26.4 (233)	2.00	2094-BM01-M
MPM-B1304E	2250	4000	10.75	10.2 (90.3)	34.2	27.1 (240)	2.20	2094-BM02-M
MPM-B1304M	4500	6000	19.02	10.4 (92.0)	60.6	27.1 (240)	2.20	2094-BM03-M
MPM-B1651C	1500	3500	10.21	11.4 (101)	29.2	23.2 (205)	2.50	2094-BM02-M
MPM-B1651F	3000	5000	17.75	11.4 (101)	50.9	23.2 (205)	2.50	2094-BM03-M
MPM-B1651M	4500	5000	22.46	11.3 (100)	56.8	21.4 (189)	2.50	2094-BM03-M
MPM-B1652C	1500	2500	11.51	16.4 (145)	33.6	40.2 (356)	3.80	2094-BM02-M
MPM-B1652E	2250	3500	20.94	21.1 (187)	60.5	48.0 (425)	4.30	2094-BM03-M
MPM-B1652F	3000	4500	28.74	21.1 (187)	84.1	48.0 (424)	4.30	2094-BM05-M
MPM-B1653C	1500	2500	20.05	26.7 (236)	59.2	67.7 (599)	4.60	2094-BM03-M
MPM-B1653E	2250	3500	27.00	26.8 (237)	72.9	62.0 (549)	5.10	2094-BM03-M
MPM-B1653F	3000	4000	34.94	31.0 (274)	94.3	56.0 (495)	5.10	2094-BM05-M
MPM-B2152C	1500	2500	27.40	36.7 (325)	55.4	72.2 (639)	5.60	2094-BM03-M
MPM-B2152F	3000	4500	43.54	34.1 (302)	97.8	72.3 (495)	5.90	2094-BM05-M
MPM-B2152M	4500	5000	44.58	34.1 (302)	76.3	52.9 (468)	5.90	2094-BM05-M
MPM-B2153B	1250	2000	24.06	48.0 (425)	60.0	101 (894)	6.80	2094-BM03-M
MPM-B2153E	2250	3000	39.63	47.9 (424)	97.8	101 (894)	7.20	2094-BM05-M
MPM-B2153F	3000	3800	43.86	45.6 (403)	97.8	99.0 (875)	7.20	2094-BM05-M
MPM-B2154B	1250	2000	35.46	62.7 (555)	97.8	154 (1362)	6.90	2094-BM05-M
MPM-B2154E	2250	3000	43.68	55.9 (495)	97.8	112 (990)	7.50	2094-BM05-M
MPM-B2154F	3000	3300	44.40	56.2 (497)	83.6	88.0 (778)	7.50	2094-BM05-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPF Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
MPF-B310P	5000	2.30	1.60 (14)	7.10	3.6 (32)	0.77	2094-BMP5-M
MPF-B320P	5000	4.0	2.90 (25.6)	9.90	6.0 (53.1)	1.5	2094-BMP5-M
		4.24	3.10 (27)	14.0	7.8 (69)		2094-BM01-M
MPF-B330P	5000	4.0	2.90 (25.6)	9.90	6.5 (57.5)	1.6	2094-BMP5-M
		5.70	4.18 (37)	19.0	11.1 (98)		2094-BM01-M
MPF-B430P	5000	8.60	6.20 (54.9)	21.5	13.9 (123)	2.0	2094-BM01-M
		9.20	6.55 (58)	32.0	19.8 (175)		2094-BM02-M
MPF-B4530K	4000	8.60	7.10 (62.8)	21.5	15.1 (133)	2.4	2094-BM01-M
		9.90	8.25 (73)	31.0	20.3 (179)		2094-BM02-M
MPF-B4540F	3000	8.60	9.50 (84.1)	21.5	20.9 (185)	2.5	2094-BM01-M
		9.10	10.20 (90)	29.0	27.1 (240)		2094-BM02-M
MPF-B540K	4000	20.5	19.4 (171)	60.0	48.6 (430)	4.1	2094-BM03-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MDF Integrated Drive-Motor Performance Specifications

Performance Specifications with Kinetix 6000M (non-brake) Motors

IDM Drive-Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000M IPIM Module
MDF-SB1003P-*xxx*2*x*-S	5000	4.03	3.00 (26.5)	19.0	10.50 (92.9)	1.10	2094-SEPM-B24-S
MDF-SB1153H-*xxx*2*x*-S	3500	4.50	4.80 (42.5)	20.0	18.50 (164)	1.15	
MDF-SB1304F-*xxx*2*x*-S	3000	5.80	7.25 (64.2)	20.0	21.75 (192)	1.39	

Performance Specifications with Kinetix 6000M (brake) Motors

IDM Drive-Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000M IPIM Module
MDF-SB1003P-*xxx*4*x*-S	5000	4.03	3.00 (26.5)	19.0	10.50 (92.9)	1.02	2094-SEPM-B24-S
MDF-SB1153H-*xxx*4*x*-S	3500	4.50	4.80 (42.5)	20.0	18.50 (164)	1.00	
MDF-SB1304F-*xxx*4*x*-S	3000	5.80	7.25 (64.2)	20.0	21.75 (192)	1.24	

Performance specification data and curves reflect nominal system performance of a typical system at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPS Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
MPS-B330P	5000	4.0	3.0 (26.5)	9.90	6.6 (58.4)	1.3	2094-BMP5-M
		4.9	3.6 (32)	19.0	11.0 (97.2)		2094-BM01-M
MPS-B4540F	3000	7.1	8.1 (72)	21.5	22.8 (202)	1.4	2094-BM01-M
				26.0	27.1 (240)		2094-BM02-M
MPS-B560F	3000	17.0	21.5 (190)	68.0	67.8 (600)	3.5	2094-BM03-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin RDB Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
RDB-B21519	750	1235	9.9	31.2 (276)	27.3	83.1 (735)	3.64	2094-BM02-M
RDB-B2151C	1500	2125	17.3	31.3 (277)	46.4	82.8 (733)	5.23	2094-BM03-M
RDB-B21529	750	1035	12.2	43.4 (384)	32.8	111 (982)	4.33	2094-BM02-M
RDB-B2152C	1500	2125	23.5	43.4 (384)	63.2	111 (982)	6.41	2094-BM03-M
RDB-B21539	750	1250	15.8	51.5 (456)	47.9	137 (1212)	5.34	2094-BM03-M
RDB-B2153C	1500	2250	29.4	51.5 (456)	82.6	137 (1212)	5.87	2094-BM03-M
RDB-B29014	200	450	5.9	48.9 (433)	17.6	110 (973)	1.97	2094-BM01-M
RDB-B29016	375	785	10.0	48.9 (433)	31.0	110 (973)	3.18	2094-BM02-M
RDB-B29019	750	1500	19.1	48.9 (167)	58.7	110 (973)	3.63	2094-BM03-M
RDB-B29024	200	435	10.7	97.8 (865)	33.0	214 (1894)	3.33	2094-BM02-M
RDB-B29026	375	885	21.9	97.8 (865)	67.2	214 (1894)	4.05	2094-BM03-M
RDB-B29029	750	1200	36.2	97.5 (863)	97.8	195 (1726)	4.05	2094-BM05-M
RDB-B29034	200	500	17.4	140 (1239)	56.6	321 (2841)	5.16	2094-BM03-M
RDB-B29036	375	750	26.0	140 (1239)	84.9	318 (2814)	5.49	2094-BM05-M
RDB-B29039	750	1000	48.9	113 (1000)	97.8	194 (1717)	4.41	2094-BM05-M
RDB-B41014	200	385	17.8	183 (1619)	51.2	340 (3009)	5.20	2094-BM03-M
RDB-B41016	375	700	33.2	183 (1619)	95.5	339 (3000)	4.83	2094-BM05-M
RDB-B41018	625	700	48.9	175 (1549)	97.8	271 (2398)	4.83	2094-BM05-M
RDB-B41024	200	365	31.5	330 (2929)	95.5	690 (6107)	7.29	2094-BM05-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 6200 and Kinetix 6500 servo drives.

Linear Motion Family	Page
LDAT-Series integrated linear thrusters	68
MP-Series (Bulletin MPAS) integrated linear stages	72
MP-Series (Bulletin MPAR) electric cylinders	72
MP-Series (Bulletin MPAI) heavy-duty electric cylinders	73
LDC-Series iron-core linear motors	74

For Kinetix 6200 and Kinetix 6500 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

LDAT-Series Performance Specifications with Kinetix 6200/6500 Drives

Performance Specifications (frame 30) with Kinetix 6200/6500 Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S031010-DB*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2094-BM01-M
LDAT-S031020-DB*x*	3.1					0.25	
LDAT-S031030-DB*x*	3.5					0.29	
LDAT-S031040-DB*x*	3.8					0.31	
LDAT-S032010-DB*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.40	2094-BM01-M
LDAT-S032020-DB*x*	4.1					0.52	
LDAT-S032030-DB*x*	4.7					0.59	
LDAT-S032040-DB*x*	5.0					0.63	
LDAT-S032010-EB*x*	3.1	3.7		12.2		0.40	
LDAT-S032020-EB*x*	4.1					0.52	
LDAT-S032030-EB*x*	4.7					0.59	
LDAT-S032040-EB*x*	5.0					0.63	
LDAT-S033010-DB*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2094-BM02-M
LDAT-S033020-DB*x*	4.7					0.88	
LDAT-S033030-DB*x*	5.0					0.95	
LDAT-S033040-DB*x*							
LDAT-S033010-EB*x*	3.5	3.7		12.2		0.67	2094-BM01-M
LDAT-S033020-EB*x*	4.7					0.87	
LDAT-S033030-EB*x*	5.0					0.91	
LDAT-S033040-EB*x*							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 6200/6500 Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S051010-DB*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.34	2094-BMP5-M
LDAT-S051020-DB*x*	3.7					0.43	
LDAT-S051030-DB*x*	4.1					0.49	
LDAT-S051040-DB*x*	4.4					0.53	
LDAT-S051050-DB*x*	4.7					0.55	
LDAT-S052010-DB*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.92	2094-BM01-M
LDAT-S052020-DB*x*	4.8					1.20	
LDAT-S052030-DB*x*	5.0					1.24	
LDAT-S052040-DB*x*							
LDAT-S052050-DB*x*							
LDAT-S052010-EB*x*	3.7	3.1		11.4		0.80	2094-BMP5-M
LDAT-S052020-EB*x*	4.6					0.98	
LDAT-S052030-EB*x*	4.6					1.02	
LDAT-S052040-EB*x*							
LDAT-S052050-EB*x*							
LDAT-S053010-DB*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.56	2094-BM02-M
LDAT-S053020-DB*x*	5.0					1.87	
LDAT-S053030-DB*x* ... LDAT-S053050-DB*x*							
LDAT-S053010-EB*x* ... LDAT-S053050-EB*x*	3.5	3.1		11.4		1.04	2094-BMP5-M
LDAT-S054010-DB*x*	4.4	12.4	509 (114)	45.5	1453 (327)	2.26	2094-BM02-M
LDAT-S054020-DB*x* ... LDAT-S054050-DB*x*	5.00					2.53	
LDAT-S054010-EB*x*	4.4	6.2		22.7		1.87	2094-BM01-M
LDAT-S054020-EB*x* ... LDAT-S054050-EB*x*	5.0					2.05	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 6200/6500 Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S072010-DB*x*	3.9	6.0	364 (82)	22.0	1055 (237)	1.37	2094-BM01-M
LDAT-S072020-DB*x*	5.0					1.64	
LDAT-S072030-DB*x* ... LDAT-S072070-DB*x*							
LDAT-S072010-EB*x*	3.5	3.0		11.0		1.03	2094-BMP5-M
LDAT-S072020-EB*x* ... LDAT-S072070-EB*x*							

Performance Specifications (frame 70) with Kinetix 6200/6500 Drives (continued)

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S073010-DB*x*	4.4	9.0	554 (125)	32.8	1576 (354)	2.27	2094-BM02-M
LDAT-S073020-DB*x* … LDAT-S073070-DB*x*	5.0					2.50	
LDAT-S073010-EB*x* … LDAT-S073070-EB*x*	2.4	3.0		10.9		1.01	2094-BMP5-M
LDAT-S074010-DB*x*	4.7	11.9	730 (164)	43.5	2088 (469)	3.15	2094-BM02-M
LDAT-S074020-DB*x* … LDAT-S074070-DB*x*	5.0					3.30	
LDAT-S074010-EB*x* … LDAT-S074070-EB*x*	3.5	6.0		21.7		2.08	2094-BM01-M
LDAT-S076010-DB*x*	5.0	18.2	1122 (252)	66.4	3189 (717)	5.02	2094-BM03-M
LDAT-S076020-DB*x* … LDAT-S076070-DB*x*							
LDAT-S076010-EB*x* … LDAT-S076070-EB*x*	3.5	9.1		33.2		3.18	2094-BM02-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 6200/6500 Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S102010-DB*x*	3.4	5.7	456 (103)	21.0	1289 (290)	1.44	2094-BM01-M
LDAT-S102020-DB*x*	4.4					1.74	
LDAT-S102030-DB*x*	5.0					1.91	
LDAT-S102040-DB*x*							
LDAT-S102050-DB*x* … LDAT-S102090-DB*x*							
LDAT-S102010-EB*x* … LDAT-S102090-EB*x*	2.6	2.9		10.5		0.96	2094-BMP5-M
LDAT-S103010-DB*x*	3.8	8.6	702 (158)	31.5	1935 (435)	2.41	2094-BM02-M
LDAT-S103020-DB*x*	5.0					2.93	
LDAT-S103030-DB*x* … LDAT-S103090-DB*x*							
LDAT-S103010-EB*x* … LDAT-S103090-EB*x*	1.8	2.9		10.5		0.92	2094-BMP5-M

Performance Specifications (frame 100) with Kinetix 6200/6500 Drives (continued)

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S104010-DB*x*	4.1	11.5	929 (209)	42.0	2578 (580)	3.76	2094-BM02-M
LDAT-S104020-DB*x*	5.0					4.29	
LDAT-S104030-DB*x* … LDAT-S104090-DB*x*							
LDAT-S104010-EB*x* … LDAT-S104090-EB*x*	2.7	5.7		21.0		2.07	2094-BM01-M
LDAT-S106010-DB*x*	4.5	17.3	1403 (315)	63.0	3871 (870)	5.41	2094-BM03-M
LDAT-S106020-DB*x* … LDAT-S106090-DB*x*	5.0					5.87	
LDAT-S106010-EB*x* … LDAT-S106090-EB*x*	2.7	8.6		31.5		2.94	2094-BM02-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 6200/6500 Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6200/6500 400V-class Drives
LDAT-S152010-DB*x*	3.2	5.3	643 (145)	19.5	1799 (404)	1.76	2094-BM01-M
LDAT-S152020-DB*x* … LDAT-S152090-DB*x*	3.5					1.89	
LDAT-S152010-EB*x* … LDAT-S152090-EB*x*	1.8	2.7		9.8		0.87	2094-BMP5-M
LDAT-S153010-DB*x* … LDAT-S153090-DB*x*	3.6	8.0	978 (220)	29.1	2680 (602)	2.87	2094-BM01-M
LDAT-S153010-EB*x* … LDAT-S153090-EB*x*	1.2	2.7		9.1		0.80	2094-BMP5-M
LDAT-S154010-DB*x* … LDAT-S154090-DB*x*	3.5	10.7	1306 (294)	39.1	3597 (809)	3.83	2094-BM02-M
LDAT-S154010-EB*x* … LDAT-S154090-EB*x*	1.8	5.3		19.5		1.78	2094-BM01-M
LDAT-S156010-DB*x* … LDAT-S156090-DB*x*	3.6	16.3	1997 (449)	59.4	5469 (1229)	5.85	2094-BM03-M
LDAT-S156010-EB*x* … LDAT-S156090-EB*x*	1.8	8.1		19.8		2.71	2094-BM01-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAS Performance Specifications with Kinetix 6200/6500 Drives

Linear Stage Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 6200/ Kinetix 6500 400V-class Drives**
MPAS-B*xxxx*1-V05S*x*A	200 (7.9) (1)	1.75	521 (117)	3.50	1212 (272)	0.37	2094-BMP5-M
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	6.60	968 (218)	0.62	2094-BMP5-M
MPAS-B8*xxx*F-ALMO2C	5000 (200) (3)	3.50	189 (42.5)	9.30	456 (103)	0.527	2094-BMP5-M
MPAS-B8*xxx*F-ALMS2C		3.15	159 (35.7)	8.37	399 (89.7)	0.475	2094-BMP5-M
MPAS-B9*xxx*L-ALMO2C		3.40	285 (64.1)	9.10	680 (153)	0.768	2094-BMP5-M
MPAS-B9*xxx*L-ALMS2C		3.03	245 (55.1)	8.19	601 (135)	0.69	2094-BMP5-M

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAR Performance Specifications with Kinetix 6200/6500 Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 6200/ Kinetix 6500 400V-class Drives**
MPAR-B1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2094-BMP5-M
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	2094-BMP5-M
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	2094-BMP5-M
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2094-BMP5-M
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	2094-BM01-M
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2094-BM01-M

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAI Performance Specifications with Kinetix 6200/6500 Drives

Performance Specifications (ballscrew) with Kinetix 6200/6500 Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B2076CV1	305 (12)	0.90	890 (200)	706 (159)	2.30	1446 (325)	0.22	2094-BMP5-M
MPAI-B2150CV3		1.29	1446 (325)	1147 (258)	3.25		0.25	
MPAI-B2300CV3								
MPAI-B3076CM1	305 (12)	1.35	1624 (365)	1290 (290)	4.57	4448 (1000)	0.27	2094-BMP5-M
MPAI-B3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-B3150CM3	279 (11)	2.81	4003 (900)	3176 (714)	4.30	4448 (1000)	0.39	2094-BMP5-M
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		
MPAI-B3300EM3								
MPAI-B3450EM3	376 (15)							
MPAI-B4150CM3	279 (11)	5.61	7784 (1750)	6179 (1389)	8.68	8896 (2000)	0.43	2094-BM01-M
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		
MPAI-B4300EM3								
MPAI-B4450EM3	491 (19)							
MPAI-B5*xxx*CM3	200 (7.8)	6.62	13,123 (2950)	10,415 (2341)	8.48	13,345 (3000)	0.55	2094-BM01-M
MPAI-B5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	16.70	13,122 (2950)		

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (roller screw) with Kinetix 6200/6500 Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B3076RM1	305 (12)	1.45	1557 (350)	1237 (278)	4.57	4862 (1093)	0.27	2094-BMP5-M
MPAI-B3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-B3150RM3	279 (11)	2.81	3781 (850)	3003 (675)	7.07	7562 (1700)	0.39	2094-BMP5-M
MPAI-B3300RM3								
MPAI-B3450RM3	176 (6.9)							
MPAI-B3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-B3300SM3								
MPAI-B3450SM3	353 (14)							
MPAI-B4150RM3	279 (11)	5.61	7340 (1650)	5827 (1310)	14.14	14,679 (3300)	0.43	2094-BM01-M
MPAI-B4300RM3								
MPAI-B4450RM3	196 (7.6)							
MPAI-B4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-B4300SM3								
MPAI-B4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDC-Series Performance Specifications with Kinetix 6200/6500 Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current [1] Amps 0-pk	System Continuous Stall Force [1] N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 6200/ Kinetix 6500 400V-class Drives
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2094-BM01-M
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2094-BM02-M
LDC-C030200-EHT		4.1…6.1		12.1			2094-BM01-M
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2094-BM01-M
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2094-BM02-M
LDC-C050200-EHT		3.9…5.9		11.6			2094-BM01-M
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2094-BM02-M
LDC-C050300-EHT		3.9…5.9		12.0			2094-BM01-M
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2094-BM02-M
LDC-C075200-EHT		3.8…5.7		11.5			2094-BM01-M
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2094-BM02-M
LDC-C075300-EHT		3.8…5.7		11.9			2094-BM01-M
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2094-BM03-M
LDC-C075400-EHT		7.7…11.5		23.7			2094-BM02-M
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	2094-BM02-M
LDC-C100300-EHT		3.7…5.6		11.4			2094-BM01-M
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2094-BM03-M
LDC-C100400-EHT		7.4…11.1		22.8			2094-BM02-M
LDC-C100600-DHT		22.2…33.3	1349…2023 (303…455)	68.5	3534 (794)	6.74…10.11	2094-BM03-M
LDC-C100600-EHT		11.1…16.7		34.3			2094-BM02-M
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2094-BM03-M
LDC-C150400-EHT		7.0…10.6		22.6			2094-BM02-M
LDC-C150600-DHT		21.1…31.7	1922…2882 (432…648)	67.8	5246 (1179)	9.61…14.41	2094-BM03-M
LDC-C150600-EHT		10.6…15.8		33.9			2094-BM02-M

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Kinetix 6000 Multi-axis Servo Drives

The Kinetix 6000 multi-axis servo drives provide powerful simplicity to handle even the most demanding applications quickly, easily, and cost-effectively. By providing advanced control capability along with innovative design and installation features, the Kinetix 6000 drives significantly improve system performance while saving time and money. The compact size, simplified wiring, and easy-to-use components make the Kinetix 6000 drives an ideal choice for both OEMs and end-users. Target applications for the Kinetix 6000 drives include packaging, material handling, converting, and assembly.

The Kinetix 6000 drive family is part of the Kinetix Integrated Motion solution.

Kinetix 6000 Multi-axis Servo Drive Features

- Multi-axis servo drive systems with Integrated Motion on sercos interface
- TÜV certified, SIL CL3, PLe, category 3 safety performance
  - Safe-off control
- 195…265V AC three-phase (200V-class) input
- 324…528V AC three-phase (400V-class) input
  - Enhanced-peak performance for up to 250% of continuous current rating
- RSLogix 5000 software or the Logix Designer application for programming (ladder logic, structured text, and sequential function charts)
- Kinetix Integrated Motion with ControlLogix or CompactLogix controllers
- High-resolution absolute, multi-turn and single-turn encoder feedback; feedback-only auxiliary axis

To compare drive features across drive families, refer to Servo Drives beginning on page 28.

Kinetix 6000 Servo Drive Components

Kinetix 6000 servo drive systems consist of these required components:

- One integrated axis module (IAM or leader IAM)
- Up to seven axis modules
- One power rail
- One to eight rotary motors, linear motors, or linear actuators
- One to eight motor power and feedback cables
- Low-profile connector kits (required for flying-lead feedback cables)
- Two to nine sercos fiber-optic cables

Kinetix 6000 systems can also include one or more integrated axis modules used as a follower IAM (and associated axis modules, power rails, motors, cables, and connectors as required for the application).

Kinetix 6000M integrated drive-motor (IDM) systems are an option with Kinetix 6000 servo drives

- One Kinetix 6000M IDM power interface module (IPIM) per IDM system
- As many as 4 IPIM modules on the Bulletin 2094 power rail
- As many as 16 integrated drive-motor (IDM) units connect to each IPIM module

These components are optional:

- One shunt module, 2094-BSP2 with optional Bulletin 1394 external passive shunt module
- 2094-PRF, Slot-filler modules
- Bulletin 2094 Line Interface Module (LIM)
- Bulletin 2090 Resistive Brake Module (RBM)
- Bulletin 1336 external active shunt module (dynamic brake)
- 2090-XXLF AC Line Filters (required for CE)

For detailed Kinetix 6000 drive system requirements, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

Kinetix 6000 Servo Drive Selection

Drive Module	Drive Cat. No.	Continuous Output Ratings	
		Converter (A_{DC})	Inverter (A, 0-pk)
Integrated axis module (IAM), 200V-class	2094-AC05-MP5-S	3 kW, 10 A	1.2 kW, 5 A
	2094-AC05-M01-S	3 kW, 10 A	1.9 kW, 9 A
	2094-AC09-M02-S	6 kW, 19 A	3.4 kW, 15 A
	2094-AC16-M03-S	11.3 kW, 36 A	5.5 kW, 25 A
	2094-AC32-M05-S	22.5 kW, 71 A	11.0 kW, 49 A
Integrated axis module (IAM), 400V-class	2094-BC01-MP5-S	6 kW, 9 A	1.8 kW, 4.0 A
	2094-BC01-M01-S	6 kW, 9 A	3.9 kW, 8.6 A
	2094-BC02-M02-S	15 kW, 23 A	6.6 kW, 14.6 A
	2094-BC04-M03-S	28 kW, 42 A	13.5 kW, 30 A
	2094-BC07-M05-S	45 kW, 68 A	22.0 kW, 49 A
Axis module (AM), 200V-class	2094-AMP5-S	N/A	1.2 kW, 5 A
	2094-AM01-S		1.9 kW, 9 A
	2094-AM02-S		3.4 kW, 15 A
	2094-AM03-S		5.5 kW, 25 A
	2094-AM05-S		11.0 kW, 49 A
Axis module (AM), 400V-class	2094-BMP5-S	N/A	1.8 kW, 4.0 A
	2094-BM01-S		3.9 kW, 8.6 A
	2094-BM02-S		6.6 kW, 14.6 A
	2094-BM03-S		13.5 kW, 30 A
	2094-BM05-S		22.0 kW, 49 A
2094 power rail	2094-PRS*x*	Available for 1, 2, 3, 4, 5, 7, and 8-axis systems	
2094 IDM power interface module	2094-SEPM-B24-S	400V-class, 24 A rms, 15 kW, sercos, supports up to 16 integrated drive-motor units	
2094 shunt module	2094-BSP2	200/400V-class, 200 W shunt module (mounts on power rail)	
2094 slot-filler module	2094-PRF	200/400V-class, covers unused slots on power rail	

For Kinetix 6000 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003.

Kinetix 6200 Drive Component Compatibility

The 2094-BC*xx*-M*xx*-M and 2094-BM*xx*-M power modules contain the same power structure as the 2094-BC*xx*-M*xx*-S and 2094-BM*xx*-S drives. Because of this, the 2094-BSP2 shunt module, 2094-PRF slot-filler module, and 2094-PRS*x* power rails are all supported by both drive families.

In addition, 2094-BM*xx*-M AM power modules with sercos interface are supported on power rails with a 2094-BC*xx*-M*xx*-S IAM module. Conversely, 2094-BM*xx*-S AM drives are supported on power rails with a 2094-BC*xx*-M*xx*-M IAM power module with sercos interface.

IMPORTANT Kinetix 6500 EtherNet/IP control modules (catalog numbers 2094-EN02D-M01-S*x*) are not compatible with IAM/AM modules on the same Bulletin 2094 power rail where sercos interface is used.

IAM/AM Module Compatibility

IAM Module	Control Module	2094-BM*xx*-S Kinetix 6000 AM Module	2094-BM*xx*-M AM Power Modules	
			2094-SE02F-M00-S*x* Kinetix 6200 Control Module	2094-EN02D-M01-S*x* Kinetix 6500 Control Module
2094-BC*xx*-M*xx*-S (series B and C)	N/A	Fully compatible	Fully compatible	Not compatible
2094-BC*xx*-M*xx*-M (IAM power module)	2094-SE02F-M00-S*x* Sercos interface			
	2094-EN02D-M01-S*x* EtherNet/IP network	Not compatible	Not compatible	Fully compatible

For more information on the Kinetix 6200 modular servo drives, catalog numbers 2094-BC*xx*-M*xx*-M, 2094-BM*xx*-M, and 2094-SE02F-M00-S*x*, refer to Kinetix 6200 and Kinetix 6500 Modular Servo Drives on page 51.

Kinetix 6000M Integrated Drive-Motor System Compatibility

Bulletin 2094 power rails with Kinetix 6000 (series B) or Kinetix 6200 drives are compatible with Kinetix 6000M integrated drive-motor (IDM) systems. The integrated drive-motor power interface module (IPIM) mounts to the power rail and connects to as many as 16 IDM units.

IMPORTANT Kinetix 6500 EtherNet/IP control modules (catalog numbers 2094-EN02D-M01-S*x*) are not compatible with Kinetix 6000M integrated drive-motor systems.

IAM Module Compatibility

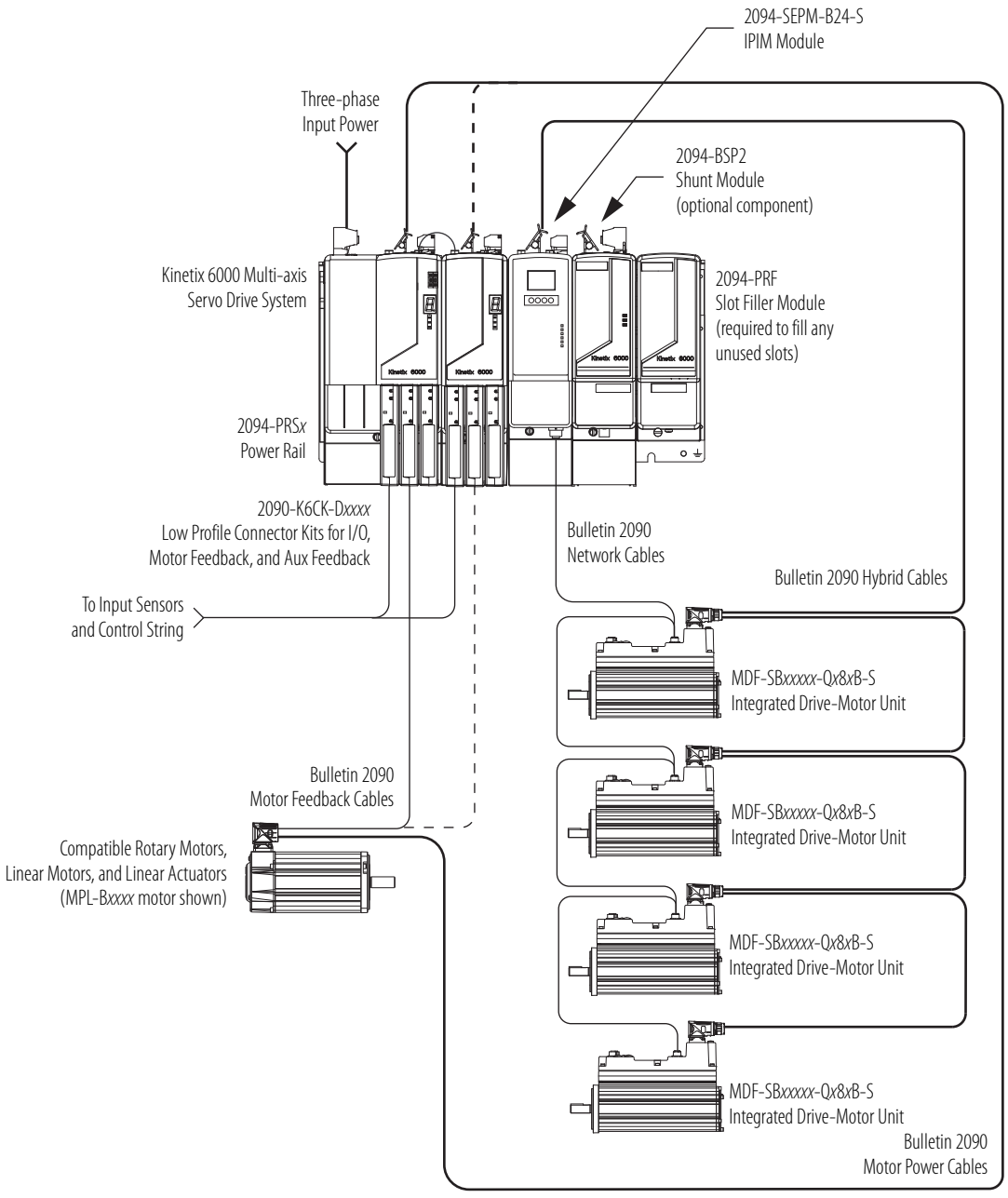
IAM Module	Control Module	2094-SEPM-B24-S IDM Power Interface Module (IPIM)
2094-BC*xx*-M*xx*-S (series B and C)	N/A	Fully compatible
2094-BC*xx*-M*xx*-M (IAM power module)	2094-SE02F-M00-S*x* sercos interface	
	2094-EN02D-M01-S*x* EtherNet/IP network	Not compatible

For more information on the Kinetix 6000M integrated drive-motor systems, refer to Typical Kinetix 6000M Integrated Drive-Motor Configuration on page 79.

Typical Kinetix 6000M Integrated Drive-Motor Configuration

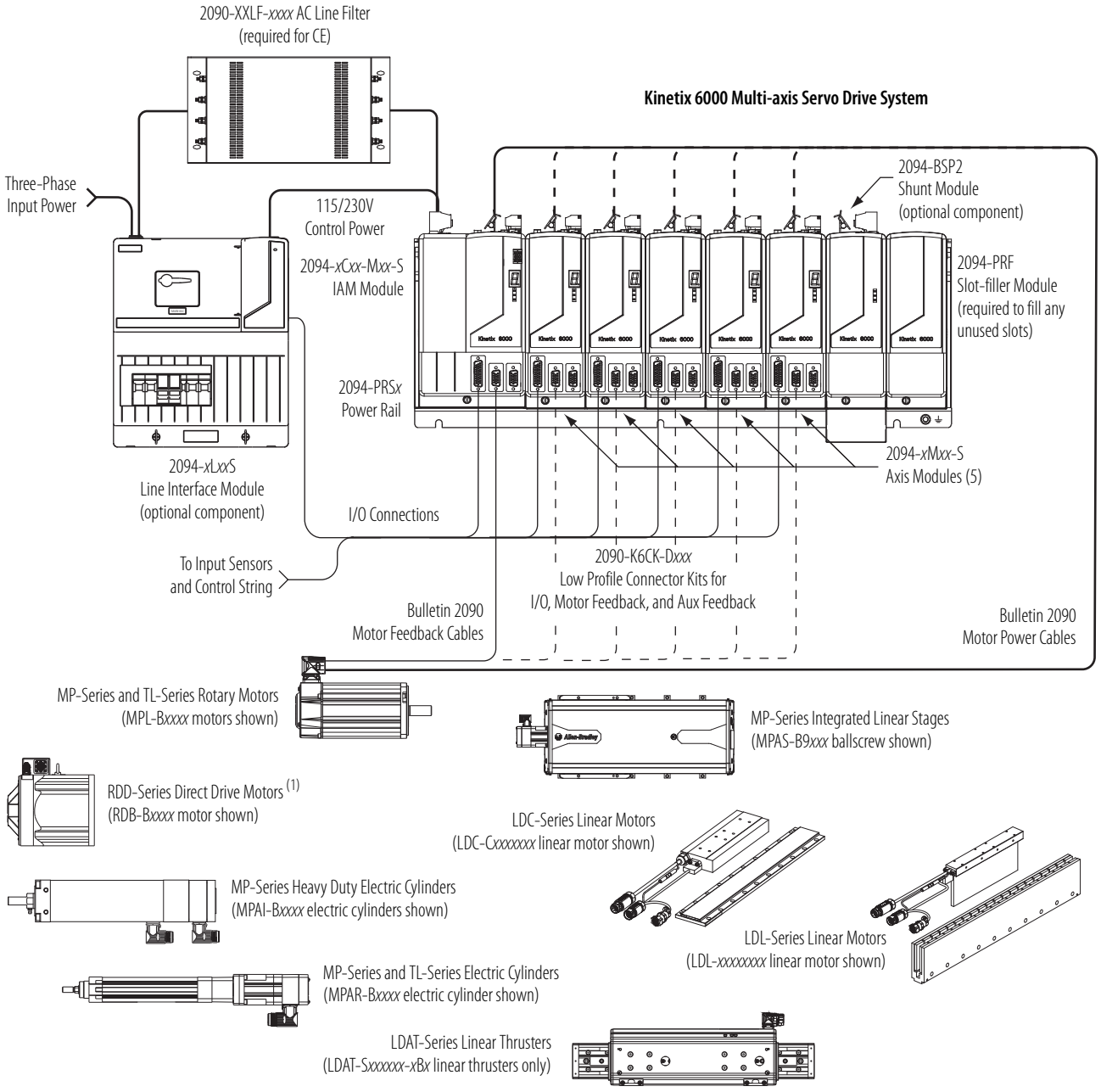
This configuration illustrates the use of Kinetix 6000 servo drives with the Kinetix 6000M integrated drive-motor (IDM) system. The IDM power interface module (IPIM) is included in the fiber-optic sercos ring configuration along with the axis modules. Refer to Typical Communication Configurations on page 83 for examples.

Modular Drive System (with Kinetix 6000M IDM system)



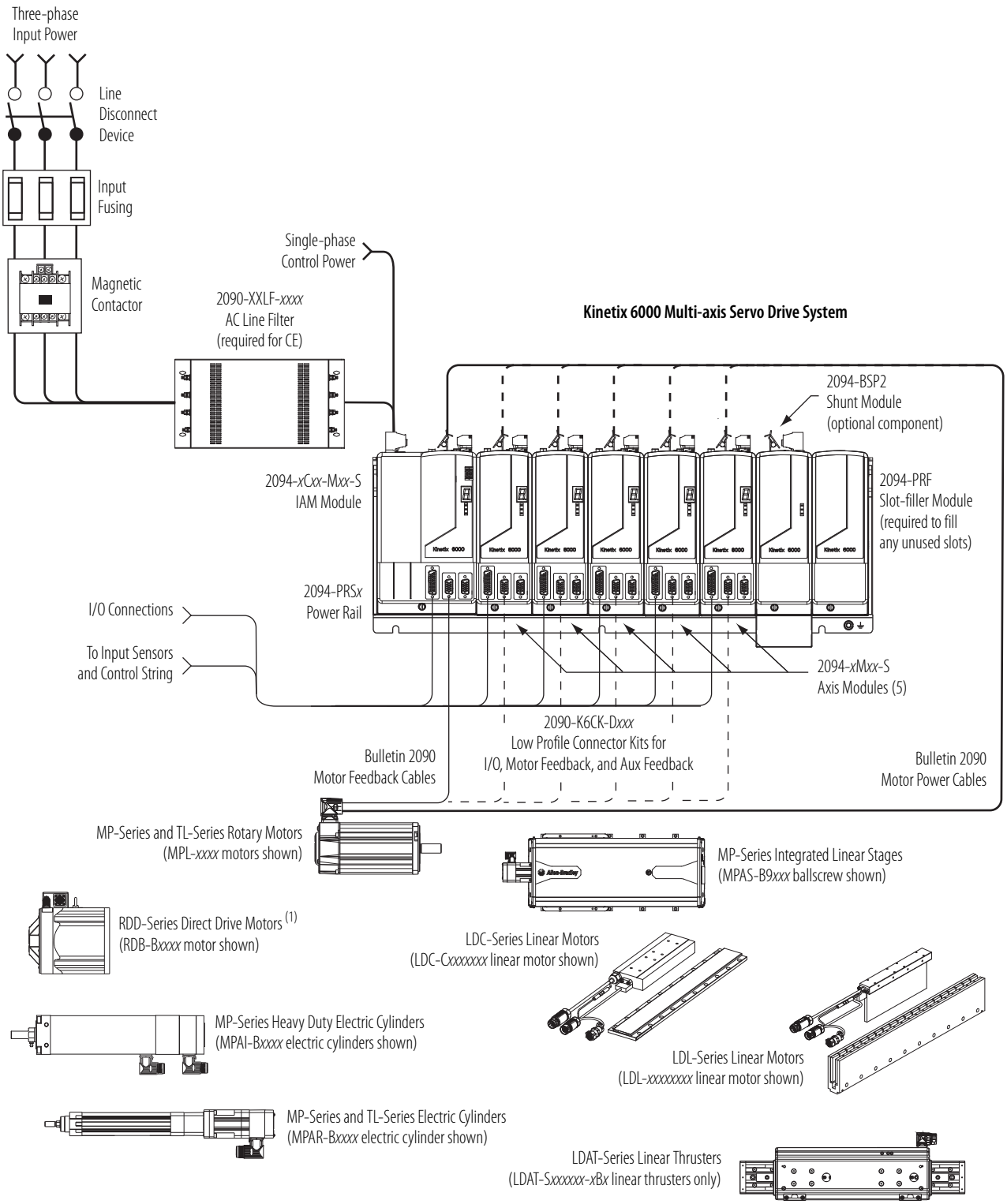
Typical Hardware Configurations

Kinetix 6000 System (with LIM module)



(1) Requires 2090-K6CK-KENDAT connector kit for motor feedback connections.

Kinetix 6000 System (without LIM module)

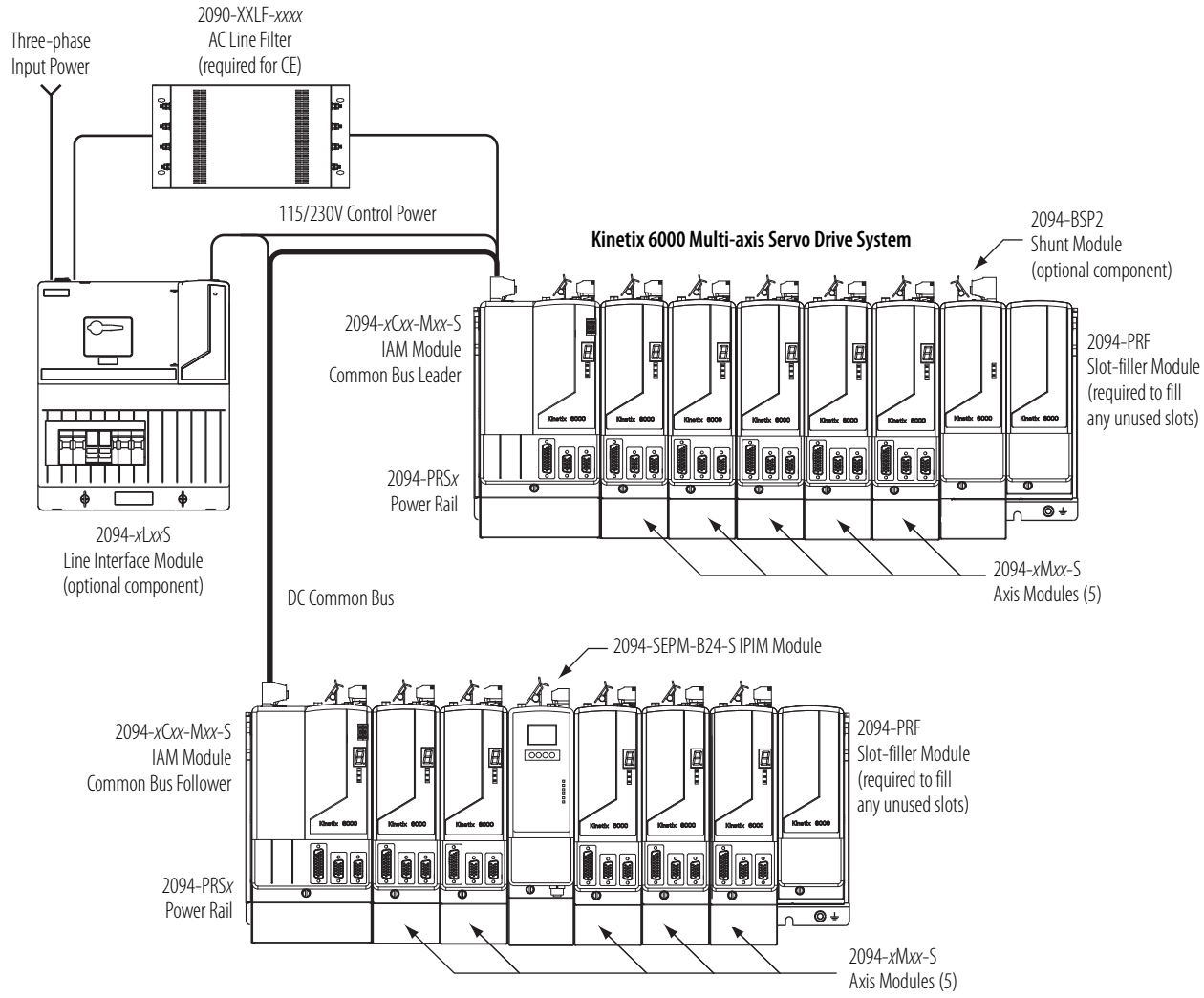


(1) Requires 2090-K6CK-KENDAT connector kit for motor feedback connections.

In this system configuration, the leader IAM module is connected to the follower IAM module via the DC common bus. When planning your panel layout, you must calculate the total bus capacitance of your DC common bus system to make sure that the leader IAM module is sized sufficiently to pre-charge the entire system. Refer to the Kinetix 6000 Servo Drive User Manual, publication 2094-UM001, when making this calculation.

IMPORTANT	If total bus capacitance of your system exceeds the leader IAM module pre-charge rating, the IAM module seven-segment status displays error code E90 (pre-charge timeout fault) if input power is applied. To correct this condition, you must replace the leader IAM module with a larger module or decrease the total bus capacitance by removing axis modules.

Kinetix 6000 System (DC common bus)

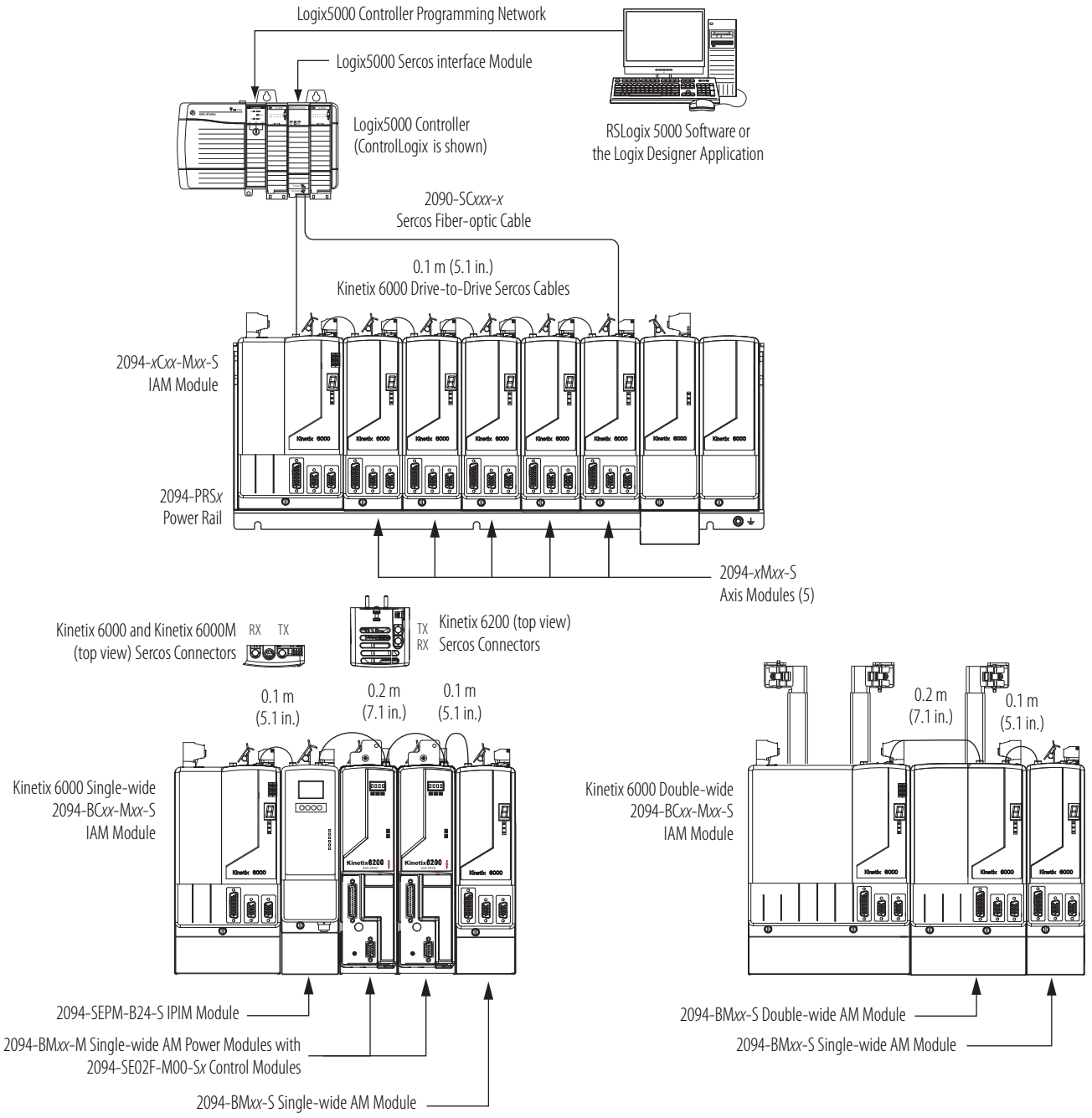


Motors and other details common to both three-phase AC and DC common-bus configurations are removed.

Typical Communication Configurations

In this example, drive-to-drive sercos cable lengths and catalog numbers are shown for the Kinetix 6000 drives and when Kinetix 6000 and Kinetix 6200 drive modules exist on the same power rail.

Kinetix 6000 Drive Communication (sercos)



Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 6000 servo drives.

For Kinetix 6000 drive system combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin MPL Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
MPL-A1510V	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2094-AMP5-S
MPL-A1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2094-AMP5-S
MPL-A1530U	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2094-AMP5-S
MPL-A210V	8000	3.09	0.55 (4.8)	10.2	1.52 (13.4)	0.37	2094-AMP5-S
MPL-A220T	6000	4.54	1.61 (14.2)	10.5	3.45 (30.0)	0.62	2094-AMP5-S
				15.5	4.74 (41.9)		2094-AM01-S
MPL-A230P	5000	5.40	2.10 (18.6)	17.0	8.0 (70.8)	0.86	2094-AM01-S
				23.0	8.2 (73.0)		2094-AM02-S
MPL-A310F	3000	3.24	1.58 (14.0)	9.30	3.61 (31.9)	0.46	2094-AMP5-S
MPL-A310P	5000	4.91	1.58 (14.0)	10.5	2.90 (25.6)	0.73	2094-AMP5-S
				14.0	3.61 (31.9)		2094-AM01-S
MPL-A320H	3500	6.10	3.05 (27.0)	17.0	7.13 (63.0)	1.0	2094-AM01-S
				19.3	7.91 (70.0)		2094-AM02-S
MPL-A320P	5000	8.50	2.88 (25.5)	17.0	5.07 (44.8)	1.3	2094-AM01-S
		9.00	3.05 (27.0)	29.5	7.91 (70.0)		2094-AM02-S
MPL-A330P	5000	12.0	4.18 (37.0)	30.0	9.10 (80.5)	1.8	2094-AM02-S
				38.0	11.1 (98.2)		2094-AM03-S
MPL-A420P	5000	12.9	4.79 (42.3)	30.0	9.67 (85.5)	2.0	2094-AM02-S
				46.0	13.6 (119)		2094-AM03-S

Performance Specifications with Kinetix 6000 (200V-class) Drives (continued)

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
MPL-A430H	3500	12.2	6.21 (55.0)	30.0	13.9 (123)	1.8	2094-AM02-S
				45.0	19.8 (175)		2094-AM03-S
MPL-A430P	5000	15.0	5.35 (47.3)	30.0	9.99 (88.3)	2.2	2094-AM02-S
		16.80	5.99 (52.9)	49.0	15.4 (136)		2094-AM03-S
				67.0	19.8 (175)		2094-AM05-S
MPL-A4530F	2800	13.40	8.36 (74.0)	30.0	15.8 (139)	1.9	2094-AM02-S
				42.0	20.3 (179)		2094-AM03-S
MPL-A4530K	4000	19.50	8.13 (71.9)	49.0	17.0 (150)	2.5	2094-AM03-S
				62.0	20.3 (179)		2094-AM05-S
MPL-A4540C	1500	8.50	9.15 (80.9)	17.0	16.9 (150)	1.5	2094-AM01-S
		9.55	10.30 (91.1)	29.0	27.1 (239)		2094-AM02-S
MPL-A4540F	3000	18.40	10.19 (90.1)	49.0	23.6 (208)	2.6	2094-AM03-S
				58.0	27.1 (239)		2094-AM05-S
MPL-A4560F	3000	22.0	14.1 (125)	49.0	27.0 (239)	3.0	2094-AM03-S
				66.0	34.4 (305)		2094-AM05-S
MPL-A520K	4000	15.0	10.77 (95.2)	49.0	19.3 (171)	3.5	2094-AM03-S
				65.0	24.2 (214)		2094-AM05-S
MPL-A540K	4000	41.5	19.42 (171)	73.4	31.3 (277)	5.5	2094-AM05-S
MPL-A560F	3000	42.0	27.39 (242)	73.4	39.6 (350)	5.3	2094-AM05-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 6000 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPL-B1510V	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2094-BMP5-S @ 150%
MPL-B1520U	7000	1.80	0.49 (4.3)	5.90	1.53 (13.3)	0.27	2094-BMP5-S @ 150%
				6.10	1.58 (13.9)		2094-BMP5-S @ 250%
MPL-B1530U	7000	2.0	0.90 (8.0)	5.90	2.34 (20.7)	0.39	2094-BMP5-S @ 150%
				7.20	2.82 (24.9)		2094-BMP5-S @ 250%
MPL-B210V	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2094-BMP5-S @ 150%
MPL-B220T	6000	3.30	1.61 (14.2)	9.90	4.12 (36.4)	0.62	2094-BMP5-S @ 250%
				11.3	4.74 (41.9)		2094-BM01-S @ 150%
MPL-B230P	5000	2.60	2.10 (18.6)	9.90	7.24 (64.0)	0.86	2094-BMP5-S @ 250%
				11.3	8.20 (73.0)		2094-BM01-S @ 150%
MPL-B310P	5000	2.4	1.6 (14)	5.90	3.2 (28)	0.77	2094-BMP5-S @ 150%
				7.10	3.6 (32)		2094-BMP5-S @ 250%
MPL-B320P	5000	4.5	3.10 (27)	13.0	7.5 (66)	1.5	2094-BM01-S @ 150%
				14.0	8.2 (72.5)		2094-BM01-S @ 250%
MPL-B330P	5000	6.1	4.18 (37)	13.0	8.0 (71)	1.8	2094-BM01-S @ 150%
				19.0	11.1 (98)		2094-BM01-S @ 250%
MPL-B420P	5000	6.3	4.74 (42)	13.0	13.1 (116)	1.9	2094-BM01-S @ 250%
				21.8	13.4 (118)		2094-BM02-S @ 150%
				22.0	13.5 (119)		2094-BM02-S @ 250%
MPL-B430P	5000	9.2	6.55 (58)	21.8	14.4 (127)	2.2	2094-BM02-S @ 150%
				32.0	19.8 (175)		2094-BM02-S @ 250%
MPL-B4530F	3000	6.7	8.36 (74)	13.0	13.9 (123)	2.1	2094-BM01-S @ 150%
				21.0	20.3 (180)		2094-BM01-S @ 250%
MPL-B4530K	4000	9.9	8.25 (73)	21.8	15.5 (137)	2.6	2094-BM02-S @ 150%
				31.0	20.3 (179)		2094-BM02-S @ 250%
MPL-B4540F	3000	9.1	10.20 (90)	21.8	21.4 (189)	2.6	2094-BM02-S @ 150%
				29.0	27.1 (240)		2094-BM02-S @ 250%
MPL-B4560F	3000	11.8	14.0 (124)	21.8	23.3 (206)	3.2	2094-BM02-S @ 150%
				36.0	34.4 (304)		2094-BM02-S @ 250%
MPL-B520K	4000	11.5	10.7 (95)	21.8	17.0 (150)	3.5	2094-BM02-S @ 150%
				33.0	23.2 (205)		2094-BM02-S @ 250%
MPL-B540D	2000	10.5	19.4 (172)	21.8	38.8 (343)	3.4	2094-BM02-S @ 150%
				23.0	41.0 (362)		2094-BM02-S @ 250%
MPL-B540K	4000	20.4	19.4 (171)	45.0	38.1 (337)	5.4	2094-BM03-S @ 150%
				60.0	48.6 (430)		2094-BM03-S @ 250%
MPL-B560F	3000	20.6	26.8 (237)	45.0	49.3 (436)	5.5	2094-BM03-S @ 150%
				68.0	67.8 (600)		2094-BM03-S @ 250%
MPL-B580F	3000	26.0	34.0 (300)	75.0	74.6 (660)	7.1	2094-BM03-S @ 250%
				73.4	73.5 (650)		2094-BM05-S @ 150%
				94.0	87.0 (770)		2094-BM05-S @ 200%

Performance Specifications with Kinetix 6000 (400V-class) Drives (continued)

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPL-B580J	3800	32.0	34.0 (301)	73.4	66.6 (589)	7.9	2094-BM05-S @ 150%
				94.0	81.0 (716)		2094-BM05-S @ 200%
MPL-B640F	3000	30.0	34.4 (304)	45.0	50.4 (446)	6.1	2094-BM03-S @ 150%
			34.4 (304)	65.0	72.3 (640)		2094-BM03-S @ 250%
		32.0	36.7 (325)				2094-BM05-S @ 150%
MPL-B660F	3000	38.5	48.0 (425)	73.4	81.0 (716)	6.1	2094-BM05-S @ 150%
				96.0	101 (895)		2094-BM05-S @ 200%
MPL-B680D	2000	30.0	55.4 (490)	75.0	125 (1105)	9.3	2094-BM03-S @ 250%
		34.0	62.8 (556)	73.4	124 (1098)		2094-BM05-S @ 150%
				94.0	152 (1350)		2094-BM05-S @ 200%
MPL-B680F	3000	47.9	60.0 (531)	73.4	85.4 (755)	7.5	2094-BM05-S @ 150%
				96.0	108 (960)		2094-BM05-S @ 200%
MPL-B680H	3500	48.9	58.0 (513)	97.8	107 (947)	7.5	2094-BM05-S @ 200%
MPL-B860D	2000	47.3	83.0 (735)	73.4	120 (1065)	12.5	2094-BM05-S @ 150%
				95.5	152 (1350)		2094-BM05-S @ 200%
MPL-B880C	1500	47.5	110 (973)	73.4	157 (1387)	12.6	2094-BM05-S @ 150%
				97.5	203 (1800)		2094-BM05-S @ 200%
MPL-B880D	2000	48.9	79.9 (706)	96.0	147 (1300)	12.6	2094-BM05-S @ 200%
MPL-B960B	1200	42.5	130 (1150)	73.4	190 (1684)	12.7	2094-BM05-S @ 150%
				94.0	231 (2050)		2094-BM05-S @ 200%
MPL-B980B	1000	40.0	162 (1440)	73.4	235 (2077)	15.2	2094-BM05-S @ 150%
				94.0	278 (2460)		2094-BM05-S @ 200%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPM Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
MPM-A1151M	4500	6000	7.65	2.3 (20.3)	30.0	6.5 (57.5)	0.90	2094-AM02-S
					30.5	6.6 (58.4)		2094-AM03-S
MPM-A1152F	3000	5000	11.93	4.7 (41.6)	30.0	9.9 (87.6)	1.40	2094-AM02-S
					44.8	13.5 (119)		2094-AM03-S
MPM-A1153F	3000	5000	16.18	6.0 (53.1)	30.0	10.7 (94.7)	1.45	2094-AM02-S
				6.5 (57.5)	49.0	16.1 (142)		2094-AM03-S
MPM-A1302F	3000	4500	17.28	6.6 (58.4)	49.0	13.2 (117)	1.65	2094-AM03-S
					50.2	13.5 (119)		2094-AM05-S
MPM-A1304F	3000	4000	19.65	7.6 (67.2)	30.0	13.2 (117)	2.20	2094-AM02-S
				9.2 (81.4)	48.3	19.3 (171)		2094-AM03-S
MPM-A1651F	3000	5000	30.96	9.3 (82.3)	49.0	15.2 (134)	2.50	2094-AM03-S
				10.7 (94.7)	73.4	20.3 (179)		2094-AM05-S
MPM-A1652F	3000	4000	33.54	11.0 (97.3)	49.0	19.7 (174)	4.03	2094-AM03-S
				13.4 (119)	73.4	27.7 (245)		2094-AM05-S
MPM-A1653F	3000	4000	42.4	11.7 (103)	49.0	21.1 (187)	5.10	2094-AM03-S
				18.6 (165)	73.4	29.6 (262)		2094-AM05-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 6000 (400V-class) Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPM-B1151F	3000	5000	2.71	2.3 (20.3)	5.9	4.3 (38.0)	0.75	2094-BMP5-S @ 150%
					9.9	6.6 (58.4)		2094-BMP5-S @ 250%
MPM-B1151T	6000	7000	5.62	2.3 (20.3)	13.0	4.1 (36.3)	0.90	2094-BM01-S @ 150%
					20.5	5.8 (51.3)		2094-BM01-S @ 250%
MPM-B1152C	1500	3000	3.61	5.0 (44.2)	5.9	7.2 (63.7)	1.20	2094-BMP5-S @ 150%
					10.0	11.3 (100)		2094-BMP5-S @ 250%
					12.4	13.5 (119)		2094-BM01-S @ 150%
MPM-B1152F	3000	5200	6.17	5.0 (44.2)	13.0	9.0 (79.6)	1.40	2094-BM01-S @ 150%
					21.1	13.3 (118)		2094-BM01-S @ 250%
MPM-B1152T	6000	7000	11.02	5.0 (44.2)	21.8	8.5 (75.2)	1.40	2094-BM02-S @ 150%
					36.5	13.1 (116)		2094-BM02-S @ 250%
MPM-B1153E	2250	3500	6.21	6.5 (57.5)	21.5	13.0 (115)	1.40	2094-BM01-S @ 150%
					21.6	19.7 (174)		2094-BM01-S @ 250%
MPM-B1153F	3000	5500	9.20	6.4 (56.6)	21.8	14.4 (127)	1.40	2094-BM02-S @ 150%
					32.0	19.7 (174)		2094-BM02-S @ 250%
MPM-B1153T	6000	7000	15.95	6.4 (56.6)	45.0	14.5 (128)	1.45	2094-BM03-S @ 150%
MPM-B1302F	3000	4500	8.57	6.6 (58.4)	13.0	8.9 (78.8)	1.65	2094-BM01-S @ 150%
					21.5	13.0 (115)		2094-BM01-S @ 250%
MPM-B1302M	4500	6000	12.57	6.6 (58.4)	21.8	9.9 (87.6)	1.65	2094-BM02-S @ 150%
					32.4	13.3 (118)		2094-BM02-S @ 250%
MPM-B1302T	6000	7000	16.83	6.0 (53.1)	36.5	11.8 (104)	1.65	2094-BM02-S @ 250%
				6.7 (59.3)	43.4	13.3 (118)		2094-BM03-S @ 150%
MPM-B1304C	1500	2750	7.00	10.3 (91.1)	13.0	17.6 (156)	2.00	2094-BM01-S @ 150%
					21.5	26.4 (233)		2094-BM01-S @ 250%
MPM-B1304E	2250	4000	10.75	10.2 (90.3)	21.8	19.0 (168)	2.20	2094-BM02-S @ 150%
					34.2	27.1 (240)		2094-BM02-S @ 250%
MPM-B1304M	4500	6000	19.02	10.4 (92.0)	45.0	21.5 (190)	2.20	2094-BM03-S @ 150%
					60.6	27.1 (240)		2094-BM03-S @ 250%
MPM-B1651C	1500	3500	10.21	11.4 (101)	21.8	19.4 (172)	2.50	2094-BM02-S @ 150%
					29.2	23.2 (205)		2094-BM02-S @ 250%
MPM-B1651F	3000	5000	17.75	11.4 (101)	45.0	21.6 (191)	2.50	2094-BM03-S @ 150%
					50.9	23.2 (205)		2094-BM03-S @ 250%
MPM-B1651M	4500	5000	22.46	11.3 (100)	45.0	18.8 (166)	2.50	2094-BM03-S @ 150%
					56.8	21.4 (189)		2094-BM03-S @ 250%
MPM-B1652C	1500	2500	11.51	16.4 (145)	21.8	28.7 (254)	3.80	2094-BM02-S @ 150%
					33.6	40.2 (356)		2094-BM02-S @ 250%
MPM-B1652E	2250	3500	20.94	21.1 (187)	45.0	38.4 (340)	4.30	2094-BM03-S @ 150%
					60.5	48.0 (425)		2094-BM03-S @ 250%
MPM-B1652F	3000	4500	28.74	21.1 (187)	73.4	41.1 (364)	4.30	2094-BM05-S @ 150%
					84.1	48.0 (424)		2094-BM05-S @ 200%

Performance Specifications with Kinetix 6000 (400V-class) Drives (continued)

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPM-B1653C	1500	2500	20.05	26.7 (236)	45.0	55.0 (487)	4.60	2094-BM03-S @ 150%
					59.2	67.7 (599)		2094-BM03-S @ 250%
MPM-B1653E	2250	3500	27.00	26.8 (237)	45.0	42.5 (376)	5.10	2094-BM03-S @ 150%
					72.9	62.0 (549)		2094-BM03-S @ 250%
MPM-B1653F	3000	4000	34.94	31.0 (274)	73.4	47.8 (423)	5.10	2094-BM05-S @ 150%
					94.3	56.0 (495)		2094-BM05-S @ 200%
MPM-B2152C	1500	2500	27.4	36.7 (325)	45.0	60.3 (534)	5.60	2094-BM03-S @ 150%
					55.4	72.2 (639)		2094-BM03-S @ 250%
MPM-B2152F	3000	4500	43.54	34.1 (302)	73.4	56.2 (497)	5.90	2094-BM05-S @ 150%
					97.8	72.3 (495)		2094-BM05-S @ 200%
MPM-B2152M	4500	5000	44.58	34.1 (302)	73.4	51.0 (451)	5.90	2094-BM05-S @ 150%
					76.3	52.9 (468)		2094-BM05-S @ 200%
MPM-B2153B	1250	2000	24.06	48.0 (425)	45.0	80.0 (708)	6.80	2094-BM03-S @ 150%
					60.0	101 (894)		2094-BM03-S @ 250%
MPM-B2153E	2250	3000	39.63	47.9 (424)	73.4	79.4 (703)	7.20	2094-BM05-S @ 150%
					97.8	101 (894)		2094-BM05-S @ 200%
MPM-B2153F	3000	3800	43.86	45.6 (403)	73.4	75.0 (664)	7.20	2094-BM05-S @ 150%
					97.8	99.0 (875)		2094-BM05-S @ 200%
MPM-B2154B	1250	2000	35.46	62.7 (555)	73.4	121 (1071)	6.90	2094-BM05-S @ 150%
					97.8	154 (1362)		2094-BM05-S @ 200%
MPM-B2154E	2250	3000	43.68	55.9 (495)	73.4	87.7 (776)	7.50	2094-BM05-S @ 150%
					97.8	112 (990)		2094-BM05-S @ 200%
MPM-B2154F	3000	3300	44.40	56.2 (497)	73.4	78.8 (697)	7.50	2094-BM05-S @ 150%
					83.6	88.0 (778)		2094-BM05-S @ 200%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPF Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
MPF-A310P	5000	4.50	1.58 (14.0)	10.5	2.91 (25.7)	0.73	2094-AMP5-S
				14.0	3.61 (31.9)		2094-AM01-S
MPF-A320H	3500	6.10	3.05 (27.0)	17.0	6.97 (61.6)	1.0	2094-AM01-S
				19.3	7.91 (70.0)		2094-AM02-S
MPF-A320P	5000	8.50	2.88 (25.5)	17.0	5.07 (44.8)	1.3	2094-AM01-S
		9.00	3.05 (27.0)	29.5	7.91 (70.0)		2094-AM02-S
MPF-A330P	5000	12.0	3.85 (34.0)	30.0	8.47 (74.9)	1.6	2094-AM02-S
				38.0	10.32 (91.2)		2094-AM03-S
MPF-A430H	3500	12.2	6.21 (55.0)	30.0	13.20 (117)	1.8	2094-AM02-S
				45.0	19.82 (175)		2094-AM03-S
MPF-A430P	5000	16.80	5.94 (52.5)	49.0	15.36 (136)	1.9	2094-AM03-S
				67.0	19.80 (175)		2094-AM05-S
MPF-A4530K	4000	19.50	8.08 (71.4)	49.0	17.01 (150)	2.3	2094-AM03-S
				62.0	20.30 (179)		2094-AM05-S
MPF-A4540F	3000	18.40	10.15 (89.7)	49.0	23.56 (208)	2.5	2094-AM03-S
				58.0	27.10 (239)		2094-AM05-S
MPF-A540K	4000	24.5	11.40 (100)	49.0	21.68 (192)	4.1	2094-AM03-S
		41.5	19.42 (171)	73.4	31.55 (279)		2094-AM05-S

Performance Specifications with Kinetix 6000 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPF-B310P	5000	2.30	1.6 (14)	5.90	3.2 (28)	0.77	2094-BMP5-S @ 150%
				7.10	3.6 (32)		2094-BMP5-S @ 250%
MPF-B320P	5000	4.00	2.90 (26)	5.90	3.9 (34)	1.5	2094-BMP5-S @ 150%
		4.24	3.10 (27)	13.0	7.5 (66)		2094-BM01-S @ 150%
				14.0	7.8 (69)		2094-BM01-S @ 250%
MPF-B330P	5000	5.70	4.18 (37)	13.0	8.2 (72)	1.6	2094-BM01-S @ 150%
				19.0	11.1 (98)		2094-BM01-S @ 250%
MPF-B430P	5000	9.20	6.55 (58)	21.8	14.2 (125)	2.0	2094-BM02-S @ 150%
				32.0	19.8 (175)		2094-BM02-S @ 250%
MPF-B4530K	4000	9.90	8.25 (73)	21.8	15.4 (136)	2.4	2094-BM02-S @ 150%
				31.0	20.3 (179)		2094-BM02-S @ 250%
MPF-B4540F	3000	9.10	10.20 (90)	21.8	21.4 (189)	2.5	2094-BM02-S @ 150%
				29.0	27.1 (240)		2094-BM02-S@ 250%
MPF-B540K	4000	20.5	19.4 (171)	45.0	37.9 (335)	4.1	2094-BM03-S @ 150%
				60.0	48.6 (430)		2094-BM03-S @ 250%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MDF Integrated Drive-Motor Performance Specifications

Performance Specifications with Kinetix 6000M (non-brake) Motors

IDM Drive-Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000M IPIM Module
MDF-SB1003P-*xxx*2*x*-S	5000	4.03	3.00 (26.5)	19.0	10.50 (92.9)	1.10	2094-SEPM-B24-S
MDF-SB1153H-*xxx*2*x*-S	3500	4.50	4.80 (42.5)	20.0	18.50 (164)	1.15	
MDF-SB1304F-*xxx*2*x*-S	3000	5.80	7.25 (64.2)	20.0	21.75 (192)	1.39	

Performance Specifications with Kinetix 6000M (brake) Motors

IDM Drive-Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000M IPIM Module
MDF-SB1003P-*xxx*4*x*-S	5000	4.03	3.00 (26.5)	19.0	10.50 (92.9)	1.02	2094-SEPM-B24-S
MDF-SB1153H-*xxx*4*x*-S	3500	4.50	4.80 (42.5)	20.0	18.50 (164)	1.00	
MDF-SB1304F-*xxx*4*x*-S	3000	5.80	7.25 (64.2)	20.0	21.75 (192)	1.24	

Performance specification data and curves reflect nominal system performance of a typical system at 40 °C (104 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPS Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
MPS-A330P	5000	8.50	3.10 (27)	17.0	5.80 (51)	1.3	2094-AM01-S
		9.80	3.60 (32.0)	30.0	9.30 (82)		2094-AM02-S
				38.0	11.10 (98)		2094-AM03-S
MPS-A4540F	3000	14.4	8.1 (72)	30.0	15.9 (140)	1.4	2094-AM02-S
				49.0	24.2 (214)		2094-AM03-S
				56.0	27.1 (240)		2094-AM05-S

Performance Specifications with Kinetix 6000 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
MPS-B330P	5000	4.9	3.60 (32)	13.0	8.2 (72.5)	1.3	2094-BM01-S @ 150%
				19.0	11.0 (97.2)		2094-BM01-S @ 250%
MPS-B4540F	3000	7.1	8.1 (72)	21.5	22.8 (202)	1.4	2094-BM01-S @ 250%
				21.8	23.2 (205)		2094-BM02-S @ 150%
				26.0	27.1 (240)		2094-BM02-S @ 250%
MPS-B560F	3000	17.0	21.5 (190)	45.0	49.2 (435)	3.5	2094-BM03-S @ 150%
				68.0	67.8 (600)		2094-BM03-S @ 250%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin RDB Motor Performance Specifications with Kinetix 6000 Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 400V-class Drives
RDB-B21519	750	1235	9.90	31.2 (276)	21.8	66.8 (591)	3.64	2094-BM02-S @ 150%
					27.3	83.1 (735)		2094-BM02-S @ 250%
RDB-B2151C	1500	2125	17.3	31.3 (277)	45.0	80.2 (710)	5.23	2094-BM03-S @ 150%
					46.4	82.8 (733)		2094-BM03-S @ 250%
RDB-B21529	750	1035	12.2	43.4 (384)	21.8	76.8 (680)	4.33	2094-BM02-S @ 150%
					32.8	111 (982)		2094-BM02-S @ 250%
RDB-B2152C	1500	2125	23.5	43.4 (384)	45.0	80.4 (711)	6.41	2094-BM03-S @ 150%
					63.2	111 (982)		2094-BM03-S @ 250%
RDB-B21539	750	1250	15.8	51.5 (456)	45.0	130 (1150)	5.34	2094-BM03-S @ 150%
					47.9	137 (1212)		2094-BM03-S @ 250%
RDB-B2153C	1500	2250	29.4	51.5 (456)	75.0	125 (1106)	5.87	2094-BM03-S @ 250%
					73.4	122 (1080)		2094-BM05-S @ 150%
					82.6	137 (1212)		2094-BM05-S @ 200%
RDB-B29014	200	450	5.9	48.9 (167)	13.0	89.2 (789)	1.97	2094-BM01-S @ 150%
					17.6	110 (973)		2094-BM01-S @ 250%
RDB-B29016	375	785	10.0	48.9 (167)	21.8	86.6 (766)	3.18	2094-BM02-S @ 150%
					31.0	110 (973)		2094-BM02-S @ 250%
RDB-B29019	750	1500	19.1	48.9 (167)	45.0	90.8 (803)	3.63	2094-BM03-S @ 150%
					58.7	110 (973)		2094-BM03-S @ 250%
RDB-B29024	200	435	10.7	97.8 (865)	21.8	159 (1407)	3.33	2094-BM02-S @ 150%
					33.0	214 (1894)		2094-BM02-S @ 250%
RDB-B29026	375	885	21.9	97.8 (865)	45.0	161 (1425)	4.05	2094-BM03-S @ 150%
					67.2	214 (1894)		2094-BM03-S @ 250%
RDB-B29029	750	1200	36.2	97.5 (863)	97.8	195 (1726)	4.05	2094-BM05-S @ 200%
RDB-B29034	200	500	17.4	140 (1239)	45.0	274 (2425)	5.16	2094-BM03-S @ 150%
					56.6	321 (2841)		2094-BM03-S @ 250%
RDB-B29036	375	750	26.0	140 (1239)	73.4	290 (2566)	5.49	2094-BM05-S @ 150%
					84.9	318 (2814)		2094-BM05-S @ 200%
RDB-B29039	750	1000	48.9	113 (1000)	97.8	194 (1717)	4.41	2094-BM05-S @ 200%
RDB-B41014	200	385	17.8	183 (1619)	45.0	317 (2805)	5.20	2094-BM03-S @ 150%
					51.2	340 (3009)		2094-BM03-S @ 250%
RDB-B41016	375	700	33.2	183 (1619)	73.4	292 (2584)	4.83	2094-BM05-S @ 150%
					95.5	339 (3000)		2094-BM05-S @ 200%
RDB-B41018	625	700	48.9	175 (1549)	97.8	271 (2398)	4.83	2094-BM05-S @ 200%
RDB-B41024	200	365	31.5	330 (2929)	73.4	593 (5248)	7.29	2094-BM05-S @ 150%
					95.5	690 (6107)		2094-BM05-S @ 200%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin TLY Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications (non-brake) with Kinetix 6000 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
TLY-A110T	6000	0.55	0.096 (0.85)	1.50	0.20 (1.75)	0.041	2094-AMP5-S
TLY-A120T		1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2094-AMP5-S
TLY-A130T		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2094-AMP5-S
TLY-A220T		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2094-AMP5-S
TLY-A230T		5.20	1.23 (10.9)	10.5	2.07 (18.3)	0.44	2094-AMP5-S
		5.50	1.30 (11.5)	15.5	3.05 (27.0)		2094-AM01-S
TLY-A2530P	5000	8.50	2.20 (19.5)	17.0	4.18 (37.0)	0.69	2094-AM01-S
		10.0	2.60 (23.0)	21.0	5.20 (46.0)		2094-AM02-S
TLY-A2540P		8.50	2.48 (22.0)	17.0	4.97 (44.0)	0.86	2094-AM01-S
		10.0	2.94 (26.0)	24.8	7.10 (63.0)		2094-AM02-S
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.95	2094-AM02-S

Performance Specifications (brake) with Kinetix 6000 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 6000 200V-class Drives
TLY-A110T	6000	0.50	0.086 (0.76)	1.50	0.20 (1.75)	0.037	2094-AMP5-S
TLY-A120T		0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2094-AMP5-S
TLY-A130T		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2094-AMP5-S
TLY-A220T		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2094-AMP5-S
TLY-A230T		4.95	1.16 (10.3)	10.5	2.07 (18.3)	0.32	2094-AMP5-S
		4.95	1.16 (10.3)	15.5	3.05 (27.0)		2094-AM01-S
TLY-A2530P	5000	8.50	2.20 (19.5)	17.0	4.18 (37.0)	0.55	2094-AM01-S
		10.0	2.60 (23.0)	21.0	5.20 (46.0)		2094-AM02-S
TLY-A2540P		8.50	2.48 (22.0)	17.0	4.97 (44.0)	0.66	2094-AM01-S
		10.0	2.94 (26.0)	24.8	7.10 (63.0)		2094-AM02-S
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.90	2094-AM02-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 6000 servo drives.

Linear Motion Family	Page
LDAT-Series integrated linear thrusters	96
MP-Series (Bulletin MPAS) integrated linear stages	103
MP-Series (Bulletin MPAR) electric cylinders	104
MP-Series (Bulletin MPAI) heavy-duty electric cylinders	105
LDC-Series iron-core linear motors	107
LDL-Series ironless linear motors	109

For Kinetix 6000 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication GMC-RM003.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

LDAT-Series Performance Specifications with Kinetix 6000 Drives

Performance Specifications (frame 30) with Kinetix 6000 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S031010-DB*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2094-AM01-S
LDAT-S031020-DB*x*	3.1					0.25	
LDAT-S031030-DB*x*	3.5					0.29	
LDAT-S031040-DB*x*	3.8					0.31	
LDAT-S032010-DB*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.44	2094-AM02-S
LDAT-S032020-DB*x*	4.1					0.52	
LDAT-S032030-DB*x*	4.7					0.59	
LDAT-S032040-DB*x*	5.0					0.63	
LDAT-S032010-EB*x*	3.1	3.7		12.2		0.40	2094-AM01-S
LDAT-S032020-EB*x*	4.1					0.47	
LDAT-S032030-EB*x*	4.7					0.52	
LDAT-S032040-EB*x*	5.0					0.55	
LDAT-S033010-DB*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2094-AM03-S
LDAT-S033020-DB*x*	4.7					0.88	
LDAT-S033030-DB*x*	5.0					0.95	
LDAT-S033040-DB*x*							
LDAT-S033010-EB*x*	3.5	3.7		12.2		0.55	2094-AM01-S
LDAT-S033020-EB*x*	4.4					0.65	
LDAT-S033030-EB*x*							
LDAT-S033040-EB*x*							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 6000 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S051010-DB*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.31	2094-AMP5-S
LDAT-S051020-DB*x*	3.7					0.38	
LDAT-S051030-DB*x*	4.1					0.42	
LDAT-S051040-DB*x*	4.4					0.44	
LDAT-S051050-DB*x*	4.7					0.46	
LDAT-S052010-DB*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.79	2094-AM01-S
LDAT-S052020-DB*x*	4.8					0.97	
LDAT-S052030-DB*x*	5.00					1.01	
LDAT-S052040-DB*x*							
LDAT-S052050-DB*x*							
LDAT-S052010-EB*x* ... LDAT-S052050-EB*x*	2.6	3.1		11.4		0.50	2094-AMP5-S
LDAT-S053010-DB*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.31	2094-AM02-S
LDAT-S053020-DB*x*	5.0					1.53	
LDAT-S053030-DB*x* ... LDAT-S053050-DB*x*	5.0					1.53	
LDAT-S053010-EB*x* ... LDAT-S053050-EB*x*	1.7	3.1		11.4		0.47	2094-AMP5-S
LDAT-S054010-DB*x*	4.4	12.4	509 (114)	45.5	1453 (327)	1.87	2094-AM02-S
LDAT-S054020-DB*x* ... LDAT-S054050-DB*x*	5.0					2.05	
LDAT-S054010-EB*x* ... LDAT-S054050-EB*x*	2.6	6.2		22.7		1.02	2094-AM01-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 6000 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S072010-DB*x* ... LDAT-S072070-DB*x*	3.5	6.0	364 (82)	22.0	1055 (237)	1.03	2094-AM01-S
LDAT-S072010-EB*x* ... LDAT-S072070-EB*x*	1.7	3.0		11.0		0.47	2094-AMP5-S
LDAT-S073010-DB*x* ... LDAT-S073070-DB*x*	3.5	9.0	554 (125)	32.8	1576 (354)	1.57	2094-AM02-S
LDAT-S073010-EB*x* ... LDAT-S073070-EB*x*	1.2	3.0		10.9		0.41	2094-AMP5-S

Performance Specifications (frame 70) with Kinetix 6000 (200V-class) Drives (continued)

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S074010-DB*x* … LDAT-S074070-DB*x*	3.5	11.9	730 (164)	43.5	2088 (469)	2.08	2094-AM02-S
LDAT-S074010-EB*x* … LDAT-S074070-EB*x*	1.8	6.0		21.7		0.95	2094-AM01-S
LDAT-S076010-DB*x* … LDAT-S076070-DB*x*	3.5	18.2	1122 (252)	66.4	3189 (717)	3.17	2094-AM03-S
LDAT-S076010-EB*x* … LDAT-S076070-EB*x*	1.8	9.1		33.2		1.45	2094-AM02-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 6000 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S102010-DB*x* … LDAT-S102090-DB*x*	2.6	5.7	456 (103)	21.0	1289 (290)	0.96	2094-AM01-S
LDAT-S102010-EB*x* … LDAT-S102090-EB*x*	1.3	2.9		10.5		0.42	2094-AMP5-S
LDAT-S103010-DB*x* … LDAT-S103090-DB*x*	2.7	8.6	702 (158)	31.5	1935 (435)	1.47	2094-AM02-S
LDAT-S103010-EB*x* … LDAT-S103090-EB*x*	0.9	2.9		10.5	1388 (312)	0.30	2094-AMP5-S
LDAT-S104010-DB*x* … LDAT-S104090-DB*x*	2.7	11.5	929 (209)	42.0	2578 (580)	2.07	2094-AM02-S
LDAT-S104010-EB*x* … LDAT-S104090-EB*x*	1.3	5.7		21.0		0.86	2094-AM01-S
LDAT-S106010-DB*x* … LDAT-S106090-DB*x*	2.7	17.3	1403 (315)	63.0	3871 (870)	2.94	2094-AM03-S
LDAT-S106010-EB*x* … LDAT-S106090-EB*x*	1.3	8.6		31.5		1.28	2094-AM02-S

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 6000 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 6000 200V-class Drives
LDAT-S152010-DB*x* ... LDAT-S152090-DB*x*	1.8	5.3	643 (145)	19.5	1799 (404)	0.87	2094-AM01-S
LDAT-S152010-EB*x* ... LDAT-S152090-EB*x*	0.9	2.7		9.8	1679 (377)	0.34	2094-AMP5-S
LDAT-S153010-DB*x* ... LDAT-S153090-DB*x*	1.8	8.0	978 (220)	29.1	2680 (602)	1.33	2094-AM02-S
LDAT-S154010-DB*x* ... LDAT-S154090-DB*x*	1.8	10.7	1306 (294)	39.1	3597 (809)	1.78	2094-AM02-S
LDAT-S154010-EB*x* ... LDAT-S154090-EB*x*	0.9	5.3		19.5	3383 (761)	0.70	2094-AM01-S
LDAT-S156010-DB*x* ... LDAT-S156090-DB*x*	1.8	16.3	1997 (449)	59.4	5469 (1229)	2.71	2094-AM03-S
LDAT-S156010-EB*x* ... LDAT-S156090-EB*x*	0.9	8.1		19.8	5110 (1149)	1.05	2094-AM02-S

Performance Specifications (frame 30) with Kinetix 6000 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S031010-DB*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2094-BM01-S @ 150%
LDAT-S031020-DB*x*	3.1					0.25	
LDAT-S031030-DB*x*	3.5					0.29	
LDAT-S031040-DB*x*	3.8					0.31	
LDAT-S032010-DB*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.40	2094-BM01-S @ 150%
LDAT-S032020-DB*x*	4.1					0.52	
LDAT-S032030-DB*x*	4.7					0.59	
LDAT-S032040-DB*x*	5.0					0.63	
LDAT-S032010-EB*x*	3.1	3.7		12.2		0.40	
LDAT-S032020-EB*x*	4.1					0.52	
LDAT-S032030-EB*x*	4.7					0.59	
LDAT-S032040-EB*x*	5.0					0.63	
LDAT-S033010-DB*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2094-BM02-S @ 150%
LDAT-S033020-DB*x*	4.7					0.88	
LDAT-S033030-DB*x*	5.0					0.95	
LDAT-S033040-DB*x*							
LDAT-S033010-EB*x*	3.5	3.7		12.2		0.67	2094-BM01-S @ 150%
LDAT-S033020-EB*x*	4.7					0.87	
LDAT-S033030-EB*x*	5.0					0.91	
LDAT-S033040-EB*x*							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 6000 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S051010-DB*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.34	2094-BMP5-S @ 150%
LDAT-S051020-DB*x*	3.7					0.43	
LDAT-S051030-DB*x*	4.1					0.49	
LDAT-S051040-DB*x*	4.4					0.53	
LDAT-S051050-DB*x*	4.7					0.55	
LDAT-S052010-DB*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.92	2094-BM01-S @ 150%
LDAT-S052020-DB*x*	4.8					1.20	
LDAT-S052030-DB*x*	5.0					1.24	
LDAT-S052040-DB*x*							
LDAT-S052050-DB*x*							
LDAT-S052010-EB*x*	3.7	3.1		11.4		0.80	2094-BMP5-S @ 150%
LDAT-S052020-EB*x*	4.6					0.98	
LDAT-S052030-EB*x*	4.6					1.02	
LDAT-S052040-EB*x*							
LDAT-S052050-EB*x*							
LDAT-S053010-DB*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.56	2094-BM02-S @ 150%
LDAT-S053020-DB*x*	5.0					1.87	
LDAT-S053030-DB*x* ... LDAT-S053050-DB*x*							
LDAT-S053010-EB*x* ... LDAT-S053050-EB*x*	3.5	3.1		11.4		1.04	2094-BMP5-S @ 150%
LDAT-S054010-DB*x*	4.4	12.4	509 (114)	45.5	1453 (327)	2.26	2094-BM02-S @ 150%
LDAT-S054020-DB*x* ... LDAT-S054050-DB*x*	5.0					2.53	
LDAT-S054010-EB*x*	4.4	6.2		22.7		1.87	2094-BM01-S @ 150%
LDAT-S054020-EB*x* ... LDAT-S054050-EB*x*	5.0					2.05	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 6000 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S072010-DB*x*	3.9	6.0	364 (82)	22.0	1055 (237)	1.37	2094-BM01-S @ 150%
LDAT-S072020-DB*x*	5.0					1.64	
LDAT-S072030-DB*x* ... LDAT-S072070-DB*x*							
LDAT-S072010-EB*x*	3.5	3.0		11.0		1.03	2094-BMP5-S @ 150%
LDAT-S072020-EB*x* ... LDAT-S072070-EB*x*							

Performance Specifications (frame 70) with Kinetix 6000 (400V-class) Drives (continued)

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S073010-DB*x*	4.4	9.0	554 (125)	32.8	1576 (354)	2.27	2094-BM02-S @ 150%
LDAT-S073020-DB*x* ... LDAT-S073070-DB*x*	5.0					2.50	
LDAT-S073010-EB*x* ... LDAT-S073070-EB*x*	2.4	3.0		10.9		1.01	2094-BMP5-S @ 150%
LDAT-S074010-DB*x*	4.7	11.9	730 (164)	43.5	2088 (469)	3.15	2094-BM02-S @ 150%
LDAT-S074020-DB*x* ... LDAT-S074070-DB*x*	5.0					3.30	
LDAT-S074010-EB*x* ... LDAT-S074070-EB*x*	3.5	6.0		21.7		2.08	2094-BM01-S @ 150%
LDAT-S076010-DB*x*	5.0	18.2	1122 (252)	66.4	3189 (717)	5.02	2094-BM03-S @ 150%
LDAT-S076020-DB*x* ... LDAT-S076070-DB*x*							
LDAT-S076010-EB*x* ... LDAT-S076070-EB*x*	3.5	9.1		33.2		3.18	2094-BM02-S @ 150%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 6000 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S102010-DB*x*	3.4	5.7	456 (103)	21.0	1289 (290)	1.44	2094-BM01-S @ 150%
LDAT-S102020-DB*x*	4.4					1.74	
LDAT-S102030-DB*x*	5.0					1.91	
LDAT-S102040-DB*x*							
LDAT-S102050-DB*x* ... LDAT-S102090-DB*x*							
LDAT-S102010-EB*x* ... LDAT-S102090-EB*x*	2.6	2.9		10.5		0.96	2094-BMP5-S @ 150%
LDAT-S103010-DB*x*	3.8	8.6	702 (158)	31.5	1935 (435)	2.41	2094-BM02-S @ 150%
LDAT-S103020-DB*x*	5.0					2.93	
LDAT-S103030-DB*x* ... LDAT-S103090-DB*x*							
LDAT-S103010-EB*x* ... LDAT-S103090-EB*x*	1.8	2.9		10.5		0.92	2094-BMP5-S @ 150%
LDAT-S104010-DB*x*	4.1	11.5	929 (209)	42.0	2578 (580)	3.76	2094-BM02-S @ 150%
LDAT-S104020-DB*x*	5.0					4.29	
LDAT-S104030-DB*x* ... LDAT-S104090-DB*x*							
LDAT-S104010-EB*x* ... LDAT-S104090-EB*x*	2.7	5.7		21.0		2.07	2094-BM01-S @ 150%

Performance Specifications (frame 100) with Kinetix 6000 (400V-class) Drives (continued)

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S106010-DB*x*	4.5	17.3	1403 (315)	63.0	3871 (870)	5.41	2094-BM03-S @ 150%
LDAT-S106020-DB*x* … LDAT-S106090-DB*x*	5.0					5.87	
LDAT-S106010-EB*x* … LDAT-S106090-EB*x*	2.7	8.6		31.5		2.94	2094-BM02-S @ 150%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 6000 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 6000 400V-class Drives
LDAT-S152010-DB*x*	3.2	5.3	643 (145)	19.5	1799 (404)	1.76	2094-BM01-S @ 150%
LDAT-S152020-DB*x* … LDAT-S152090-DB*x*	3.5					1.89	
LDAT-S152010-EB*x* … LDAT-S152090-EB*x*	1.8	2.7		9.8		0.87	2094-BMP5-S @ 150%
LDAT-S153010-DB*x* … LDAT-S153090-DB*x*	3.6	8.0	978 (220)	29.1	2680 (602)	2.87	2094-BM01-S @ 150%
LDAT-S153010-EB*x* … LDAT-S153090-EB*x*	1.2	2.7		9.1		0.80	2094-BMP5-S @ 150%
LDAT-S154010-DB*x* … LDAT-S154090-DB*x*	3.5	10.7	1306 (294)	39.1	3597 (809)	3.83	2094-BM02-S @ 150%
LDAT-S154010-EB*x* … LDAT-S154090-EB*x*	1.8	5.3		19.5		1.78	2094-BM01-S @ 150%
LDAT-S156010-DB*x* … LDAT-S156090-DB*x*	3.6	16.3	1997 (449)	59.4	5469 (1229)	5.85	2094-BM03-S @ 150%
LDAT-S156010-EB*x* … LDAT-S156090-EB*x*	1.8	8.1		19.8		2.71	2094-BM01-S @ 150%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAS Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives)

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 200V-class Drives
MPAS-A*xxxx*1-V05S*x*A	200 (7.9) (1)	3.09	521 (117)	6.10	1212 (272)	0.37	2094-AMP5-S
MPAS-A*xxxx*2-V20S*x*A	1124 (44.3) (2)	4.54	462 (104)	9.10	968 (218)	0.62	2094-AMP5-S
MPAS-A6*xxx*B-ALMO2C	5000 (200) (3)	5.3	105 (23.6)	15.8	359 (80.7)	0.32	2094-AM01-S
MPAS-A6*xxx*B-ALMS2C		4.7	83.0 (18.7)	14.2	312 (70.1)	0.29	2094-AM01-S
MPAS-A8*xxx*E-ALMO2C		7.0	189 (42.5)	17.0	417 (93.7)	0.53	2094-AM01-S
				18.5	456 (103)		2094-AM02-S
MPAS-A8*xxx*E-ALMS2C		6.3	159 (35.7)	16.7	399 (89.7)	0.48	2094-AM01-S
MPAS-A9*xxx*K-ALMO2C		6.7	285 (64.1)	17.0	630 (142)	0.77	2094-AM01-S
				18.3	680 (153)		2094-AM02-S
MPAS-A9*xxx*K-ALMS2C		6.1	245 (55.1)	16.5	601 (135)	0.69	2094-AM01-S

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).
(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).
(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance Specifications with Kinetix 6000 (400V-class) Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 400V-class Drives
MPAS-B*xxxx*1-V05S*x*A	200 (7.9) (1)	1.75	521 (117)	3.50	1212 (272)	0.37	2094-BMP5-S @ 150%
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	5.90	865 (194)	0.62	2094-BMP5-S @ 150%
				6.60	968 (218)		2094-BMP5-S @ 250%
MPAS-B8*xxx*F-ALMO2C	5000 (200) (3)	3.50	189 (42.5)	5.90	281 (63.2)	0.527	2094-BMP5-S @ 150%
				9.30	456 (103)		2094-BMP5-S @ 250%
MPAS-B8*xxx*F-ALMS2C		3.15	159 (35.7)	5.90	272 (61.1)	0.475	2094-BMP5-S @ 150%
				8.37	399 (89.7)		2094-BMP5-S @ 250%
MPAS-B9*xxx*L-ALMO2C		3.40	285 (64.1)	5.90	433 (97.3)	0.768	2094-BMP5-S @ 150%
				9.10	680 (153)		2094-BMP5-S @ 250%
MPAS-B9*xxx*L-ALMS2C		3.03	245 (55.1)	5.90	424 (95.3)	0.69	2094-BMP5-S @ 150%
				8.19	601 (135)		2094-BMP5-S @ 250%

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).
(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).
(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAR Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 6000 200V-class Drives**
MPAR-A1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2094-AMP5-S
MPAR-A1*xxx*E	500	2.16	280 (62.9)	2.48	350 (78.7)	0.140	2094-AMP5-S
MPAR-A2*xxx*C	250	2.42	420 (94.4)	2.72	525 (118)	0.105	2094-AMP5-S
MPAR-A2*xxx*F	640	4.54	640 (144)	5.41	800 (180)	0.410	2094-AM01-S
MPAR-A3*xxx*E	500	10.33	2000 (450)	12.34	2500 (562)	1.00	2094-AM02-S
MPAR-A3*xxx*H	1000	12.20	1300 (292)	16.40	1625 (365)	1.30	2094-AM02-S

Performance Specifications with Kinetix 6000 (400V-class) Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 6000 400V-class Drives**
MPAR-B1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2094-BMP5-S @ 150%
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	2094-BMP5-S @ 150%
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	2094-BMP5-S @ 150%
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2094-BMP5-S @ 150%
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	2094-BM01-S @ 150%
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2094-BM01-S @ 150%

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAI Performance Specifications with Kinetix 6000 Drives

Performance Specifications (ball screw) with Kinetix 6000 (200V-class) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 200V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A2076CV1	305 (12)	1.80	890 (200)	706 (159)	4.50	1446 (325)	0.22	2094-AMP5-S
MPAI-A2150CV3		2.47	1446 (325)	1147 (258)	6.20		0.25	
MPAI-A2300CV3								
MPAI-A3076CM1	305 (12)	2.68	1624 (365)	1290 (290)	8.90	4448 (1000)	0.27	2094-AM01-S
MPAI-A3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-A3150CM3	279 (11)	5.61	4003 (900)	3176 (714)	8.40	4448 (1000)	0.39	2094-AM01-S
MPAI-A3300CM3								
MPAI-A3450CM3	188 (7.3)							
MPAI-A3150EM3	559 (22)		2002 (450)	1588 (357)	14.14	4003 (900)		
MPAI-A3300EM3								
MPAI-A3450EM3	376 (15)							
MPAI-A4150CM3	279 (11)	10.89	7784 (1750)	6179 (1389)	17.07	8896 (2000)	0.43	2094-AM02-S
MPAI-A4300CM3								
MPAI-A4450CM3	245 (9.5)							
MPAI-A4150EM3	559 (22)		3892 (875)	3092 (695)	27.44	7784 (1750)		
MPAI-A4300EM3								
MPAI-A4450EM3	491 (19)							
MPAI-A5*xxx*CM3	200 (7.8)	13.25	13,123 (2950)	10,415 (2341)	16.70	13,345 (3000)	0.55	2094-AM03-S
MPAI-A5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	33.40	13,122 (2950)		

Performance Specifications (roller screw) with Kinetix 6000 (200V-class) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 200V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A3076RM1	305 (12)	2.87	1557 (350)	1237 (278)	8.90	4862 (1093)	0.27	2094-AM01-S
MPAI-A3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-A3150RM3	279 (11)	5.61	3781 (850)	3003 (675)	14.14	7562 (1700)	0.39	2094-AM01-S
MPAI-A3300RM3								
MPAI-A3450RM3	176 (6.9)							
MPAI-A3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-A3300SM3								
MPAI-A3450SM3	353 (14)							
MPAI-A4150RM3	279 (11)	10.89	7340 (1650)	5827 (1310)	27.44	14,679 (3300)	0.43	2094-AM02-S
MPAI-A4300RM3								
MPAI-A4450RM3	196 (7.6)							
MPAI-A4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-A4300SM3								
MPAI-A4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with actuator at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (ball screw) with Kinetix 6000 (400V-class) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 400V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B2076CV1	305 (12)	0.90	890 (200)	706 (159)	2.30	1446 (325)	0.22	2094-BMP5-S @ 150%
MPAI-B2150CV3		1.29	1446 (325)	1147 (258)	3.25		0.25	
MPAI-B2300CV3								
MPAI-B3076CM1	305 (12)	1.35	1624 (365)	1290 (290)	4.57	4448 (1000)	0.27	2094-BMP5-S @ 150%
MPAI-B3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		2094-BMP5-S @ 250%
MPAI-B3150CM3	279 (11)	2.81	4003 (900)	3176 (714)	4.30	4448 (1000)	0.39	2094-BMP5-S @ 150%
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		2094-BMP5-S @ 250%
MPAI-B3300EM3								
MPAI-B3450EM3	376 (15)							
MPAI-B4150CM3	279 (11)	5.61	7784 (1750)	6179 (1389)	8.68	8896 (2000)	0.43	2094-BM01-S @ 150%
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		2094-BM01-S @ 250%
MPAI-B4300EM3								
MPAI-B4450EM3	491 (19)							
MPAI-B5*xxx*CM3	200 (7.8)	6.62	13,123 (2950)	10,415 (2341)	8.48	13,345 (3000)	0.55	2094-BM01-S @ 150%
MPAI-B5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	16.70	13,122 (2950)		2094-BM01-S @ 250%

Performance Specifications (roller screw) with Kinetix 6000 (400V-class) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 6000 400V-class Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B3076RM1	305 (12)	1.45	1557 (350)	1237 (278)	4.57	4862 (1093)	0.27	2094-BMP5-S @ 250%
MPAI-B3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-B3150RM3	279 (11)	2.81	3781 (850)	3003 (675)	7.07	7562 (1700)	0.39	2094-BMP5-S @ 250%
MPAI-B3300RM3								
MPAI-B3450RM3	176 (6.9)							
MPAI-B3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-B3300SM3								
MPAI-B3450SM3	353 (14)							
MPAI-B4150RM3	279 (11)	5.61	7340 (1650)	5827 (1310)	14.14	14,679 (3300)	0.43	2094-BM01-S @ 250%
MPAI-B4300RM3								
MPAI-B4450RM3	196 (7.6)							
MPAI-B4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-B4300SM3								
MPAI-B4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with actuator at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDC-Series Performance Specifications with Kinetix 6000 Drives

Performance Specifications with Kinetix 6000 (200V-class) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current (1) Amps 0-pk	System Continuous Stall Force (1) N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 6000 200V-class Drives
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2094-AM01-S
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2094-AM02-S
LDC-C030200-EHT		4.1…6.1		12.1			2094-AM01-S
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2094-AM01-S
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2094-AM02-S
LDC-C050200-EHT		3.9…5.9		11.6			2094-AMP5-S
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2094-AM03-S
LDC-C050300-EHT		3.9…5.9		12.0			2094-AMP5-S
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2094-AM02-S
LDC-C075200-EHT		3.8…5.7		11.5			2094-AMP5-S
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2094-AM03-S
LDC-C075300-EHT		3.8…5.7		11.9			2094-AM01-S
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2094-AM03-S
LDC-C075400-EHT		7.7…11.5		23.7			2094-AM02-S
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	2094-AM03-S
LDC-C100300-EHT		3.7…5.6		11.4			2094-AM01-S
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2094-AM03-S
LDC-C100400-EHT		7.4…11.1		22.8			2094-AM02-S
LDC-C100600-DHT		22.2…33.3	1349…2023 (303…455)	68.5	3534 (794)	6.74…10.11	2094-AM05-S
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2094-AM03-S
LDC-C150600-DHT		21.1…31.7	1922…2882 (432…648)	67.8	5246 (1179)	9.61…14.41	2094-AM05-S

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 6000 (400V-class) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current [1] Amps 0-pk	System Continuous Stall Force [1] N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 6000 400V-class Drives
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2094-BM01-S @ 150%
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2094-BM02-S @ 250%
LDC-C030200-EHT		4.1…6.1		12.1			2094-BM01-S @ 150%
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2094-BM01-S @ 150%
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2094-BM02-S @ 250%
LDC-C050200-EHT		3.9…5.9		11.6			2094-BM01-S @ 150%
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2094-BM02-S @ 250%
LDC-C050300-EHT		3.9…5.9		12.0			2094-BM01-S @ 150%
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2094-BM02-S @ 250%
LDC-C075200-EHT		3.8…5.7		11.5			2094-BM01-S @ 150%
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2094-BM02-S @ 250%
LDC-C075300-EHT		3.8…5.7		11.9			2094-BM01-S @ 150%
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2094-BM03-S @ 250%
LDC-C075400-EHT		7.7…11.5		23.7			2094-BM02-S @ 250%
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	
LDC-C100300-EHT		3.7…5.6		11.4			2094-BM01-S @ 150%
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2094-BM03-S @ 250%
LDC-C100400-EHT		7.4…11.1		22.8			2094-BM02-S @ 250%
LDC-C100600-DHT		22.2…33.3	1349…2023 (303…455)	68.5	3534 (794)	6.74…10.11	2094-BM03-S @ 250%
LDC-C100600-EHT		11.1…16.7		34.3			2094-BM02-S @ 250%
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2094-BM03-S @ 150%
LDC-C150400-EHT		7.0…10.6		22.6			2094-BM02-S @ 250%
LDC-C150600-DHT		21.1…31.7	1922…2882 (432…648)	67.8	5246 (1179)	9.61…14.41	2094-BM03-S @ 250%
LDC-C150600-EHT		10.6…15.8		33.9			2094-BM02-S @ 250%

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDL-Series Performance Specifications with Kinetix 6000 Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current [1] Amps 0-pk	System Continuous Stall Force [1] N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 6000 200V-class Drives
LDL-N030120-DHT	10.0 (32.8)	3.0	63 (14)	9.9	209 (47)	0.31	2094-AMP5-S
LDL-N030240-DHT		6.0	126 (28)	19.9	417 (94)	0.63	2094-AM01-S
LDL-N030240-EHT		3.0		9.9			2094-AMP5-S
LDL-T030120-DHT		3.0	72 (16)	9.9	239 (54)	0.36	2094-AMP5-S
LDL-T030240-DHT		6.0	144 (32)	19.9	479 (108)	0.72	2094-AM01-S
LDL-T030240-EHT		3.0		9.9			2094-AMP5-S
LDL-N050120-DHT	10.0 (32.8)	2.7	96 (22)	9.1	317 (71)	0.48	2094-AMP5-S
LDL-N050240-DHT		5.5	191 (43)	18.1	635 (143)	0.95	2094-AM01-S
LDL-N050240-EHT		2.7		9.1			2094-AMP5-S
LDL-N050360-DHT		8.2	287 (65)	27.2	952 (214)	1.43	2094-AM02-S
LDL-N050360-EHT		2.7		9.1			2094-AMP5-S
LDL-N050480-DHT		10.9	383 (86)	36.3	1269 (285)	1.91	2094-AM03-S
LDL-N050480-EHT		5.5		18.1			2094-AM01-S
LDL-T050120-DHT		2.7	110 (25)	9.1	364 (82)	0.55	2094-AMP5-S
LDL-T050240-DHT		5.5	220 (49)	18.1	728 (164)	1.10	2094-AM01-S
LDL-T050240-EHT		2.7		9.1			2094-AMP5-S
LDL-T050360-DHT		8.2	329 (74)	27.2	1093 (246)	1.64	2094-AM02-S
LDL-T050480-DHT		10.9	439 (99)	36.3	1457 (327)	2.19	2094-AM03-S
LDL-T050480-EHT		5.5		18.1			2094-AM01-S
LDL-N075480-DHT	10.0 (32.8)	9.9	519 (117)	32.8	1723 (387)	2.59	2094-AM03-S
LDL-N075480-EHT		4.9		16.4			2094-AM01-S
LDL-T075480-DHT		9.9	596 (134)	32.8	1977 (444)	2.98	2094-AM03-S
LDL-T075480-EHT		4.9		16.4			2094-AM01-S

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Notes:

Kinetix 300 and Kinetix 350 EtherNet/IP Servo Drives

Kinetix 300
Servo Drive

The Kinetix 300 EtherNet/IP indexing drive provides a cost-effective single-axis solution for low axis-count motion control applications. The Kinetix 300 servo drive is designed to connect and operate with CompactLogix controllers supporting Integrated Architecture or MicroLogix controllers for component motion solutions. By using one standard EtherNet/IP network for an entire machine - including motion, control, I/O, and HMI simplifies wiring, reduces panel layout costs, and allows easy integration into manufacturing and enterprise systems. In addition, safe torque-off functionality helps protect personnel while increasing machine productivity.

Kinetix 350
Servo Drive

The Kinetix 350 single-axis EtherNet/IP servo drive was developed to provide scalability for your motion control system by simplifying integration of the entire control solution on one network. The Kinetix 350 servo drive is designed to connect and operate with the ControlLogix and CompactLogix controllers supporting Integrated Motion on the EtherNet/IP network. Combined as a system, they provide a cost-effective motion solution that delivers the high performance and scalability you need to compete in today's industry. With its compact design, the Kinetix 350 requires less panel space and is easily connected. In addition, you can reduce installation and commissioning time by re-using code across integrated products throughout your entire machine portfolio.

Kinetix 300 and Kinetix 350 Servo Drive Features

- Single-axis solution for low-complexity motion applications
- Flexible control architecture for simple analog, PTO, or EtherNet/IP indexing control (Kinetix 300 drives)
- Integrated motion on the EtherNet/IP network (Kinetix 350 drives)
- Simplified integration of the entire control solution on one network, including HMI, PAC, I/O, and motion
- Memory module for Automatic Device Replacement (ADR)
- Safe Torque-off Control, ISO-13849-1 Certified, PLd, category 3
- Versatile AC input voltage range:
  - 100 and 200V-class AC, single-phase
  - 200V-class single-phase and three-phase
  - 400V-class AC, three-phase
- 2097-V31PR*x* (100V-class models) drive 200V-class motors at full speed
- 2097-V32PR*x* (200V-class models) include integrated AC (EMC) line filter
- High-resolution absolute, multi-turn and single-turn encoder feedback, auxiliary axis for Master Gearing mode

For distinguishing features for Kinetix 300 and Kinetix 350 servo drives, refer to page 112.

Kinetix 300 EtherNet/IP Indexing Drive Features

- Indexing
  - Five indexing types
  - S-curve and trapezoidal moves
  - 32 index capability
- Commanded control over EtherNet/IP
  - Velocity and current
  - Absolute and incremental position with or without registration
- Electronic gearing
- Analog input control
- Step and direction control
- ControlLogix 1756-L7*x* or 1756-L7*x*S Programmable Automation Controller (PAC) with 1756-EN*x*T Ethernet module
- CompactLogix 5370 or 1769-L3*x* controllers (PAC) with RSLogix 5000 software and Add-on Profile for Integrated Architecture solution
- CompactLogix 1768-L4*x* or 1768-L4*x*S controllers (PAC) with 1768-ENBT Ethernet modules
- MicroLogix 1100 or 1400 Programmable Logic Controller (PLC) with built-in web server for configuration and diagnostics
- Micro850 controller (PLC) with Connected Components Workshop software

Kinetix 350 Single-axis EtherNet/IP Drive Features

- EtherNet/IP network with CIP Motion technology for real-time, closed loop motion control on standard Ethernet network
- Fully compatible with linear and star configuration topology
- Achieve the benefits of Kinetix Integrated Motion with ControlLogix L6 and L7 controllers
- CompactLogix 5370 controllers that support Integrated Motion on the EtherNet/IP network and RSLogix 5000 software (version 20.00.00 or later) or the Logix Designer application
- RSLogix 5000 software or the Logix Designer application for programming (ladder logic, structured text, and sequential function charts)

To compare drive features across drive families, refer to Servo Drives beginning on page 28.

Kinetix 300 and Kinetix 350 Servo Drive Components

Kinetix 300 and Kinetix 350 servo drive systems consist of these required components:

- One 2097-V3*xxxx* (Kinetix 300) drive or 2097-V3*xxxx*-LM (Kinetix 350) drive
- One servo motor or linear actuator
- One motor power and motor feedback cable
- One 2090-K2CK-D15M low-profile connector kit (required for flying-lead feedback cables)
- One 2097-TB1 I/O terminal expansion block
- 1585J-M8CBJM-*x* (shielded) Ethernet cable

Kinetix 300 and Kinetix 350 servo drive systems can also include any of these optional components:

- One 2097-F*x* or 2090-XXLF-TC116 AC line filter
- One 2097-R*x* shunt resistor

For detailed Kinetix 300 and 350 drive system requirements, refer to the Kinetix 300 and 350 Drive Systems Design Guide, publication GMC-RM004.

Kinetix 300 and Kinetix 350 Servo Drive Selection

Kinetix 300 Drives Cat. No.	Kinetix 350 Drives Cat. No.	Input Voltage	Continuous Output Power kW	Continuous Output Current A 0-pk	Features
2097-V31PR0	2097-V31PR0-LM	120/240V AC rms, single-phase (1)	0.40	2.8	• 120V Doubler mode • Safe Torque-off
2097-V31PR2	2097-V31PR2-LM		0.80	5.7	
2097-V32PR0	2097-V32PR0-LM	240V AC rms, single-phase (1)	0.40	2.8	• Integrated AC line filter • Safe Torque-off
2097-V32PR2	2097-V32PR2-LM		0.80	5.7	
2097-V32PR4	2097-V32PR4-LM		1.70	11.3	
2097-V33PR1	2097-V33PR1-LM	120V AC rms, single-phase, 240V AC rms, single-phase (1), 240V AC rms, three-phase	0.50	2.8	Safe Torque-off
2097-V33PR3	2097-V33PR3-LM		1.00	5.7	
2097-V33PR5	2097-V33PR5-LM		2.00	11.3	
2097-V33PR6	2097-V33PR6-LM		3.00	17.0	
2097-V34PR3	2097-V34PR3-LM	480V AC rms, three-phase	1.00	2.8	
2097-V34PR5	2097-V34PR5-LM		2.00	5.7	
2097-V34PR6	2097-V34PR6-LM		3.00	8.5	

(1) Expect the same motor performance with 240V single-phase input as you can get from the 240V three-phase input (refer to the table below).

Kinetix 300 and Kinetix 350 Drive Operation with 240V Input Voltage

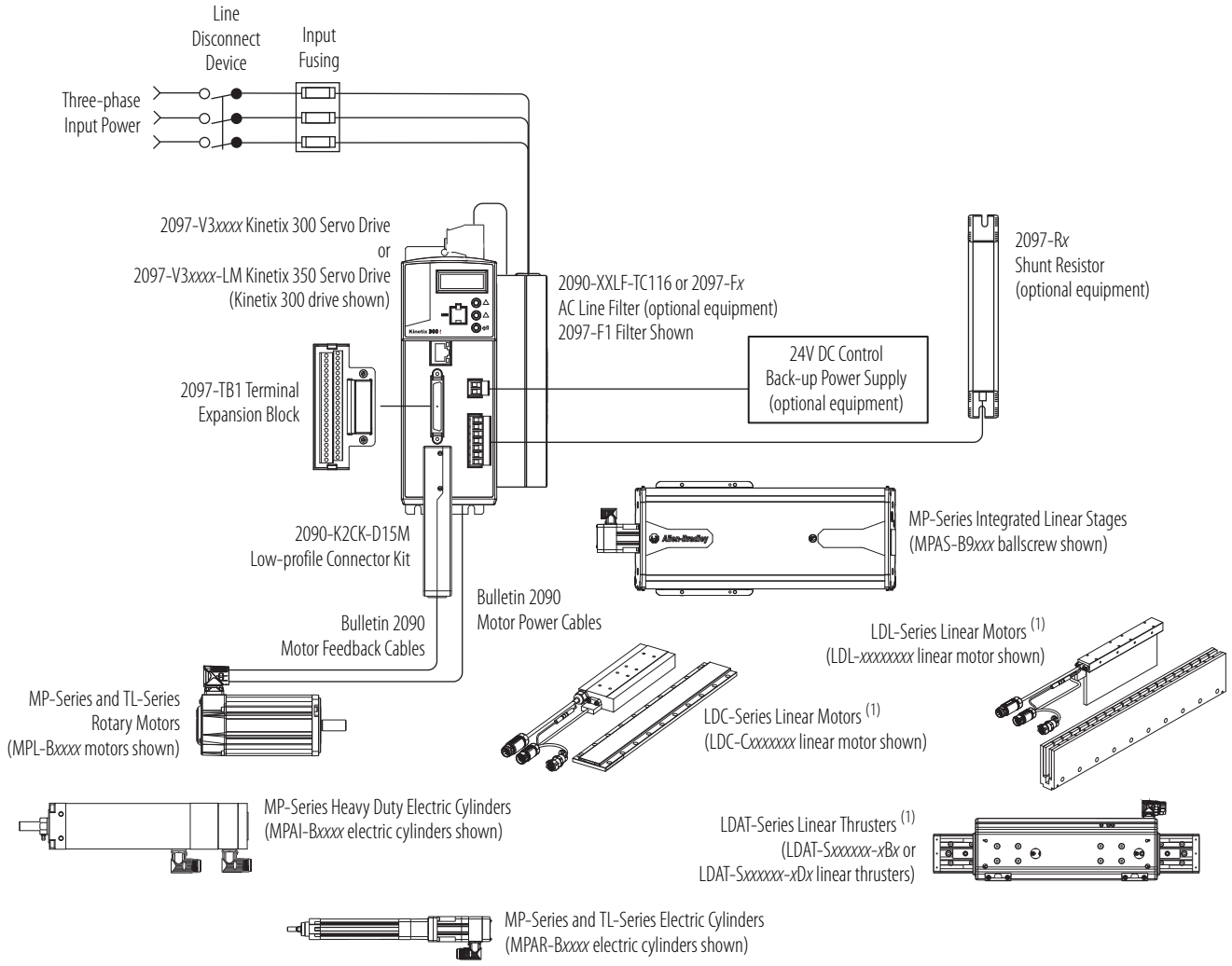
Three-phase Operation with 240V Input	Single-phase Operation with 240V Input		Continuous Output Current A 0-pk	Peak Output Current A 0-pk
2097-V33PR1-*xx*	2097-V32PR0-*xx*	2097-V31PR0-*xx*	2.8	8.5
2097-V33PR3-*xx*	2097-V32PR2-*xx*	2097-V31PR2-*xx*	5.7	17.0
2097-V33PR5-*xx*	2097-V32PR4-*xx*	N/A	11.3	33.9

For Kinetix 300 and Kinetix 350 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003.

Typical Hardware Configuration

This typical hardware configuration illustrates the use of servo drives, motors, actuators, and motion accessories available for Kinetix 300 and Kinetix 350 drive systems.

Kinetix 300/350 Drive Systems

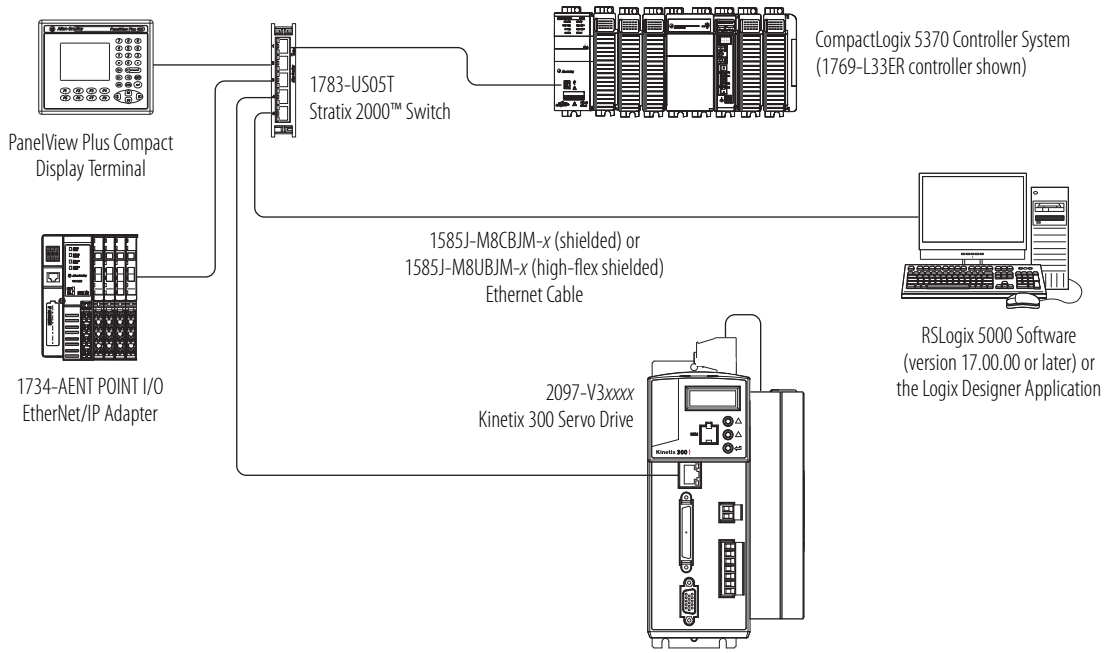


(1) LDC-Series and LDL-Series linear motors, and LDAT-Series linear thrusters are compatible with only Kinetix 300 servo drives.

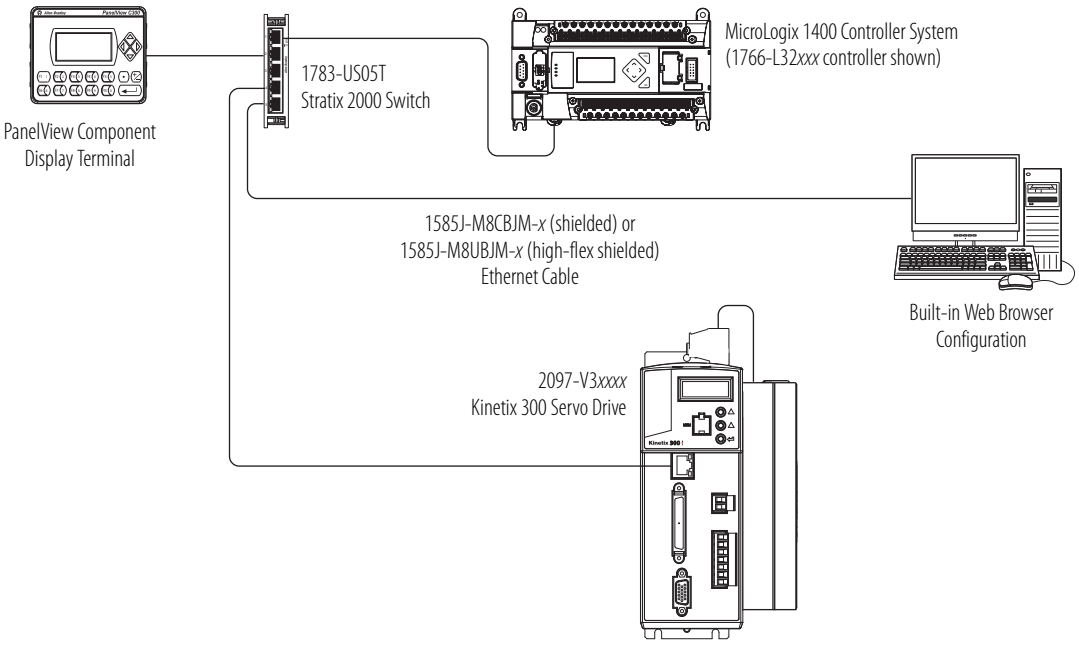
Typical Communication Configurations

The Kinetix 300 and Kinetix 350 servo drives use the EtherNet/IP network for configuring the Logix5000 module.

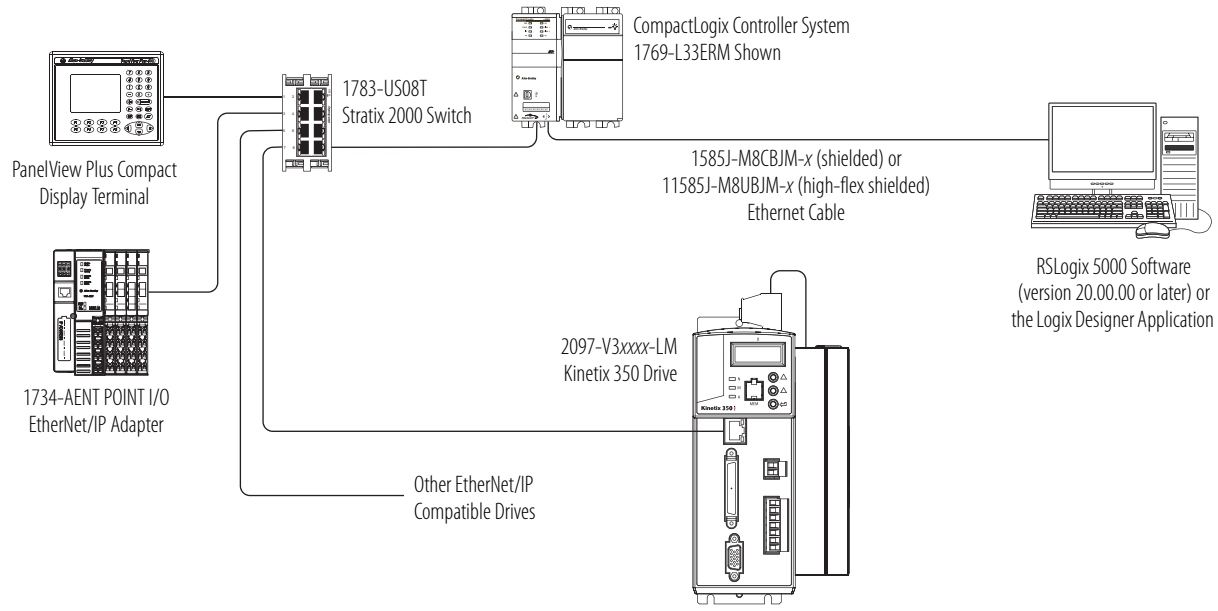
Kinetix 300 Drive System with CompactLogix Controller (PAC)



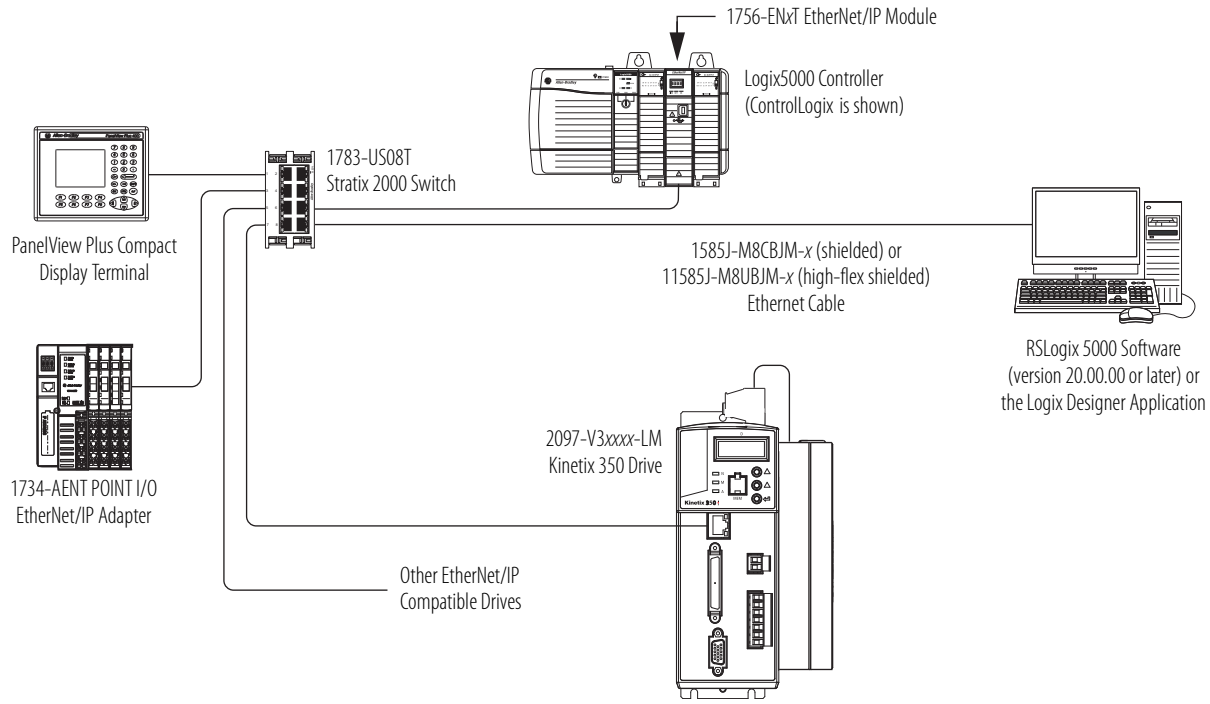
Kinetix 300 Drive System with MicroLogix Controller (PLC)



Kinetix 350 Drive System with CompactLogix Controller (PAC) Platform



Kinetix 350 Drive System with ControlLogix Controller (PAC) Platform



Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 300/350 servo drives.

For Kinetix 300/350 drive system combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 300 and Kinetix 350 Drive Systems Design Guide, publication GMC-RM004.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin MPL Motor Performance Specifications with Kinetix 300/350 Drives

Performance Specifications with Kinetix 300/350 (200V-class, single-phase) Drives

Rotary Motor	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class, Single-phase Drives
MPL-A1510V	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
MPL-A1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-A1530U	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPL-A210V	8000	3.09	0.55 (4.8)	10.2	1.52 (13.5)	0.37	
MPL-A220T	6000	4.54	1.61 (14.2)	15.5	4.74 (41.9)	0.62	
MPL-A230P	5000	5.40	2.10 (18)	23.0	8.2 (72.5)	0.86	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPL-A310F	3000	3.20	1.58 (14)	9.3	3.61 (32)	0.46	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPL-A310P	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	
MPL-A320H	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPL-A320P	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 300/350 (200V-class, three-phase) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class, Three-phase Drives
MPL-A1510V	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2097-V33PR1-*xx*
MPL-A1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-A1530U	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2097-V33PR3-*xx*
MPL-A210V	8000	3.09	0.55 (4.8)	10.2	1.52 (13.5)	0.37	
MPL-A220T	6000	4.54	1.61 (14.2)	15.5	4.74 (41.9)	0.62	
MPL-A230P	5000	5.40	2.10 (18)	23.0	8.2 (72.5)	0.86	2097-V33PR5-*xx*
MPL-A310F	3000	3.20	1.58 (14)	9.3	3.61 (32)	0.46	2097-V33PR3-*xx*
MPL-A310P	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	
MPL-A320H	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx*
MPL-A320P	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	
MPL-A330P	5000	12.0	4.18 (37)	38	11.1 (98)	1.8	2097-V33PR6-*xx*
MPL-A420P	5000	12.7	4.74 (42)	46	13.5 (120)	2.0	
MPL-A430H	3500	12.2	6.21 (55)	45	19.8 (175)	1.8	
MPL-A430P	5000	16.8	5.99 (53)	51	15.7 (139)	2.2	
MPL-A4530F	2800	13.4	8.36 (74)	42	20.3 (180)	1.9	
MPL-A4540C	1500	9.4	10.2 (90)	29	27.1 (240)	1.5	

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A (0-pk)	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 400V-class Three-phase Drives
MPL-B1510V	8000	0.95	0.26 (2.3)	3.10	0.77 (6.80)	0.16	2097-V34PR3-*xx*
MPL-B1520U	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-B1530U	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	
MPL-B210V	8000	1.75	0.55 (4.8)	5.80	1.52 (13.5)	0.37	
MPL-B220T	6000	3.30	1.61 (14.2)	11.3	4.74 (41.9)	0.62	2097-V34PR5-*xx*
MPL-B230P	5000	2.60	2.10 (18.6)	11.3	8.20 (73.0)	0.86	
MPL-B310P	5000	2.4	1.58 (14)	7.1	3.61 (32)	0.77	2097-V34PR3-*xx*
MPL-B320P	5000	4.5	2.94 (26)	14.0	7.91 (70)	1.5	2097-V34PR5-*xx*
MPL-B330P	5000	6.1	4.18 (37)	19.0	11.1 (98)	1.8	2097-V34PR6-*xx*
MPL-B420P	5000	6.4	4.74 (42)	22.0	13.5 (120)	1.9	
MPL-B4530F	3000	6.7	8.36 (74)	21.0	20.3 (180)	2.1	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPM Motor Performance Specifications with Kinetix 300/350 Drives

Performance Specifications with Kinetix 300/350 (200V-class) Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Three-phase Drives
MPM-A1151M	4500	6000	7.65	2.3 (20.3)	30.5	6.6 (58.4)	0.90	2097-V33PR5-*xx*
MPM-A1152F	3000	5000	11.93	4.7 (41.6)	44.8	13.5 (119)	1.40	2097-V33PR6-*xx*

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Motor Cat. No.	Speed, base rpm	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 400V-class Three-phase Drives
MPM-B1151F	3000	5000	2.71	2.3 (20.3)	9.9	6.6 (58.4)	0.75	2097-V34PR5-*xx*
MPM-B1151T	6000	7000	5.62	2.3 (20.3)	20.5	5.8 (51.3)	0.90	2097-V34PR6-*xx*
MPM-B1152C	1500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2097-V34PR5-*xx*
MPM-B1152F	3000	5200	6.17	5.0 (44.2)	21.1	13.3 (118)	1.40	2097-V34PR6-*xx*
MPM-B1153E	2250	3500	6.21	6.5 (57.5)	21.6	19.7 (174)	1.40	
MPM-B1302F	3000	4500	8.57	6.6 (58.4)	22.0	13.2 (117)	1.65	
MPM-B1304C	1500	2750	7.0	10.3 (91.1)	22.3	27.1 (240)	2.00	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPS Motor Performance Specifications with Kinetix 300/350 Drives

Performance Specifications with Kinetix 300/350 (200V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Three-phase Drives
MPS-A330P	5000	9.80	3.60 (32)	33.9	10.1 (89.4)	1.3	2097-V33PR5-*xx*
				38.0	11.1 (98.2)		2097-V33PR6-*xx*
MPS-A4540F	3000	14.4	8.1 (72)	50.9	24.8 (219)	1.4	

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 400V-class Three-phase Drives
MPS-B330P	5000	4.90	3.6 (32)	16.9	10.1 (89.4)	1.3	2097-V34PR5-*xx*
				19.0	11.1 (98.2)		2097-V34PR6-*xx*
MPS-B4540F	3000	7.1	8.1 (72)	25.4	26.3 (233)	1.4	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPF Motor Performance Specifications with Kinetix 300/350 Drives

Performance Specifications with Kinetix 300/350 (200V-class, single-phase) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Single-phase Drives
MPF-A310P	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPF-A320H	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPF-A320P	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	

Performance Specifications with Kinetix 300/350 (200V-class, three-phase) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Three-phase Drives
MPF-A310P	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	2097-V33PR3-*xx*
MPF-A320H	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx*
MPF-A320P	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	2097-V33PR5-*xx*
MPF-A330P	5000	12.0	4.18 (37)	38	11.1 (98)	1.6	2097-V33PR6-*xx*
MPF-A430H	3500	12.2	6.21 (55)	45	19.8 (175)	1.8	2097-V33PR6-*xx*

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A (0-pk)	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A (0-pk)	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 400V-class Three-phase Drives
MPF-B310P	5000	2.30	1.58 (14)	7.1	3.61 (32)	0.77	2097-V34PR3-*xx*
MPF-B320P	5000	4.24	3.05 (27)	14.0	7.34 (65)	1.5	2097-V34PR5-*xx*
MPF-B330P	5000	5.70	4.18 (37)	16.9	10.0 (88)	1.6	2097-V34PR5-*xx*
				19.0	11.1 (98)		2097-V34PR6-*xx*

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin TLY Motor Performance Specifications with Kinetix 300/350 Drives

Performance Specifications (non-brake) with Kinetix 300/350 (200V-class, single-phase) Drives

Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Single-phase Drives
TLY-A110*x*	6000 (1)	0.55	0.096 (0.85)	1.50	0.20 (1.75)	0.041	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A120*x*		1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A130*x*		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A220*x*		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A230*x*		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
TLY-A2530P	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.69	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A2540P		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.95	2097-V33PR5-*xx* 2097-V32PR4-*xx*

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*T-B motors with absolute high-resolution encoders are rated for 5000 rpm.

Performance Specifications (non-brake) with Kinetix 300/350 (200V-class, three-phase) Drives

Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Three-phase Drives
TLY-A110*x*	6000 (1)	0.55	0.096 (0.85)	1.50	0.20 (1.75)	0.041	2097-V33PR1-*xx*
TLY-A120*x*		1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2097-V33PR1-*xx*
TLY-A130*x*		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2097-V33PR1-*xx*
TLY-A220*x*		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2097-V33PR1-*xx*
TLY-A230*x*		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2097-V33PR3-*xx*
TLY-A2530P	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.69	2097-V33PR5-*xx*
TLY-A2540P		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2097-V33PR5-*xx*
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.95	2097-V33PR5-*xx*

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*T-B motors with absolute high-resolution encoders are rated for 5000 rpm.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (brake) with Kinetix 300/350 (200V-class, single-phase) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Single-phase Drives
TLY-A110*x*	6000 (1)	0.50	0.086 (0.76)	1.50	0.20 (1.75)	0.037	2097-V33PR1-*xx*
							2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A120*x*		0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2097-V33PR1-*xx*
							2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A130*x*		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2097-V33PR1-*xx*
							2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A220*x*		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2097-V33PR1-*xx*
							2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLY-A230*x*		4.95	1.16 (10.3)	15.5	3.05 (27.0)	0.32	2097-V33PR3-*xx*
							2097-V32PR2-*xx* 2097-V31PR2-*xx*
TLY-A2530P	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.55	2097-V33PR5-*xx*
							2097-V32PR4-*xx*
TLY-A2540P		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.66	2097-V33PR5-*xx*
							2097-V32PR4-*xx*
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.90	2097-V33PR5-*xx*
							2097-V32PR4-*xx*

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*T-B motors with absolute high-resolution encoders are rated for 5000 rpm.

Performance Specifications (brake) with Kinetix 300/350 (200V-class, three-phase) Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 300/350 200V-class Three-phase Drives
TLY-A110*x*	6000 (1)	0.50	0.086 (0.76)	1.50	0.20 (1.75)	0.037	2097-V33PR1-*xx*
TLY-A120*x*		0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2097-V33PR1-*xx*
TLY-A130*x*		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2097-V33PR1-*xx*
TLY-A220*x*		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2097-V33PR1-*xx*
TLY-A230*x*		4.95	1.16 (10.3)	15.5	3.05 (27.0)	0.32	2097-V33PR3-*xx*
TLY-A2530P	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.55	2097-V33PR5-*xx*
TLY-A2540P		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.66	2097-V33PR5-*xx*
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.90	2097-V33PR5-*xx*

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*T-B motors with absolute high-resolution encoders are rated for 5000 rpm.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 300/350 servo drives.

For Kinetix 300/350 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 300 and Kinetix 350 Drive Systems Design Guide, publication GMC-RM004.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

LDAT-Series Performance Specifications with Kinetix 300 Drives

Performance Specifications (frame 30) with Kinetix 300 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S031010-D*xx*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S031020-D*xx*	3.1					0.25		
LDAT-S031030-D*xx*	3.5					0.29		
LDAT-S031040-D*xx*	3.8					0.31		
LDAT-S032010-D*xx*	3.1	7.4	126 (28)	24.3	336 (76)	0.44	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S032020-D*xx*	4.1					0.52		
LDAT-S032030-D*xx*	4.7					0.59		
LDAT-S032040-D*xx*	5.0					0.63		
LDAT-S032010-E*xx*	3.1	3.7		12.2		0.40	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S032020-E*xx*	4.1					0.47		
LDAT-S032030-E*xx*	4.7					0.52		
LDAT-S032040-E*xx*	5.0					0.55		
LDAT-S033010-D*xx*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2097-V33PR6	2097-V33PR6
LDAT-S033020-D*xx*	4.7					0.88		
LDAT-S033030-D*xx*	5.0					0.95		
LDAT-S033040-D*xx*								
LDAT-S033010-E*xx*	3.5	3.7		12.2		0.55	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S033020-E*xx*	4.4					0.65		
LDAT-S033030-E*xx*								
LDAT-S033040-E*xx*								

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 300 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S051010-D*xx*	2.8	3.1	119 (27)	11.4	363 (82)	0.31	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S051020-D*xx*	3.7					0.38		
LDAT-S051030-D*xx*	4.1					0.42		
LDAT-S051040-D*xx*	4.4					0.44		
LDAT-S051050-D*xx*	4.7					0.46		
LDAT-S052010-D*xx*	3.7	6.2	251 (56)	22.7	727 (163)	0.79	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S052020-D*xx*	4.8					0.97		
LDAT-S052030-D*xx*	5.00					1.01		
LDAT-S052040-D*xx*								
LDAT-S052050-D*xx*								
LDAT-S052010-E*xx* . . . LDAT-S052050-E*xx*	2.6	3.1		11.4		0.50	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3

Performance Specifications (frame 50) with Kinetix 300 (200V-class) Drives (continued)

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S053010-D*xx*	4.1	9.4	378 (85)	34.2	1093 (246)	1.31	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S053020-D*xx*	5.0					1.53		
LDAT-S053030-D*xx* ... LDAT-S053050-D*xx*	5.0					1.53		
LDAT-S053010-E*xx* ... LDAT-S053050-E*xx*	1.7	3.1		11.4		0.47	N/A	2097-V33PR3
LDAT-S054010-D*xx*	4.4	12.4	509 (114)	45.5	1453 (327)	1.87	2097-V33PR6	2097-V33PR6
LDAT-S054020-D*xx* ... LDAT-S054050-D*xx*	5.0					2.05		
LDAT-S054010-E*xx* ... LDAT-S054050-E*xx*	2.6	6.2		22.7		1.02	2097-V33PR5 2097-V32PR4	2097-V33PR5

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 300 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S072010-D*xx* ... LDAT-S072070-D*xx*	3.5	6.0	364 (82)	22.0	1055 (237)	1.03	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S072010-E*xx* ... LDAT-S072070-E*xx*	1.7	3.0		11.0		0.47	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S073010-D*xx* ... LDAT-S073070-D*xx*	3.5	9.0	554 (125)	32.8	1576 (354)	1.57	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S073010-E*xx* ... LDAT-S073070-E*xx*	1.2	3.0		10.9		0.41	N/A	2097-V33PR3
LDAT-S074010-D*xx* ... LDAT-S074070-D*xx*	3.5	11.9	730 (164)	43.5	2088 (469)	2.08	2097-V33PR6	2097-V33PR6
LDAT-S074010-E*xx* ... LDAT-S074070-E*xx*	1.8	6.0		21.7		0.95	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S076010-E*xx* ... LDAT-S076070-E*xx*	1.8	9.1	1122 (252)	33.2	3189 (717)	1.45	2097-V33PR5 2097-V32PR4	2097-V33PR5

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 300 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S102010-D*xx* … LDAT-S102090-D*xx*	2.6	5.7	456 (103)	21.0	1289 (290)	0.96	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S102010-E*xx* … LDAT-S102090-E*xx*	1.3	2.9		10.5		0.42	N/A	2097-V33PR3
LDAT-S103010-D*xx* … LDAT-S103090-D*xx*	2.7	8.6	702 (158)	31.5	1935 (435)	1.47	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S103010-E*xx* … LDAT-S103090-E*xx*	0.9	2.9		10.5	1388 (312)	0.30	N/A	2097-V33PR3
LDAT-S104010-D*xx* … LDAT-S104090-D*xx*	2.7	11.5	929 (209)	42.0	2578 (580)	2.07	2097-V33PR6	2097-V33PR6
LDAT-S104010-E*xx* … LDAT-S104090-E*xx*	1.3	5.7		21.0		0.86	N/A	2097-V33PR3
LDAT-S106010-E*xx* … LDAT-S106090-E*xx*	1.3	8.6	1403 (315)	31.5	3871 (870)	1.28	N/A	2097-V33PR5

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 300 (200V-class) Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 300 (200V-class) Drives	
							Single-phase Operation	Three-phase Operation
LDAT-S152010-D*xx* … LDAT-S152090-D*xx*	1.8	5.3	643 (145)	19.5	1799 (404)	0.87	2097-V33PR3 2097-V32PR2 2097-V31PR2	2097-V33PR3
LDAT-S152010-E*xx* … LDAT-S152090-E*xx*	0.9	2.7		9.8	1679 (377)	0.34	N/A	2097-V33PR1
LDAT-S153010-D*xx* … LDAT-S153090-D*xx*	1.8	8.0	978 (220)	29.1	2680 (602)	1.33	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S154010-D*xx* … LDAT-S154090-D*xx*	1.8	10.7	1306 (294)	39.1	3597 (809)	1.78	2097-V33PR5 2097-V32PR4	2097-V33PR5
LDAT-S154010-E*xx* … LDAT-S154090-E*xx*	0.9	5.3		19.5	3383 (761)	0.70	N/A	2097-V33PR3
LDAT-S156010-D*xx* … LDAT-S156090-D*xx*	1.8	16.3	1997 (449)	59.4	5469 (1229)	2.71	2097-V33PR6	2097-V33PR6
LDAT-S156010-E*xx* … LDAT-S156090-E*xx*	0.9	8.1		19.8	5110 (1149)	1.05	N/A	2097-V33PR5

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 30) with Kinetix 300 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 300 (400V-class) Drives Three-phase Operation
LDAT-S031010-D*xx*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2097-V34PR5
LDAT-S031020-D*xx*	3.1					0.25	
LDAT-S031030-D*xx*	3.5					0.29	
LDAT-S031040-D*xx*	3.8					0.31	
LDAT-S032010-D*xx*	3.1	7.4	126 (28)	24.3	336 (76)	0.40	2097-V34PR6
LDAT-S032020-D*xx*	4.1					0.52	
LDAT-S032030-D*xx*	4.7					0.59	
LDAT-S032040-D*xx*	5.0					0.63	
LDAT-S032010-E*xx*	3.1	3.7		12.2		0.40	2097-V34PR5
LDAT-S032020-E*xx*	4.1					0.52	
LDAT-S032030-E*xx*	4.7					0.59	
LDAT-S032040-E*xx*	5.0					0.63	
LDAT-S033010-E*xx*	3.5	3.7	190 (43)	12.2	504 (113)	0.67	2097-V34PR5
LDAT-S033020-E*xx*	4.7					0.87	
LDAT-S033030-E*xx*	5.0					0.91	
LDAT-S033040-E*xx*							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 300 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 300 (400V-class) Drives Three-phase Operation
LDAT-S051010-D*xx*	2.8	3.1	119 (27)	11.4	363 (82)	0.34	2097-V34PR5
LDAT-S051020-D*xx*	3.7					0.43	
LDAT-S051030-D*xx*	4.1					0.49	
LDAT-S051040-D*xx*	4.4					0.53	
LDAT-S051050-D*xx*	4.7					0.55	
LDAT-S052010-D*xx*	3.7	6.2	251 (56)	22.7	727 (163)	0.92	2097-V34PR6
LDAT-S052020-D*xx*	4.8					1.20	
LDAT-S052030-D*xx*	5.0					1.24	
LDAT-S052040-D*xx*							
LDAT-S052050-D*xx*							
LDAT-S052010-E*xx*	3.7	3.1		11.4		0.80	2097-V34PR5
LDAT-S052020-E*xx*	4.6					0.98	
LDAT-S052030-E*xx*	4.6					1.02	
LDAT-S052040-E*xx*							
LDAT-S052050-E*xx*							
LDAT-S053010-E*xx* … LDAT-S053050-E*xx*	3.5	3.1	378 (85)	11.4	1093 (246)	1.04	2097-V34PR5
LDAT-S054010-E*xx*	4.4	6.2	509 (114)	22.7	45.5	1.87	2097-V34PR6
LDAT-S054020-E*xx* … LDAT-S054050-E*xx*	5.0					1453 (327)	

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 300 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 300 (400V-class) Drives Three-phase Operation
LDAT-S072010-D*xx*	3.9	6.0	364 (82)	22.0	1055 (237)	1.37	2097-V34PR6
LDAT-S072020-D*xx*	5.0					1.64	
LDAT-S072030-D*xx* … LDAT-S072070-D*xx*							
LDAT-S072010-E*xx* … LDAT-S072070-E*xx*	3.5	3.0		11.0		1.03	2097-V34PR5
LDAT-S073010-E*xx* … LDAT-S073070-E*xx*	2.4	3.0	554 (125)	10.9	1576 (354)	1.01	2097-V34PR5
LDAT-S074010-E*xx* … LDAT-S074070-E*xx*	3.5	6.0	730 (164)	21.7	2088 (469)	2.08	2097-V34PR6

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 300 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 300 (400V-class) Drives Three-phase Operation
LDAT-S102010-D*xx*	3.4	5.7	456 (103)	21.0	1289 (290)	1.44	2097-V34PR5
LDAT-S102020-D*xx*	4.4					1.74	
LDAT-S102030-D*xx*	5.0					1.91	
LDAT-S102040-D*xx*							
LDAT-S102050-D*xx* ... LDAT-S102090-D*xx*							
LDAT-S102010-E*xx* ... LDAT-S102090-E*xx*	2.6	2.9		10.5		0.96	2097-V34PR5
LDAT-S103010-D*xx*	3.8	8.6	702 (158)	31.5	1935 (435)	2.41	2097-V34PR6
LDAT-S103020-D*xx* ... LDAT-S103090-D*xx*	5.0					2.93	
LDAT-S103010-E*xx* ... LDAT-S103090-E*xx*	1.8	2.9		10.5		0.92	2097-V34PR5
LDAT-S104010-E*xx* ... LDAT-S104090-E*xx*	2.7	5.7	929 (209)	21.0	2578 (580)	2.07	2097-V34PR5
LDAT-S106010-E*xx* ... LDAT-S106090-E*xx*	2.7	8.6	1403 (315)	31.5	3871 (870)	2.94	2097-V34PR6

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 300 (400V-class) Drives

Linear Thruster Cat. No.	Velocity, max 460V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 460V AC kW	Kinetix 300 (400V-class) Drives Three-phase Operation
LDAT-S152010-D*xx*	3.2	5.3	643 (145)	19.5	1799 (404)	1.76	2097-V34PR5
LDAT-S152020-D*xx* ... LDAT-S152090-D*xx*	3.5					1.89	
LDAT-S152010-E*xx* ... LDAT-S152090-E*xx*	1.8	2.7		9.8		0.87	2097-V34PR3
LDAT-S153010-D*xx* ... LDAT-S153090-D*xx*	3.6	8.0	978 (220)	29.1	2680 (602)	2.87	2097-V34PR6
LDAT-S153010-E*xx* ... LDAT-S153090-E*xx*	1.2	2.7		9.1		0.80	2097-V34PR3
LDAT-S154010-E*xx* ... LDAT-S154090-E*xx*	1.8	5.3	1306 (294)	19.5	3597 (809)	1.78	2097-V34PR5
LDAT-S156010-E*xx* ... LDAT-S156090-E*xx*	1.8	8.1	1997 (449)	19.8	5469 (1229)	2.71	2097-V34PR6

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAS Performance Specifications with Kinetix 300/350 Drives

IMPORTANT Kinetix 300 and Kinetix 350 drives are compatible with MPAS-A*xxxxx*-V*xx*S*x*A (ball screw) stages. Only Kinetix 300 drives are compatible with MPAS-A*xxxxx*-ALM*x*2C (direct-drive) stages.

Performance Specifications with Kinetix 300/350 (200V-class, single-phase) Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Single-phase Drives
MPAS-A*xxxx*1-V05S*x*A	200 (7.9) (1)	3.09	521 (117)	6.10	1212 (272)	0.37	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAS-A*xxxx*2-V20S*x*A	1124 (44.3) (2)	4.54	462 (104)	9.10	968 (218)	0.62	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAS-A6*xxx*B-ALMO2C	5000 (200) (3)	5.3	105 (23.6)	15.8	359 (80.7)	0.32	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAS-A6*xxx*B-ALMS2C		4.7	83.0 (18.7)	14.2	312 (70.1)	0.29	
MPAS-A8*xxx*E-ALMO2C		7.0	189 (42.5)	18.5	456 (103)	0.53	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPAS-A8*xxx*E-ALMS2C		6.3	159 (35.7)	16.7	399 (89.7)	0.48	
MPAS-A9*xxx*K-ALMO2C		6.7	285 (64.1)	18.3	680 (153)	0.77	
MPAS-A9*xxx*K-ALMS2C		6.1	245 (55.1)	16.5	601 (135)	0.69	

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance Specifications with Kinetix 300/350 (200V-class, three-phase) Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Three-phase Drives
MPAS-A*xxxx*1-V05S*x*A	200 (7.9) (1)	3.09	521 (117)	6.10	1212 (272)	0.37	2097-V33PR3-*xx*
MPAS-A*xxxx*2-V20S*x*A	1124 (44.3) (2)	4.54	462 (104)	9.10	968 (218)	0.62	
MPAS-A6*xxx*B-ALMO2C	5000 (200) (3)	5.3	105 (23.6)	15.8	359 (80.7)	0.32	2097-V33PR3
MPAS-A6*xxx*B-ALMS2C		4.7	83.0 (18.7)	14.2	312 (70.1)	0.29	
MPAS-A8*xxx*E-ALMO2C		7.0	189 (42.5)	18.5	456 (103)	0.53	2097-V33PR5
MPAS-A8*xxx*E-ALMS2C		6.3	159 (35.7)	16.7	399 (89.7)	0.48	
MPAS-A9*xxx*K-ALMO2C		6.7	285 (64.1)	18.3	680 (153)	0.77	
MPAS-A9*xxx*K-ALMS2C		6.1	245 (55.1)	16.5	601 (135)	0.69	

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

IMPORTANT Kinetix 300 and Kinetix 350 drives are compatible with MPAS-B*xxxxx*-V*xx*S*x*A (ball screw) stages. Only Kinetix 300 drives are compatible with MPAS-B*xxxxx*-ALM*x*2C (direct-drive) stages.

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 400V-class Three-phase Drives
MPAS-B*xxxx*1-V05S*x*A	200 (7.9) (1)	1.75	521 (117)	3.50	1212 (272)	0.37	2097-V34PR3-*xx*
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	6.60	968 (218)	0.62	2097-V34PR5-*xx*
MPAS-B8*xxx*F-ALMO2C	5000 (200) (3)	3.50	189 (42.5)	9.30	456 (103)	0.527	2097-V34PR5
MPAS-B8*xxx*F-ALMS2C		3.15	159 (35.7)	8.37	399 (89.7)	0.475	
MPAS-B9*xxx*L-ALMO2C		3.40	285 (64.1)	9.10	680 (153)	0.768	
MPAS-B9*xxx*L-ALMS2C		3.03	245 (55.1)	8.19	601 (135)	0.69	

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

(3) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Bulletin MPAR Performance Specifications with Kinetix 300/350 Drives

Performance Specifications with Kinetix 300/350 (200V-class, single-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 400V-class Single-phase Drives
MPAR-A1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
MPAR-A1*xxx*E	500	2.16	280 (62.9)	2.48	350 (78.7)	0.140	
MPAR-A2*xxx*C	250	2.42	420 (94.4)	2.72	525 (118)	0.105	
MPAR-A2*xxx*F	640	4.54	640 (144)	5.41	800 (180)	0.410	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAR-A3*xxx*E	500	10.33	2000 (450)	12.34	2500 (562)	1.00	2097-V33PR5-*xx* 2097-V32PR4-*xx*

Performance Specifications with Kinetix 300/350 (200V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Three-phase Drives
MPAR-A1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2097-V33PR1-*xx*
MPAR-A1*xxx*E	500	2.16	280 (62.9)	2.48	350 (78.7)	0.140	
MPAR-A2*xxx*C	250	2.42	420 (94.4)	2.72	525 (118)	0.105	
MPAR-A2*xxx*F	640	4.54	640 (144)	5.41	800 (180)	0.410	2097-V33PR3-*xx*
MPAR-A3*xxx*E	500	10.33	2000 (450)	12.34	2500 (562)	1.00	2097-V33PR5-*xx*
MPAR-A3*xxx*H	1000	12.20	1300 (292)	16.40	1625 (365)	1.30	2097-V33PR6-*xx*

Performance Specifications with Kinetix 300/350 (400V-class) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 400V-class Three-phase Drives
MPAR-B1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2097-V34PR3-*xx*
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2097-V34PR5-*xx*
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2097-V34PR6-*xx*

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAI Performance Specifications with Kinetix 300/350 (200V-class) Drives

Performance Specifications (ball screw) with Kinetix 300/350 (200V-class, single-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Single-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A2076CV1	305 (12)	1.80	890 (200)	706 (159)	4.50	1446 (325)	0.22	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
MPAI-A2150CV3		2.47	1446 (325)	1147 (258)	6.20		0.25	
MPAI-A2300CV3								
MPAI-A3076CM1	305 (12)	2.68	1624 (365)	1290 (290)	8.90	4448 (1000)	0.27	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAI-A3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-A3150CM3	279 (11)	5.61	4003 (900)	3176 (714)	8.40	4448 (1000)	0.39	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAI-A3300CM3								
MPAI-A3450CM3	188 (7.3)							
MPAI-A3150EM3	559 (22)		2002 (450)	1588 (357)	14.14	4003 (900)		
MPAI-A3300EM3								
MPAI-A3450EM3	376 (15)							
MPAI-A4150CM3	279 (11)	10.89	7784 (1750)	6179 (1389)	17.07	8896 (2000)	0.43	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPAI-A4300CM3								
MPAI-A4450CM3	245 (9.5)							
MPAI-A4150EM3	559 (22)		3892 (875)	3092 (695)	27.44	7784 (1750)		
MPAI-A4300EM3								
MPAI-A4450EM3	491 (19)							

Performance Specifications (roller screw) with Kinetix 300/350 (200V-class, single-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Single-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A3076RM1	305 (12)	2.87	1557 (350)	1237 (278)	8.90	4862 (1093)	0.27	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAI-A3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-A3150RM3	279 (11)	5.61	3781 (850)	3003 (675)	14.14	7562 (1700)	0.39	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPAI-A3300RM3								
MPAI-A3450RM3	176 (6.9)							
MPAI-A3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-A3300SM3								
MPAI-A3450SM3	353 (14)							
MPAI-A4150RM3	279 (11)	10.89	7340 (1650)	5827 (1310)	27.44	14,679 (3300)	0.43	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPAI-A4300RM3								
MPAI-A4450RM3	196 (7.6)							
MPAI-A4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-A4300SM3								
MPAI-A4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (ball screw) with Kinetix 300/350 (200V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Three-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A2076CV1	305 (12)	1.80	890 (200)	706 (159)	4.50	1446 (325)	0.22	2097-V33PR1-*xx*
MPAI-A2150CV3		2.47	1446 (325)	1147 (258)	6.20		0.25	2097-V33PR3-*xx*
MPAI-A2300CV3								
MPAI-A3076CM1	305 (12)	2.68	1624 (365)	1290 (290)	8.90	4448 (1000)	0.27	2097-V33PR3-*xx*
MPAI-A3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-A3150CM3	279 (11)	5.61	4003 (900)	3176 (714)	8.40	4448 (1000)	0.39	2097-V33PR3-*xx*
MPAI-A3300CM3								
MPAI-A3450CM3	188 (7.3)							
MPAI-A3150EM3	559 (22)		2002 (450)	1588 (357)	14.14	4003 (900)		
MPAI-A3300EM3								
MPAI-A3450EM3	376 (15)							
MPAI-A4150CM3	279 (11)	10.89	7784 (1750)	6179 (1389)	17.07	8896 (2000)	0.43	2097-V33PR5-*xx*
MPAI-A4300CM3								
MPAI-A4450CM3	245 (9.5)							
MPAI-A4150EM3	559 (22)		3892 (875)	3092 (695)	27.44	7784 (1750)		
MPAI-A4300EM3								
MPAI-A4450EM3	491 (19)							
MPAI-A5*xxx*CM3	200 (7.8)	13.25	13,123 (2950)	10,415 (2341)	16.70	13,345 (3000)	0.55	2097-V33PR6-*xx*
MPAI-A5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	33.40	13,122 (2950)		

Performance Specifications (roller screw) with Kinetix 300/350 (200V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Three-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A3076RM1	305 (12)	2.87	1557 (350)	1237 (278)	8.90	4862 (1093)	0.27	2097-V33PR3-*xx*
MPAI-A3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-A3150RM3	279 (11)	5.61	3781 (850)	3003 (675)	14.14	7562 (1700)	0.39	2097-V33PR3-*xx*
MPAI-A3300RM3								
MPAI-A3450RM3	176 (6.9)							
MPAI-A3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-A3300SM3								
MPAI-A3450SM3	353 (14)							
MPAI-A4150RM3	279 (11)	10.89	7340 (1650)	5827 (1310)	27.44	14,679 (3300)	0.43	2097-V33PR5-*xx*
MPAI-A4300RM3								
MPAI-A4450RM3	196 (7.6)							
MPAI-A4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-A4300SM3								
MPAI-A4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAI Performance Specifications with Kinetix 300/350 (400V-class) Drives

Performance Specifications (ball screw) with Kinetix 300/350 (400V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 400V-class Three-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B2076CV1	305 (12)	0.90	890 (200)	706 (159)	2.30	1446 (325)	0.22	2097-V34PR3-*xx*
MPAI-B2150CV3		1.29	1446 (325)	1147 (258)	3.25		0.25	
MPAI-B2300CV3								
MPAI-B3076CM1	305 (12)	1.35	1624 (365)	1290 (290)	4.57	4448 (1000)	0.27	2097-V34PR3-*xx*
MPAI-B3076EM1	610 (24)		814 (183)	645 (145)		2570 (578)		
MPAI-B3150CM3	279 (11)	2.81	4003 (900)	3176 (714)	4.30	4448 (1000)	0.39	2097-V34PR5-*xx*
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		
MPAI-B3300EM3								
MPAI-B3450EM3	376 (15)							
MPAI-B4150CM3	279 (11)	5.61	7784 (1750)	6179 (1389)	8.68	8896 (2000)	0.43	2097-V34PR5-*xx*
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		
MPAI-B4300EM3								
MPAI-B4450EM3	491 (19)							
MPAI-B5*xxx*CM3	200 (7.8)	6.62	13,123 (2950)	10,415 (2341)	8.48	13,345 (3000)	0.55	2097-V34PR6-*xx*
MPAI-B5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	16.70	13,122 (2950)		

Performance Specifications (roller screw) with Kinetix 300/350 (400V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)		System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 400V-class Three-phase Drives
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-B3076RM1	305 (12)	1.45	1557 (350)	1237 (278)	4.57	4862 (1093)	0.27	2097-V34PR3-*xx*
MPAI-B3076SM1	610 (24)		778 (175)	618 (139)		2431 (547)		
MPAI-B3150RM3	279 (11)	2.81	3781 (850)	3003 (675)	7.07	7562 (1700)	0.39	2097-V34PR5-*xx*
MPAI-B3300RM3								
MPAI-B3450RM3	176 (6.9)							
MPAI-B3150SM3	559 (22)		1891 (425)	1499 (337)		3781 (850)		
MPAI-B3300SM3								
MPAI-B3450SM3	353 (14)							
MPAI-B4150RM3	279 (11)	5.61	7340 (1650)	5827 (1310)	14.14	14,679 (3300)	0.43	2097-V34PR5-*xx*
MPAI-B4300RM3								
MPAI-B4450RM3	196 (7.6)							
MPAI-B4150SM3	559 (22)		3670 (825)	2914 (655)		7340 (1650)		
MPAI-B4300SM3								
MPAI-B4450SM3	393 (15)							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin TLAR Performance Specifications with Kinetix 300/350 Drives

Performance Specifications (non-brake) with Kinetix 300/350 (200V-class, single-phase) Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 300/350 200V-class Single-phase Drives**
TLAR-A1*xxx*B	150	1.36	240 (53.9)	1.79	300 (67.4)	0.036	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A1*xxx*E	500	2.59	280 (62.9)	3.03	350 (78.7)	0.140	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A2*xxx*C	250	3.03	420 (94.4)	3.41	525 (118)	0.105	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A2*xxx*F	640	5.50	640 (144)	7.25	800 (180)	0.350	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLAR-A3*xxx*H	1000	10.0	1300 (292)	17.2	1625 (365)	0.930	2097-V33PR5-*xx* 2097-V32PR4-*xx*

Performance Specifications (non-brake) with Kinetix 300/350 (200V-class, three-phase) Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 300/350 200V-class Three-phase Drives**
TLAR-A1*xxx*B	150	1.36	240 (53.9)	1.79	300 (67.4)	0.036	2097-V33PR1-*xx*
TLAR-A1*xxx*E	500	2.59	280 (62.9)	3.03	350 (78.7)	0.140	2097-V33PR1-*xx*
TLAR-A2*xxx*C	250	3.03	420 (94.4)	3.41	525 (118)	0.105	2097-V33PR1-*xx*
TLAR-A2*xxx*F	640	5.50	640 (144)	7.25	800 (180)	0.350	2097-V33PR1-*xx*
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2097-V33PR5-*xx*
TLAR-A3*xxx*H	1000	10.0	1300 (292)	17.2	1625 (365)	0.930	2097-V33PR5-*xx*

Performance Specifications (brake) with Kinetix 300/350 (200V-class, single-phase) Drives

Electric Cylinder Cat. No.	**Speed, max** mm/s (in/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Motor Output Power Rating** kW	**Kinetix 300/350 200V-class Single-phase Drives**
TLAR-A1*xxx*B	150	1.18	240 (53.9)	1.79	300 (67.4)	0.036	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A1*xxx*E	500	2.24	280 (62.9)	3.03	350 (78.7)	0.140	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A2*xxx*C	250	2.68	420 (94.4)	3.41	525 (118)	0.105	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A2*xxx*F	640	4.95	640 (144)	7.25	800 (180)	0.350	2097-V33PR1-*xx* 2097-V32PR0-*xx* 2097-V31PR0-*xx*
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLAR-A3*xxx*H	1000	10.0	1300 (292)	17.2	1625 (365)	0.930	2097-V33PR5-*xx* 2097-V32PR4-*xx*

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (brake) with Kinetix 300/350 (200V-class, three-phase) Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 300/350 200V-class Three-phase Drives
TLAR-A1*xxx*B	150	1.18	240 (53.9)	1.79	300 (67.4)	0.036	2097-V33PR1-*xx*
TLAR-A1*xxx*E	500	2.24	280 (62.9)	3.03	350 (78.7)	0.140	2097-V33PR1-*xx*
TLAR-A2*xxx*C	250	2.68	420 (94.4)	3.41	525 (118)	0.105	2097-V33PR1-*xx*
TLAR-A2*xxx*F	640	4.95	640 (144)	7.25	800 (180)	0.350	2097-V33PR1-*xx*
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2097-V33PR5-*xx*
TLAR-A3*xxx*H	1000	10.0	1300 (292)	17.2	1625 (365)	0.930	2097-V33PR5-*xx*

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDC-Series Performance Specifications with Kinetix 300 Drives

Performance Specifications with Kinetix 300 (200V-class, single-phase) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current (1) Amps 0-pk	System Continuous Stall Force (1) N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output (1) kW	Kinetix 300 200V-class Single-phase Drives (2)
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2097-V33PR5 2097-V32PR4
LDC-C030200-EHT		4.1…6.1		12.1			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2097-V33PR5 2097-V32PR4
LDC-C050200-EHT		3.9…5.9		11.6			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDC-C050300-EHT		3.9…5.9	363…544 (82…122)	12.0	941 (212)	1.81…2.72	
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2097-V33PR5 2097-V32PR4
LDC-C075200-EHT		3.8…5.7		11.5			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDC-C075300-EHT		3.8…5.7	523…784 (117…176)	11.9	1368 (308)	2.61…3.92	
LDC-C075400-EHT		7.7…11.5	697…1045 (157…235)	23.7	1824 (410)	3.48…5.22	2097-V33PR5 2097-V32PR4
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	
LDC-C100300-EHT		3.7…5.6		11.4			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDC-C100400-EHT		7.4…11.1	899…1349 (202…303)	22.8	2356 (530)	4.49…6.74	2097-V33PR5 2097-V32PR4

(1) Values represent the range between no cooling (low value) and water cooling (high value).
(2) Drives selected are for motors with no cooling.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 300 (200V-class, three-phase) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current (1) Amps 0-pk	System Continuous Stall Force (1) N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output (1) kW	Kinetix 300 200V-class Three-phase Drives (2)
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2097-V33PR3
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2097-V33PR5
LDC-C030200-EHT		4.1…6.1		12.1			2097-V33PR3
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2097-V33PR3
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2097-V33PR5
LDC-C050200-EHT		3.9…5.9		11.6			2097-V33PR3
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2097-V33PR6
LDC-C050300-EHT		3.9…5.9		12.0			2097-V33PR3
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2097-V33PR5
LDC-C075200-EHT		3.8…5.7		11.5			2097-V33PR3
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2097-V33PR6
LDC-C075300-EHT		3.8…5.7		11.9			2097-V33PR3
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2097-V33PR6
LDC-C075400-EHT		7.7…11.5		23.7			2097-V33PR5
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	2097-V33PR5
LDC-C100300-EHT		3.7…5.6		11.4			2097-V33PR3
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2097-V33PR6
LDC-C100400-EHT		7.4…11.1		22.8			2097-V33PR5
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2097-V33PR6

(1) Values represent the range between no cooling (low value) and water cooling (high value).

(2) Drives selected are for motors with no cooling.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 300 (400V-class, three-phase) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current (1) Amps 0-pk	System Continuous Stall Force (1) N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 300 400V-class Three-phase Drives
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2097-V34PR5
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2097-V34PR6
LDC-C030200-EHT		4.1…6.1		12.1			2097-V34PR5
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2097-V34PR5
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2097-V34PR6
LDC-C050200-EHT		3.9…5.9		11.6			2097-V34PR5
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2097-V34PR6
LDC-C050300-EHT		3.9…5.9		12.0			2097-V34PR5
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2097-V34PR6
LDC-C075200-EHT		3.8…5.7		11.5			2097-V34PR5
LDC-C075300-EHT		3.8…5.7	523…784 (117…176)	11.9	1368 (308)	2.61…3.92	2097-V34PR5
LDC-C075400-EHT		7.7…11.5	697…1045 (157…235)	23.7	1824 (410)	3.48…5.22	2097-V34PR6
LDC-C100300-EHT	10.0 (32.8)	3.7…5.6	674…1012 (152…227)	11.4	1767 (397)	3.37…5.06	2097-V34PR5
LDC-C100400-EHT		7.4…11.1	899…1349 (202…303)	22.8	2356 (530)	4.49…6.74	2097-V34PR6
LDC-C150400-EHT	10.0 (32.8)	7.0…10.6	1281…1922 (288…432)	22.6	3498 (786)	6.40…9.61	2097-V34PR6

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDL-Series Performance Specifications with Kinetix 300 (200V-class) Drives

Performance Specifications with Kinetix 300 (200V-class, single-phase) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 300 200V-class Single-phase Drives
LDL-N030120-DHT	10.0 (32.8)	3.0	63 (14)	9.9	209 (47)	0.31	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-N030240-DHT		6.0	126 (28)	19.9	417 (94)	0.63	2097-V33PR5 2097-V32PR4
LDL-N030240-EHT		3.0		9.9			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-T030120-DHT		3.0	72 (16)	9.9	239 (54)	0.36	
LDL-T030240-DHT		6.0	144 (32)	19.9	479 (108)	0.72	2097-V33PR5 2097-V32PR4
LDL-T030240-EHT		3.0		9.9			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-N050120-DHT	10.0 (32.8)	2.7	96 (22)	9.1	317 (71)	0.48	2097-V33PR1 2097-V32PR0 2097-V31PR0
LDL-N050240-DHT		5.5	191 (43)	18.1	635 (143)	0.95	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-N050240-EHT		2.7		9.1			2097-V33PR1 2097-V32PR0 2097-V31PR0
LDL-N050360-DHT		8.2	287 (65)	27.2	952 (214)	1.43	2097-V33PR5 2097-V32PR4
LDL-N050360-EHT		2.7		9.1			2097-V33PR1 2097-V32PR0 2097-V31PR0
LDL-N050480-EHT		5.5	383 (86)	18.1	1269 (285)	1.91	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-T050120-DHT		2.7	110 (25)	9.1	364 (82)	0.55	2097-V33PR1 2097-V32PR0 2097-V31PR0
LDL-T050240-DHT		5.5	220 (49)	18.1	728 (164)	1.10	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-T050240-EHT		2.7		9.1			2097-V33PR1 2097-V32PR0 2097-V31PR0
LDL-T050360-DHT		8.2	329 (74)	27.2	1093 (246)	1.64	2097-V33PR5 2097-V32PR4
LDL-T050480-EHT		5.5	439 (99)	18.1	1457 (327)	2.19	2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-N075480-DHT	10.0 (32.8)	9.9	519 (117)	32.8	1723 (387)	2.59	2097-V33PR5 2097-V32PR4
LDL-N075480-EHT		4.9		16.4			2097-V33PR3 2097-V32PR2 2097-V31PR2
LDL-T075480-DHT		9.9	596 (134)	32.8	1977 (444)	2.98	2097-V33PR5 2097-V32PR4
LDL-T075480-EHT		4.9		16.4			2097-V33PR3 2097-V32PR2 2097-V31PR2

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications with Kinetix 300 (200V-class, three-phase) Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 300 200V-class Three-phase Drives
LDL-N030120-DHT	10.0 (32.8)	3.0	63 (14)	9.9	209 (47)	0.31	2097-V33PR3
LDL-N030240-DHT		6.0	126 (28)	19.9	417 (94)	0.63	2097-V33PR5
LDL-N030240-EHT		3.0		9.9			2097-V33PR3
LDL-T030120-DHT		3.0	72 (16)	9.9	239 (54)	0.36	2097-V33PR3
LDL-T030240-DHT		6.0	144 (32)	19.9	479 (108)	0.72	2097-V33PR5
LDL-T030240-EHT		3.0		9.9			2097-V33PR3
LDL-N050120-DHT	10.0 (32.8)	2.7	96 (22)	9.1	317 (71)	0.48	2097-V33PR1
LDL-N050240-DHT		5.5	191 (43)	18.1	635 (143)	0.95	2097-V33PR3
LDL-N050240-EHT		2.7		9.1			2097-V33PR1
LDL-N050360-DHT		8.2	287 (65)	27.2	952 (214)	1.43	2097-V33PR5
LDL-N050360-EHT		2.7		9.1			2097-V33PR1
LDL-N050480-DHT		10.9	383 (86)	36.3	1269 (285)	1.91	2097-V33PR6
LDL-N050480-EHT		5.5		18.1			2097-V33PR3
LDL-T050120-DHT		2.7	110 (25)	9.1	364 (82)	0.55	2097-V33PR1
LDL-T050240-DHT		5.5	220 (49)	18.1	728 (164)	1.10	2097-V33PR3
LDL-T050240-EHT		2.7		9.1			2097-V33PR1
LDL-T050360-DHT		8.2	329 (74)	27.2	1093 (246)	1.64	2097-V33PR5
LDL-T050480-DHT		10.9	439 (99)	36.3	1457 (327)	2.19	2097-V33PR6
LDL-T050480-EHT		5.5		18.1			2097-V33PR3
LDL-N075480-DHT	10.0 (32.8)	9.9	519 (117)	32.8	1723 (387)	2.59	2097-V33PR5
LDL-N075480-EHT		4.9		16.4			2097-V33PR3
LDL-T075480-DHT		9.9	596 (134)	32.8	1977 (444)	2.98	2097-V33PR5
LDL-T075480-EHT		4.9		16.4			2097-V33PR3

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 40 °C (104 °F) ambient, and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Kinetix 3 Component Servo Drives

The Kinetix 3 component servo drive provides a cost-effective motion control solution for smaller, low-axis count applications. By providing the ability to apply the appropriate level of control for the application along with downloadable configuration software and automatic motor recognition, the Kinetix 3 servo drive delivers a motion solution that is easy to use at minimum cost. Its compact size and lower power ranges make it ideal for a variety of applications including indexing tables, medical manufacturing, laboratory automation equipment, and semiconductor processing.

Kinetix 3 Servo Drive Features

- Single-axis solution for low-complexity motion applications, with or without a PLC
- Digital I/O, analog, preset velocity, and pulse-train command interfaces
- Performs indexing on up to 64 points through serial communication or over digital I/O
- 170…264V AC, (200V-class) single-phase or three-phase
- Drive configuration via free, downloadable, Ultraware software
- Modbus-RTU control with Connected Components Building Blocks (CCBB)
- MicroLogix 1100 or 1400 Programmable Logic Controller (PLC) with RSLogix 500 software
- Micro830 or Micro850 Programmable Logic Controller (PLC) with Connected Components Workshop Software

Kinetix 3 Servo Drive Components

Kinetix 3 servo drive systems consist of these required components:

- One 2071-A*xxxx* servo drive
- One rotary motor, linear motor, or linear actuator
- One motor power and motor feedback cable
- One 2071-TBMF breakout board (required for flying-lead feedback cables)

Kinetix 3 servo drive systems can also include any of these optional components:

- One 2071-TBIO breakout board for control interface (24 pins accessible)
- One 2090-DAIO-D50*xx* breakout cable (50 pins accessible)
- Bulletin 2090 control and configuration serial cables
- Bulletin 2090-XXLF-TC*xxx* AC line filter

To compare drive features across drive families, refer to Servo Drives beginning on page 28.

Kinetix 3 Servo Drive Selection

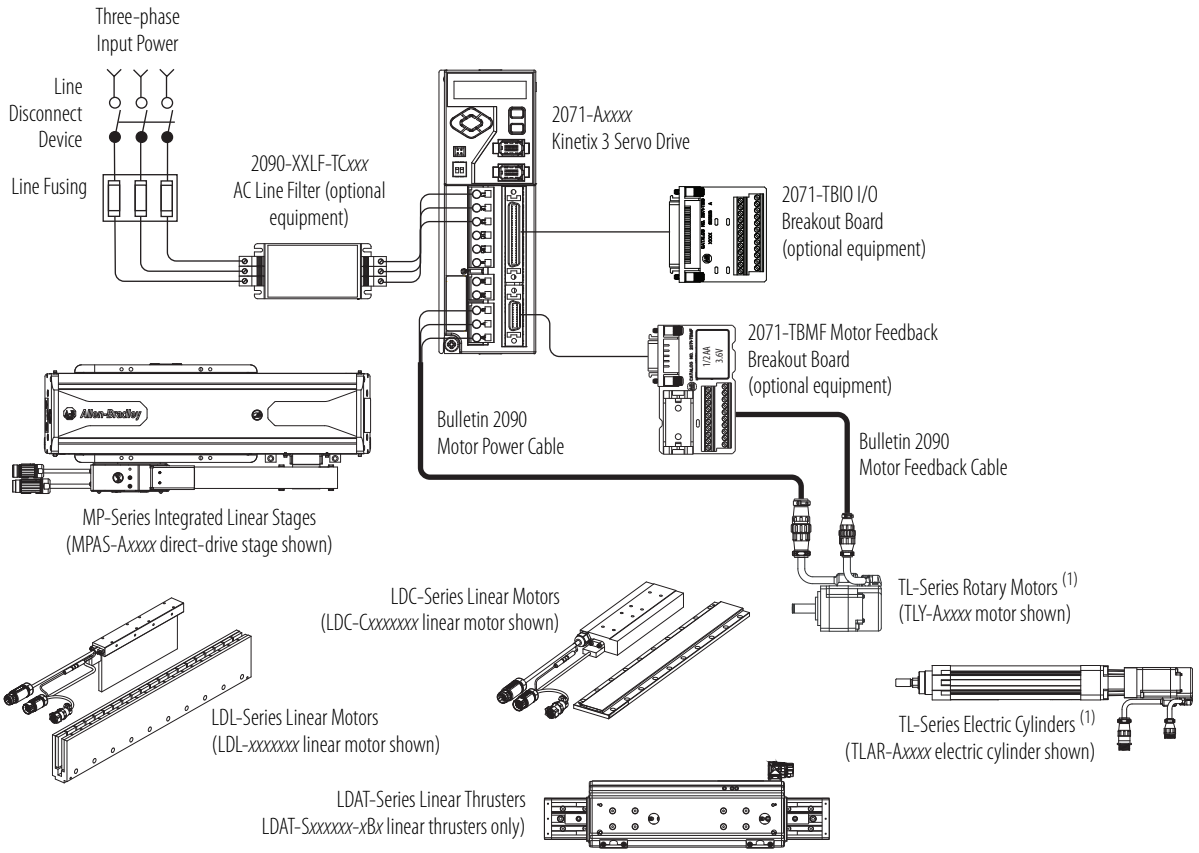
Cat. No.	Input Voltage	Continuous Output Power	Continuous Output Current A 0-pk
2071-AP0	240V AC rms, single-phase	50 W	0.85
2071-AP1		100 W	1.56
2071-AP2		200 W	2.40
2071-AP4		400 W	4.67
2071-AP8	240V AC rms, single-phase or three-phase	800 W	7.07
2071-A10	240V AC rms, three-phase	1.0 kW	9.90
2071-A15		1.5 kW	13.99

For Kinetix 3 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication GMC-TD003.

Typical Hardware Configurations

These hardware configurations illustrate the typical use of servo drives, motors, actuators, and motion accessories available for Kinetix 3 drive systems.

Kinetix 3 Servo Drive System

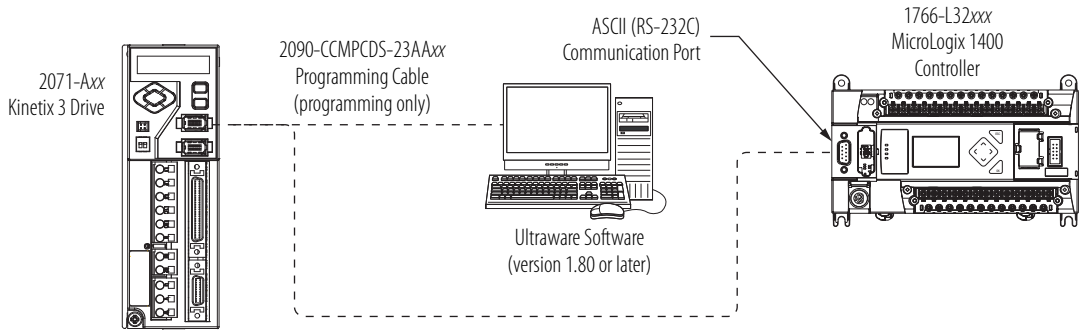


(1) TL-Series (Bulletin TL and TLY) rotary motors and Bulletin TLAR electric cylinders require the 2071-TBMF breakout board with 3.6V lithium battery (not included) to maintain absolute position reference. Other Kinetix 3 compatible motors and actuators require the breakout board for flying-lead feedback connections, but not the battery.

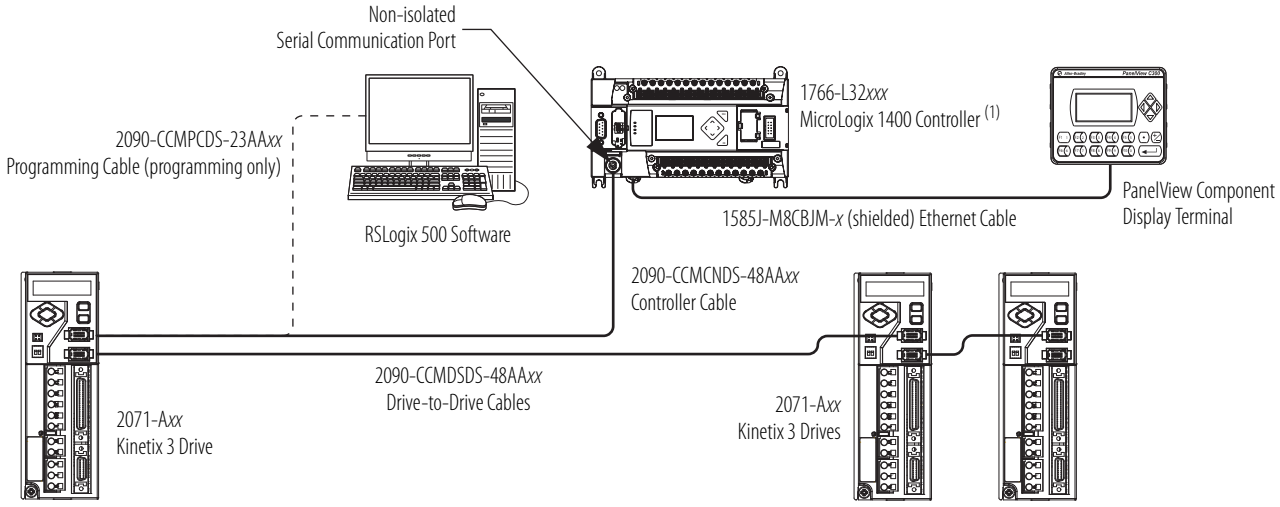
Typical Communication Configurations

Bulletin 2090 control and configuration serial cables are available for programming your drive and controller.

Kinetix 3 Configuration (ASCII control)

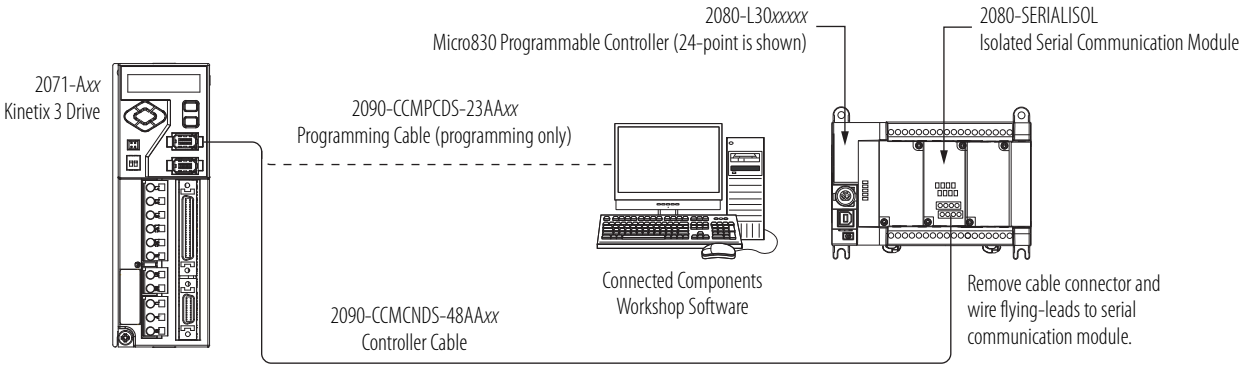


Kinetix 3 Configuration (Modbus control)



(1) Could also be MicroLogix 1100 controller (catalog number 1763-L16*xxx*).

Kinetix 3 Configuration (2080-SERIALISOL communication module)



Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 3 servo drives.

Rotary Motor Family	Page
TL-Series (Bulletin TLY) low-inertia motors	144
TL-Series (Bulletin TL) low-inertia motors	145

For Kinetix 3 drive system combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 3 Drive Systems Design Guide, publication GMC-RM005.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

Bulletin TLY Motor Performance Specifications with Kinetix 3 Drives

Performance Specifications (non-brake) with Kinetix 3 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 3 200V-series Drives
TLY-A120*x*	6000 (1)	1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2071-AP1
TLY-A130*x*		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2071-AP1
TLY-A220*x*		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2071-AP4
TLY-A230*x*		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2071-AP4
TLY-A2540P	5000	10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2071-AP8
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.95	2071-A10

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*P-B motors with absolute high-resolution encoders are rated at 5000 rpm.

Performance Specifications (brake) with Kinetix 3 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 3 200V-series Drives
TLY-A120*x*	6000 (1)	0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2071-AP1
TLY-A130*x*		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2071-AP1
TLY-A220*x*		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2071-AP4
TLY-A230*x*		4.95	1.16 (10.3)	15.5	3.05 (27.0)	0.32	2071-AP4
TLY-A2540P	5000	10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.66	2071-AP8
TLY-A310M	4500	10.0	3.61 (31.9)	30.0	9.0 (79.6)	0.90	2071-A10

(1) Applies to TLY-A*xxx*T-H motors with incremental feedback. The TLY-A*xxx*P-B motors with absolute high-resolution encoders are rated at 5000 rpm.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin TL Motor Performance Specifications with Kinetix 3 Drives

Performance Specifications (non-brake) with Kinetix 3 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 3 200V-series Drives
TL-A120P	5000	1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2071-AP1
TL-A130P		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2071-AP1
TL-A220P		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2071-AP4
TL-A230P		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2071-AP4
TL-A2540P		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2071-AP8
TL-A410M	4500	15.5	5.42 (48.0)	43.4	13.0 (115.0)	2.0	2071-A15

Performance Specifications (brake) with Kinetix 3 Drives

Motor Cat. No.	Speed, max rpm	System Continuous Stall Current A 0-pk	System Continuous Stall Torque N•m (lb•in)	System Peak Stall Current A 0-pk	System Peak Stall Torque N•m (lb•in)	Motor Rated Output kW	Kinetix 3 200V-series Drives
TL-A120P	5000	0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2071-AP1
TL-A130P		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2071-AP1
TL-A220P		3.15	0.757 (6.70)	7.90	1.48 (13.10)	0.24	2071-AP4
TL-A230P		4.95	1.160 (10.30)	15.5	3.05 (27.0)	0.32	2071-AP4
TL-A2540P		10.0	2.940 (26.00)	24.8	7.10 (63.0)	0.66	2071-AP8
TL-A410M	4500	14.0	4.860 (43.0)	43.4	13.0 (115.0)	1.80	2071-A15

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 3 servo drives.

For Kinetix 3 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 3 Drive Systems Design Guide, publication GMC-RM005.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer software to verify compatibility. Download is available at http://www.ab.rockwellautomation.com/motion-control/motion-analyzer-software.

LDAT-Series Performance Specifications with Kinetix 3 Drives

Performance Specifications (frame 30) with Kinetix 3 Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S031010-DB*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2071-AP8
LDAT-S031020-DB*x*	3.1					0.25	
LDAT-S031030-DB*x*	3.5					0.29	
LDAT-S031040-DB*x*	3.8					0.31	
LDAT-S032010-DB*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.44	2071-A10
LDAT-S032020-DB*x*	4.1					0.52	
LDAT-S032030-DB*x*	4.7					0.59	
LDAT-S032040-DB*x*	5.0					0.63	
LDAT-S032010-EB*x*	3.1	3.7		12.2		0.40	2071-AP8
LDAT-S032020-EB*x*	4.1					0.47	
LDAT-S032030-EB*x*	4.7					0.52	
LDAT-S032040-EB*x*	5.0					0.55	
LDAT-S033010-DB*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2071-A15
LDAT-S033020-DB*x*	4.7					0.88	
LDAT-S033030-DB*x*	5.0					0.95	
LDAT-S033040-DB*x*							
LDAT-S033010-EB*x*	3.5	3.7		12.2		0.55	2071-AP8
LDAT-S033020-EB*x*	4.4					0.65	
LDAT-S033030-EB*x*							
LDAT-S033040-EB*x*							

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 50) with Kinetix 3 Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S051010-DB*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.31	2071-AP4
LDAT-S051020-DB*x*	3.7					0.38	
LDAT-S051030-DB*x*	4.1					0.42	
LDAT-S051040-DB*x*	4.4					0.44	
LDAT-S051050-DB*x*	4.7					0.46	
LDAT-S052010-DB*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.79	2071-AP8
LDAT-S052020-DB*x*	4.8					0.97	
LDAT-S052030-DB*x*	5.00					1.01	
LDAT-S052040-DB*x*							
LDAT-S052050-DB*x*							
LDAT-S052010-EB*x* ... LDAT-S052050-EB*x*	2.6	3.1		11.4		0.50	2071-AP4

Performance Specifications (frame 50) with Kinetix 3 Drives (continued)

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S053010-DB*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.31	2071-A10
LDAT-S053020-DB*x*	5.0					1.53	
LDAT-S053030-DB*x* ... LDAT-S053050-DB*x*	5.0					1.53	
LDAT-S053010-EB*x* ... LDAT-S053050-EB*x*	1.7	3.1		11.4		0.47	2071-AP4
LDAT-S054010-DB*x*	4.4	12.4	509 (114)	45.5	1453 (327)	1.87	2071-A15
LDAT-S054020-DB*x* ... LDAT-S054050-DB*x*	5.0					2.05	
LDAT-S054010-EB*x* ... LDAT-S054050-EB*x*	2.6	6.2		22.7		1.02	2071-AP8

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 70) with Kinetix 3 Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S072010-DB*x* ... LDAT-S072070-DB*x*	3.5	6.0	364 (82)	22.0	1055 (237)	1.03	2071-AP8
LDAT-S072010-EB*x* ... LDAT-S072070-EB*x*	1.7	3.0		11.0		0.47	2071-AP4
LDAT-S073010-DB*x* ... LDAT-S073070-DB*x*	3.5	9.0	554 (125)	32.8	1576 (354)	1.57	2071-A10
LDAT-S073010-EB*x* ... LDAT-S073070-EB*x*	1.2	3.0		10.9		0.41	2071-AP4
LDAT-S074010-DB*x* ... LDAT-S074070-DB*x*	3.5	11.9	730 (164)	43.5	2088 (469)	2.08	2071-A15
LDAT-S074010-EB*x* ... LDAT-S074070-EB*x*	1.8	6.0		21.7		0.95	2071-AP8
LDAT-S076010-EB*x* ... LDAT-S076070-EB*x*	1.8	9.1	1122 (252)	33.2	3189 (717)	1.45	2071-A10

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 100) with Kinetix 3 Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S102010-DB*x* … LDAT-S102090-DB*x*	2.6	5.7	456 (103)	21.0	1289 (290)	0.96	2071-AP8
LDAT-S102010-EB*x* … LDAT-S102090-EB*x*	1.3	2.9		10.5		0.42	2071-AP4
LDAT-S103010-DB*x* … LDAT-S103090-DB*x*	2.7	8.6	702 (158)	31.5	1935 (435)	1.47	2071-A10
LDAT-S103010-EB*x* … LDAT-S103090-EB*x*	0.9	2.9		10.5	1388 (312)	0.30	2071-AP4
LDAT-S104010-DB*x* … LDAT-S104090-DB*x*	2.7	11.5	929 (209)	42.0	2578 (580)	2.07	2071-A15
LDAT-S104010-EB*x* … LDAT-S104090-EB*x*	1.3	5.7		21.0		0.86	2071-AP8
LDAT-S106010-EB*x* … LDAT-S106090-EB*x*	1.3	8.6	1403 (315)	31.5	3871 (870)	1.28	2071-A10

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Performance Specifications (frame 150) with Kinetix 3 Drives

Linear Thruster Cat. No.	Velocity, max 230V AC m/s	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Rated Output 230V AC kW	Kinetix 3 200V-class Drives
LDAT-S152010-DB*x* … LDAT-S152090-DB*x*	1.8	5.3	643 (145)	19.5	1799 (404)	0.87	2071-AP8
LDAT-S152010-EB*x* … LDAT-S152090-EB*x*	0.9	2.7		9.8	1679 (377)	0.34	2071-AP4
LDAT-S153010-DB*x* … LDAT-S153090-DB*x*	1.8	8.0	978 (220)	29.1	2680 (602)	1.33	2071-A10
LDAT-S153010-EB*x* … LDAT-S153090-EB*x*	1.8	10.7	1306 (294)	39.1	3597 (809)	1.78	2071-AP4
LDAT-S154010-DB*x* … LDAT-S154090-DB*x*	0.9	5.3		19.5	3383 (761)	0.70	2071-A15
LDAT-S154010-EB*x* … LDAT-S154090-EB*x*	1.8	16.3	1997 (449)	59.4	5469 (1229)	2.71	2071-AP8
LDAT-S156010-EB*x* … LDAT-S156090-EB*x*	0.9	8.1		19.8	5110 (1149)	1.05	2071-A10

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin MPAS Performance Specifications with Kinetix 3 Drives

Linear Stage Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current A 0-pk	System Peak Stall Force N•m (lb•in)	Motor Output Power Rating kW	Kinetix 3 200V-series Drives
MPAS-A6*xxx*B-ALMO2C	5000 (200) (1)	5.3	105 (23.6)	15.8	359 (80.7)	0.32	2071-AP8
MPAS-A6*xxx*B-ALMS2C		4.7	83.0 (18.7)	14.2	312 (70.1)	0.29	
MPAS-A8*xxx*E-ALMO2C		7.0	189 (42.5)	18.5	456 (103)	0.53	
MPAS-A8*xxx*E-ALMS2C		6.3	159 (35.7)	16.7	399 (89.7)	0.48	
MPAS-A9*xxx*K-ALMO2C		6.7	285 (64.1)	18.3	680 (153)	0.77	
MPAS-A9*xxx*K-ALMS2C		6.1	245 (55.1)	16.5	601 (135)	0.69	

(1) Due to the short travel of many of these stages and the distance needed to reach a maximum velocity of 5000 mm/s (200 in./s), the maximum velocity of these stages is often less than 5000 mm/s (200 in./s). For the maximum velocity of each linear stage according to stroke length, refer to the Kinetix Linear Motion Specifications Technical Data, publication GMC-TD002.

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Bulletin TLAR Performance Specifications with Kinetix 3 Drives

Performance Specifications (non-brake) with Kinetix 3 Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 3 200V-series Drives
TLAR-A1*xxx*B	150	1.36	240 (53.9)	1.79	300 (67.4)	0.036	2071-AP0
TLAR-A1*xxx*E	500	2.59	280 (62.9)	3.03	350 (78.7)	0.140	2071-AP2
TLAR-A2*xxx*C	250	3.03	420 (94.4)	3.41	525 (118)	0.105	2071-AP2
TLAR-A2*xxx*F	640	5.50	640 (144)	7.25	800 (180)	0.350	2071-AP4
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2071-A10
TLAR-A3*xxx*H	1000		1300 (292)	17.2	1625 (365)		2071-A15

Performance Specifications (brake) with Kinetix 3 Drives

Electric Cylinder Cat. No.	Speed, max mm/s (in/s)	System Continuous Stall Current Amps 0-pk	System Continuous Stall Force N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Motor Output Power Rating kW	Kinetix 3 200V-series Drives
TLAR-A1*xxx*B	150	1.18	240 (53.9)	1.79	300 (67.4)	0.036	2071-AP0
TLAR-A1*xxx*E	500	2.24	280 (62.9)	3.03	350 (78.7)	0.140	2071-AP2
TLAR-A2*xxx*C	250	2.68	420 (94.4)	3.41	525 (118)	0.105	2071-AP2
TLAR-A2*xxx*F	640	4.95	640 (144)	7.25	800 (180)	0.350	2071-AP4
TLAR-A3*xxx*E	500	10.0	2000 (450)	12.9	2500 (562)	0.930	2071-A10
TLAR-A3*xxx*H	1000		1300 (292)	17.2	1625 (365)		2071-A15

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDC-Series Performance Specifications with Kinetix 3 Drives

Linear Motor Cat. No.	Speed, max m/s (ft/s)	System Continuous Stall Current (1) Amps 0-pk	System Continuous Stall Force (1) N (lb)	System Peak Stall Current Amps 0-pk	System Peak Stall Force N (lb)	Linear Motor Rated Output kW	Kinetix 3 200V-series Drives
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2071-AP4
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2071-A10
LDC-C030200-EHT		4.1…6.1		12.1			2071-AP4
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2071-AP4
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2071-A10
LDC-C050200-EHT		3.9…5.9		11.6			2071-AP4
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2071-A15
LDC-C050300-EHT		3.9…5.9		12.0			2071-AP4
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2071-A10
LDC-C075200-EHT		3.8…5.7		11.5			2071-AP4
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2071-A15
LDC-C075300-EHT		3.8…5.7		11.9			2071-AP4
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2071-A15
LDC-C075400-EHT		7.7…11.5		23.7			2071-A10
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	2071-A15
LDC-C100300-EHT		3.7…5.6		11.4			2071-AP4
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2071-A15
LDC-C100400-EHT		7.4…11.1		22.8			2071-A10
LDC-C100600-DHT		22.2…33.3	1349…2023 (303…455)	68.5	3534 (794)	6.74…10.11	2071-A15
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2071-A10
LDC-C150400-EHT							2071-A15
LDC-C150600-DHT		21.1…31.7	1922…2882 (432…648)	67.8	5246 (1179)	9.61…14.41	2071-A15

(1) Values represent the range between no cooling (low value) and water cooling (high value).

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

LDL-Series Performance Specifications with Kinetix 3 Drives

Linear Motor Cat. No.	**Speed, max** m/s (ft/s)	**System Continuous Stall Current** Amps 0-pk	**System Continuous Stall Force** N (lb)	**System Peak Stall Current** Amps 0-pk	**System Peak Stall Force** N (lb)	**Linear Motor Rated Output** kW	**Kinetix 3 200V-series Drives**
LDL-N030120-DHT	10.0 (32.8)	3.0	63 (14)	9.9	209 (47)	0.31	2071-AP4
LDL-N030240-DHT		6.0	126 (28)	19.9	417 (94)	0.63	2071-AP8
LDL-N030240-EHT		3.0		9.9			2071-AP4
LDL-T030120-DHT		3.0	72 (16)	9.9	239 (54)	0.36	2071-AP4
LDL-T030240-DHT		6.0	144 (32)	19.9	479 (108)	0.72	2071-AP8
LDL-T030240-EHT		3.0		9.9			2071-AP4
LDL-N050120-DHT	10.0 (32.8)	2.7	96 (22)	9.1	317 (71)	0.48	2071-AP4
LDL-N050240-DHT		5.5	191 (43)	18.1	635 (143)	0.95	2071-AP8
LDL-N050240-EHT		2.7		9.1			2071-AP4
LDL-N050360-DHT		8.2	287 (65)	27.2	952 (214)	1.43	2071-A10
LDL-N050360-EHT		2.7		9.1			2071-AP4
LDL-N050480-DHT		10.9	383 (86)	36.3	1269 (285)	1.91	2071-A15
LDL-N050480-EHT		5.5		18.1			2071-AP8
LDL-T050120-DHT		2.7	110 (25)	9.1	364 (82)	0.55	2071-AP4
LDL-T050240-DHT		5.5	220 (49)	18.1	728 (164)	1.10	2071-AP8
LDL-T050240-EHT		2.7		9.1			2071-AP4
LDL-T050360-DHT		8.2	329 (74)	27.2	1093 (246)	1.64	2071-A10
LDL-T050480-DHT		10.9	439 (99)	36.3	1457 (327)	2.19	2071-A15
LDL-T050480-EHT		5.5		18.1			2071-AP8
LDL-N075480-DHT	10.0 (32.8)	9.9	519 (117)	32.8	1723 (387)	2.59	2071-A15
LDL-N075480-EHT		4.9		16.4			2071-AP8
LDL-T075480-DHT		9.9	596 (134)	32.8	1977 (444)	2.98	2071-A15
LDL-T075480-EHT		4.9		16.4			2071-AP8

Performance specification data and curves reflect nominal system performance of a typical system with motor at 40 °C (104 °F) and drive at 50 °C (122 °F) ambient and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

Notes:

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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