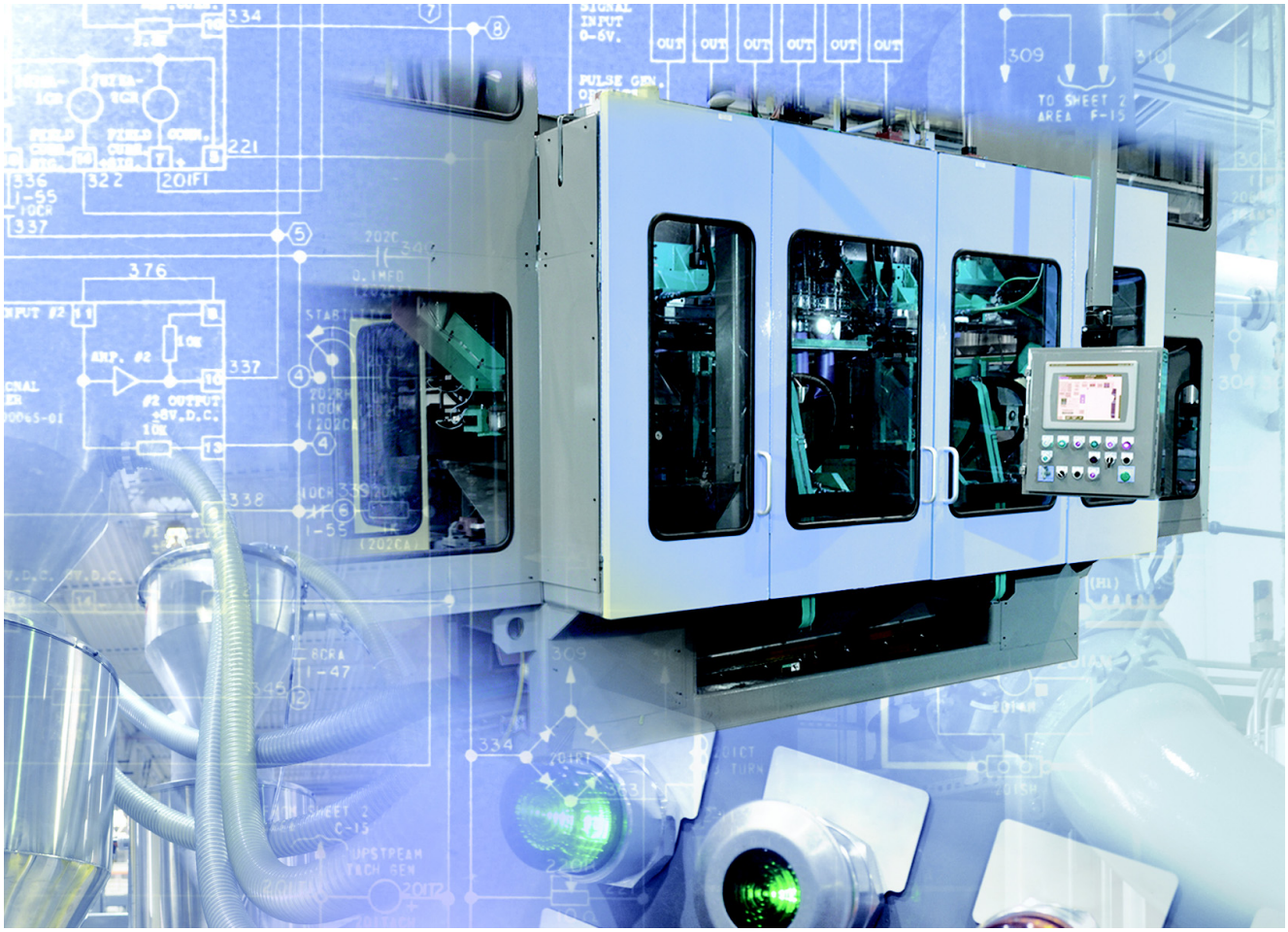
Selection Guide

Allen-Bradley

Kinetix Motion Control

Rotary Servo Motors
Linear Motors
Linear Actuators
Servo Drives
Logix 5000 Motion Modules
Motion Accessories



Product Specifications

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

Design Guides

Kinetix 5700 Drive Systems
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 22, 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

For assistance and validation in making final product selections, consider using the Integrated Architecture® Builder tool that is available at http://www.rockwellautomation.com/global/support/configuration.page.

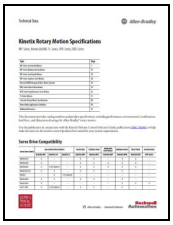
Additional product options are available through Encompass™, our third-party product referencing program. For more information about the Encompass program, see http://www.rockwellautomation.com/global/sales-partners/complementary-products/overview.page.

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.

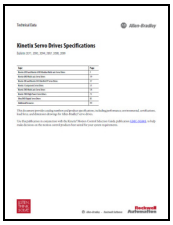
Product Specifications

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



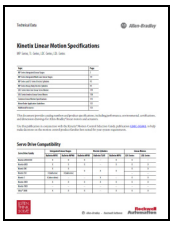
Kinetix Rotary Motion Specifications Technical Data, publication KNX-TD001

- Kinetix VP (Bulletin VPL, VPC, VPF, VPH, and VPS) Servo Motors
- MP-Series™ (Bulletin MPL, MPM, MPF, and MPS) Servo Motors
- HPK-Series™ Asynchronous Servo Motors
- TL-Series™ Servo Motors



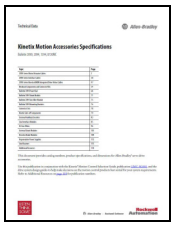
Kinetix Servo Drives Specifications Technical Data, publication KNX-TD003

- Kinetix 5700 Servo Drives
- 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



Kinetix Linear Motion Specifications Technical Data, publication KNX-TD002

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

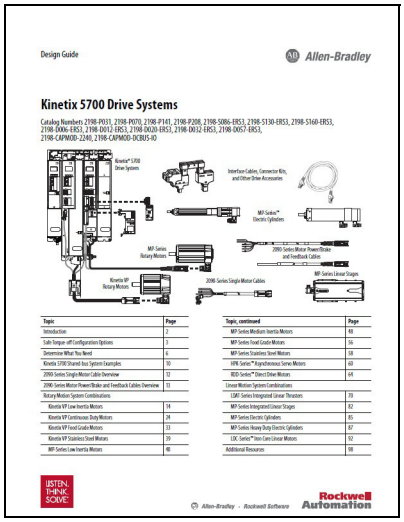


Kinetix Motion Accessories Specifications Technical Data, publication KNX-TD004

- 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 5700 Drive Systems Design Guide, publication KNX-RM010
- Kinetix 5500 Drive Systems Design Guide, publication KNX-RM009
- Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication KNX-RM003
- Kinetix 300/350 Drive Systems Design Guide, publication KNX-RM004
- Kinetix 3 Drive Systems Design Guide, publication KNX-RM005
- Kinetix 2000 Drive Systems Design Guide, publication KNX-RM006
- Kinetix 7000 Drive Systems Design Guide, publication GMC-RM007

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 and 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 over the EtherNet/IP™ network uses CIP Motion™, CIP Safety™, CIP Security™, and CIP Sync™ technology from ODVA Inc., all built on the Common Industrial Protocol (CIP™). Global standards help provide 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® Logix 5000™ controllers (ControlLogix®, GuardLogix®, 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 up to 212 kW
  - Kinetix 5700 servo drive family
  - 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
- 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 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 that produces low-cost equipment at high volumes. The component servo drive can apply the appropriate level of control for the application without added complexity. Systems can include serial commands from MicroLogix™ or Micro800™ controllers, or discrete wires attached directly to the sensor or controller with TL-Series low-inertia motors.

What's New?

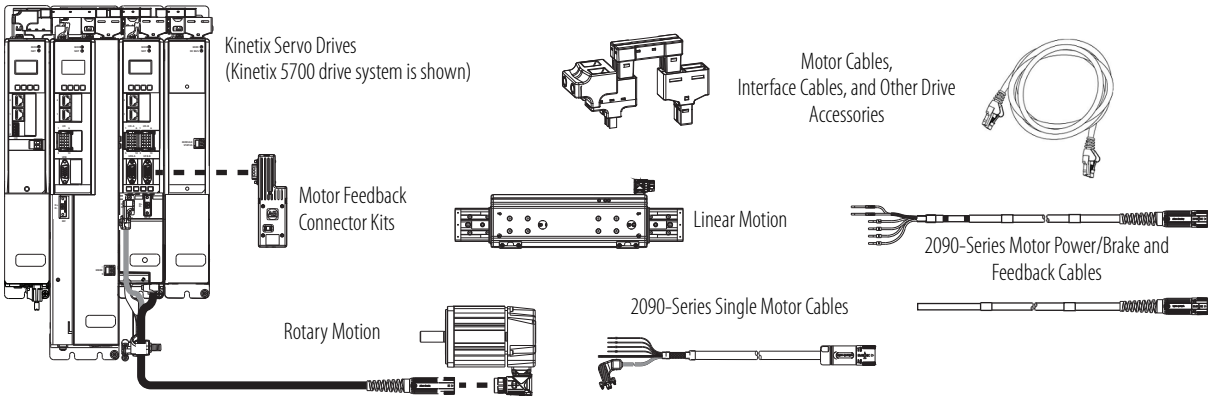
The new Kinetix motion control products include the following.

Motion Control Products	Description	Refer to
 **Kinetix 5700 DC-bus Power Supply Single-axis and Dual-axis Inverters**	The Kinetix 5700 drive family helps expand the value of Integrated Motion and Integrated Safety on the EtherNet/IP network to large custom machine-builder applications. The power range of Kinetix 5700 drives is designed for machines with high axis-counts and high-power requirements. Single and dual-axis inverters are available with integrated and hardwired safe torque-off (STO) and Safe Stop 1 (SS1) safety functions. • Large power range designed for machines with high axis counts • DC-bus power supply or regenerative bus supply, 480V three-phase operation – Multi-axis, DC-bus sharing, extended DC-bus sharing • TÜV Rheinland certified, PL e, category 3, SIL 3 • 2198-*xxxx*-ERS3 and 2198-*xxxx*-ERS4 single-axis and dual-axis inverters – Hardwired and Integrated STO • 2198-*xxxx*-ERS3 single-axis and dual-axis (series B) inverters add: – Integrated (drive-based) Timed SS1 • 2198-*xxxx*-ERS4 single-axis and dual-axis inverters add: – Integrated (drive-based) Timed SS1 and Monitored SS1 – Integrated (controller-based) SS1, SFX, SS2, SOS, SLS, SLP, SDI, SBC • Single-axis and dual-axis inverters – Accepts DSL encoder feedback from Kinetix VP motor family – Accepts Hiperface and incremental encoder feedback from Allen-Bradley motors and actuators • Induction motor frequency control, closed-loop control, and adaptive tuning • Integrated motion and integrated safety on the EtherNet/IP network • CIP Security communication across the EtherNet/IP network	• Page 16 for a flowchart to help you determine if the Kinetix 5700 drive family is a good choice for your application. • Page 35 for an overview of Kinetix 5700 servo drive features. • Page 55 for Kinetix 5700 drive performance specifications with compatible rotary motion products. • Page 65 for Kinetix 5700 drive performance specifications with compatible linear motion products.
 **Kinetix VP (Bulletin VPH) Hygienic Stainless Steel Servo Motors**	Kinetix VP (Bulletin VPH) hygienic servo motors are specifically designed to meet the unique needs of washdown environments such as those found in food and beverage, dairy, meat processing, and pharmaceutical manufacturing equipment. The enhanced hygienic design includes a 316-grade stainless-steel housing that provides a reliable and convenient solution to the requirements of machine cleaning and hygienic operations. • Smooth, passivated, 316-grade stainless-steel cylindrical exterior • Designed per 3A and EHEDG guidelines • Single cable technology • Certified and listed to NSF/ANSI Standard 169 • 200V and 400V-class windings • VPH-A/B*xxxxx*-C motors with absolute single-turn encoder, Hiperface DSL protocol. • VPH-A/B*xxxxx*-Q/-W motors with absolute multi-turn encoder, Hiperface DSL, SIL 2 (PL d) protocol. • On-motor cable extensions available in 1. . . 15 m (3.2 . . . 49.2 ft) lengths	• Page 11 for an overview of all the Allen-Bradley rotary motor families. • Page 24 to compare features and specifications across the Bulletin VPL, VPC, VPF, VPH, and VPS motor families. • Page 60 for Kinetix 5700 drive performance with Bulletin VPH hygienic servo motors. • Page 93 for Kinetix 5500 drive performance with Bulletin VPH hygienic servo motors.

Motion Control Products	Description	Refer to
 **Kinetix 5700 Regenerative Bus Supply**	Regenerative bus supplies with 400V-class (three-phase) AC input provides continuous output power and current to Bulletin 2198 single-axis and dual-axis inverters for applications with requirements in the range of 24…140 kW and 35…207 A, output current. 2198-RP*xxx* regenerative bus supplies offer the following features and benefits: • Provides full-line motoring and regenerative power to and from a Kinetix 5700 common-bus system • Integrated LC filter minimizes AC line harmonics from the AC power source and saves significant panel-space and installation costs • Configure the regenerative bus supply to provide active DC-bus voltage regulation or passive AC rectification like the DC-bus power supply • Extend the same 458…747V DC-bus voltage to two or more extended clusters in the same cabinet • Kinetix 5700 accessory modules provide connection points for the extended DC-bus • The Kinetix 5700 servo drive system is capable of up to 208 A DC-bus current. • Compatible with Kinetix 5700, Kinetix 7000, Kinetix 6000, Kinetix 6200, PowerFlex® 755, and other select PowerFlex inverters	• Page 16 for a flowchart to help you determine if the Kinetix 5700 regenerative bus supply is a good choice for your application. • Page 35 for an overview of Kinetix 5700 regenerative bus supply features. • Page 55 for Kinetix 5700 drive performance specifications with compatible rotary motion products. • Page 65 for Kinetix 5700 drive performance specifications with compatible linear motion products.
 **Kinetix 5700 Single-axis Inverters**	2198-S263-ERS*x* and 2198-S312-ERS*x* single-axis inverters offer the following features and benefits: • Extends Kinetix 5700 drive system as a single platform for motion solutions from 1.6 kW…112 kW • Features and safety options identical to other 2198-S*xxx*-ERS*x* single-axis inverters • Supports HPK-Series motors and third-party induction motors up to 112 kW • Regenerates excess energy back to the common DC-bus • Significant cabinet space savings with zero-stack capability and single-cable technology • Power matched solutions with 2198-RP263 and 2198-RP312 regenerative bus supplies, respectively	• Page 55 for Kinetix 5700 drive performance specifications with compatible rotary motion products. • Page 65 for Kinetix 5700 drive performance specifications with compatible linear motion products.
 **Kinetix VP (Bulletin VPAR) Electric Cylinders**	The Kinetix VP (Bulletin VPAR) electric cylinders are available in three ISO 15552 pneumatic-class frame sizes (32, 40, and 63). These durable, quiet, and energy-efficient non-rotating stainless-steel piston rod actuators are an excellent upgrade for pneumatic systems and offer the following features and benefits: • Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, assembly, wiring, and commissioning time. • State-of-the-art design features ballscrew construction with linear stroke lengths up to 800 mm (32 in.) and speeds up to 1.0 m/s (39.4 in/s). • Single cable technology • Compatibility with Kinetix 5700 and Kinetix 5500 servo drive families. • VPAR-B*xxxxx*-P actuators with absolute multi-turn encoder, Hiperface DSL protocol. • VPAR-B*xxxxx*-Q/-W actuators with absolute multi-turn encoder, Hiperface DSL, SIL 2 (PL d) protocol. • Linear feed force of up to 2500 N (562 lb) • Optional 24V DC holding brakes	• Page 13 for an overview of all the Allen-Bradley linear actuator families. • Page 29 to compare features and specifications across Bulletin VPAR, MPAR, and MPAI electric cylinders. • Page 70 for Kinetix 5700 drive performance with Bulletin VPAR electric cylinders. • Page 109 for Kinetix 5500 drive performance with Bulletin VPAR electric cylinders.
 **2198-ABQE Encoder Output Module**	The Allen-Bradley encoder output module is a DIN-rail mounted EtherNet/IP network-based standalone module capable of generating output pulses in multiple encoder protocols to a customer-supplied peripheral device (cameras, for example, used in line-scan vision systems). The encoder output module supports real and virtual axes for systems using the integrated motion on EtherNet/IP network. • Synchronizes third-party devices to our integrated motion system • Configure and program with Studio 5000 Logix Designer application • In-cabinet installation eliminates the need to mount encoders on the machine • Syncs with any axis of motion. It is not limited to nearby axes • Configurable output: quadrature or pulse train • Dual Ethernet ports support a variety of network topologies	• Page 48 for Kinetix 5700 servo drive/encoder-module system examples. • Page 81 for Kinetix 5500 servo drive/encoder-module system examples. • Page 121 for Kinetix 6500 servo drive/encoder-module system examples. • Page 174 for Kinetix 350 servo drive/encoder-module system examples.

Select a Kinetix Motion Control System

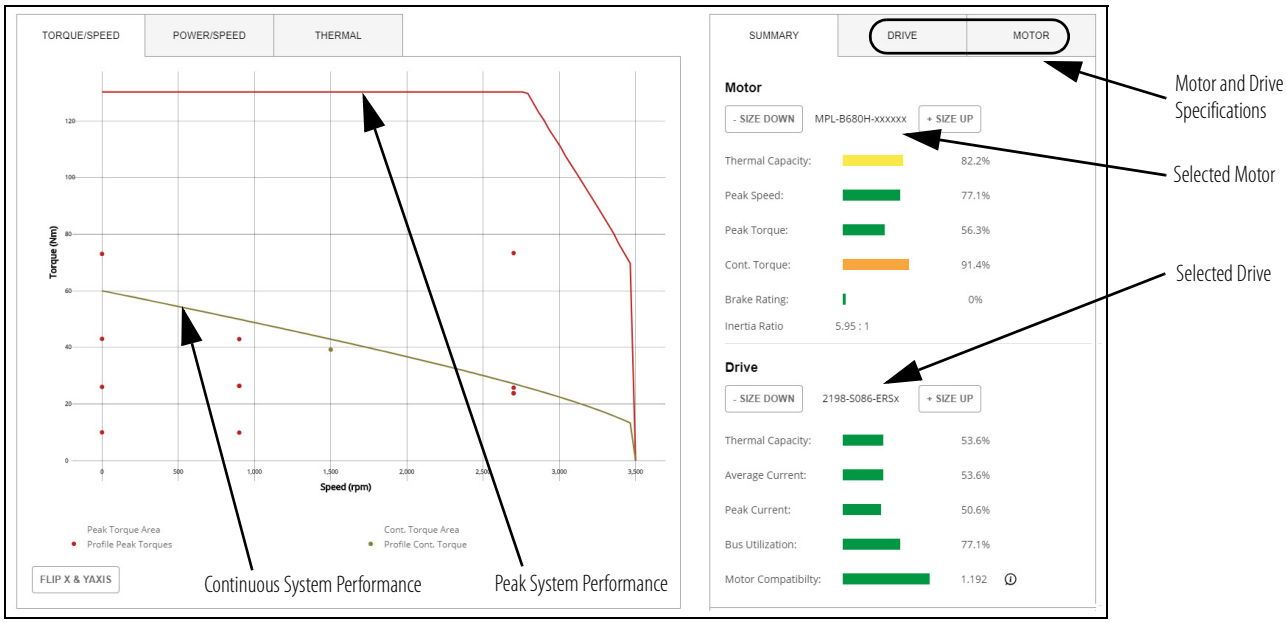
Typical motion control systems require selections from several categories of Allen-Bradley motion control products.



Use Motion Analyzer

Motion Analyzer 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 provides you with the data to determine the optimum drive and motor/actuator combination for your application.

The torque-speed tool gives you quick access to torque-speed performance curves for any compatible combination of motors/actuators and drives.



To access Motion Analyzer, go to https://motionanalyzer.rockwellautomation.com.

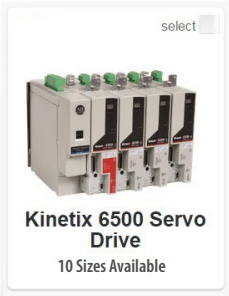
Motion Analyzer Features

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

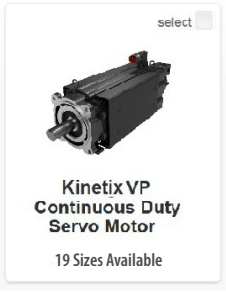
- Reduce motion system design risk
- Reduce time from machine design to shipment
- Optimize motion control system cost and size
- Enhance machine performance and reliability
- Create a bill of materials

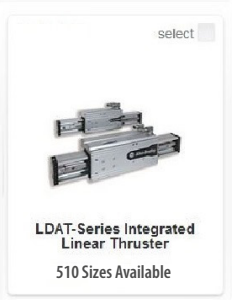
Motion Analyzer includes the full range of Kinetix Motion Control products and features.

Kinetix Servo Drives - Motion Analyzer includes all the latest drive and motor/actuator families from Rockwell Automation, including Kinetix 5700 drives and power supplies.



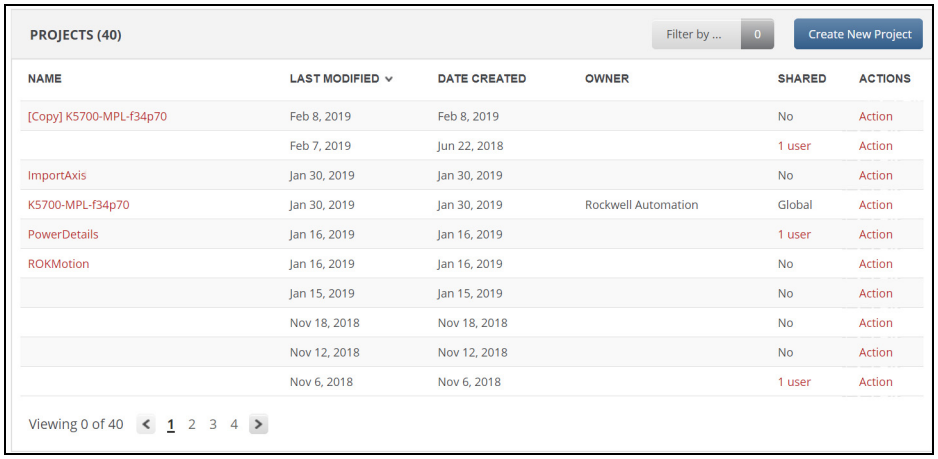
Allen-Bradley Rotary Motion and Linear Motion





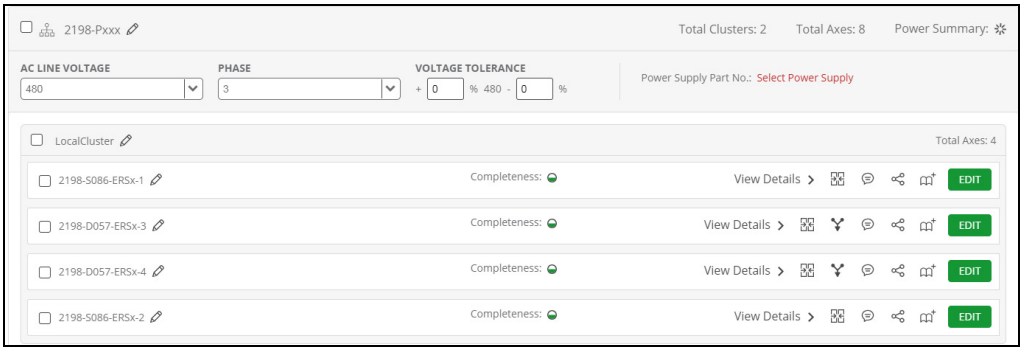
Encompass Partner Products - We have the specifications and ratings for a wide range of products in the Rockwell Automation PartnerNetwork™ program, allowing you to build your whole system in a single tool. No need to look up and manually enter the data, simply select your product and go.

Project and Component Library - Create, store, reuse, and share from the Library feature. Store projects and components from the Library for an easy means of managing developments and designs.

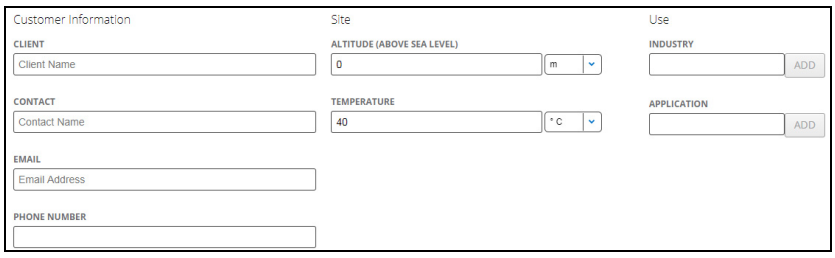


Collaborate and Share - Motion Analyzer allows you to share your projects with other users in a secure environment. You have complete control over who can read, write, or make copies of your project. Exercise this feature from the Library or Architecture Overview.

Power Bus and Axis Drive Architecture - Setup drive and bus architecture in the Architecture Overview. In addition, define line-in power requirements at the bus level to establish design continuity between each axis. The Kinetix 5700 system also supports drive clustering and dual-axis merge (when 2198-D*xxx*-ERS*x* drives are defined in the axis).



Project Preferences - Use your project data for practical and environmental conditions. Store your customer application for sorting in the future. Set your site altitude and temperature to improve the accuracy of the motor thermal performance.

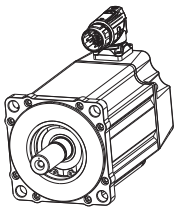


Sign-up for free today by visiting https://motionanalyzer.rockwellautomation.com. Contact motionanalyzersupport@ra.rockwell.com for Motion Analyzer related support.

Select a Rotary Motion Family

Kinetix VP Servo Motors

- Developed to match Kinetix 5500 and Kinetix 5700 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

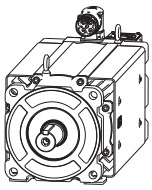


Kinetix VP (Bulletin VPL) low-inertia servo motors are based on proven MP-Series technology for dynamic performance, increased reliability, and leverages high volume production.

- High-energy rare-earth magnets
- Absolute multi-turn digital encoder options, SIL 2 (PL d) rated (Hiperface DSL protocol)
- 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

The Kinetix VP (Bulletin VPC) continuous-duty servo motors for applications with high-torque and high-speed demands.

- Developed to match Kinetix 5700 (400V-class) drives for optimized system sizing and performance
- Interior permanent-magnet technology with high-energy rare-earth magnets
- Hiperface, Hiperface DSL and EnDat encoder protocols
- IP65 with shaft seal and environmentally sealed connector
- 17.6…191 N•m (156…1691 lb•in) continuous stall torque



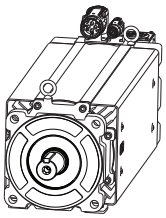
VPC-B*xxxxx*-Q Servo Motors

VPC-B*xxxxx*-Q servo motors with single cable connector.

- Absolute, multi-turn Hiperface DSL encoder protocol
- SIL 2 (PL d) rated encoder option

VPC-B*xxxxx*-S and VPC-B*xxxxx*-Y servo motors with motor power/brake and feedback cable connectors.

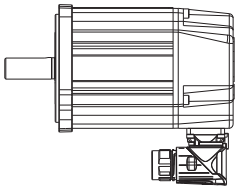
- Absolute, single-turn (-S) Hiperface encoder protocol
- Absolute, multi-turn (-Y) EnDat encoder protocol



VPC-B*xxxxx*-S/-Y Servo Motors

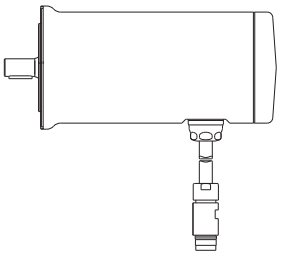
Kinetix VP (Bulletin VPF) food-grade servo motors address the challenges of food environments by incorporating food-grade paint and shaft seal, along with noncorrosive fasteners and stainless steel shaft.

- Configurable winding options, brakes, and encoder feedback
- Food-grade epoxy coating
- Absolute multi-turn digital encoder options, SIL 2 (PL d) rated (Hiperface DSL protocol)
- SpeedTec DIN connector, rotates 315°
- IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector
- 0.93…19 N•m (8…172 lb•in) continuous stall torque



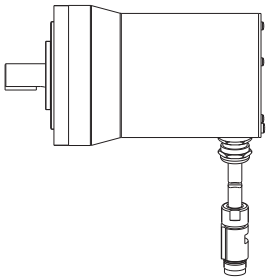
Kinetix VP (Bulletin VPH) hygienic stainless-steel servo motors are specifically designed to meet the unique needs of washdown environments such as those found in food and beverage, dairy, meat processing, and pharmaceutical manufacturing equipment.

- Smooth, passivated, 316-grade stainless-steel cylindrical exterior
- Designed per 3A and EHEDG guidelines
- Absolute multi-turn digital encoder options, SIL 2 (PL d) rated (Hiperface DSL protocol)
- On-motor cable extensions available in 1…15 m (3.2…49.2 ft) lengths
- IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector
- 0.80…19 N•m (7…165 lb•in) continuous stall torque



Kinetix VP (Bulletin VPS) stainless-steel motors are specifically designed to meet the unique needs of washdown environments such as those found in food and beverage, dairy, meat processing, and pharmaceutical manufacturing equipment.

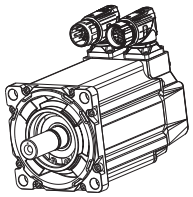
- Specifically designed for sanitary environments for use with high-pressure, highly caustic washdown applications
- Smooth passivated 300-series stainless-steel cylindrical exterior
- Absolute multi-turn digital encoder (Hiperface DSL protocol)
- Complies with NSF/ANSI Standard 169
- On-motor cable extension, 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



To compare features across motor families, refer to Rotary Servo Motors on page 23. See the Kinetix Rotary Motion Technical Data, publication KNX-TD001, for product specifications.

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 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 MPF) food-grade motors address the challenges of food environments by incorporating food-grade paint and shaft seal, along with noncorrosive fasteners and stainless steel shaft.

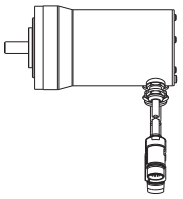
- Configurable winding options, brakes, and encoder feedback
- Food-grade epoxy coating
- IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connectors
- 1.6…19.4 N•m (14…172 lb•in) continuous stall torque

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

- Multiple winding speed options
- High-energy, rare-earth magnets
- IP66 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.

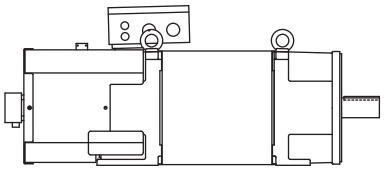
- Specifically designed for sanitary environments for use with high-pressure, highly caustic washdown applications
- Smooth passivated 300-series stainless-steel cylindrical exterior
- Certified and listed to NSF/ANSI Standard 169
- Cable extensions, 3 m (9.8 ft)
- IP69K for 1200 psi motor washdown,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



HPK-Series Asynchronous Servo Motors

HPK-Series Asynchronous Servo Motors employ proven induction motor technology optimized for servo system performance.

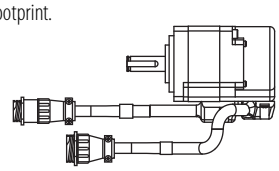
- High power, large load inertias
- 400 and 460V windings, 1500 and 3000 rpm rated speeds
- IP54 environmental rating
- 96…955 N•m (849…8452 lb•in) continuous stall torque
- Multi-turn and single-turn high-resolution Hiperface absolute-position encoders



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



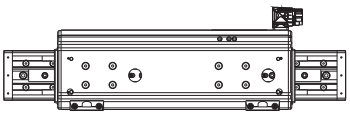
To compare features across motor families, refer to Rotary Servo Motors on page 23. See the Kinetix Rotary Motion Technical Data, publication KNX-TD001, for product specifications.

Select a Linear Motion Family

LDAT-Series Integrated Linear Thrusters

The LDAT-Series linear thruster is a robust, 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)

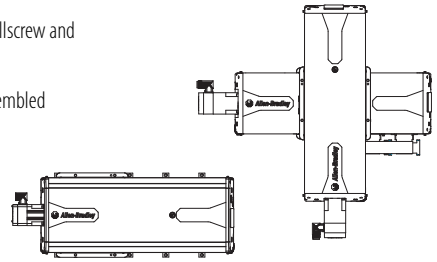


MP-Series Integrated Linear Stages

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

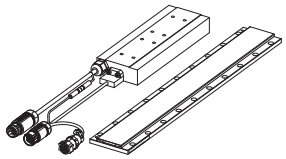


To compare features across linear thrusters and linear stages, refer to Linear Actuators on page 28.

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.

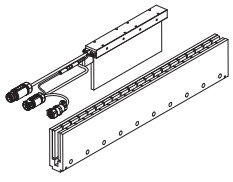
- 200/400V and 460V AC operation (LDC-Series)
- Cogging torque <5% of the continuous force (LDC-Series)
- Speed capabilities to 10 m/s (32.8 ft/s) to increase machine productivity
- IP65 rating and RoHS compliant
- 74…2882 N (17…648 lb) continuous stall force (LDC-Series)



LDL-Series Ironless Linear Motors

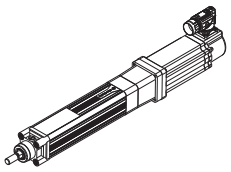
LDL-Series linear motors technology provides cost-effective options to help you improve machine throughput while reducing maintenance and downtime.

- 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 27.

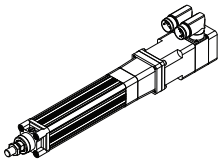
Kinetix VP Electric Cylinders



With Bulletin VPAR 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 and 400/460V operation
- Single-cable technology
- Absolute multi-turn digital encoder options, SIL 2 (PL d) rated (Hiperface DSL protocol)
- State of the art design features ballscrew construction driven by Kinetix VP (Bulletin VPL) servo motors
- Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, wiring, and commissioning time
- IP40 rating (Bulletin VPAR) complete unit, IP66 (Bulletin VPAR) for electronic components with the use of environmentally sealed (Bulletin 2090) cable connectors
- 240…2000 N (54…450 lb) continuous stall force

MP-Series Electric Cylinders



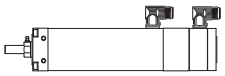
With Bulletin MPAR electric cylinders, your applications experience flexible servo motor control ideal for solutions requiring forces to be built up quickly and positions that need to be approached accurately. Available in three ISO 15552 pneumatic-class frame sizes (32, 40, and 63 mm), these durable,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

- 200/230V and 400/460V operation
- State of the art design features ballscrew construction driven by MP-Series (Bulletin MPL) servo motors
- Fully assembled and ready to mount cylinders contribute to reductions in mechanical design engineering, wiring, and commissioning time
- IP40 rating (Bulletin MPAR) 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

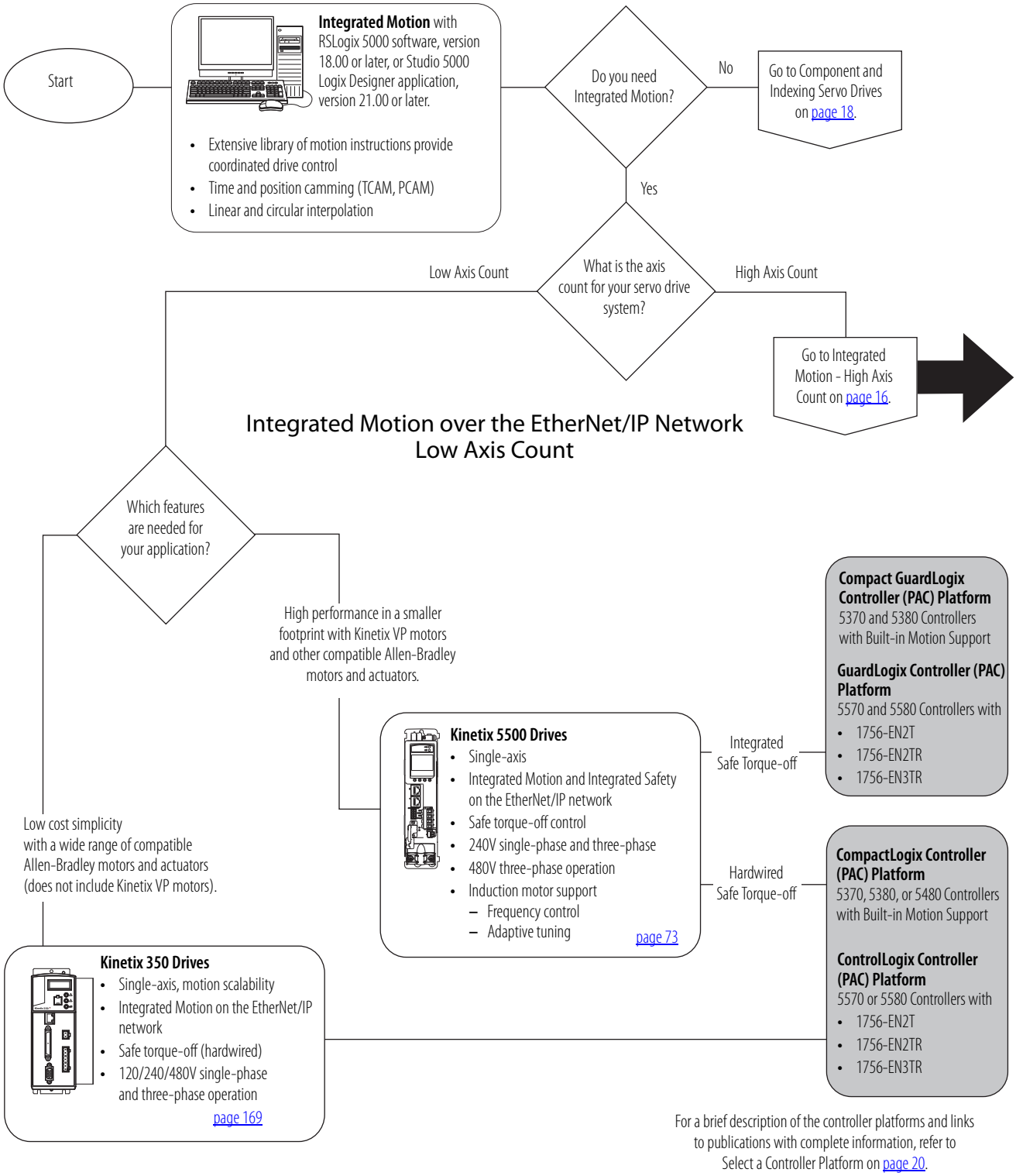
Bulletin MPAI heavy-duty electric cylinders are compact, lightweight, high-force actuators that serve as a cost-effective alternative to fluid power solutions.

- 200/230V and 400/460V operation
- State of the art design features ballscrew and roller screw construction driven by MP-Series (Bulletin MPL) servo 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 28. See the Kinetix Linear Motion Technical Data, publication KNX-TD002, for product specifications.

Select a Servo Drive System



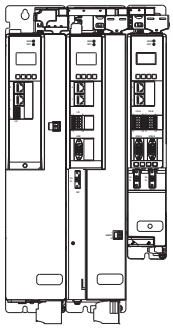
To compare features across servo drive families, refer to Servo Drives beginning on page 30. See the Kinetix Servo Drives Technical Data, publication KNX-TD003, for product specifications.

For compatible rotary motion and linear motion products, refer to Compatible Rotary Motors on page 19.

Integrated Motion over the EtherNet/IP Network - High Axis Count

Kinetix 5700 Drive Systems
- TÜV Rheinland certified functional safety, PL e, Cat 3; SIL 3
- 2198-*xxxx*-ERS3 and 2198-*xxxx*-ERS4 single-axis and dual-axis inverters
  - Hardwired and Integrated STO
- 2198-*xxxx*-ERS3 single-axis and dual-axis (series B) inverters add:
  - Integrated (drive-based) Timed SS1
- 2198-*xxxx*-ERS4 single-axis and dual-axis inverters add:
  - Integrated (drive-based) Timed SS1, Monitored SS1
  - Integrated (controller-based) SS1, SS2, SOS, SLS, SLP, SDI, SFX, SBC
- Single-axis and dual-axis inverters
  - Accept DSL encoder feedback from Kinetix VP motor family
  - Accept Hiperface and incremental encoder feedback from Allen-Bradley motors and actuators
- Induction motor support
  - Frequency control
  - Closed-loop control
  - Adaptive tuning
- Integrated Motion and Integrated Safety on the EtherNet/IP network
- CIP Security communication across the EtherNet/IP network

Kinetix 5700 Power Supplies
- DC-bus power supply, 480V three-phase operation
  - Multi-axis, DC-bus sharing, extended DC-bus sharing
  - Configure two or three 2198-P208 DC-bus (converter) power supplies for increased output power
- Regenerative bus supply, 480V three-phase operation
  - Multi-axis, DC-bus sharing, extended DC-bus sharing
  - Provides full-line motoring and regenerative power to and from a Kinetix 5700 common DC-bus system
  - Integrated LC filter minimizes AC line harmonics from the AC power source

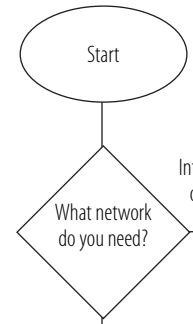


Accessory Modules
- Capacitor module is used for energy storage and provides connection points for the extended DC-bus
- DC-bus conditioner module that decreases the voltage stress on insulation components in an inverter system with long cable lengths and provides connection points for the extended DC-bus
- Extension module (or any two accessory modules) is required for 208 A systems, and provides connection points for the extended DC-bus

page 35

Compact GuardLogix Controller (PAC) Platform
5370 and 5380 Controllers with Built-in Motion Support

GuardLogix Controller (PAC) Platform
5570 and 5580 Controllers with
- 1756-EN2T
- 1756-EN2TR
- 1756-EN3TR



Kinetix 5500 Drives

- Multi-axis, AC/DC bus-sharing
- 240V single-phase and three-phase
- 480V three-phase operation
- Integrated Motion and Integrated Safety on the EtherNet/IP network
- Safe torque-off control
- Hardwired STO with connections to safety inputs
- Integrated STO with connections to safety controller
- Accepts DSL and Hiperface encoder feedback
- Induction motor support
  - Frequency control
  - Adaptive tuning

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CompactLogix Controller (PAC) Platform
5370, 5380, or 5480 Controllers with Built-in Motion Support

ControlLogix Controller (PAC) Platform
5570 or 5580 Controllers with
- 1756-EN2T
- 1756-EN2TR
- 1756-EN3TR

For a brief description of the controller platforms and links to publications with complete information, refer to Select a Controller Platform on page 20.

Kinetix 6500 Drives

- Multi-axis
- Integrated Motion on the EtherNet/IP network
- Safe-speed monitoring
- Safe torque-off (hardwired)
- 400V-class, three-phase operation
- DC common bus support

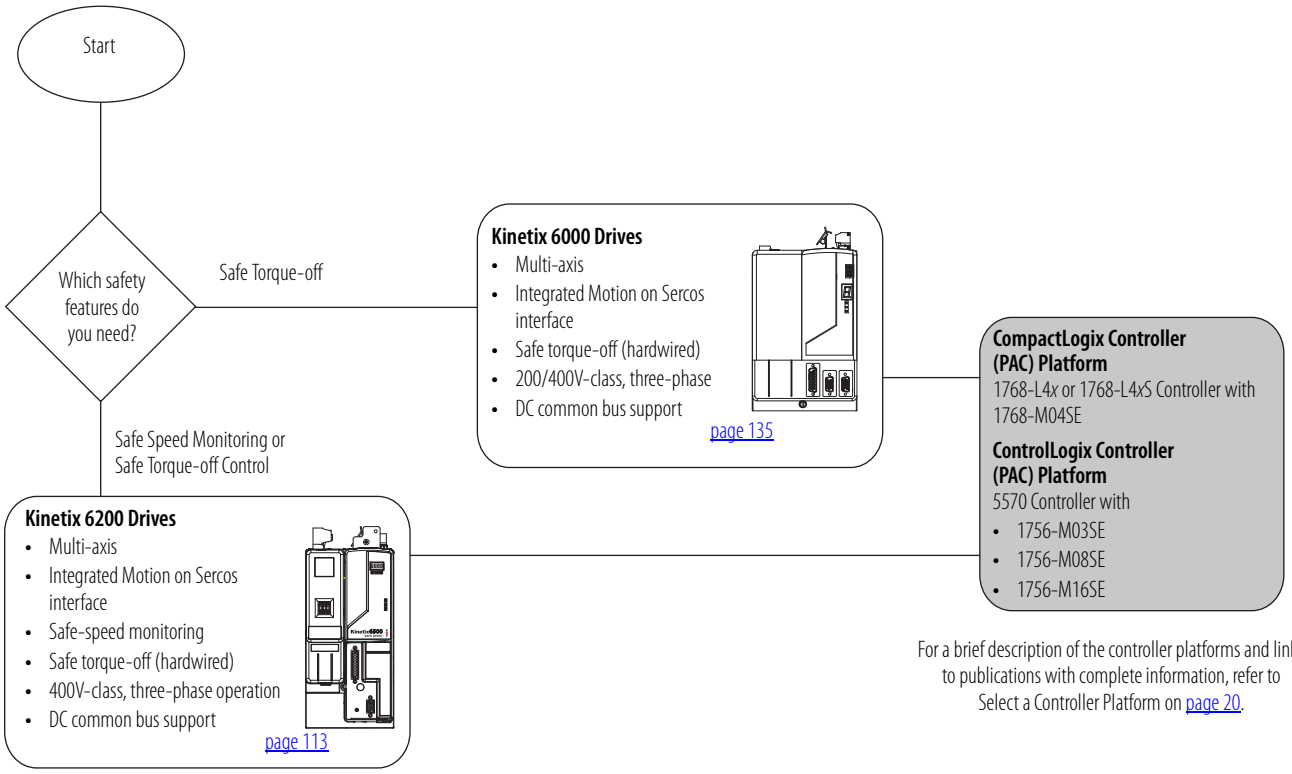
page 113

CompactLogix Controller (PAC) Platform
5370, 5380, or 5480 Controllers with Built-in Motion Support

ControlLogix Controller (PAC) Platform
5570 or 5580 Controllers with
- 1756-EN2T
- 1756-EN2TR
- 1756-EN3TR

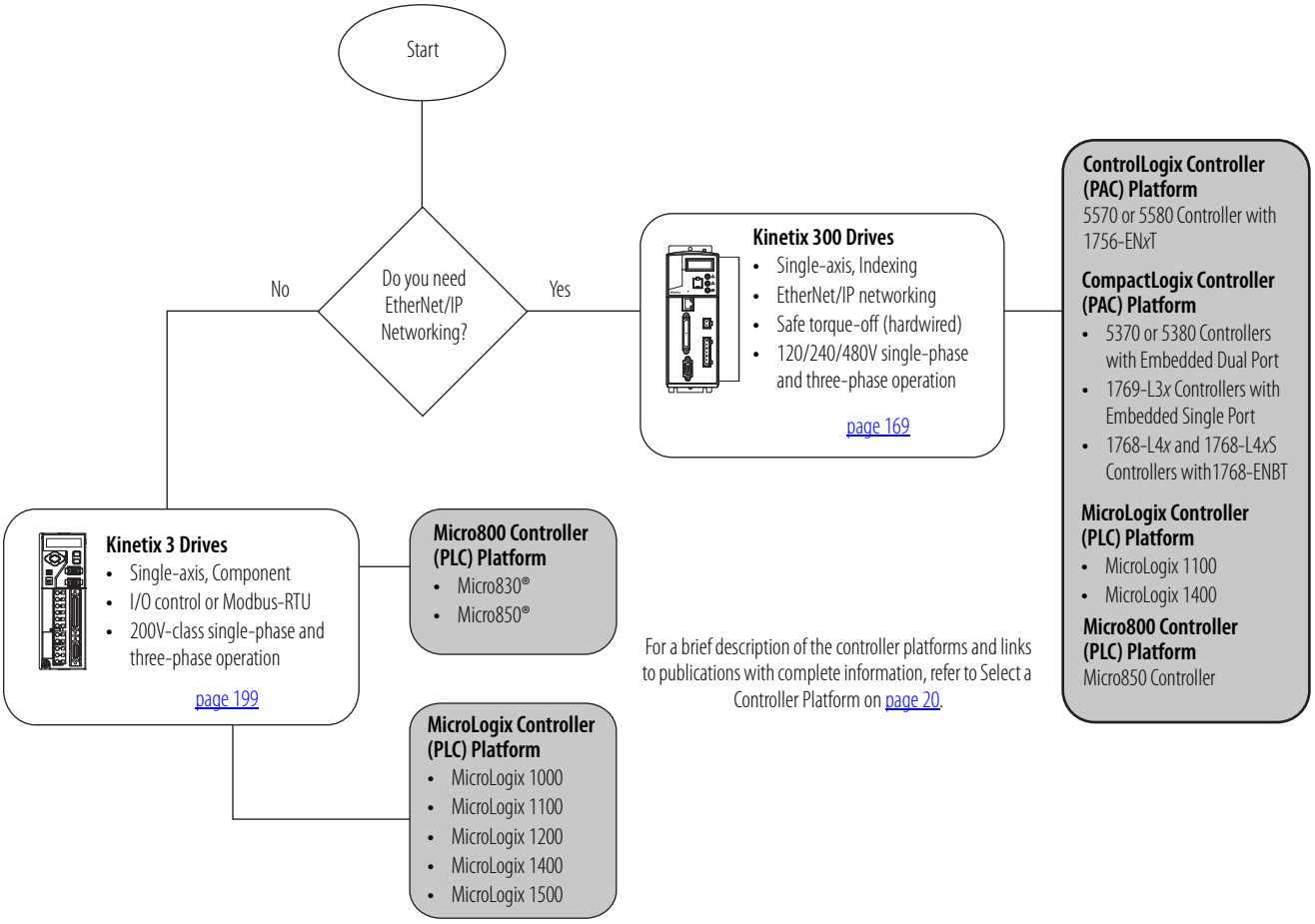
To compare features across servo drive families, refer to Servo Drives beginning on page 30. See the Kinetix Servo Drives Technical Data, publication KNX-TD003, for product specifications.

Integrated Motion on Sercos Interface



To compare features across servo drive families, refer to Servo Drives beginning on page 30. See the Kinetix Servo Drives Technical Data, publication KNX-TD003, for product specifications.

Component and Indexing Servo Drives



To compare features across servo drive families, refer to Servo Drives beginning on page 30. See the Kinetix Servo Drives Technical Data, publication KNX-TD003, for product specifications.

Compatible Rotary Motors

Rotary Motion	Kinetix 5700	Kinetix 5500	Kinetix 6500	Kinetix 350	Kinetix 6000	Kinetix 6200	Kinetix 300	Kinetix 3
Kinetix VP (Bulletin VPL)	X	X	–	–	–	–	–	–
Kinetix VP (Bulletin VPC)	X	–	–	–	–	–	–	–
Kinetix VP (Bulletin VPF)	X	X	–	–	–	–	–	–
Kinetix VP (Bulletin VPH)	X	X	–	–	–	–	–	–
Kinetix VP (Bulletin VPS)	X	X	–	–	–	–	–	–
MP-Series (Bulletin MPL)	X	X	X	X	X	X	X	–
MP-Series (Bulletin MPM)	X	X	X	X	X	X	X	–
MP-Series (Bulletin MPF)	X	X	X	X	X	X	X	–
MP-Series (Bulletin MPS)	X	X	X	X	X	X	X	–
HPK-Series	X	–	–	–	–	–	–	–
TL-Series (Bulletin TLY)	–	–	–	X	X (1)	X	X	X
TL-Series (Bulletin TL)	–	–	–	–	–	–	–	X (2)

(1) TLY-A*xxxx*-H rotary motors (incremental encoders) only.
(2) TL-A*xxxx*-B rotary motors (high-resolution encoders) only.

Compatible Linear Motors and Actuators

Linear Motion	Kinetix 5700	Kinetix 5500	Kinetix 6500	Kinetix 350	Kinetix 6000	Kinetix 6200	Kinetix 300	Kinetix 3
LDAT-Series	X (3)	X (1)	X (2)	–	X (2)	X (2)	X (3)	X (2)
MP-Series (Bulletin MPAS)	X (4)	X (5)	X	X (5)	X	X	X	X (6)
MP-Series (Bulletin MPMA)	X	X (5)	X	X (5)	X	X	X	–
Kinetix VP (Bulletin VPAR)	X	X	–	–	–	–	–	–
MP-Series (Bulletin MPAR)	X	X	X	X	X	X	X	–
MP-Series (Bulletin MPAI)	X	X	X	X	X	X	X	–
LDC-Series Iron-core	X	–	X	–	X	X	X	X
LDL-Series Ironless	–	–	X	–	X	X	X	X

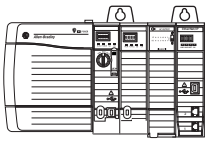
(1) LDAT-S*xxxxxx*-x*Dx* linear thrusters (high-resolution absolute encoders) only.
(2) LDAT-S*xxxxxx*-x*Bx* linear thrusters (incremental encoders) only.
(3) LDAT-S*xxxxxx*-x*Bx* (incremental) or LDAT-S*xxxxxx*-x*Dx* (high-resolution absolute) linear thrusters.
(4) MP-Series ballscrew or direct-drive linear stages
(5) MP-Series (ballscrew) linear stages only.
(6) MP-Series (direct-drive) linear stages only.

Select a Controller Platform

ControlLogix, GuardLogix, or CompactLogix controllers are required for Coordinated Motion.

Programmable Automation Controllers

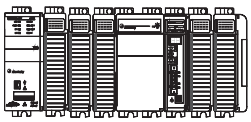
ControlLogix Controller Platform



The ControlLogix and GuardLogix programmable automation controllers (PAC) are 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

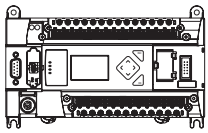


The CompactLogix and Compact GuardLogix programmable automation controllers (PAC) are a modular system that provides cost-effective control for smaller applications. Modules snap together side-by-side on a DIN rail.

- 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

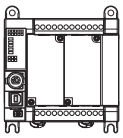
MicroLogix Controller Platform



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)

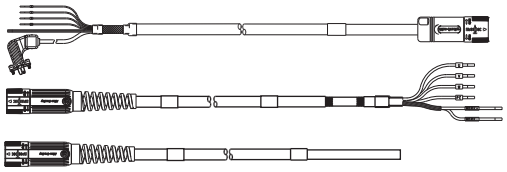
For more information on controller platforms and the interface/network modules that are required for motion control applications, refer to the publications listed in the table below.

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

Select Servo Drive Accessories

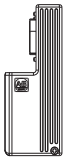
Motor and Interface Cables

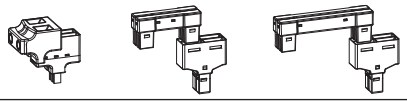
- Single Cable Technology for Kinetix VP rotary motors
- Motor power and feedback cables for your motor/actuator
- Interface cables for Sercos and Ethernet communication modules
- Interface cables for I/O control and cascading safe-off signals from drive-to-drive



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
- Bulletin 2198 Bus-sharing connector kits

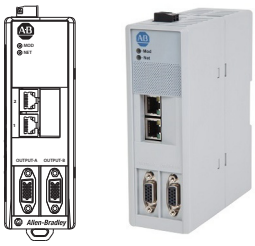


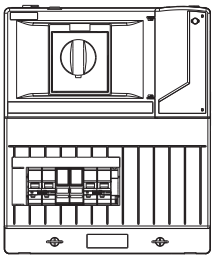


2198-ABQE Encoder Output Module

The Allen-Bradley encoder output module is a DIN-rail mounted EtherNet/IP network-based standalone module capable of generating output pulses in multiple encoder protocols to a customer-supplied peripheral device (cameras, for example, used in line-scan vision systems). The encoder output module supports real and virtual axes for systems using the integrated motion on EtherNet/IP network.

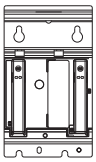
- Synchronizes third-party devices to our integrated motion system
- Configure and program with Studio 5000 Logix Designer software
- In-cabinet installation eliminates the need to mount encoders on the machine
- Syncs with any axis of motion. It is not limited to nearby axes.
- Configurable output: quadrature or pulse train
- Dual Ethernet ports support a variety of network topologies

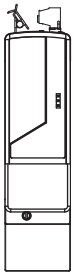


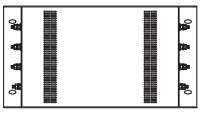


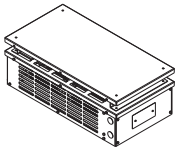
Power Components

- 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 2198 and 2090 AC line filters
- Bulletin 2198, 2090, and 1394 external shunt modules









For more information on accessories, refer to Kinetix Servo Drives Specifications Technical Data, publication KNX-TD003 and Motion Control Accessories Specifications Technical Data, publication KNX-TD004.

Verify System Combinations and Accessory Items

Each of these publications focus on a drive family and provide the drive accessory catalog numbers that are required for a typical system. Included are tables and examples listing the required motor/actuator cables, interface cables, and connector kits that are 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 5700 Drive Systems Design Guide	KNX-RM010
Kinetix 5500 Drive Systems Design Guide	KNX-RM009
Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide	KNX-RM003
Kinetix 300 and Kinetix 350 Drive Systems Design Guide	KNX-RM004
Kinetix 3 Drive Systems Design Guide	KNX-RM005
Kinetix 2000 Drive Systems Design Guide	KNX-RM006
Kinetix 7000 Drive Systems Design Guide	GMC-RM007

Additional Resources

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

Resource	Description
Kinetix Rotary Motion Specifications, publication KNX-TD001	Provides product specifications for Kinetix VP, MP-Series, TL-Series, and HPK-Series rotary motors.
Kinetix Linear Motion Specifications, publication KNX-TD002	Provides product specifications for Bulletin MPAS and MPMA linear stages, Bulletin MPAR and MPAI electric cylinders, and LDC-Series and LDL-Series linear motors.
Kinetix Servo Drives Specifications, publication KNX-TD003	Provides product specifications for Kinetix Integrated Motion over the EtherNet/IP network, Integrated Motion over Sercos interface, EtherNet/IP networking, and component servo drive families.
Kinetix Motion Accessories Specifications, publication KNX-TD004	Provides product specifications for Bulletin 2090 motor and interface cables, low-profile connector kits, drive power components, and other servo drive accessory items.
Kinetix 5700 Safe Monitor Functions Safety Reference Manual, publication 2198-RM001	Provides a description of integrated stopping functions and safe monitoring functions with a Logix 5000 controller and Kinetix 5700 servo drives.
Kinetix 6200 and Kinetix 6500 Safe Speed Monitoring Servo Drives Safety Reference Manual, publication 2094-RM001	Provides information on how to wire, configure, and troubleshoot 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	Provides information on how to wire, configure, and troubleshoot the safe torque-off features of your Kinetix 6200 and Kinetix 6500 drives.
System Design for Control of Electrical Noise Reference Manual, publication GMC-RM001	Provides information, examples, and techniques designed to minimize system failures caused by electrical noise.
Industrial Ethernet Media Brochure, publication 1585-BR001	Provides information to determine the Bulletin 1585 Ethernet cable that fits your application and the product specifications to help select the appropriate components.
Access Motion Analyzer from: https://motionanalyzer.rockwellautomation.com.	Provides comprehensive motion application sizing tool used for analysis, optimization, selection, and validation of your Kinetix Motion Control system.
Rockwell Automation® Product Selection website http://www.rockwellautomation.com/global/support/selection.page	Provides online product selection and system configuration tools, including AutoCAD (DXF) drawings.

You can view or download publications at http://www.rockwellautomation.com/global/literature-library/overview.page.

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://ab.rockwellautomation.com for more information.

Kinetix VP Servo Motors

Motor Features	Kinetix VP (Bulletin VPL) Low Inertia Motors	Kinetix VP (Bulletin VPC) Continuous Duty Motors
Main characteristics	• Developed to match Kinetix® 5500 drive and Kinetix 5700 dual-axis inverter ratings for optimized system sizing • Single cable technology • High torque to size ratio • Low rotor inertia	• Developed to match Kinetix 5700 drives for optimized system sizing and performance • Interior permanent-magnet design • Fan for increased power output • Increased maximum speeds • Single cable technology • High continuous torque
Features	• 200 and 400V-class windings • High-energy rare-earth magnets • Shaft-end threaded hole • SpeedTec DIN connector, rotates 325° • Standard IEC 72-1 mounting dimensions	• 400V-class windings • IE4 energy efficiency rated • Shaft-end threaded hole • SpeedTec DIN connector, rotates 325° • Larger bearings for longer life • Integrated foot mount • 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	IP65 with shaft seal (standard) and use of environmentally sealed cable connector
Continuous stall torque	0.46…33 N•m (4…292 lb•in)	17.6…191.1 N•m (156…1691 lb•in)
Peak stall torque	1.33…79 N•m (12…702 lb•in)	40.3…327.8 N•m (357…2901 lb•in)
Rated speed	Up to 8000 rpm	1000, 1500, and 3000 rpm
Motor rated output	0.19…7.16 kW (0.25…9.60 Hp)	4.0…30 kW (5.4…40.2 Hp)
Feedback options	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position	• Single-turn and multi-turn high-resolution absolute encoders • SIL 2 (PL d) rated encoder option • High-accuracy EnDat digital encoder option
Motor options	• 24V DC brake • Shaft seal kit • Keyless shaft	• 24V DC brake • Shaft seal kit • Keyless shaft
Compatible drives	• Kinetix 5700 • Kinetix 5500	Kinetix 5700
Typical applications	• Packaging • Converting • Material handling • Electronic assembly • Automotive	• Converting • Printing • Web handling • Material handling

Kinetix VP Servo Motors (continued)

Motor Features	Kinetix VP (Bulletin VPF) Food Grade Motors	Kinetix VP (Bulletin VPH) Hygienic Stainless-steel Motors	Kinetix VP (Bulletin VPS) Stainless Steel Motors
Main characteristics	• Developed to match Kinetix 5500 drive and Kinetix 5700 dual-axis inverter • Configurable winding options, brakes, and encoder feedback • ratings for optimized system sizing • Single cable technology • Low rotor inertia	• EHEDG design for smooth surface and liquid collection. For use with high-pressure, highly-caustic washdown applications. • Single cable technology • Hiperface DSL encoder protocol • Low rotor inertia	• Developed to match Kinetix 5500 drive and Kinetix 5700 dual-axis inverter • Specifically designed for sanitary environments for use with high-pressure, highly-caustic washdown applications • Single cable technology • Low rotor inertia
Features	• Food-grade epoxy coating • 200 and 400V-class windings • Single-turn and multi-turn absolute feedback • SIL 2 (PLd) rated encoder options • Shaft end threaded hole • SpeedTec DIN connector, rotates 315° • High-energy rare-earth magnets • Standard IEC 72-1 mounting dimensions	• Smooth, passivated, 316 grade stainless-steel cylindrical exterior • Designed per 3A and EHEDG guidelines • Certified and listed to NSF/ANSI Standard 169 • 200V and 400V-class windings • Single-turn and multi-turn absolute feedback • SIL 2 (PLd) rated encoder options • Shaft-end threaded hole • On-motor cable extensions available in 1…15 m (3.2 ft…49.2 ft) lengths • High-energy rare-earth magnets • 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	Brushless AC synchronous servo motors
Environmental ratings	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector • Food grade grease on shaft seal	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector • IP69K for 1200 psi motor washdown	• IP66/IP67 with shaft seal (standard) and use of environmentally sealed cable connector • IP69K for 1200 psi motor washdown
Continuous stall torque	0.93…19 N•m (8…172 lb•in)	0.80…19 N•m (7…165 lb•in)	8.1 and 21.0 N•m (72 and 186 lb•in)
Peak stall torque	2.69…49 N•m (24…430 lb•in)	2.76…74 N•m (24…650 lb•in)	27.1 and 67.8 N•m (240 and 600 lb•in)
Rated speed	Up to 8000 rpm	2300…8000 rpm	3000 rpm
Motor rated output	0.34…4.18 kW (0.46…5.60 Hp)	0.40…3.16 kW (0.54…4.23 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 • Positive air-pressure kit	• 24V DC brake • Shaft seal kit • Positive air-pressure kit • Mounting plate O-ring	• Shaft seal kit with slinger • Positive air-pressure kit
Compatible drives	• Kinetix 5700 • Kinetix 5500	• Kinetix 5700 • Kinetix 5500	• Kinetix 5700 • Kinetix 5500
Typical applications	• Food packaging • Volumetric filling • Form, fill, seal • Food handling • For meat and poultry applications, the stainless-steel motors are recommended	• Meat, poultry, dairy, food and beverage processing • Food slicing and filling • Raw food handling • Life science • Consumer products	• Meat and poultry processing • Food slicing and filling • Raw food handling • Life science • Consumer products

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	• Configurable winding options, brakes, and encoder feedback • 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	• Food-grade epoxy coating • 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 (1)	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position • Incremental encoders • Resolver	• 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 (2) (3) drives	• Kinetix 5700 • Kinetix 5500 • Kinetix 6200/Kinetix 6500 • Kinetix 6000 • Kinetix 7000 • Kinetix 300/350 • Kinetix 2000 • PowerFlex® 755		• Kinetix 5700 • Kinetix 5500 • Kinetix 6200/Kinetix 6500 • Kinetix 6000 • Kinetix 300/350 • Kinetix 2000	
Typical applications	• Packaging • Converting • Material handling • Electronic assembly • Automotive	• Printing • Web handling • Converting • Automotive	• 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) Not all drive families accept incremental and resolver feedback options.

(2) For Kinetix 2000 drive specifications, refer to Additional Resources on page 22 for links to the applicable technical data and design guide publications.

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

HPK-Series Asynchronous Servo Motors

Motor Features	HPK-Series™ Asynchronous Servo Motors
Main characteristics	• High-power • Large load inertia
Features	• 400V and 460V windings • DIN connectors, rotates 180° • Blower cooled • IEC flange or foot mount
Motor type	Asynchronous Induction Motors
Environmental rating	IP54
Continuous torque	96…955 N•m (849…8452 lb•in)
Peak torque	165…1927 N•m (1460…17,054 lb•in)
Speed	Base speeds of 1500 and 3000 rpm
Motor rated output	17.1…150 kW
Feedback options	• Multi-turn, high-resolution absolute position • Single-turn, high-resolution absolute position
Motor options	• Multiple junction box mounting locations • Holding brake, 380…460V • HPK-*xxxxxx*-ENC-*xx* encoder kit
Compatible drives	• Kinetix 5700 • Kinetix 7000
Typical applications	• High power packaging • Converting • Wind/unwind/rewind • Sheeters • Flying knife • Material handling

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)
Typical applications	• Robotics • Material handling • X-Y tables • Specialty machinery • Semiconductor manufacturing • Medical/laboratory equipment • Light packaging machines • Office machinery

(1) For Kinetix 2000 drive specifications, refer to Additional Resources on page 22 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://ab.rockwellautomation.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 5700 • Kinetix 6200/6500 • Kinetix 6000 • Kinetix 300 • Kinetix 3 • Kinetix 2000	• Kinetix 6000 • Kinetix 300 • Kinetix 3 • Kinetix 2000
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 drive specifications, refer to Additional Resources on page 22 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://ab.rockwellautomation.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 5700 • Kinetix 5500 (ball screw only) • 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	• Kinetix 5700 • Kinetix 5500 (ball screw only) • Kinetix 6000 and Kinetix 6200/6500 • Kinetix 300 (ball screw and direct-drive) • Kinetix 350 (ball screw only) • Kinetix 2000	• Kinetix 5700 • Kinetix 5500 • Kinetix 6000 and Kinetix 6200/6500 • Kinetix 300 • Kinetix 3 • Kinetix 2000
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 drive specifications, refer to Additional Resources on page 22 for links to the applicable technical data and design guide publications.

Kinetix VP and MP-Series Electric Cylinders

Actuator Features	Kinetix VP (Bulletin VPAR) 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 Kinetix VP (Bulletin VPL) 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 and 400/460V operation • Absolute, high-resolution feedback options consistent with Kinetix VP (Bulletin VPL) servo motors • Single cable technology	• 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 • 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	150…1000 mm/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.)
Feedback options	Multi-turn, high-resolution absolute position		
Optional equipment	24V DC holding brakes		
Field-installable accessories	• Foot mounting • Flange mounting • Trunnion mounting kit • Trunnion support • Mounting attachments (swivel flange, trunnion) • Piston-rod attachments (rod eye, rod clevis, rod coupler) • Guide rod		• Mounting plates • Front flange mount • Rear clevis mount • Rod-end attachments (rod eye, rod clevis) • Anti-rotation option
Compatible drives (2)	• Kinetix 5700 • Kinetix 5500	• Kinetix 5700 • Kinetix 5500 • Kinetix 6200/6500 • Kinetix 6000 • Kinetix 300/350 • Kinetix 2000	
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 drive specifications, refer to Additional Resources on page 22 for links to the applicable technical data and design guide publications.

Servo Drives

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

Integrated Motion on the EtherNet/IP Network Servo Drives

Drive Features	Kinetix 5700	Kinetix 5500
Main characteristics	• Designed for machines with high axis-counts; high-power and high-performance requirements • 208 A DC-bus sharing with DC-bus connector links • Single motor cable, SpeedTec connector, with DSL connector kit at drive end • Digital (DSL) feedback device and 15-pin (sine/cosine) Hiperface feedback • Capability to run servo and induction motors	• High performance in a smaller footprint and optimized power density • AC input power and 24V DC input power bus-sharing • Single motor cable, SpeedTec connector, with flying-leads at drive end • Digital (DSL) feedback device provides real-time motor performance information to the control circuitry • Capability to run servo and induction motors
	• Integrated motion and integrated safety on the EtherNet/IP™ network • CIP Security™ communication across the EtherNet/IP network	Integrated motion and integrated safety on the EtherNet/IP network
	• TÜV Rheinland certified, PL e, Cat 3; SIL 3 • 2198-*xxxx*-ERS3 single-axis and dual-axis inverters – Hardwired and Integrated STO • 2198-*xxxx*-ERS3 single-axis and dual-axis (series B) inverters – Integrated (drive-based) Timed SS1 • 2198-*xxxx*-ERS4 single-axis and dual-axis inverters – Hardwired (drive-based) STO – Integrated (drive-based) Timed SS1, Monitored SS1 – Integrated (controller-based) STO, SS1, SS2, SOS, SLS, SLP, SDI, SFX, SBC	• Safe torque-off (STO) control, TÜV Rheinland certified • 2198-H*xxx*-ERS: Hardwired STO, PL d, Cat 3; SIL 2 • 2198-H*xxx*-ERS2: Integrated STO, PL e, Cat 3; SIL 3
Drive configuration	• Multi-axis bus-sharing configurations • DC-bus and extended DC-bus sharing	• Single-axis operation for low-cost simplicity • Multi-axis bus-sharing configurations (AC, DC, AC/DC, AC/DC hybrid)
Input voltage	• 324…528V AC, three-phase, 2198-P*xxx* DC-bus power supply • 324…506V AC, three-phase, 2198-RP*xxx* regenerative bus supply (voltage regulation enabled) • 324…528V AC, three-phase, 2198-RP*xxx* regenerative bus supply (voltage regulation disabled)	• 195…264V AC, single-phase • 195…264V AC, three-phase • 324…528V AC, three-phase
Common-bus follower input voltage	458…747V DC	• 138...186V DC, single-phase • 276...373V DC, three-phase • 458...747V DC, three-phase
Continuous output power (inverter)	1.7…112 kW	• 0.2…1.0 kW (195…264V, single-phase input) • 0.3…7.2 kW (195…264V, three-phase input) • 0.6…14.6 kW (324…528V, three-phase input)
Continuous output current (inverter)	2.5…192 A rms	1.0…23.0 A rms
Drive digital inputs	• DC-bus power supply: 2 configurable inputs (4 functions) • Regenerative bus supplies and inverters: 4 configurable inputs (10 functions)	• Home/Registration1 (dual function) • High speed registration (1)
Drive digital outputs	Motor brake relay output (with suppression)	
Programming	Studio 5000 Logix Designer® application • 2198-*xxxx*-ERS3 drive modules: Version 26.00.00 or later • 2198-*xxxx*-ERS3 (series B) and 2198-*xxxx*-ERS4 drive modules: Version 31.00.00 or later • 2198-S263-ERS*x* and 2198-S312-ERS*x* drive modules: Version 32.00.00 or later • 2198-RP*xxx* regenerative bus supplies: Version 32.00.00 or later	Studio 5000 Logix Designer application Version 21.00.00 or later
	Ladder logic, structured text, and sequential function charts	
Logix 5000™ module compatibility	• 1756-EN2T, 1756-EN2TR, 1756-EN3TR EtherNet/IP modules with ControlLogix® 5570 and 5580 controllers or GuardLogix® 5570 and 5580 safety controllers • CompactLogix™ 5370 and CompactLogix 5380 controllers or Compact GuardLogix 5370 or 5380 safety controllers	
I/O control	EtherNet/IP network	
Feedback	• DSL high-resolution absolute, multi-turn and single-turn encoder feedback • Hiperface and incremental encoder support with 2198-K57CK-D15M connector kit • Feedback-only, master feedback, and load feedback support options	• DSL high-resolution absolute, multi-turn and single-turn encoder feedback • Hiperface encoder support with 2198-H2DCK converter kit
	Feedback-only axis with Bulletin 842HR, 844D, 847H, or 847T encoders	Feedback-only axis with Bulletin 842E-CM encoder
Rotary motors compatibility	• Kinetix VP (Bulletin VPL/VPC/VPF/VPS) • MP-Series (Bulletin MPL/MPM/MPF/MPS) • HPK-Series	• Kinetix VP (Bulletin VPL/VPF/VPS) • MP-Series (Bulletin MPL/MPM/MPF/MPS)
Linear motors compatibility	LDC-Series Iron Core	–
Linear actuator compatibility	• LDAT-S*xxxxxx*-*xDx* and -*xBx* Integrated Linear Thrusters • Kinetix VP (Bulletin VPAR) and MP-Series (Bulletin MPAR/MPAI) Electric Cylinders • MP-Series Linear Stages (Bulletin MPAS and MPMA)	• LDAT-S*xxxxxx*-*xDx* Integrated Linear Thrusters • Bulletin VPAR, Bulletin MPAR, and Bulletin MPAI Electric Cylinders • MP-Series Linear Stages (Bulletin MPAS and MPMA ballscrew only)
Induction motor support	• Basic volts/hertz, fan/pump V/Hz, and sensorless-vector open-loop frequency control • Closed-loop control	Basic volts/hertz, fan/pump V/Hz, and sensorless-vector open-loop frequency control
Accessory compatibility	• 2198-CAPMOD-2240 capacitor module • 2198-DCBUSCOND-RP312 DC-bus conditioner module • 2198-CAPMOD-DCBUS-IO extension module • 2198 AC (EMC) line filters • 2198 encoder output module • 2198 shared-bus connector kits • 2198 external passive-shunt resistors • Encompass™ partner Powerohm active shunts • 1321 line reactors	• 2198-CAPMOD-1300 capacitor module • 2198 AC (EMC) line filters • 2198 encoder output module • 2198 shared-bus connector kits • 2097 external passive-shunt resistors

Integrated Motion on the EtherNet/IP Network Servo Drives (continued)

Drive Features	Kinetix 6500	Kinetix 350
Main characteristics	• Multi-axis, integrated motion, optimized for low and high axis count • Supports complete motion command set • Common bus • Modular design	• Single-axis, integrated motion, 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 speed monitoring • Safe torque-off control • TÜV Rheinland certified PL e, Category 4; SIL 3	• Safe torque-off control • TÜV Rheinland certified PL d, Category 3; SIL 2
Drive configuration	1…8 Axes on Bulletin 2094 power rail	Single-axis
Input voltage	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	458…747V DC (400V-class)	N/A
Continuous output power (inverter)	1.8…22 kW (400V-class)	0.4…1.7 kW (single-phase input) 0.5…3.0 kW (single-phase or three-phase input) 1.0…3.0 kW (three-phase input)
Continuous output current (inverter)	2.8…34.6 A rms (400V-class)	2.0…12.0 A rms
Drive digital inputs	• 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	RSLogix 5000® software	
	Version 18.00.00 or later	Version 20.00 or later
	Ladder logic, structured text, and sequential function charts	
Logix 5000 module compatibility	• 1756-EN2T, 1756-EN2TR, 1756-EN3TR EtherNet/IP modules with ControlLogix 5570 and ControlLogix 5580 controllers or GuardLogix 5570 and 5580 safety controllers • CompactLogix 5370 and 5380 controllers or Compact GuardLogix 5370 and 5380 safety controllers	
I/O control	EtherNet/IP	
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
	Feedback-only auxiliary axis	Feedback-only axis with Bulletin 842E-CM encoder
Rotary motors compatibility	MP-Series (Bulletin MPL/MPM/MPF/MPS)	• MP-Series (Bulletin MPL/MPM/MPF/MPS) • TL-Series (Bulletin TLY)
Linear motors compatibility	LDC-Series Iron Core	N/A
Linear actuator compatibility	• 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) • MP-Series Linear Stages (Bulletin MPAS and MPMA ballscrew only)
Accessory compatibility	• 2094 Line Interface Modules (LIM) • 2198 encoder output module • 2090 Resistive Brake Modules (RBM) • 1394 external passive-shunt resistors	• 2097 I/O terminal expansion block • 2097 memory module programmer • 2097 AC (EMC) line filters • 2097 external passive-shunt resistors • 2198 encoder output module

Integrated Motion on Sercos Interface Servo Drives

Drive Features	Kinetix 6200	Kinetix 6000
Main characteristics	• Multi-axis • Common bus • Modular design	• Multi-axis • Common bus • Enhanced peak performance
	Integrated motion on Sercos interface	
	• Safe speed monitoring • Safe torque-off control • TÜV Rheinland certified PL e, Category 4; SIL 3	• Safe torque-off control • TÜV Rheinland certified PL e, Category 3; SIL 3
Drive configuration	1…8 Axes on Bulletin 2094 power rail	
Input voltage	324…528V AC, three-phase (400V-class)	195…265V AC, three-phase (200V-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)
Continuous output power (inverter)	1.8…22 kW (400V-class)	1.2…11 kW (200V-class)
		1.8…22 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)
Drive digital inputs	• Enable, home, overTravel ± • High speed registration (2/axis)	
Drive digital outputs	Motor brake relay output (with suppression)	
DPI connector	N/A	DriveExplorer software or DPI HIM module
Programming	RSLogix 5000 software	
	Version 17.00.00 or later	Version 11.00.00 or later
	Ladder logic, structured text, and sequential function charts	
Logix 5000 module compatibility	• 1756-M03SE, 1756-M08SE, 1756-M16SE ControlLogix communication modules • 1768-M04SE CompactLogix communication module	
I/O control	Fiber-optic Sercos	
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
	Feedback-only Auxiliary Axis	
Rotary motors compatibility	• MP-Series (Bulletin MPL/MPM) • MP-Series (Bulletin MPF/MPS)	• MP-Series (Bulletin MPL/MPM) • MP-Series (Bulletin MPF/MPS) • TL-Series (Bulletin TLY-A*xxxx*-H)
Linear motors compatibility	LDC-Series Iron Core	• LDC-Series Iron Core • LDL-Series Ironless
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)
Accessory compatibility	• 2094 Power Interface Module (IPIM) • 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 external passive-shunt resistors	• 2094 Power Interface Module (IPIM) • 2094 Line Interface Modules (LIM) • 2090 Resistive Brake Modules (RBM) • 1394 external passive-shunt resistors

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 • TÜV Rheinland certified PL d, Category 3; SIL 2	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
Logix 5000 module/controller compatibility	• ControlLogix 5570 or 5580 controller with 1756-EN*x*T • CompactLogix 5370 or 5380 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) • 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	• 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

Notes:

Kinetix 5700 Drive Systems

The Kinetix® 5700 drive family helps expand the value of integrated motion on EtherNet/IP™ to large, custom machine-builder applications. Drive modules connect and operate by using ControlLogix®, GuardLogix®, CompactLogix™, or Compact GuardLogix controllers.

With the Logix Designer application as a single control engine, and one design environment – Studio 5000® – machine builders now have more flexibility to scale, design, and control to help meet their needs. Kinetix 5700 servo drives can help reduce commissioning time and improve machine performance. They offer the simplicity, power, and space savings you need to help get your machine up and running faster.

Kinetix 5700 servo drives are designed for machines with high axis-counts and high-power requirements. Single and dual-axis inverters are available with integrated and hardwired functional safety.

Kinetix 5700 Drive System Features

- Designed for machines with high axis-counts, high-power requirements, and high-performance needs
- CIP Security™ communication that helps to provide a secure data transport across the EtherNet/IP network
- DC-bus power supply, 480V three-phase operation
  - AC input voltage range: 324…528V rms, three-phase
  - Multi-axis, DC-bus sharing, extended DC-bus sharing
- Regenerative bus supply, 480V three-phase operation
  - AC input voltage range: 324…506V rms, three-phase
  - Multi-axis, DC-bus sharing, extended DC-bus sharing
  - Provides full-line motoring and regenerative power to and from a Kinetix 5700 common DC-bus system
  - Integrated LC filter minimizes AC line harmonics from the AC power source
- Single-axis and dual-axis inverters
  - 1.7…112 kW continuous output power
  - 3.5…271.5 A 0-pk, continuous output current
  - Accepts Hiperface DSL encoder feedback from Kinetix VP servo motor or actuator family
  - Accepts Hiperface multi- and single-turn encoder feedback from compatible Allen-Bradley® motors and actuators
  - Accepts digital AqB, digital AqB with UVW, sine/cosine, and sine/cosine with UVW master feedback types
- 2198-*xxxx*-ERS3 and 2198-*xxxx*-ERS4 single-axis and dual-axis inverters
  - TÜV Rheinland certified functional safety, PL e, Cat 3; SIL 3; Hardwired and Integrated STO
- 2198-*xxxx*-ERS3 single-axis and dual-axis (series B) inverters add integrated (drive-based) Timed SS
- 2198-*xxxx*-ERS4 single-axis and dual-axis inverters add:
  - Integrated (drive-based) Timed SS1, Monitored SS1
  - Integrated (controller-based) SS1, SS2, SOS, SLS, SLP, SDI, SFX, SBC
- Single cable technology for Kinetix VP motors; DSL connector kit (drive-end) and SpeedTec connector (motor-end)
- Bulletin 2198 capacitor module, DC-bus conditioner module, extension module, passive shunt resistors, and Encompass™ partner Powerohm active shunts for energy absorption management
- Support for permanent-magnet servo motors and actuators
- Support for induction motors with open-loop frequency control or closed-loop control
- Integrated motion and integrated safety on the EtherNet/IP network

To compare drive features across drive families, refer to Servo Drives beginning on page 30.

Kinetix 5700 Drive Module Components

Kinetix 5700 servo drive systems consist of these required components:

- 2198-P*xxx* DC-bus power supplies (up to three modules wired in parallel are possible)
- 2198-RP*xxx* regenerative bus supplies (provides full-line motoring and regenerative power)
- Single-axis and dual-axis inverters
  - Extended drive systems are possible with Bulletin 2198 accessory modules
- Kinetix VP (400V-class) servo motors and actuators
  - Use 2090-CS*x*M1DE cables (includes 2198-KITCON-DSL feedback connector kit) or 2090-CS*x*M1DG flying-lead cables (order 2198-KITCON-DSL connector kit separately)
- MP-Series™ (400V-class) servo motors and actuators, LDAT-Series linear thrusters, LDC-Series™ linear motors, or HPK-Series™ asynchronous rotary motors
  - Use 2090-CP*x*M7DF power/brake cables and 2090-CFBM7DF feedback cables with 2198-K57CK-D15M universal feedback connector kits
- Support for induction motors with basic volts/hertz, fan/pump V/Hz, and sensorless-vector open-loop frequency control methods or closed-loop motor feedback options
- 1606-XL*xxx* 24V power supplies for control and motor brake power
- 1585J-M8CBJM-*x* (shielded) Ethernet cable

Kinetix 5700 servo drive systems can also include any of these optional components:

- Kinetix 5700 accessory modules
  - 2198-CAPMOD-2240 capacitor module
  - 2198-DCBUSCOND-RP312 DC-bus conditioner module
  - 2198-CAPMOD-DCBUS-IO extension module
- 2198-ABQE encoder output module
- One 2198-DBR*xx*-F or 2198-DB*xx*-F AC line filter
- 2198-R*xxx* external passive-shunt resistors
- External active shunts from Rockwell Automation Encompass partner, Powerohm Resistors, Inc., are available for connecting to Bulletin 2198 DC-bus power supplies and regenerative bus supplies.
- Bulletin 1321 line reactors (required with two or three 2198-P208 DC-bus power supplies)
- Bulletin 2198 24V DC input-power shared-bus connection system

For detailed Kinetix 5700 drive system requirements, refer to the Kinetix 5700 Drive Systems Design Guide, publication KNX-RM010.

Kinetix 5700 Drive Module Selection

Kinetix 5700 Drive Modules	Module Cat. No. (1)		Module Width mm	Continuous Output Power kW	Continuous Output Current to Bus A_{DC} rms	Continuous Output Current A 0-pk
DC-bus Power Supply (324…528V AC rms, three-phase input power)	2198-P031 2198-P070		55	7 17	10.5 25.5	–
	2198-P141 2198-P208		85	31 46	46.9 69.2	
Regenerative Power Supply (324…506V AC rms, three-phase input power) (2)	2198-RP088		165	24	35.3	–
	2198-RP200		275	67	100.0	
	2198-RP263		440	119	176.4	
	2198-RP312			140	207.0	
Dual-axis Inverters	2198-D006-ERS3 2198-D012-ERS3 2198-D020-ERS3 2198-D032-ERS3	2198-D006-ERS4 2198-D012-ERS4 2198-D020-ERS4 2198-D032-ERS4	55	1.7 3.4 5.5 8.9	–	3.5 7.0 11.3 18.3
	2198-D057-ERS3	2198-D057-ERS4	85	15.9		32.5
Single-axis Inverters	2198-S086-ERS3 2198-S130-ERS3	2198-S086-ERS4 2198-S130-ERS4	85	29.7 44.9	–	60.8 91.9
	2198-S160-ERS3	2198-S160-ERS4	100	60.1		120.2
	2198-S263-ERS3 2198-S312-ERS3	2198-S263-ERS4 2198-S312-ERS4	220	90 112		212.1 271.5

(1) Throughout this publication, when the Kinetix 5700 inverter catalog number ends in -ERSx, for example 2198-D057-ERSx, the variable (x) indicates that the inverter catalog number can be -ERS3 or -ERS4.

(2) Applies when DC-bus voltage regulation is enabled. If DC-bus voltage regulation is not enabled, the input voltage range is 324…528V AC. For more information on these two modes of operation, see the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002.

For Kinetix 5700 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication KNX-TD003.

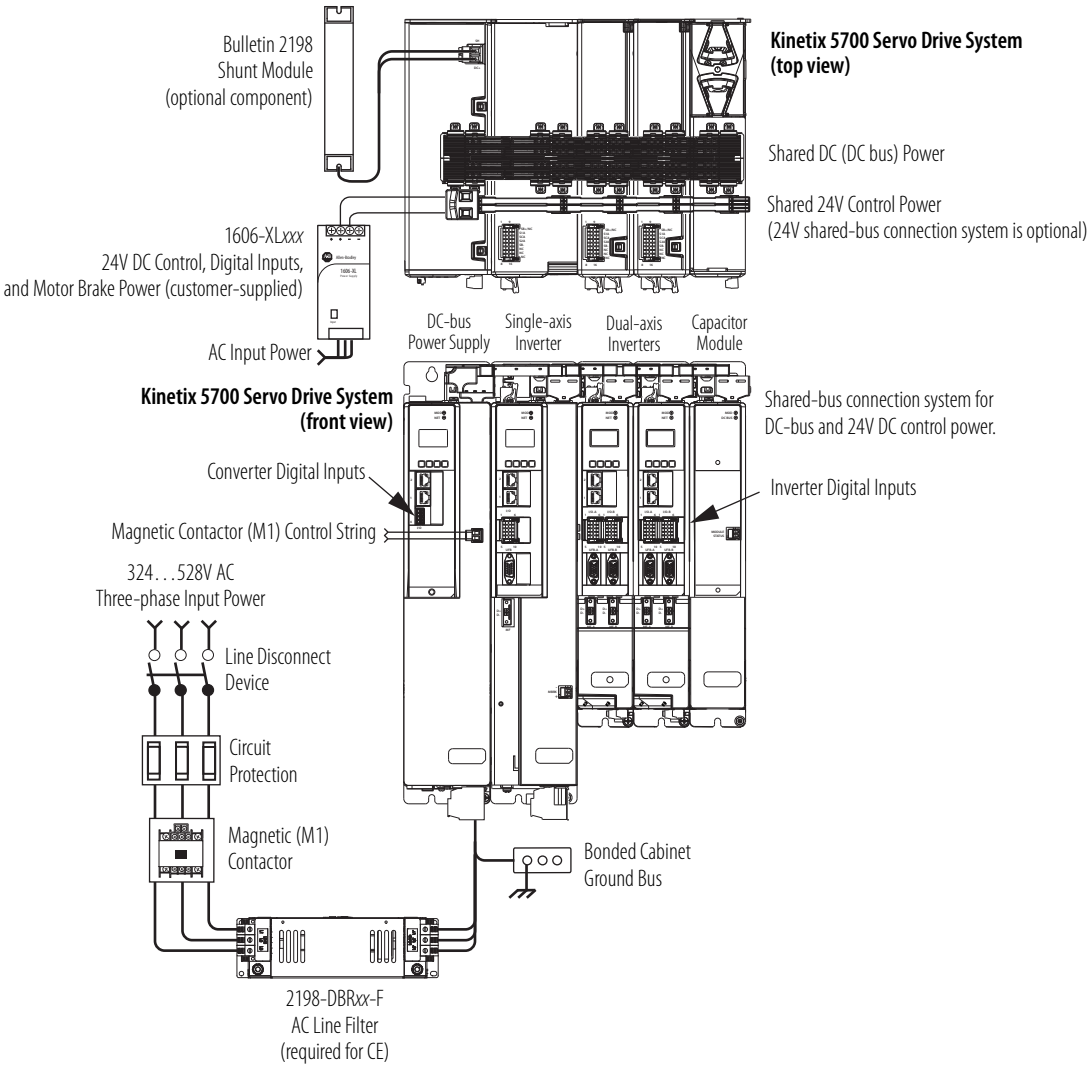
DC-bus Power Supply Input Power Configurations

A single 2198-P*xxx* DC-bus (converter) power supply can supply the Kinetix 5700 drive system with 458…747V shared DC-bus power (7…46 kW). For additional output power (kW) you can install two or three 2198-P208 DC-bus power supplies. You can also extend the DC-bus to additional inverter clusters via accessory modules.

DC-bus Power Supply Configuration Example

In this multi-axis example, AC input power is fed to the DC-bus (converter) power supply. One single-axis (inverter) module and two dual-axis (inverter) modules support five axes of motion. The DC-bus power supply is mounted on the far left and the inverters are positioned on the right, but the reverse mounting order (right to left) is also possible.

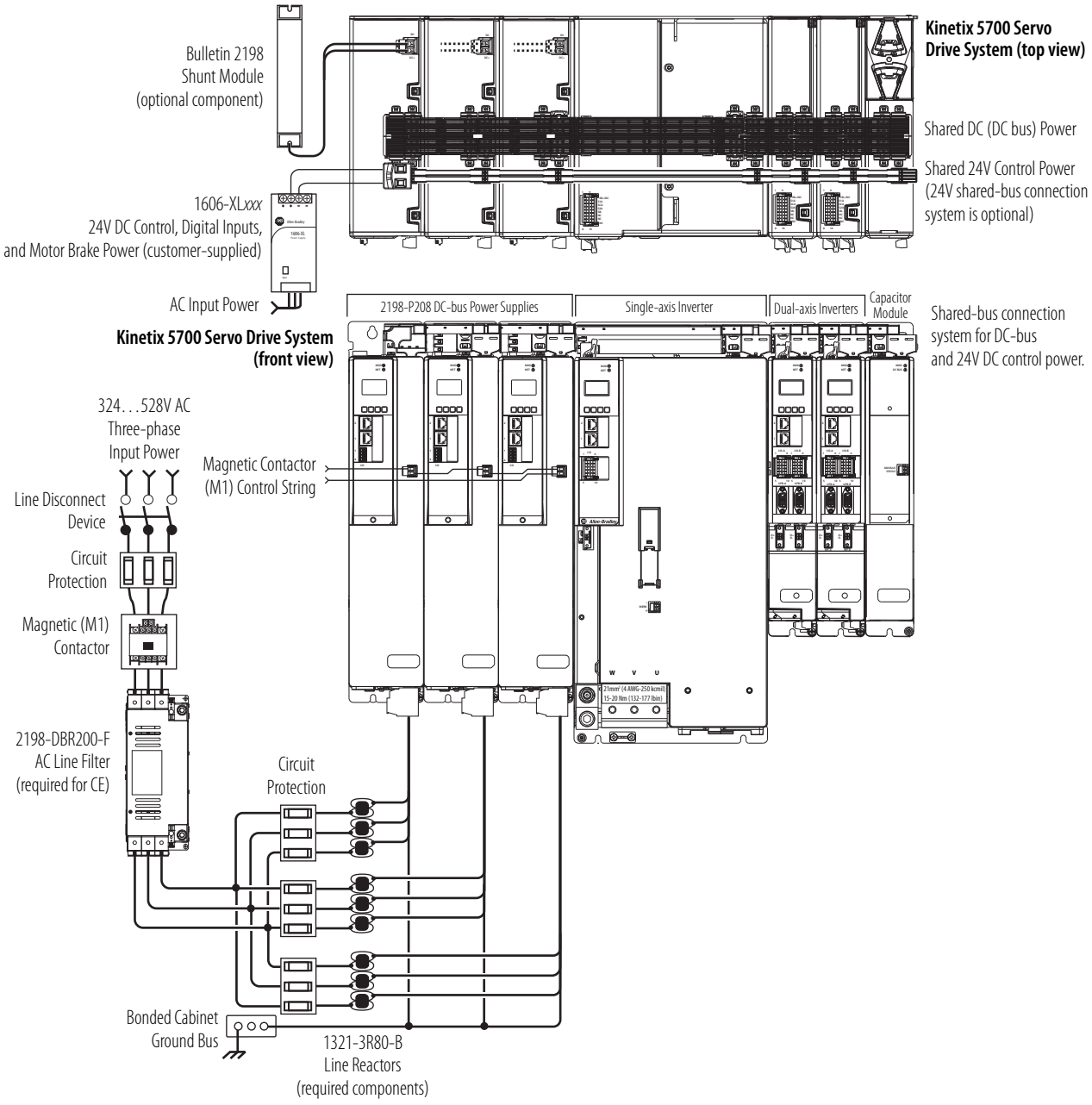
Digital inputs are wired to sensors and the control circuitry at the IOD connectors. The contactor-enable relay protects the DC-bus power supply in the event of shutdown fault conditions.



Multiple DC-Bus Power Supply Configuration

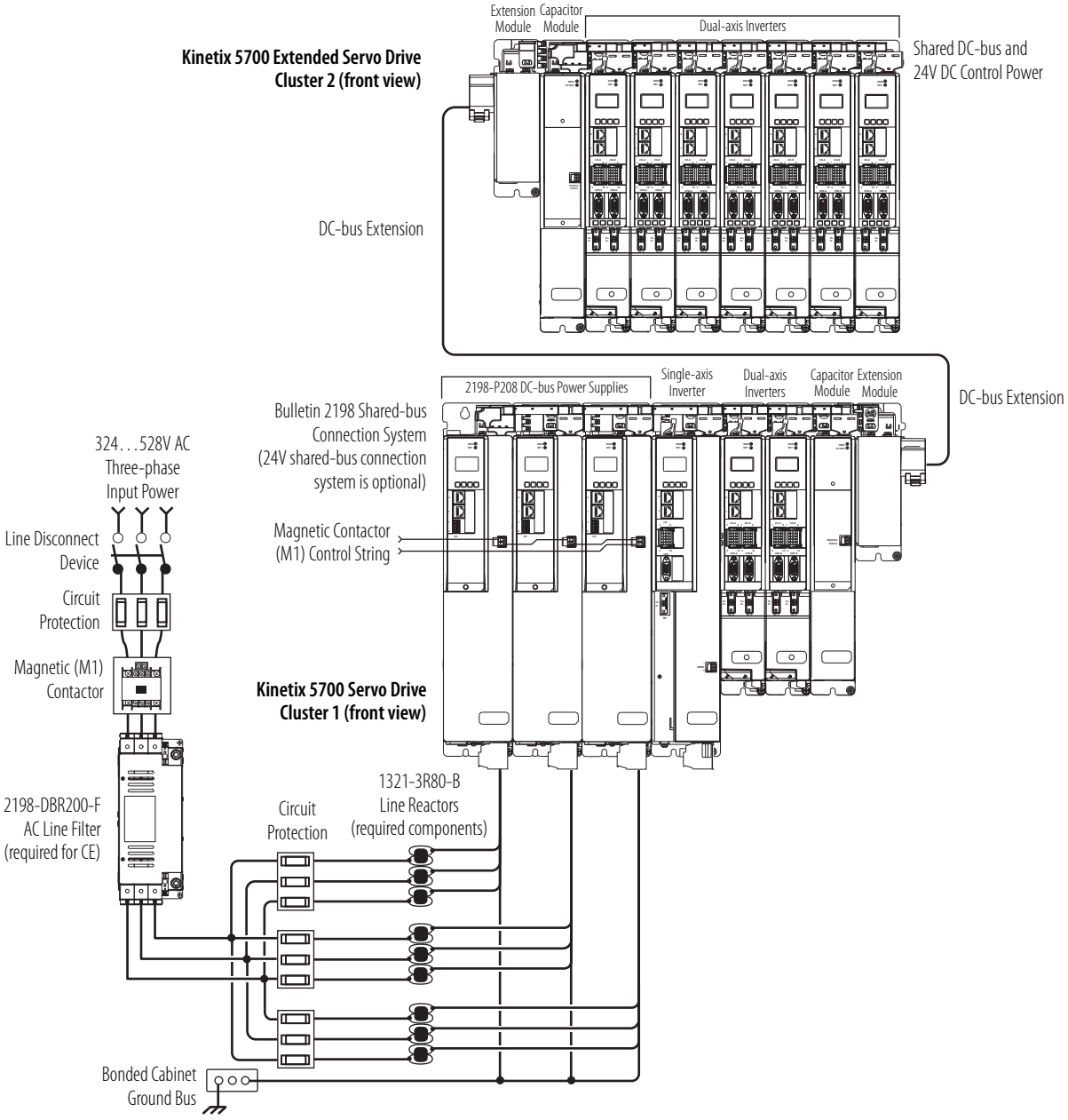
In this example, three DC-bus (converter) power supplies all receive AC input power and feed the inverter modules for increased output power.

Contactor enable relays from each of the DC-bus power supplies are wired in series to protect the DC-bus power supply in the event of shutdown fault conditions



Extended DC-bus Configuration Example

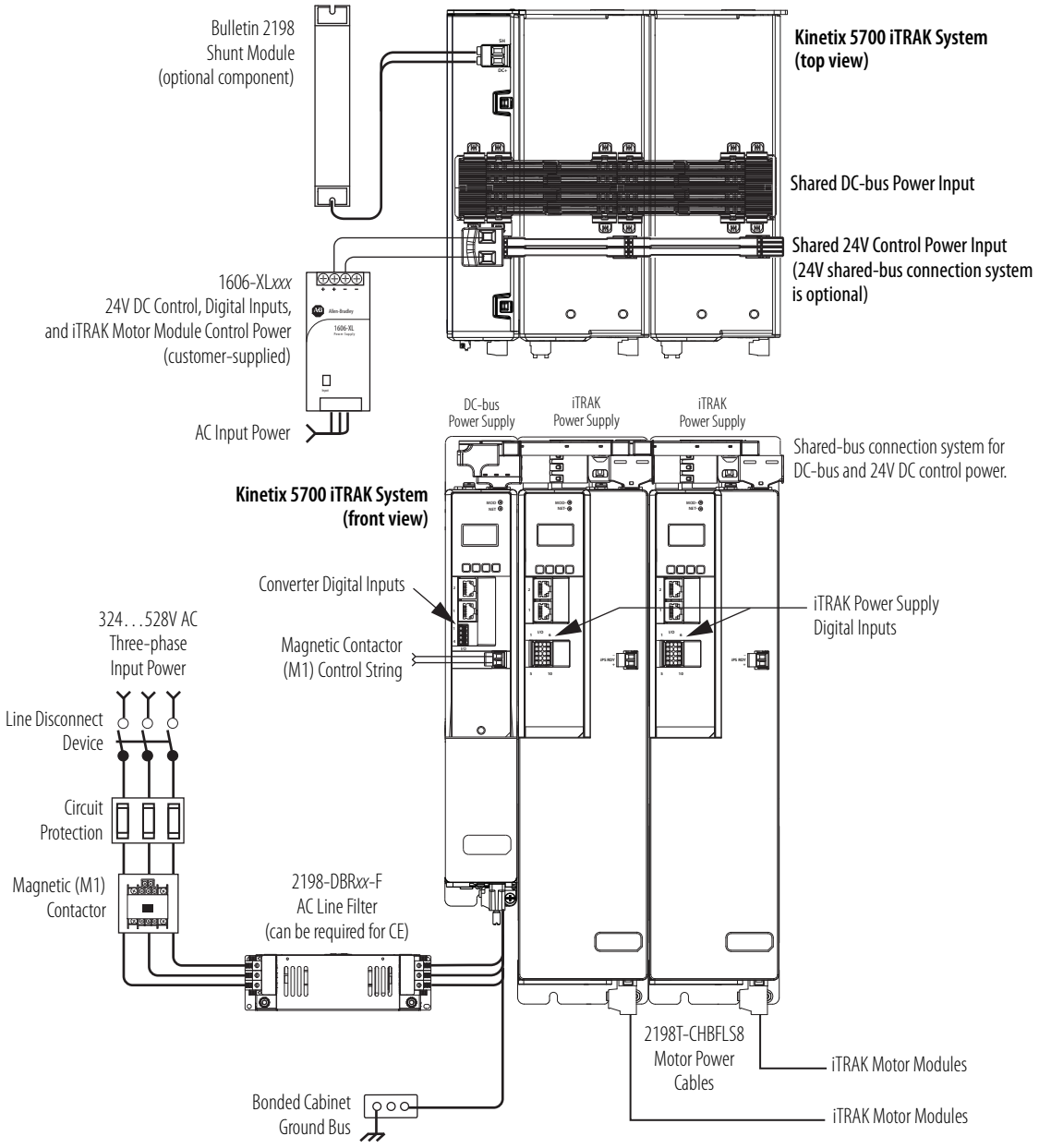
In this example, two drive clusters in the same cabinet are connected by the same 458…747V DC bus voltage. Kinetix 5700 accessory modules provide connection points for the DC-bus at the end of cluster 1 and the beginning of cluster 2. The Kinetix 5700 servo drive system is capable of up to 208 A DC-bus current. Two accessory modules are needed when the DC-bus system current exceeds 104 A. See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on the when accessory modules are required.



iTRAK Power Supply Configuration Example

In this example, AC input power is fed to the DC-bus (converter) power supply. Two iTRAK power supplies support up to 40 iTRAK motor modules, depending on cable lengths and iTRAK motor-module power consumption.

Digital inputs are wired to sensors and the control circuitry at the IOD connectors. The contactor-enable relay protects the DC-bus power supply in the event of shutdown fault conditions.



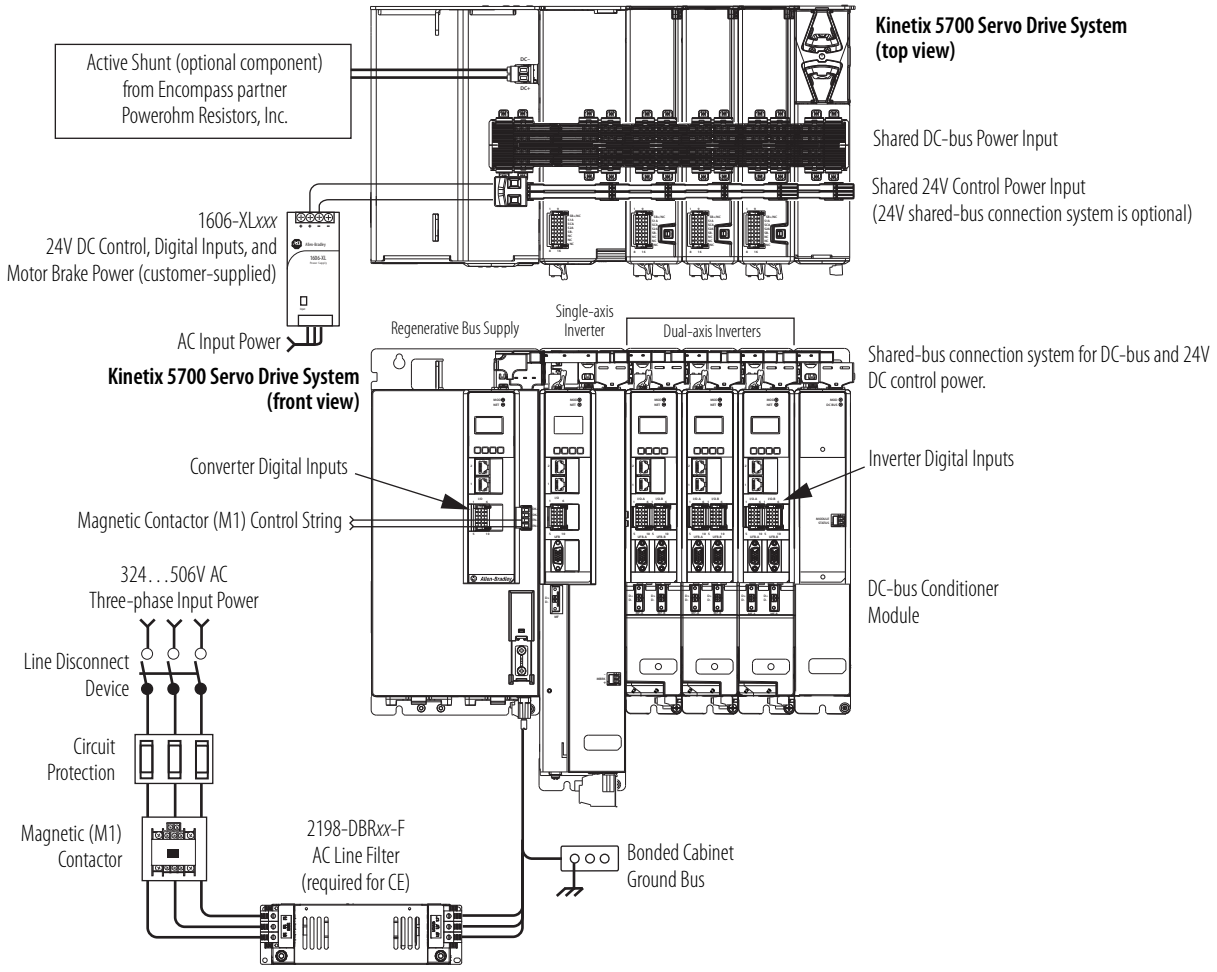
Regenerative Bus Supply Input Power Configurations

The 2198-RP*xxx* regenerative bus supply (24…140 kW) provides full-line motoring and regenerative power to and from the Kinetix 5700 drive system. In addition, you can extend the DC-bus voltage to additional inverter clusters via accessory modules. The regenerative bus supply can be left or right of the inverters. Further, we recommend that the highest inverter power ratings are positioned closest to the regenerative bus supply and in decreasing order leading away from the regenerative bus supply.

Typical Regenerative Bus Configuration Example

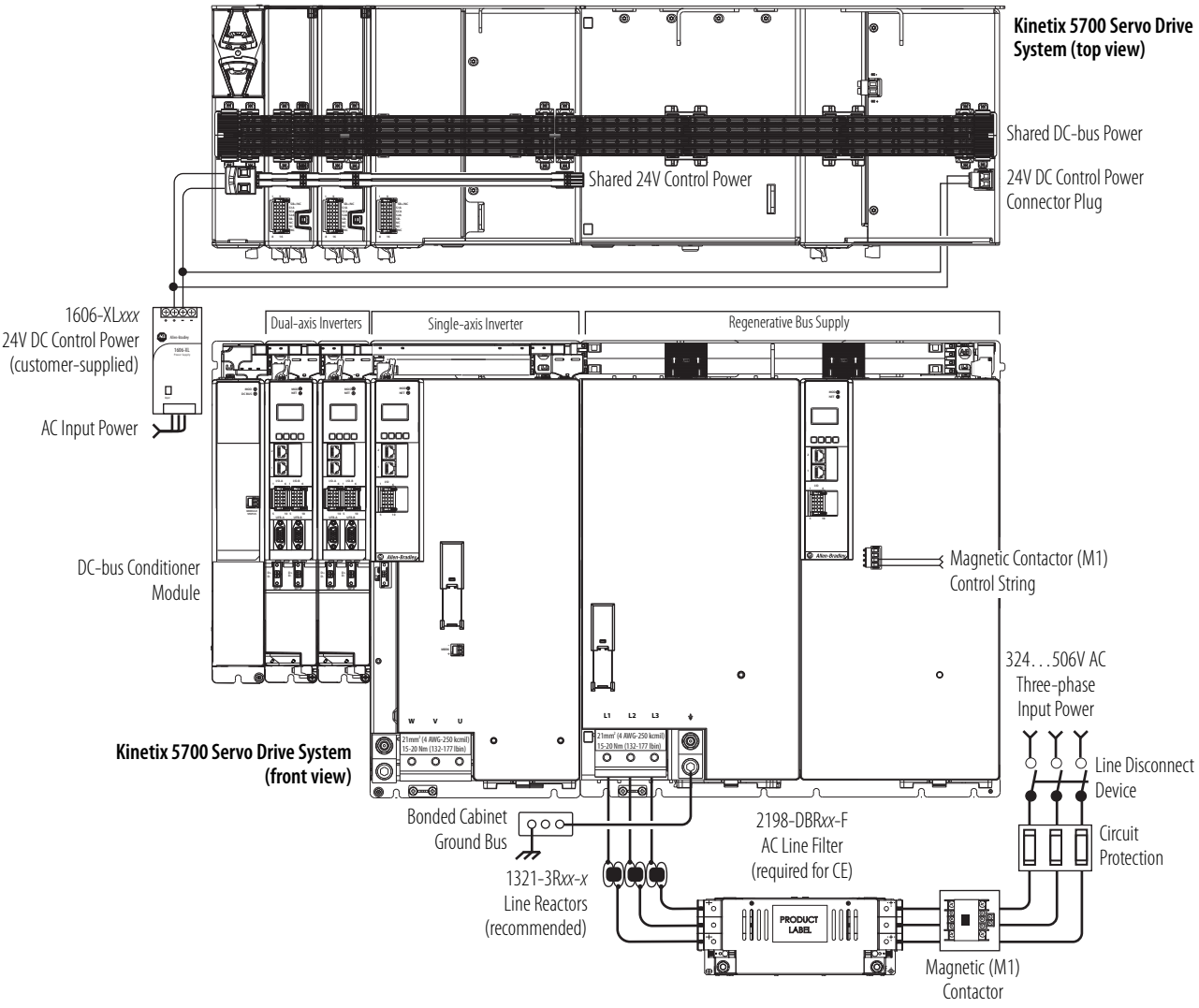
In this example, the inverter modules are mounted to the right of the regenerative bus supply. One single-axis (inverter) module and three dual-axis (inverter) modules support seven axes of motion. Other features include:

- Digital inputs are wired to sensors and the control circuitry at the IOD connectors.
- The contactor enable relay protects the regenerative bus supply in the event of shutdown fault conditions.
- The DC-bus conditioner module is required when the combined motor cable length exceeds 400 m (1312 ft). See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on the when accessory modules are required.



In this example, the 2198-RP312 regenerative bus supply is mounted on the far right and followed by the 2198-S312-ERS*x* single-axis inverter, and two 2198-D020-ERS*x* dual-axis inverters.

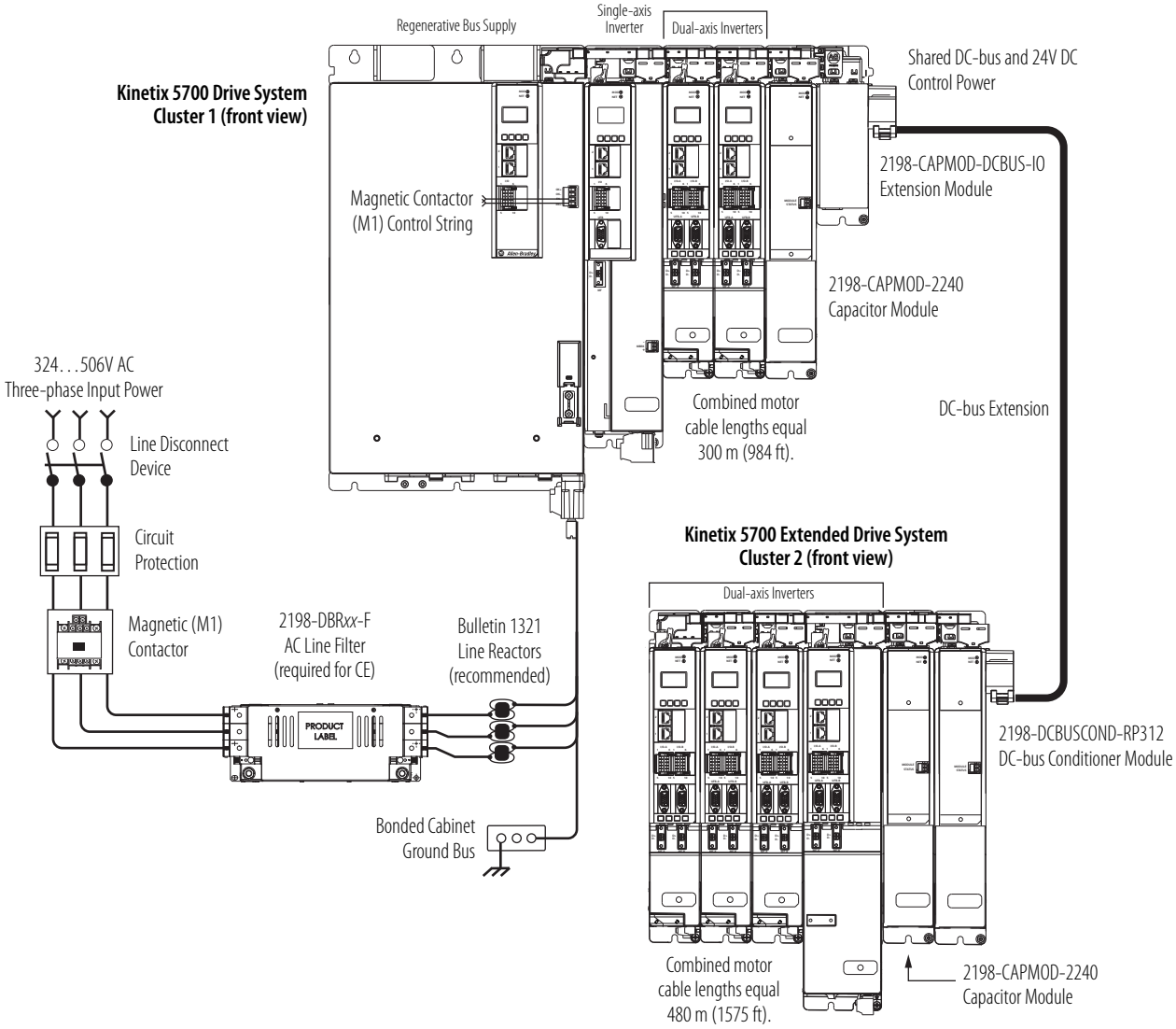
- The 2198-BARCON-440DC200 DC-bus link extends the DC-bus from the regenerative bus supply to the single-axis inverter.
- The 2198-BARCON-220DC200 DC-bus link extends the DC-bus from the single-axis inverter to the dual-axis inverter
- The regenerative bus supply has 24V DC wired to the connector plug.
- The 2198-*xxxx*-P-T bus-bar connector extends 24V control power from the input wire connector to the dual-axis and single-axis inverters.
- The DC-bus conditioner module is required when the combined motor cable length exceeds 400 m (1312 ft). See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on the when accessory modules are required.



Extended Regenerative Bus Configuration Example

In this example, two drive clusters in the same cabinet are connected by the same 458…747V DC bus voltage.

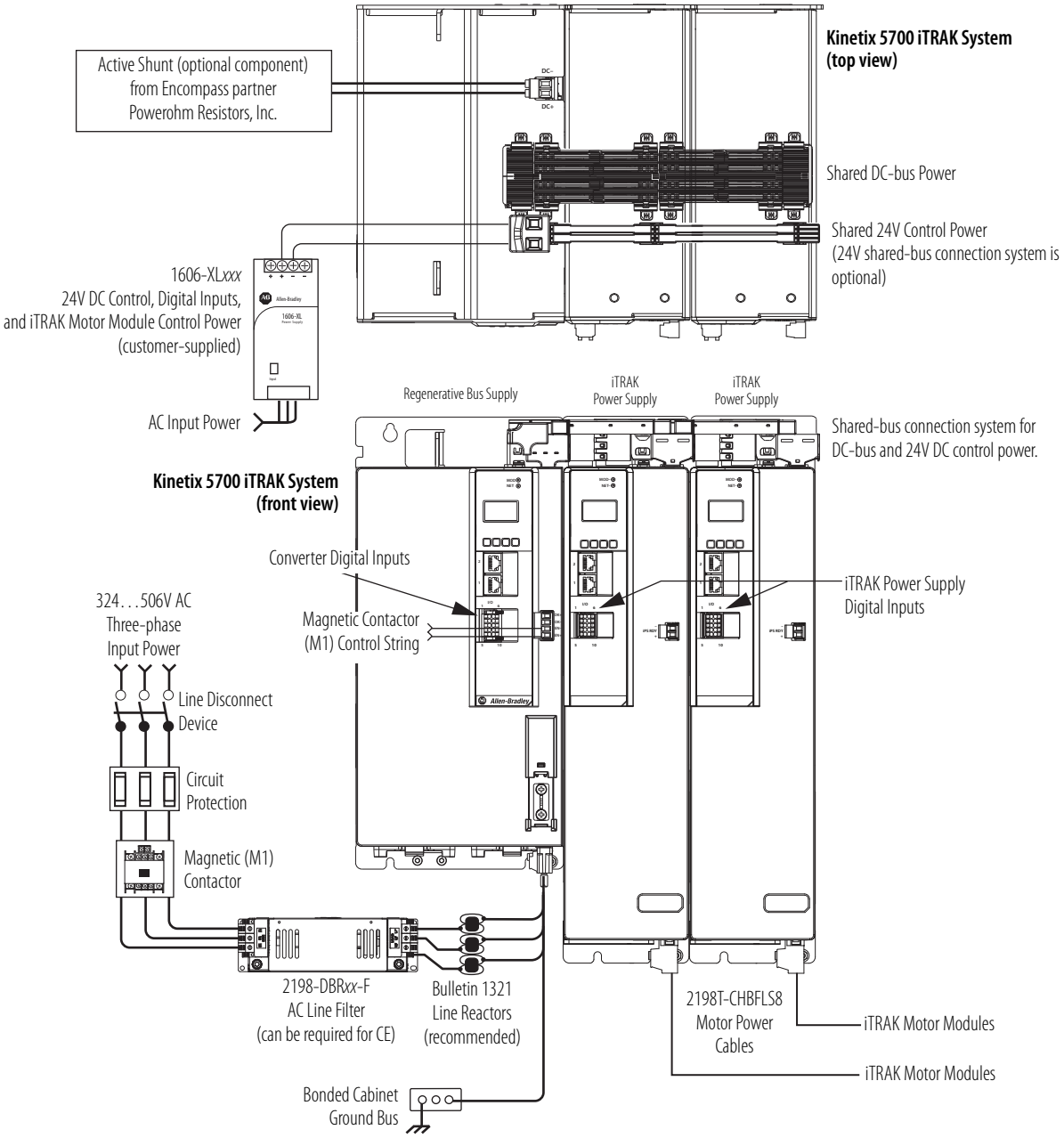
- Kinetix 5700 accessory modules provide connection points for the DC bus at the end of cluster 1 and the beginning of cluster 2.
- The Kinetix 5700 servo drive system is capable of up to 208 A DC-bus current. Two parallel accessory modules are needed when the DC-bus system current exceeds 104 A.
- The DC-bus conditioner module is required when the combined motor cable length for each cluster exceeds 400 m (1312 ft). See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on the when accessory modules are required.



iTRAK Power Supply Configuration Example

In this example, AC input power is fed to the regenerative bus supply. Two iTRAK power supplies support up to 40 iTRAK motor modules, depending on cable lengths and iTRAK motor-module power consumption.

Digital inputs are wired to sensors and the control circuitry at the IOD connectors. The contactor-enable relay protects the regenerative bus supply in the event of shutdown fault conditions.

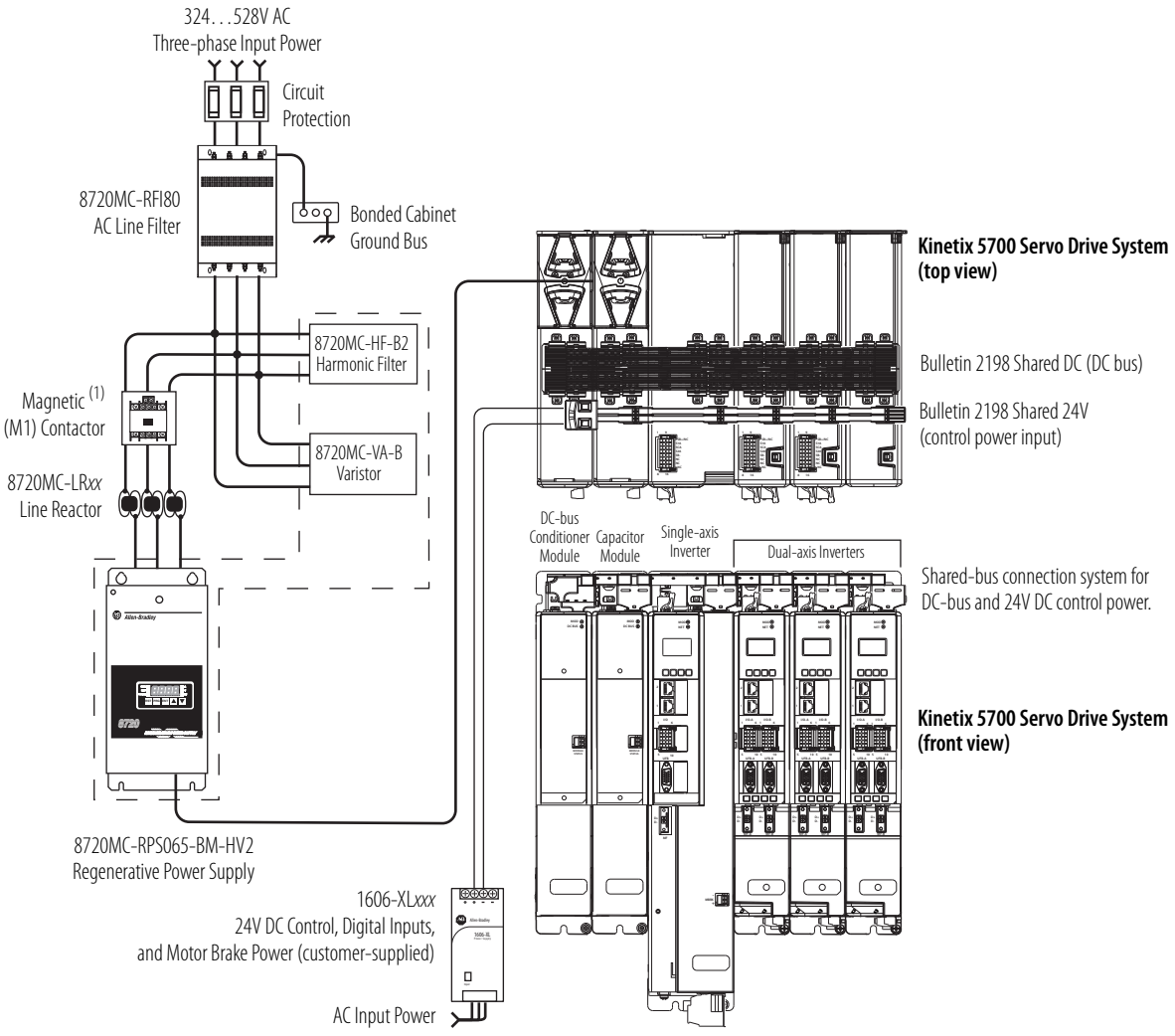


8720MC-RPS Power Supply Input Power Configuration

In this example, three-phase AC input power is fed to the Bulletin 8720MC regenerative power supply. The 8720MC-RPS DC-bus voltage supplies the Kinetix 5700 DC-bus via the capacitor module.

- The 8720MC-RPS065 provides 65 A of DC-bus current. The 2198-CAPMOD-2240 capacitor module and 2198-DCBUSCOND-RP312 DC-bus conditioner are required to reduce voltage stress on the system components.
- If the 8720MC-RPS190 is used, the capacitor module and DC-bus conditioner module provide up to 208 A of DC input current. DC-bus full-regeneration is possible with this configuration.
- The DC-bus conditioner module is required when the combined motor cable length for each cluster exceeds 400 m (1312 ft). See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on the when accessory modules are required.

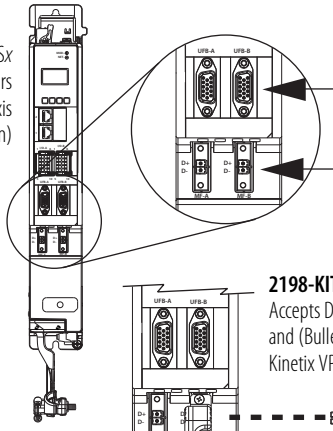
IMPORTANT The 8720MC-RPS power supply is not compatible with the iTRAK power supply.

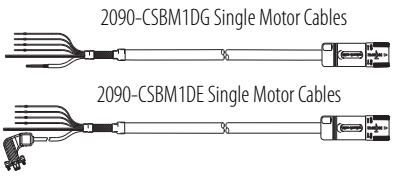


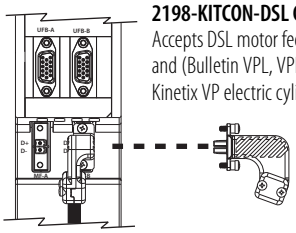
(1) This M1 contactor is controlled by the 8720MC regenerative power supply.

Motor and Auxiliary Feedback Configurations

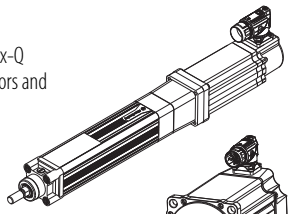
Feedback connections are made at the 2-pin motor feedback (MF) connector and the 15-pin universal feedback (UFB) connector. These examples illustrate how you can use the Bulletin 2198 connector kits for making these connections.

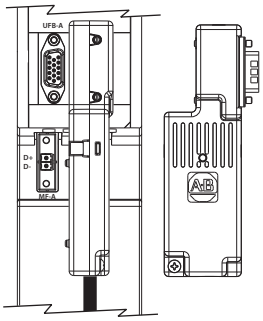




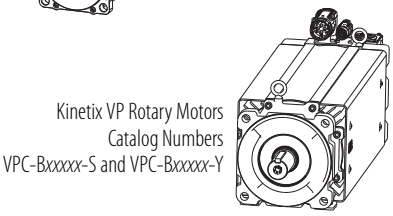


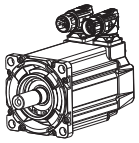
2198-KITCON-DSL Connector Kit
Accepts DSL motor feedback from VPC-Bxxxxx-Q and (Bulletin VPL, VPF, VPH, VPS) rotary motors and Kinetix VP electric cylinders.

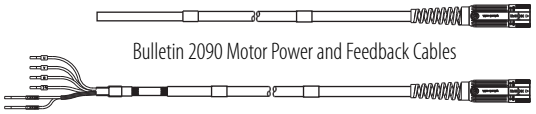


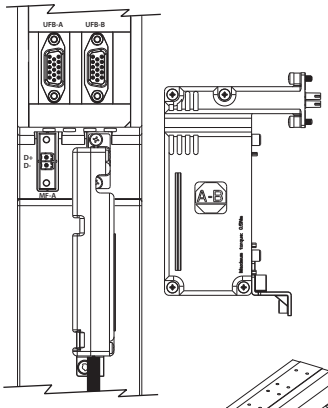


2198-K57CK-D15M Universal Connector Kit
Accepts multiple encoder feedback types:
- Hiperface high-resolution absolute multi-turn and single-turn encoders
  - VPC-Bxxxxx-S rotary motors
  - MP-Series (Bulletin MPL, MPM, MPF, MPS) rotary motors
  - HPK-Series asynchronous rotary motors
  - MP-Series (Bulletin MPAS ballscrew, MPAR, MPAI) linear actuators
  - LDAT-Series linear thrusters
- Heidenhain EnDat high-resolution absolute encoders
  - VPC-Bxxxxx-Y rotary motors
- Feedback-only, master feedback, or load feedback (absolute single-turn/multi-turn Hiperface)
- Feedback-only, master feedback, or load feedback (incremental)

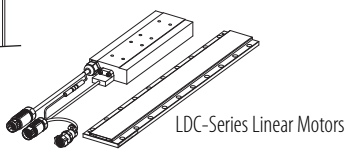


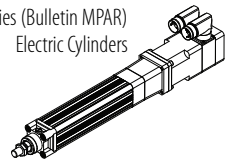


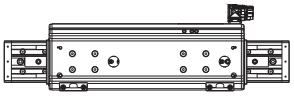


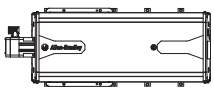


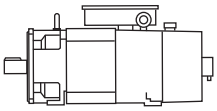
2198-H2DCK Converter Kit
Converts 15-pin Hiperface feedback into 2-pin DSL feedback for:
- VPC-Bxxxxx-S rotary motors
- MP-Series rotary motors and linear actuators
- HPK-Series asynchronous rotary motors
- LDAT-Series linear thrusters
- Feedback-only, master feedback, or load feedback (absolute single-turn/multi-turn Hiperface)











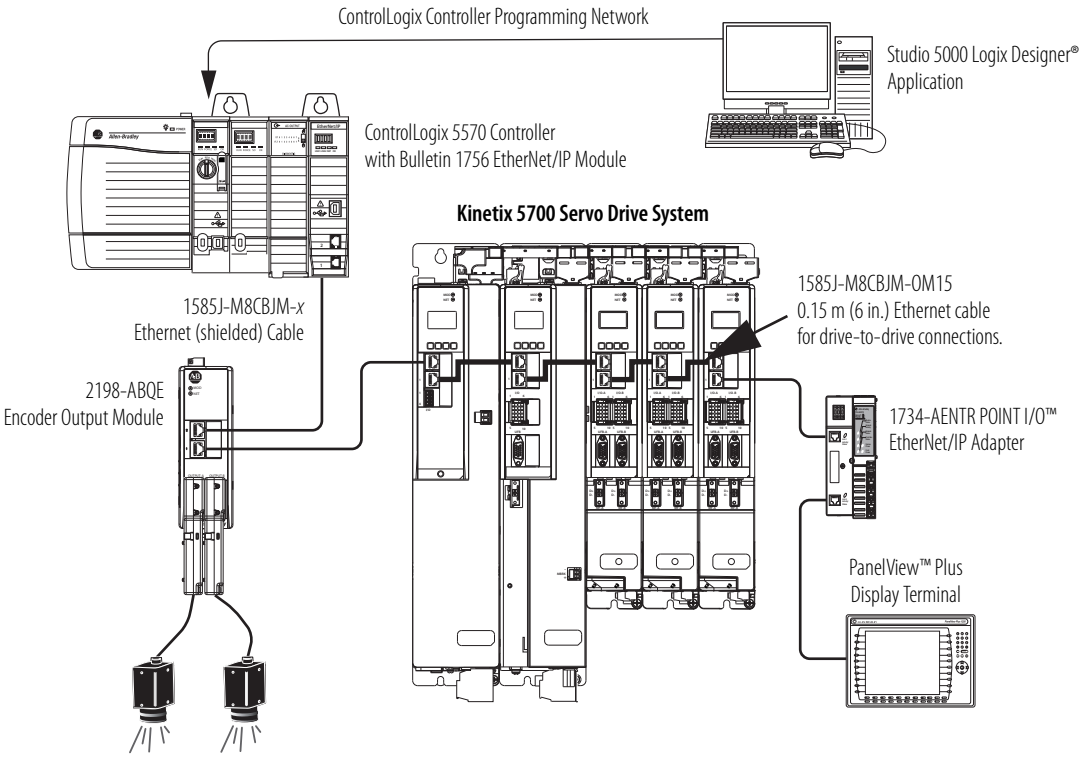
Typical Communication Configurations

The Kinetix 5700 drives support any Ethernet topology including linear, ring, and star by using ControlLogix, GuardLogix, or CompactLogix controllers. These examples feature the ControlLogix 5570 programmable automation controllers with support for integrated motion and integrated safety over the EtherNet/IP network. Other Allen-Bradley controllers are also compatible with the Kinetix 5700 servo drives.

Refer to ControlLogix Communication Module Specifications Technical Data, publication 1756-TD003, for more information on ControlLogix 1756-EN2T, 1756-EN2TR, and 1756-EN3TR communication modules.

In this example, all devices are connected in linear topology. The Kinetix 5700 drive modules 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.

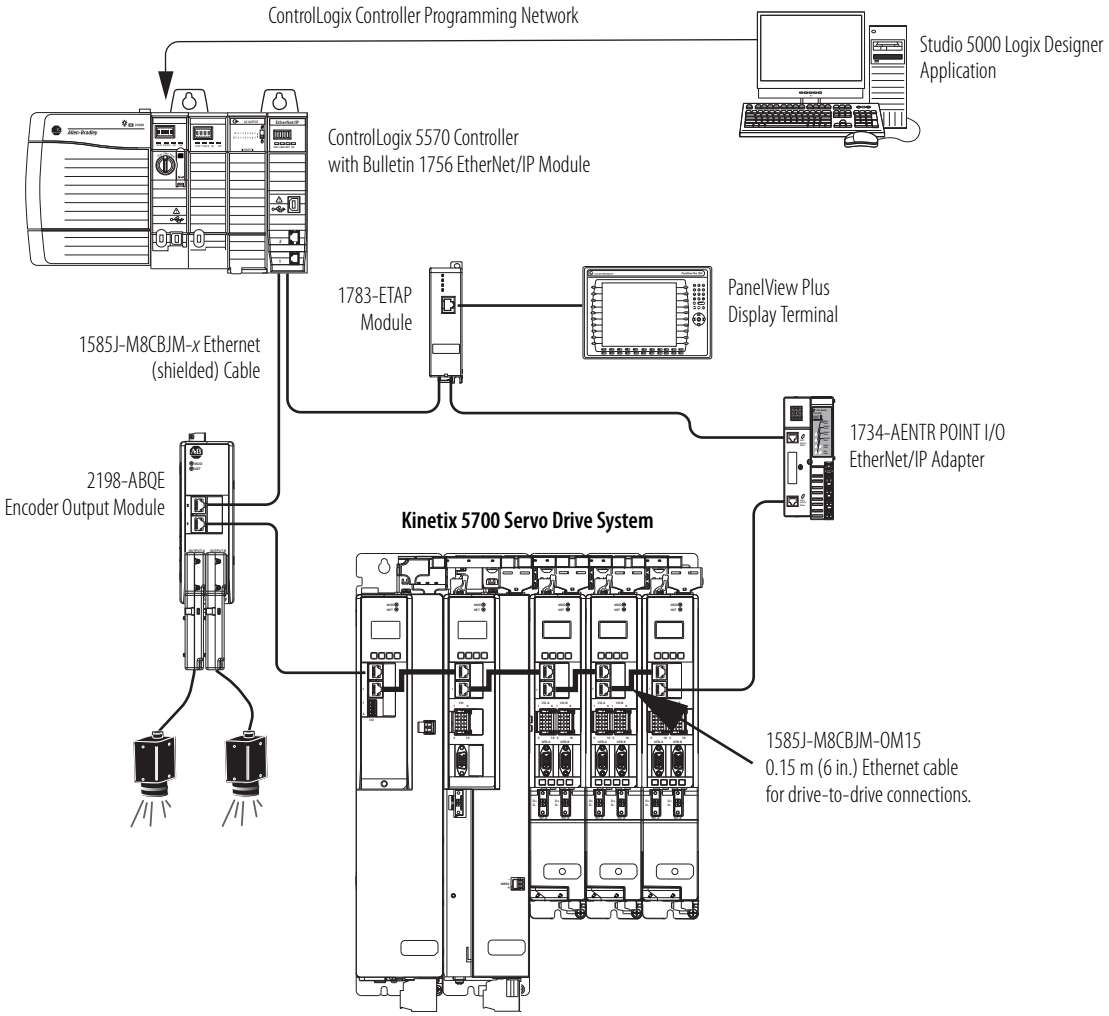
Kinetix 5700 Linear Communication



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. For more information, refer to the EtherNet/IP Embedded Switch Technology Application Guide, publication ENET-AP005.

Devices without dual ports, for example the display terminal, require a 1783-ETAP module to complete the network ring.

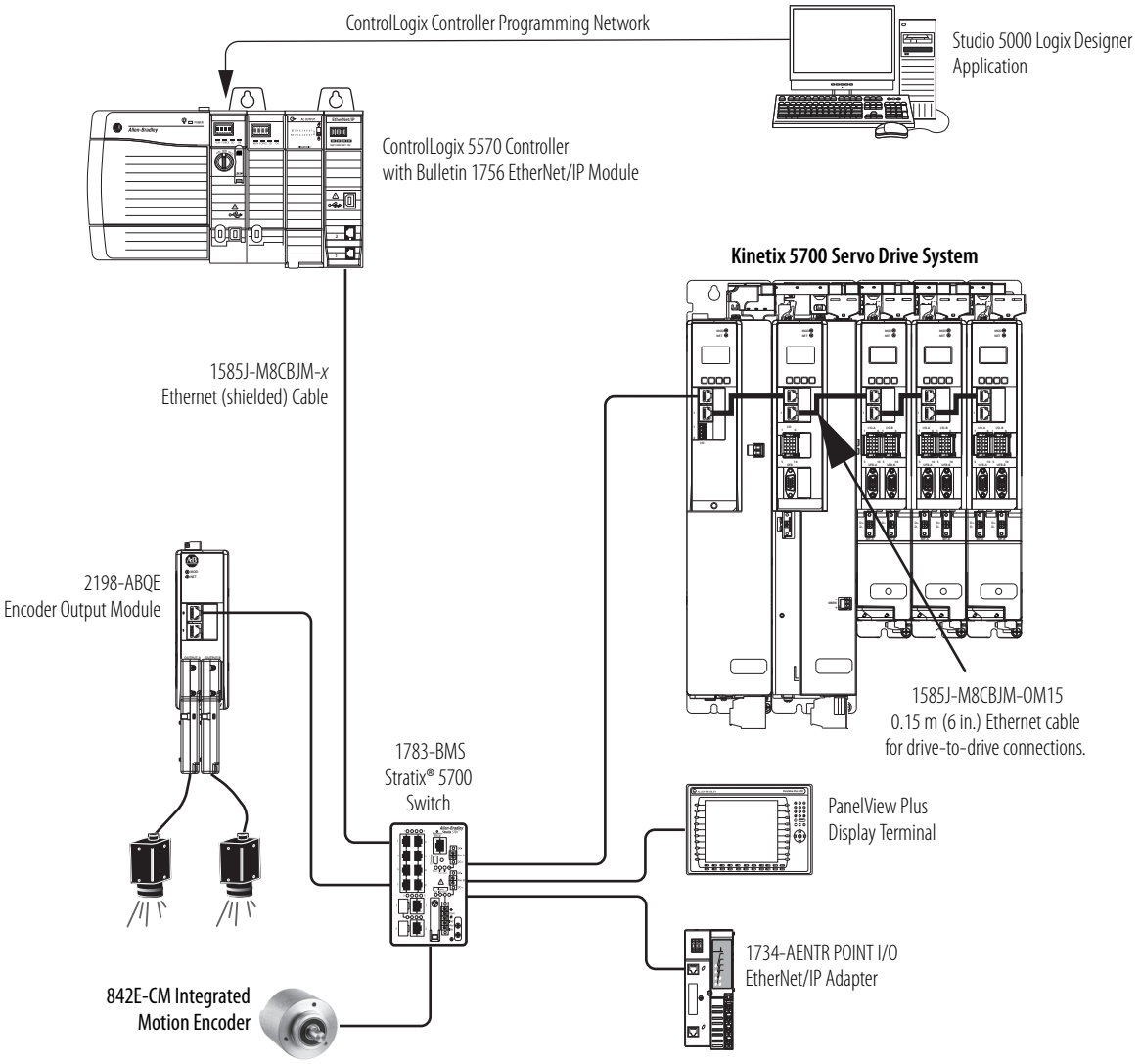
Kinetix 5700 Ring Communication



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

Kinetix 5700 drive modules have dual ports, so linear topology is maintained from one module to another, but the Kinetix 5700 system and other devices operate independently. The loss of one device does not impact the operation of other devices.

Kinetix 5700 Star Communication



You can use the 842E-CM integrated motion encoder for applications requiring an external encoder for gearing or camming to the Kinetix 5700 drive. By providing auxiliary feedback directly through the EtherNet/IP network, the 842E-CM encoder helps eliminate the need for point-to-point wiring while letting customers use the encoder in a variety of network topologies. For more information, see the 842E-CM Integrated Motion on EtherNet/IP Product Profile, publication 842ECM-PP001.

Functional Safety Configurations

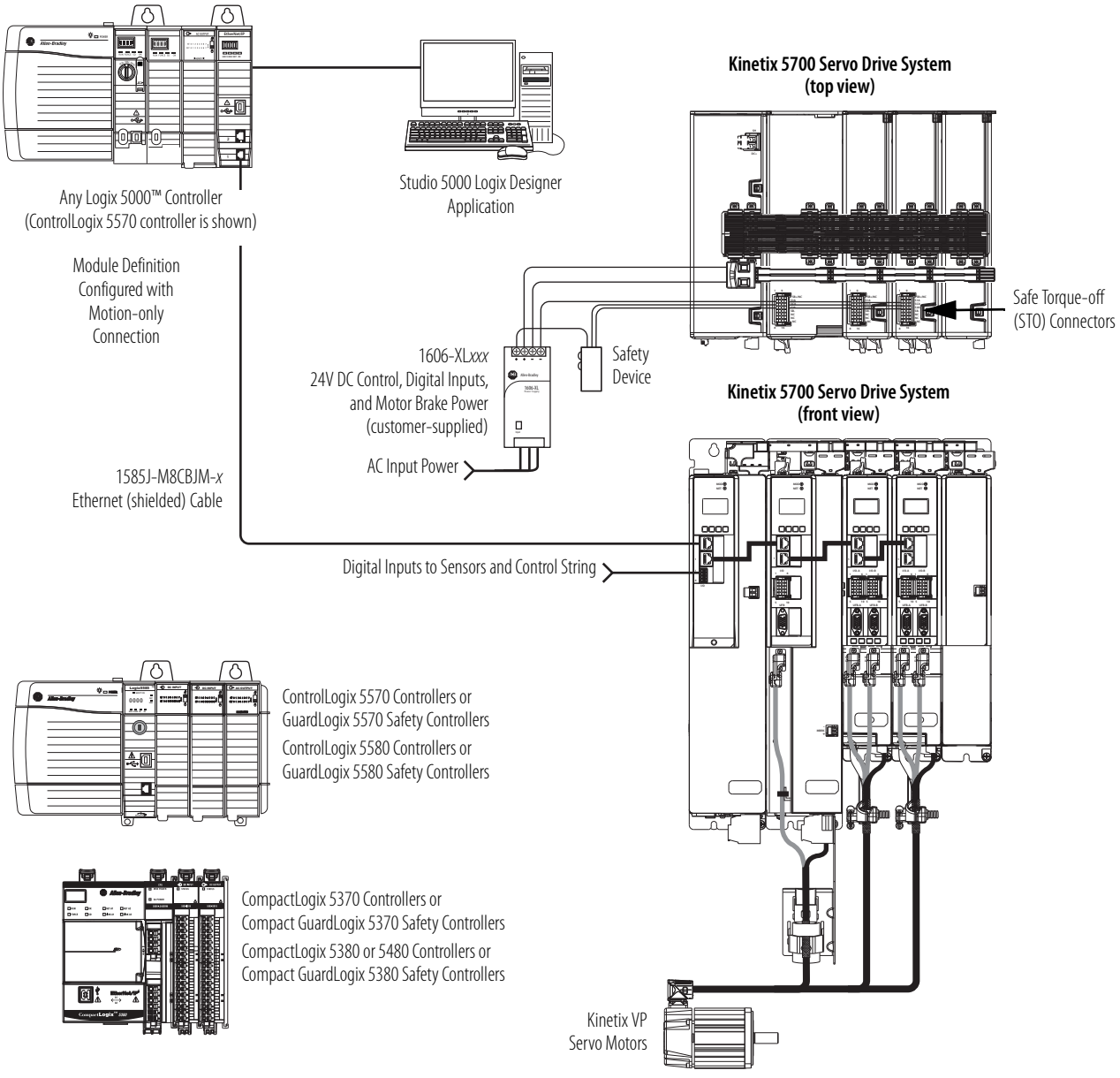
Kinetix 5700 servo drives are capable of safe torque-off (STO) and safe stop 1 (SS1) drive-based safety functions via hardwired connections or integrated over the EtherNet/IP network. In addition, safely limited speed (SLS) and other controller-based safety instructions are also possible. These examples illustrate the functional safety configuration options.

TIP These example configurations use the 2198-P*xxx* DC-bus power supply. However, 2198-RP*xxx* regenerative bus supply can be used instead.

Hardwired Safety Configuration

Kinetix 5700 servo drives use the safe torque-off (STO) connector for wiring external safety devices and cascading hardwired safety connections from one drive to another.

Safe Torque-off (hardwired) Configuration



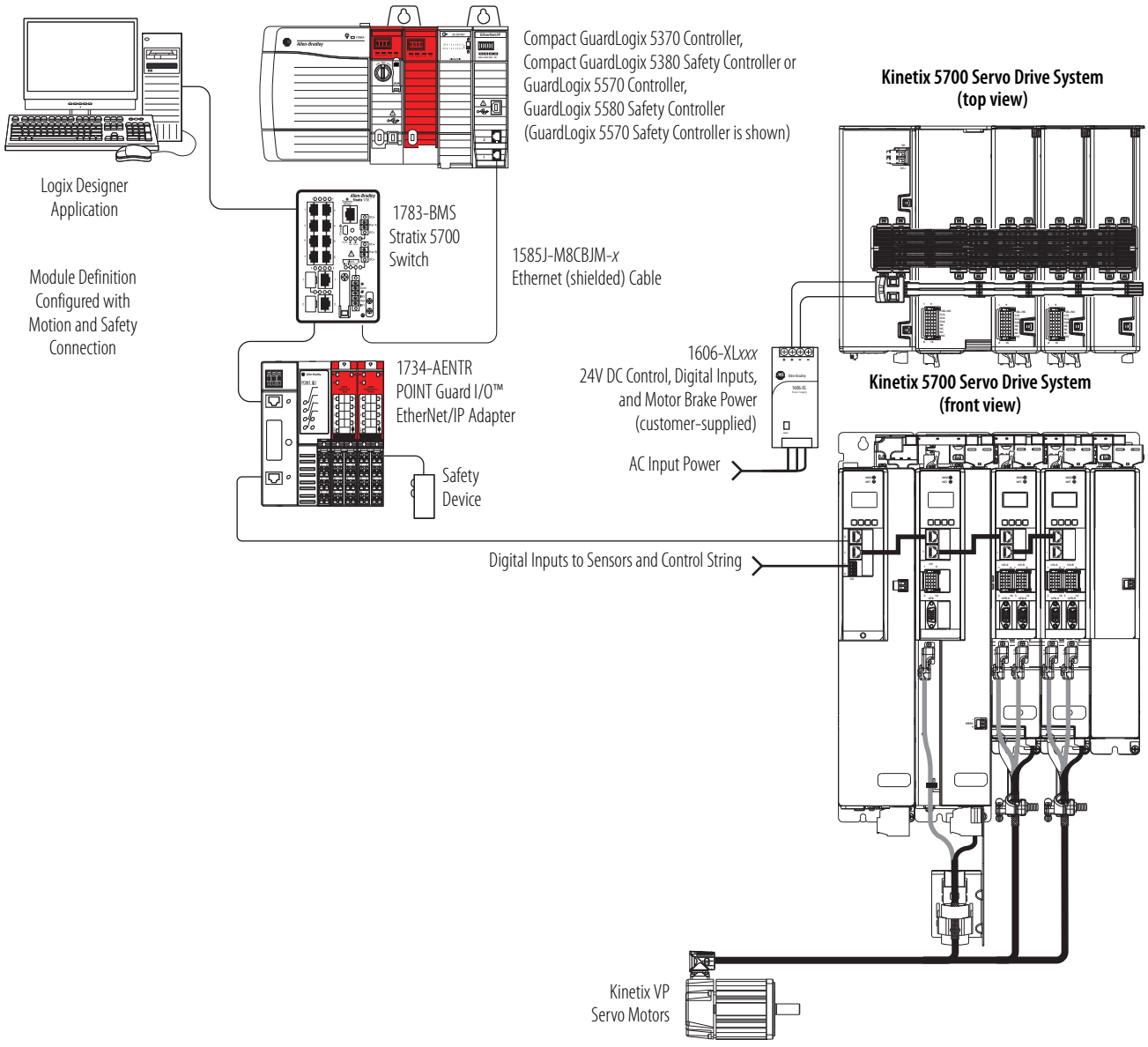
Integrated Safety Configurations

The GuardLogix or Compact GuardLogix safety controller issues the safe torque-off (STO) or safe stop (SS1) command over the EtherNet/IP network and the Kinetix 5700 servo drive executes the command.

In this example, a single GuardLogix 5570 safety controller makes a Motion and Safety connection.

IMPORTANT If only one controller is used in an application with Motion and Safety connections, it must be a GuardLogix or Compact GuardLogix safety controller. For more information, see the Integrated Functional Safety Support table on page 55.

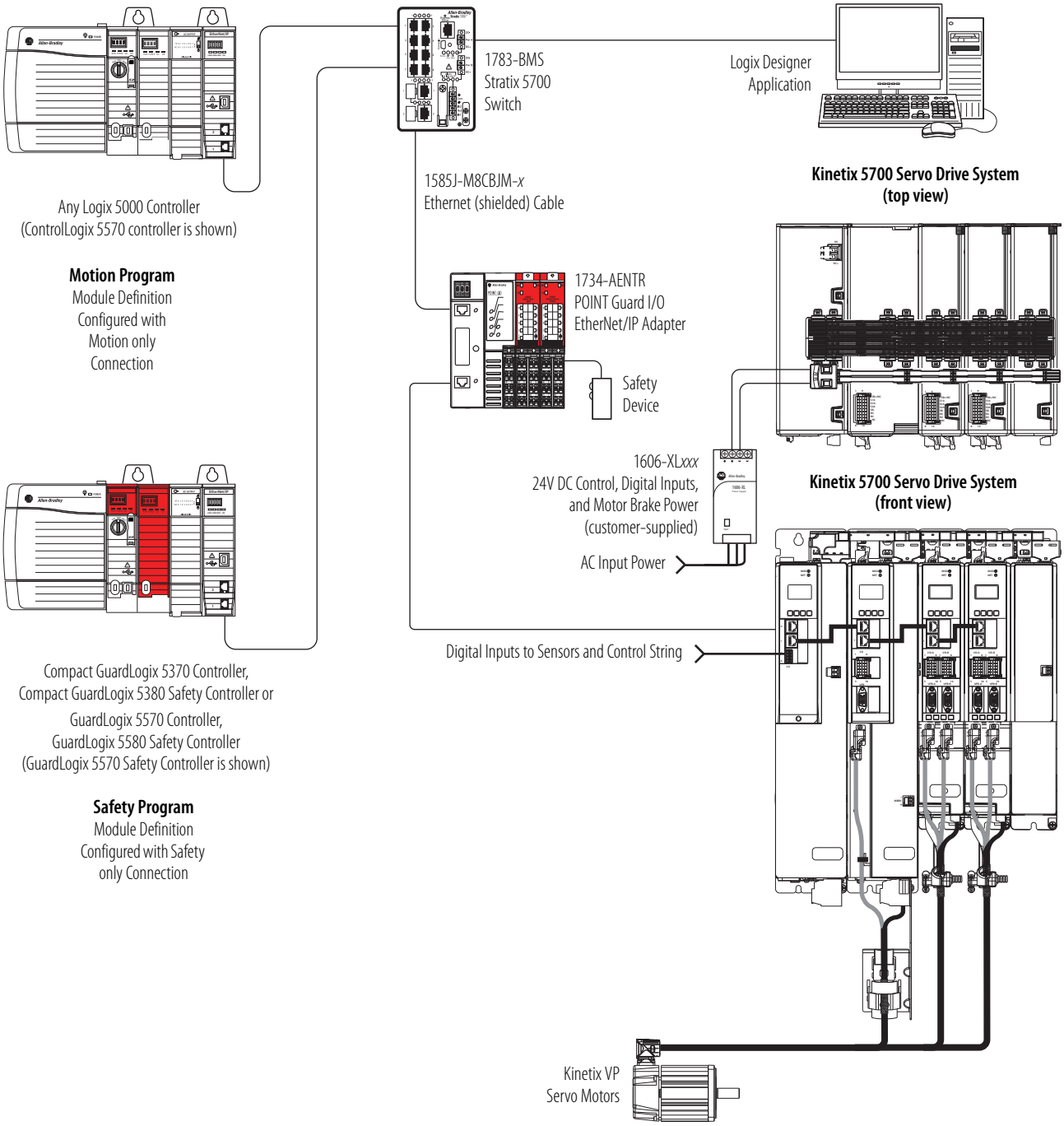
Motion and Safety Configuration (single controller)



In this example, a non-safety controller makes the Motion Only connection and a separate GuardLogix safety controller makes the Safety Only connection.

IMPORTANT If two controllers are used in an application with Motion Only and Safety Only connections, the Safety Only connection must be a GuardLogix or Compact GuardLogix safety controller and the Motion Only connection must be any Logix 5000 controller. For more information, see the Integrated Functional Safety Support table on page 55.

Motion and Safety Configuration (multi-controller)



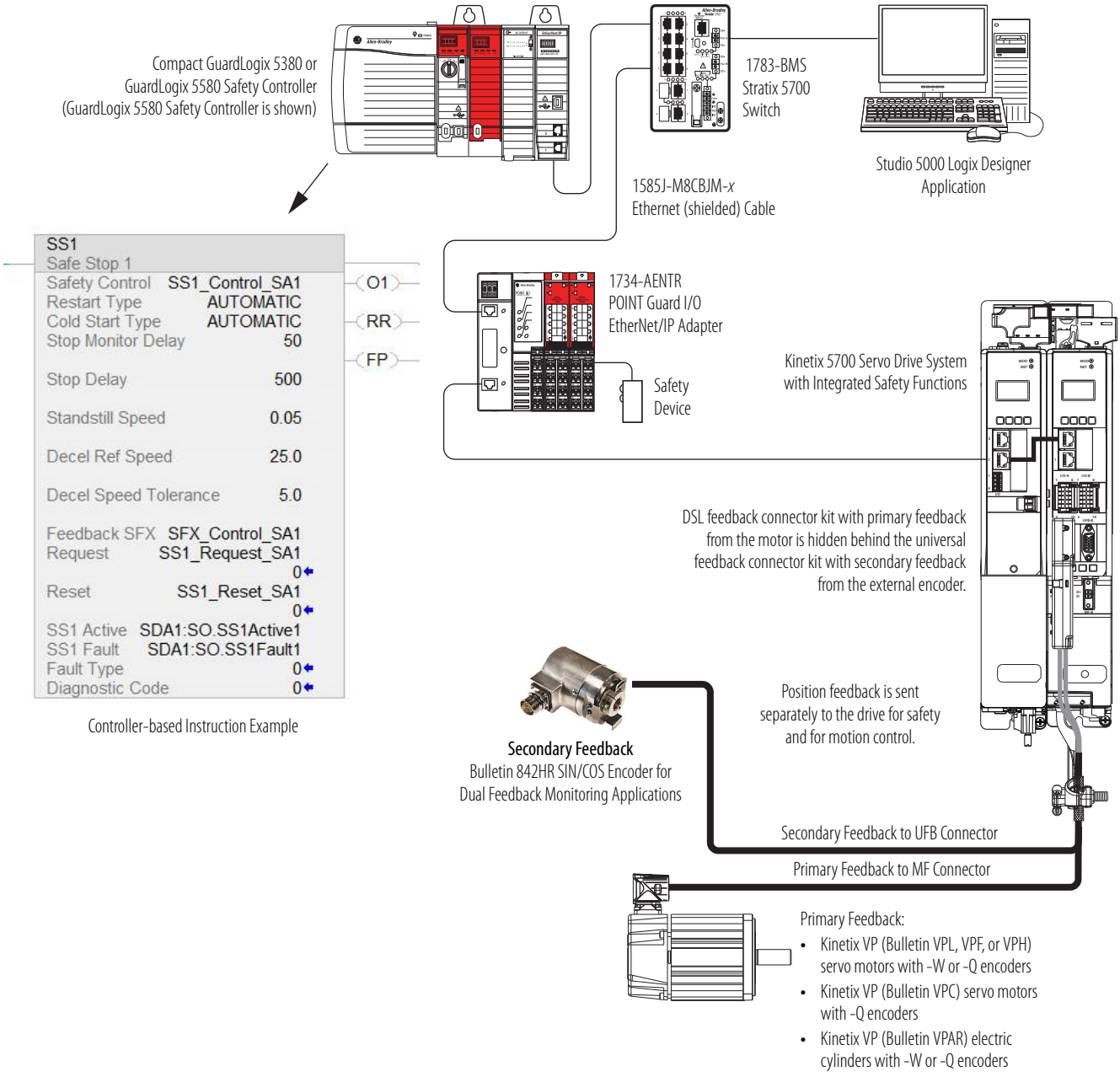
Safe Stop and Safe Monitor Configurations

Kinetix 5700 servo drives are capable of safe stop and safe monitor functions via drive-based and controller-based integrated safety over the EtherNet/IP network.

IMPORTANT For applications with safe stop and safe monitor safety functions, the GuardLogix 5580 or Compact GuardLogix 5380 controllers must be used. For more information, see the Integrated Functional Safety Support table on page 55.

In this example, the SS1 stopping function is used in a motion and safety controller-based configuration with dual-feedback monitoring.

Safe Motion-monitoring Configuration



Controller-based Instruction Example

Integrated Functional Safety Support

Integrated Safety Over the EtherNet/IP Network	Safety Function	Dual-axis Inverters Cat. No.	Single-axis Inverters Cat. No.	Minimum Controller [1] Required
Drive-based stopping functions	Timed Safe Stop 1 (SS1)	• 2198-D*xxx*-ERS3 (series B) • 2198-D*xxx*-ERS4	• 2198-S*xxx*-ERS3 (series B) • 2198-S*xxx*-ERS4	• GuardLogix 5580 • CompactLogix 5380
	Monitored Safe Stop 1 (SS1)	2198-D*xxx*-ERS4	2198-S*xxx*-ERS4	
Controller-based stopping functions	• Monitored Safe Stop 1 (SS1) • Safe Stop 2 (SS2)			
Controller-based monitoring functions	• Safe Operational Stop (SOS) • Safely Limited Speed (SLS) • Safety Limited Position (SLP) • Safe Direction (SDI)			
Safety feedback function	Safety Feedback Interface (SFX)			
Integrated STO mode	Safe Torque-off (STO)	2198-D*xxx*-ERS4	2198-S*xxx*-ERS4	
		2198-D*xxx*-ERS3	2198-S*xxx*-ERS3	• ControlLogix 5570 • CompactLogix 5370

(1) Where a ControlLogix or CompactLogix (non-safety) controller is specified, a GuardLogix or Compact GuardLogix controller is backwards compatible. Also, GuardLogix 5580 and Compact GuardLogix 5380 controllers are backwards compatible with GuardLogix 5570 and Compact GuardLogix 5370 controllers.

Rotary Motion Performance Specifications

These rotary motor families are compatible with Kinetix 5700 servo drives.

Rotary Motor Family	Page
Kinetix VP (Bulletin VPL) low-inertia motors	56
Kinetix VP (Bulletin VPC) continuous-duty motors	58
Kinetix VP (Bulletin VPF) food-grade motors	59
Kinetix VP (Bulletin VPH) hygienic stainless-steel motors (non-brake)	60
Kinetix VP (Bulletin VPH) hygienic stainless-steel motors (brake)	60
Kinetix VP (Bulletin VPS) stainless-steel motors	61
MP-Series (Bulletin MPL) low-inertia motors	61
MP-Series (Bulletin MPM) medium-inertia motors	62
MP-Series (Bulletin MPF) food-grade motors	64
MP-Series (Bulletin MPS) stainless-steel motors	64
HPK-Series asynchronous rotary motors	64

For Kinetix 5700 drive and Kinetix VP motor combinations that include cable catalog number selection and torque/speed curves, refer to the Kinetix 5700 Drive Systems Design Guide, publication KNX-RM010.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com

Bulletin VPL Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPL-B0631T	8000	8000	1.20	0.46 (4.0)	4.20	1.33 (12.0)	0.31 (0.42)	2198-D006-ERS*x*
VPL-B0631U	8000	8000	1.92	0.46 (4.0)	6.48	1.33 (12.0)	0.31 (0.42)	2198-D006-ERS*x*
VPL-B0632F	4600	4600	1.20	0.93 (8.0)	4.20	2.69 (24.0)	0.37 (0.50)	2198-D006-ERS*x*
VPL-B0632T	8000	8000	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.54 (0.72)	2198-D006-ERS*x*
VPL-B0633M	6500	6700	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.57 (0.76)	2198-D006-ERS*x*
VPL-B0633T	6500	8000	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.57 (0.76)	2198-D006-ERS*x*
					12.60	4.09 (36.0)		2198-D012-ERS*x*
VPL-B0751M	8000	8000	2.90	1.01 (9.0)	8.80	2.20 (19.0)	0.54 (0.72)	2198-D006-ERS*x*
					9.12	2.27 (20.0)		2198-D012-ERS*x*
VPL-B0752E	4900	4900	2.70	1.61 (14.0)	8.80	4.10 (36.0)	0.67 (0.90)	2198-D006-ERS*x*
					9.45	4.39 (39.0)		2198-D012-ERS*x*
VPL-B0752F	7000	7000	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.80 (1.07)	2198-D012-ERS*x*
VPL-B0752M	8000	8000	4.90	1.61 (14.0)	17.60	4.10 (36.0)	0.81 (1.09)	2198-D012-ERS*x*
					18.90	4.39 (39.0)		2198-D020-ERS*x*
VPL-B0753E	4500	4500	3.80	2.28 (20.0)	13.30	7.35 (65.0)	0.81 (1.09)	2198-D012-ERS*x*
VPL-B0753F	4500	6600	4.09	2.16 (19.0)	17.60	6.55 (58.0)	0.65 (0.87)	2198-D012-ERS*x*
					18.90	7.02 (62.0)		2198-D020-ERS*x*
VPL-B0753M	6000	8000	6.12	2.28 (20.0)	17.60	5.13 (45.0)	0.82 (1.10)	2198-D012-ERS*x*
					25.34	7.35 (65.0)		2198-D020-ERS*x*
VPL-B1001M	6000	6000	3.61	1.93 (17.0)	8.80	3.22 (28.0)	1.14 (1.53)	2198-D006-ERS*x*
					10.38	3.78 (33.0)		2198-D012-ERS*x*
VPL-B1002E	3300	3300	3.44	3.39 (30.0)	8.80	6.47 (57.0)	1.12 (1.50)	2198-D006-ERS*x*
					10.69	7.82 (69.0)		2198-D012-ERS*x*
VPL-B1002M	6000	6000	6.24	3.39 (30.0)	17.60	6.80 (60.0)	1.86 (2.49)	2198-D012-ERS*x*
					20.33	7.82 (69.0)		2198-D020-ERS*x*
VPL-B1003C	2500	2500	3.41	4.18 (37.0)	8.80	9.29 (82.0)	0.96 (1.29)	2198-D006-ERS*x*
					10.61	11.15 (99.0)		2198-D012-ERS*x*
VPL-B1003F	4750	4750	6.14	4.18 (37.0)	17.60	9.76 (86.0)	1.65 (2.21)	2198-D012-ERS*x*
					20.20	11.15 (99.0)		2198-D020-ERS*x*
VPL-B1003T	7000	7000	9.58	4.18 (37.0)	28.20	9.76 (86.0)	1.77 (2.37)	2198-D020-ERS*x*
					28.80	11.15 (99.0)		2198-D032-ERS*x*
VPL-B1152C	2250	2250	3.13	5.10 (45.0)	8.80	10.80 (95.0)	1.06 (1.42)	2198-D006-ERS*x*
					10.74	13.12 (116)		2198-D012-ERS*x*
VPL-B1152F	4000	4000	6.17	5.10 (45.0)	17.60	10.95 (97.0)	1.40 (1.88)	2198-D012-ERS*x*
					21.19	13.12 (116)		2198-D020-ERS*x*
VPL-B1152T	6500	6500	10.81	5.08 (45.0)	28.20	12.14 (107)	2.29 (3.07)	2198-D020-ERS*x*
					32.10	13.12 (116)		2198-D032-ERS*x*
VPL-B1153E	3200	3200	6.13	6.55 (58.0)	17.60	16.85 (149)	1.75 (2.35)	2198-D012-ERS*x*
					21.33	20.33 (180)		2198-D020-ERS*x*
VPL-B1153F	5000	5000	8.88	6.55 (58.0)	28.20	18.30 (162)	2.30 (3.08)	2198-D020-ERS*x*
					33.0	20.33 (180)		2198-D032-ERS*x*

Bulletin VPL Motor Performance Specifications with Kinetix 5700 Drives (continued)

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPL-B1303C	2250	2250	6.30	8.80 (78.0)	17.60	19.83 (175)	1.83 (2.45)	2198-D012-ERS*x*
					18.47	20.72 (183)		2198-D020-ERS*x*
VPL-B1303F	4000	4000	10.10	8.80 (78.0)	28.20	19.85 (175)	2.82 (3.78)	2198-D020-ERS*x*
					31.0	20.72 (183)		2198-D032-ERS*x*
VPL-B1304C	2150	2150	7.0	10.29 (91.0)	17.60	22.55 (199)	1.75 (2.35)	2198-D012-ERS*x*
					22.3	28.45 (252)		2198-D020-ERS*x*
VPL-B1304E	3500	3500	9.44	10.29 (91.0)	28.20	25.03 (221)	2.82 (3.78)	2198-D020-ERS*x*
					33.76	28.45 (252)		2198-D032-ERS*x*
VPL-B1306C	2500	2500	10.80	13.38 (118)	28.20	31.21 (276)	2.46 (3.30)	2198-D020-ERS*x*
					32.94	34.62 (306)		2198-D032-ERS*x*
VPL-B1306F	4250	4250	14.78	13.38 (118)	45.90	28.50 (252)	2.95 (3.95)	2198-D032-ERS*x*
					55.83	34.62 (306)		2198-D057-ERS*x*
VPL-B1651C	2750	2750	10.21	11.50 (102)	28.20	21.68 (192)	2.32 (3.11)	2198-D020-ERS*x*
					29.29	22.45 (199)		2198-D032-ERS*x*
VPL-B1651F	4750	4750	17.60	11.43 (101)	45.90	18.02 (159)	4.38 (5.87)	2198-D032-ERS*x*
					57.27	22.45 (199)		2198-D057-ERS*x*
VPL-B1652C	2700	2700	16.0	19.40 (172)	45.90	44.78 (396)	4.18 (5.60)	2198-D032-ERS*x*
					49.88	48.60 (430)		2198-D057-ERS*x*
VPL-B1652F	4000	4000	18.60	17.60 (156)	60.00	48.60 (430)	4.77 (6.40)	2198-D057-ERS*x*
VPL-B1653C	2300	2300	17.75	25.76 (228)	45.90	55.14 (488)	4.38 (5.87)	2198-D032-ERS*x*
					55.60	66.70 (590)		2198-D057-ERS*x*
VPL-B1653D	3000	3000	18.60	24.20 (214)	68.00	67.80 (600)	5.50 (7.30)	2198-D057-ERS*x*
VPL-B1654B	1850	1850	15.54	32.97 (292)	45.90	65.38 (578)	5.55 (7.44)	2198-D032-ERS*x*
					55.75	79.30 (702)		2198-D057-ERS*x*
VPL-B1654D	3000	3000	24.47	32.0 (283)	81.30	75.30 (666)	7.16 (9.60)	2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPC Motor Performance Specifications with Kinetix 5700 Drives

Rotary Motor Cat. No.	Rated Speed rpm	Speed, max (bus overvoltage speed) (1) 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 5700 Drives (480V AC input)
VPC-B1652A	1500	4500 (2347)	11.2	25.5 (226)	19.3	40.3 (357)	4.0 (5.4)	2198-D020-ERS*x*
VPC-B1652D	3000	5000 (4452)	15.6	17.6 (156)	38.0	40.7 (360)	5.5 (7.4)	2198-D032-ERS*x*
VPC-B1653A	1500	4500 (2310)	15.7	35.1 (311)	28.5	60.6 (536)	5.5 (7.4)	2198-D032-ERS*x*
VPC-B1653D	3000	5000 (4294)	21.4	24.0 (212)	56.3	61.4 (543)	7.5 (10.1)	2198-D057-ERS*x*
VPC-B1654D	3000	5000 (4494)	30.2	35.1 (311)	75.1	76.6 (678)	11.0 (14.7)	2198-D057-ERS*x*
VPC-B21539	1000	3000 (1573)	15.6	52.5 (465)	41.6	118.8 (1051)	5.5 (7.4)	2198-D032-ERS*x*
VPC-B2153A	1500	4500 (2325)	21.2	48.0 (425)	57.2	111.8 (990)	7.5 (10.1)	2198-D057-ERS*x*
VPC-B21549	1000	3000 (1573)	21.7	72.0 (637)	54.3	158.4 (1402)	7.5 (10.1)	2198-D057-ERS*x*
VPC-B2154A	1500	4500 (2333)	30.8	70.1 (620)	72.1	140.1 (1240)	11.0 (14.7)	2198-D057-ERS*x*
VPC-B2154D	3000	5000 (4294)	41.0	48.0 (425)	120.1	131.4 (1163)	15.0 (20.1)	2198-S086-ERS*x*
VPC-B2155D	3000	5000 (4172)	48.8	59.0 (522)	121.6	138.6 (1227)	18.5 (24.8)	2198-S086-ERS*x*
					139.5	156.7 (1387)		2198-S130-ERS*x*
VPC-B2156D	3000	5000 (4101)	57.6	70.1 (620)	121.6	139.3 (1233)	22.0 (29.5)	2198-S086-ERS*x*
					171.6	185.5 (1642)		2198-S130-ERS*x*
VPC-B30029	1000	3000 (1493)	29.2	105.1 (930)	56.9	183.7 (1626)	11.0 (14.7)	2198-S086-ERS*x*
VPC-B3002A	1500	4000 (2212)	39.6	95.5 (845)	82.9	170.4 (1508)	15.0 (20.1)	2198-S086-ERS*x*
VPC-B30039	1000	3000 (1472)	38.0	143.3 (1268)	72.2	237.9 (2106)	15.0 (20.1)	2198-S086-ERS*x*
VPC-B3003A	1500	3500 (2166)	56.3	140.3 (1242)	108.0	244.8 (2167)	22.0 (29.5)	2198-S086-ERS*x*
VPC-B30049	1000	3000 (1429)	46.6	176.7 (1564)	96.6	327.8 (2901)	18.5 (24.8)	2198-S086-ERS*x*
VPC-B3004A	1500	3500 (2128)	77.6	191.1 (1691)	145.2	319.0 (2823)	30.0 (40.2)	2198-S130-ERS*x*
VPC-B3004D	3000	4000 (4054)	76.6	95.5 (845)	183.8	225.8 (1998)	30.0 (40.2)	2198-S130-ERS*x*
					211.1	257.7 (2281)		2198-S160-ERS*x*

(1) Operation beyond this speed requires DC-bus protection. See the Kinetix 5700 Servo Drives User Manual, publication 2198-UM002, for more information on bus overvoltage speed, field-weakening mode, and the extended speed feature.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPF Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPF-B0632F	4600	4600	1.20	0.93 (8.0)	4.20	2.69 (24.0)	0.34 (0.46)	2198-D006-ERS*x*
VPF-B0632T	8000	8000	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.41 (0.55)	2198-D006-ERS*x*
VPF-B0633M	6700	6700	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.49 (0.66)	2198-D006-ERS*x*
VPF-B0633T	8000	8000	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.48 (0.64)	2198-D006-ERS*x*
					12.60	4.09 (36.0)		2198-D012-ERS*x*
VPF-B0752E	4900	4900	2.70	1.61 (14.0)	8.80	4.10 (36.0)	0.64 (0.86)	2198-D006-ERS*x*
					9.45	4.39 (39.0)		2198-D012-ERS*x*
VPF-B0752F	7000	7000	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.76 (1.02)	2198-D012-ERS*x*
VPF-B0752M	8000	8000	4.90	1.61 (14.0)	17.60	4.10 (36.0)	0.77 (1.04)	2198-D012-ERS*x*
					18.90	4.39 (39.0)		2198-D020-ERS*x*
VPF-B0753E	4500	4500	3.80	2.28 (20.0)	13.30	7.35 (65.0)	0.77 (1.04)	2198-D012-ERS*x*
VPF-B0753F	6600	6600	4.09	2.16 (19.0)	17.60	6.55 (58.0)	0.61 (0.82)	2198-D012-ERS*x*
					18.90	7.02 (62.0)		2198-D020-ERS*x*
VPF-B0753M	8000	8000	6.12	2.28 (20.0)	17.60	5.13 (45.0)	0.78 (1.05)	2198-D012-ERS*x*
					25.34	7.35 (65.0)		2198-D020-ERS*x*
VPF-B1001M	6000	6000	3.61	1.93 (17.0)	8.80	3.22 (28.0)	1.14 (1.53)	2198-D006-ERS*x*
					10.38	3.78 (33.0)		2198-D012-ERS*x*
VPF-B1002E	3300	3300	3.44	3.39 (30.0)	8.80	6.47 (57.0)	1.12 (1.50)	2198-D006-ERS*x*
					10.69	7.82 (69.0)		2198-D012-ERS*x*
VPF-B1002M	6000	6000	6.24	3.39 (30.0)	17.60	6.80 (60.0)	1.86 (2.49)	2198-D012-ERS*x*
					20.33	7.82 (69.0)		2198-D020-ERS*x*
VPF-B1003C	2500	2500	3.41	4.18 (37.0)	8.80	9.29 (82.0)	0.91 (1.23)	2198-D006-ERS*x*
					10.61	11.15 (99.0)		2198-D012-ERS*x*
VPF-B1003F	4750	4750	6.14	4.18 (37.0)	17.60	9.76 (86.0)	1.57 (2.10)	2198-D012-ERS*x*
					20.20	11.15 (99.0)		2198-D020-ERS*x*
VPF-B1003T	7000	7000	9.58	4.18 (37.0)	28.20	9.76 (86.0)	1.68 (2.25)	2198-D020-ERS*x*
					28.80	11.15 (99.0)		2198-D032-ERS*x*
VPF-B1153E	3200	3200	6.13	6.50 (58.0)	17.60	16.85 (149)	1.40 (1.88)	2198-D012-ERS*x*
					21.33	20.33 (180)		2198-D020-ERS*x*
VPF-B1153F	5000	5000	8.88	6.50 (58.0)	28.20	18.30 (162)	1.49 (2.00)	2198-D020-ERS*x*
					33.0	20.33 (180)		2198-D032-ERS*x*
VPF-B1303C	2250	2250	6.30	8.80 (78.0)	17.60	19.83 (175)	1.74 (2.33)	2198-D012-ERS*x*
					18.47	20.72 (183)		2198-D020-ERS*x*
VPF-B1303F	4000	4000	10.10	8.80 (78.0)	28.20	19.85 (175)	2.54 (3.40)	2198-D020-ERS*x*
					31.0	20.72 (183)		2198-D032-ERS*x*
VPF-B1304C	2150	2150	7.0	10.29 (91.0)	17.60	22.55 (199)	1.49 (2.00)	2198-D012-ERS*x*
					22.3	28.45 (252)		2198-D020-ERS*x*
VPF-B1304E	3500	3500	9.44	10.29 (91.0)	28.20	25.03 (221)	2.40 (3.21)	2198-D020-ERS*x*
					33.76	28.45 (252)		2198-D032-ERS*x*
VPF-B1652C	2700	2700	16.0	19.40 (172)	45.90	44.78 (396)	4.18 (5.60)	2198-D032-ERS*x*
					49.88	48.60 (430)		2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPH (non-brake) Motor Performance Specifications with Kinetix 5700 Drives

Rotary Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPH-B0632T-*xxx*2	8000	8000	1.73	0.84 (7.5)	8.80	2.39 (21.2)	0.52 (0.69)	2198-D006-ERS*x*
					10.30	2.76 (24.4)		2198-D012-ERS*x*
VPH-B0633M-*xxx*2	6700	6700	1.45	1.03 (9.2)	8.75	4.16 (36.8)	0.50 (0.67)	2198-D006-ERS*x*
VPH-B0753F-*xxx*2	6600	6600	2.60	1.87 (16.6)	8.80	3.44 (30.4)	0.74 (0.99)	2198-D006-ERS*x*
					18.90	7.30 (64.6)		2198-D020-ERS*x*
VPH-B1001F-*xxx*2	5000	5000	1.55	1.44 (12.8)	7.80	3.90 (34.5)	0.70 (0.93)	2198-D006-ERS*x*
VPH-B1003F-*xxx*2	4750	4750	3.49	3.43 (30.4)	17.60	10.33 (91.4)	1.36 (1.83)	2198-D012-ERS*x*
					20.20	11.80 (104)		2198-D020-ERS*x*
VPH-B1152F-*xxx*2	4500	4500	3.64	4.03 (35.7)	17.60	12.11 (107)	1.37 (1.84)	2198-D012-ERS*x*
					21.90	15.00 (133)		2198-D020-ERS*x*
VPH-B1153E-*xxx*2	3900	5000	5.02	5.13 (45.4)	17.60	10.93 (96.7)	1.27 (1.70)	2198-D012-ERS*x*
					34.60	21.40 (189)		2198-D032-ERS*x*
VPH-B1304E-*xxx*2	3500	3500	5.73	8.41 (74.5)	17.60	14.43 (128)	2.15 (2.88)	2198-D012-ERS*x*
					37.00	30.20 (267)		2198-D032-ERS*x*
VPH-B1653D-*xxx*2	3000	3000	10.41	18.67 (165)	28.20	27.14 (240)	3.16 (4.23)	2198-D020-ERS*x*
					76.60	73.50 (651)		2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPH (brake) Motor Performance Specifications with Kinetix 5700 Drives

Rotary Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPH-B0632T-*xxx*4	7200	8000	1.72	0.80 (7.1)	8.80	2.39 (21.2)	0.40 (0.54)	2198-D006-ERS*x*
					10.30	2.76 (24.4)		2198-D012-ERS*x*
VPH-B0633M-*xxx*4	6700	6700	1.39	1.01 (8.9)	8.75	4.16 (36.8)	0.50 (0.67)	2198-D006-ERS*x*
VPH-B0753F-*xxx*4	6600	6600	2.47	1.81 (16.0)	8.80	3.44 (30.4)	0.68 (0.92)	2198-D006-ERS*x*
					18.90	7.30 (64.6)		2198-D020-ERS*x*
VPH-B1001F-*xxx*4	5000	5000	1.56	1.42 (12.6)	7.80	3.90 (34.5)	0.68 (0.91)	2198-D006-ERS*x*
VPH-B1003F-*xxx*4	4750	4750	3.46	3.29 (29.1)	17.60	10.33 (91.4)	1.16 (1.56)	2198-D012-ERS*x*
					20.20	11.80 (104)		2198-D020-ERS*x*
VPH-B1152F-*xxx*4	4500	4500	3.89	4.03 (35.7)	17.60	12.11 (107)	1.37 (1.84)	2198-D012-ERS*x*
					21.90	15.00 (133)		2198-D020-ERS*x*
VPH-B1153E-*xxx*4	3900	5000	4.99	5.13 (45.4)	17.60	10.93 (96.7)	1.08 (1.45)	2198-D012-ERS*x*
					34.60	21.40 (189)		2198-D032-ERS*x*
VPH-B1304E-*xxx*4	3500	3500	5.85	8.24 (73.0)	17.60	14.43 (128)	1.76 (2.36)	2198-D012-ERS*x*
					37.00	30.20 (267)		2198-D032-ERS*x*
VPH-B1653D-*xxx*4	3000	3000	10.55	18.67 (165)	28.20	27.14 (240)	2.91 (3.91)	2198-D020-ERS*x*
					76.60	73.50 (651)		2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPS Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
VPS-B1304D	3000	3000	7.1	8.1 (72.0)	17.6	17.9 (158)	1.40 (1.9)	2198-D012-ERS*x*
					26.0	27.1 (240)		2198-D020-ERS*x*
VPS-B1653D	3000	3000	17.0	21.0 (186)	45.9	50.1 (443)	3.29 (4.4)	2198-D032-ERS*x*
					68.0	67.8 (600)		2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPL Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 5700 Drives (480V AC input)
MPL-B1510V	8000	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2198-D006-ERS*x*
MPL-B1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2198-D006-ERS*x*
MPL-B1530U	7000	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	2198-D006-ERS*x*
MPL-B210V	8000	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2198-D006-ERS*x*
MPL-B220T	6000	6000	3.30	1.61 (14.2)	8.80	3.67 (32.5)	0.62	2198-D006-ERS*x*
					11.3	4.74 (41.9)		2198-D012-ERS*x*
MPL-B230P	5000	5000	2.60	2.10 (18.6)	8.80	6.39 (56.6)	0.86	2198-D006-ERS*x*
					11.3	8.20 (73.0)		2198-D012-ERS*x*
MPL-B310P	5000	5000	2.4	1.6 (14.1)	7.10	3.6 (32)	0.77	2198-D006-ERS*x*
MPL-B320P	5000	5000	4.5	3.10 (27)	14.0	8.2 (72.5)	1.5	2198-D012-ERS*x*
MPL-B330P	5000	5000	6.1	4.18 (37)	17.6	10.4 (92.0)	1.8	2198-D012-ERS*x*
					19.0	11.1 (98)		2198-D020-ERS*x*
MPL-B420P	5000	5000	6.3	4.74 (42)	17.6	11.3 (100)	1.9	2198-D012-ERS*x*
					22.0	13.5 (119)		2198-D020-ERS*x*
MPL-B430P	5000	5000	9.2	6.55 (58)	28.2	17.6 (156)	2.2	2198-D020-ERS*x*
					32.0	19.8 (175)		2198-D032-ERS*x*
MPL-B4530F	3000	3000	6.7	8.36 (74)	17.6	17.7 (157)	2.1	2198-D012-ERS*x*
					21.0	20.3 (180)		2198-D020-ERS*x*
MPL-B4530K	4000	4000	9.9	8.25 (73)	28.2	18.7 (166)	2.6	2198-D020-ERS*x*
					31.0	20.3 (179)		2198-D032-ERS*x*
MPL-B4540F	3000	3000	9.1	10.20 (90)	28.2	26.2 (232)	2.6	2198-D020-ERS*x*
					29.0	27.1 (240)		2198-D032-ERS*x*
MPL-B4560F	3000	3000	11.3	13.85 (123)	28.2	28.4 (251)	3.2	2198-D020-ERS*x*
			11.8	14.0 (124)	36.0	34.4 (304)		2198-D032-ERS*x*
MPL-B520K	3500	4000	11.3	10.4 (92)	28.2	20.6 (182)	3.5	2198-D020-ERS*x*
			11.5	10.7 (95)	33.0	23.2 (205)		2198-D032-ERS*x*
MPL-B540D	2000	2000	10.5	19.4 (172)	23.0	41.0 (362)	3.4	2198-D020-ERS*x*
MPL-B540K	4000	4000	20.5	19.4 (172)	60.0	48.6 (430)	5.4	2198-D057-ERS*x*
MPL-B560F	3000	3000	20.6	26.8 (237)	68.0	67.8 (600)	5.5	2198-D057-ERS*x*
MPL-B580F	3000	3000	26.0	34.0 (301)	81.3	81.0 (717)	7.1	2198-D057-ERS*x*
					94.0	87.0 (770)		2198-S086-ERS*x*

Bulletin MPL Motor Performance Specifications with Kinetix 5700 Drives (continued)

Motor Cat. No.	Rated Speed 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 5700 Drives (480V AC input)
MPL-B580J	3800	3800	32.0	34.0 (301)	81.3	73.0 (646)	7.9	2198-D057-ERS*x*
					94.0	81.0 (717)		2198-S086-ERS*x*
MPL-B640F	2000	3000	32.1	36.7 (325)	65.0	72.3 (640)	6.1	2198-D057-ERS*x*
MPL-B660F	2000	3000	38.5	48.0 (425)	96.0	101.1 (895)	6.1	2198-S086-ERS*x*
MPL-B680D	2000	2000	34.0	62.8 (556)	94.0	154.2 (1365)	9.3	2198-S086-ERS*x*
MPL-B680F	2000	3000	48.0	60.0 (531)	96.0	108.5 (960)	7.5	2198-S086-ERS*x*
MPL-B680H	2000	3500	51.0	60.0 (531)	121.6	130 (1150)	7.5	2198-S086-ERS*x*
					140	146.9 (1300)		2198-S130-ERS*x*
MPL-B860D	2000	2000	47.5	83.0 (735)	95.5	152.5 (1350)	12.5	2198-S086-ERS*x*
MPL-B880C	1500	1500	47.5	110 (973)	97.5	203 (1797)	12.6	2198-S086-ERS*x*
MPL-B880D	2000	2000	67.0	110 (973)	96.0	147 (1301)	12.6	2198-S130-ERS*x*
MPL-B960B	1200	1200	42.5	130 (1150)	94.0	231 (2044)	12.7	2198-S086-ERS*x*
MPL-B960C	1500	1500	55.0	124.3 (1100)	121.6	219.8 (1945)	14.8	2198-S086-ERS*x*
					125	226 (2000)		2198-S130-ERS*x*
MPL-B960D	2000	2000	70.0	124.3 (1100)	125	226 (2000)	15.0	2198-S130-ERS*x*
MPL-B980B	1000	1000	40.0	162.7 (1444)	94.0	278 (2460)	15.2	2198-S086-ERS*x*
MPL-B980C	1500	1500	68.2	158.2 (1400)	140	271.2 (2400)	16.8	2198-S130-ERS*x*
MPL-B980D	2000	2000	79.0	158.2 (1400)	140	260 (2300)	18.6	2198-S130-ERS*x*
MPL-B980E	1500	2750	105	141 (1250)	226.2	233 (2062)	13.0	2198-S160-ERS*x*
					230	237 (2100)		2198-S263-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPM Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Base Speed rpm	Rated Speed 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 5700 Drives (480V AC input)
MPM-B1151F	3000	4000	5000	2.71	2.3 (20.3)	8.8	6.0 (53.1)	0.75	2198-D006-ERS*x*
						9.9	6.6 (58.0)		2198-D012-ERS*x*
MPM-B1151T	6000	5000	7000	5.62	2.3 (20.3)	17.6	5.3 (46.9)	0.90	2198-D012-ERS*x*
						20.5	5.9 (52.2)		2198-D020-ERS*x*
MPM-B1152C	1500	2500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2198-D012-ERS*x*
MPM-B1152F	3000	4000	5200	6.17	5.0 (44.2)	17.6	11.7 (103)	1.40	2198-D012-ERS*x*
						21.1	13.5 (119)		2198-D020-ERS*x*
MPM-B1152T	6000	4000	7000	11.02	5.0 (44.2)	28.2	10.7 (94.7)	1.40	2198-D020-ERS*x*
						37.9	13.5 (119)		2198-D032-ERS*x*
MPM-B1153E	2250	3000	3500	6.21	6.5 (57.5)	17.6	16.9 (149)	1.40	2198-D012-ERS*x*
						21.6	19.8 (175)		2198-D020-ERS*x*
MPM-B1153F	3000	4000	5500	9.20	6.5 (57.5)	28.2	17.9 (158)	1.40	2198-D020-ERS*x*
						32.0	19.8 (175)		2198-D032-ERS*x*
MPM-B1153T	6000	4000	7000	15.95	6.5 (57.5)	45.9	14.8 (131)	1.45	2198-D032-ERS*x*
						55.5	16.5(146)		2198-D057-ERS*x*
MPM-B1302F	3000	4000	4500	8.57	6.6 (58.4)	22.1	13.5 (119)	1.65	2198-D020-ERS*x*

Bulletin MPM Motor Performance Specifications with Kinetix 5700 Drives (continued)

Motor Cat. No.	Base Speed rpm	Rated Speed 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 5700 Drives (480V AC input)
MPM-B1302M	4500	4000	6000	12.57	6.6 (58.4)	32.4	13.5 (119)	1.65	2198-D032-ERS*x*
MPM-B1302T	6000	4000	7000	16.83	6.7 (59.3)	43.4	13.5 (119)	1.65	2198-D032-ERS*x*
MPM-B1304C	1500	1870	2750	7.00	10.3 (91.1)	17.6	22.8 (202)	2.00	2198-D012-ERS*x*
						21.5	27.1 (240)		2198-D020-ERS*x*
MPM-B1304E	2250	3500	4000	10.75	10.2 (90.3)	28.2	23.4 (207)	2.20	2198-D020-ERS*x*
						34.2	27.1 (240)		2198-D032-ERS*x*
MPM-B1304M	4500	3500	6000	19.02	10.4 (92.0)	60.6	27.1 (240)	2.20	2198-D057-ERS*x*
MPM-B1651C	1500	3000	3500	10.21	11.4 (101)	28.2	22.7 (201)	2.50	2198-D020-ERS*x*
						29.2	23.2 (205)		2198-D032-ERS*x*
MPM-B1651F	3000	3000	5000	17.75	11.4 (101)	45.9	21.9 (194)	2.50	2198-D032-ERS*x*
						50.9	23.2 (205)		2198-D057-ERS*x*
MPM-B1651M	4500	3000	5000	22.46	11.4 (101)	56.8	23.2 (205)	2.50	2198-D057-ERS*x*
MPM-B1652C	1500	2500	2500	11.51	16.0 (142)	33.6	40.0 (354)	3.80	2198-D032-ERS*x*
MPM-B1652E	2250	3500	3500	20.94	21.1 (187)	60.5	48.0 (425)	4.30	2198-D057-ERS*x*
MPM-B1652F	3000	3500	4500	28.74	21.1 (187)	84.1	48.0 (425)	4.30	2198-D057-ERS*x*
MPM-B1653C	1500	2000	2500	20.05	26.7 (236)	59.2	67.8 (600)	4.60	2198-D057-ERS*x*
MPM-B1653E	2250	3000	3500	27.00	26.8 (237)	72.9	62.0 (549)	5.10	2198-D057-ERS*x*
MPM-B1653F	3000	3000	4000	34.94	31.0 (274)	94.3	56.1 (496)	5.10	2198-S086-ERS*x*
MPM-B2152C	1500	2000	2500	27.40	36.7 (325)	55.4	72.3 (640)	5.60	2198-D057-ERS*x*
MPM-B2152F	3000	2500	4500	43.54	34.1 (302)	98.0	72.2 (639)	5.90	2198-S086-ERS*x*
MPM-B2152M	4500	2500	5000	44.58	34.1 (302)	76.3	52.9 (468)	5.90	2198-S086-ERS*x*
MPM-B2153B	1250	1750	2000	24.06	48.0 (425)	60.0	101 (895)	6.80	2198-D057-ERS*x*
MPM-B2153E	2250	2000	3000	39.63	47.9 (424)	98.6	101 (895)	7.20	2198-S086-ERS*x*
MPM-B2153F	3000	2000	3800	43.86	45.6 (403)	98.4	98.9 (875)	7.20	2198-S086-ERS*x*
MPM-B2154B	1250	1750	2000	35.46	62.7 (555)	98.0	154 (1363)	6.90	2198-S086-ERS*x*
MPM-B2154E	2250	2000	3000	43.68	55.9 (495)	98.3	112 (991)	7.50	2198-S086-ERS*x*
MPM-B2154F	3000	2000	3300	44.40	56.2 (497)	83.6	87.9 (778)	7.50	2198-S086-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPF Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
MPF-B310P	5000	5000	2.30	1.60 (14)	7.10	3.6 (32)	0.77	2198-D006-ERS*x*
MPF-B320P	5000	5000	4.24	3.10 (27)	14.0	7.8 (69)	1.5	2198-D012-ERS*x*
MPF-B330P	5000	5000	5.70	4.18 (37)	17.6	10.4 (92.0)	1.6	2198-D012-ERS*x*
					19.0	11.1 (98)		2198-D020-ERS*x*
MPF-B430P	5000	5000	9.20	6.55 (58)	28.2	17.6 (156)	2.0	2198-D020-ERS*x*
					32.0	19.8 (175)		2198-D032-ERS*x*
MPF-B4530K	4000	4000	9.90	8.25 (73)	28.2	18.7 (165)	2.4	2198-D020-ERS*x*
					31.0	20.3 (179)		2198-D032-ERS*x*
MPF-B4540F	3000	3000	9.10	10.20 (90)	28.2	26.2 (232)	2.5	2198-D020-ERS*x*
					29.0	27.1 (240)		2198-D032-ERS*x*
MPF-B540K	4000	4000	20.5	19.4 (171)	60.0	48.6 (430)	4.1	2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPS Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
MPS-B330P	5000	5000	4.9	3.60 (32)	17.6	10.5 (92.9)	1.3	2198-D012-ERS*x*
					19.0	11.0 (97.2)		2198-D020-ERS*x*
MPS-B4540F	3000	3000	7.1	8.1 (72)	17.6	19.2 (170)	1.4	2198-D012-ERS*x*
					26.0	27.1 (240)		2198-D020-ERS*x*
MPS-B560F	3000	3000	17.0	21.5 (190)	45.9	49.7 (440)	3.5	2198-D032-ERS*x*
					68.0	67.8 (600)		2198-D057-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

HPK-Series (460V) Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Base Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
HPK-B1307C	1500	3000	48.2	112 (991)	113.0	260 (2301)	17.1 (22.9)	2198-S086-ERS*x*
HPK-B1308C			59.6	141 (1248)	119.3	262 (2319)	21.6 (28.9)	2198-S086-ERS*x*
HPK-B1310C			64.9	155 (1372)	144.0	325 (2876)	23.8 (31.9)	2198-S130-ERS*x*
HPK-B1613C			109.8	271 (2398)	217.0	542 (4797)	41.7 (55.9)	2198-S160-ERS*x*
HPK-B1307E	3000	5000	81.0	96.0 (849)	146.6	165 (1460)	29.8 (39.9)	2198-S130-ERS*x*
HPK-B1308E			91.4	115 (1018)	190.3	230 (2036)	35.7 (47.8)	2198-S160-ERS*x*
HPK-B1609E			120.2	150 (1327)	217.0	270 (2390)	46.5 (62.3)	2198-S160-ERS*x*
HPK-B1611E	3000	5000	149.0	183 (1619)	338.4	400 (3540)	57.0 (76.4)	2198-S263-ERS*x*
HPK-B1815C	1500	3000	153.7	360 (3186)	402.0	850 (7523)	55.9 (74.9)	2198-S312-ERS*x*
HPK-B1613E	3000	5000	191.0	237 (2097)	440.0	520 (4602)	73.7 (98.8)	2198-S312-ERS*x*
HPK-B2010C	1500	3000	196.4	482 (4266)	440.0	970 (8585)	75.0 (100.5)	2198-S312-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

HPK-Series (400V) Motor Performance Specifications with Kinetix 5700 Drives

Motor Cat. No.	Base Speed 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 (Hp)	Kinetix 5700 Drives (480V AC input)
HPK-E1307C	1500	3000	58.5	112 (991)	146.6	263 (2327)	17.1 (22.9)	2198-S130-ERS*x*
HPK-E1310C			80.0	155 (1372)	200.0	380 (3363)	23.8 (32.4)	2198-S160-ERS*x*
HPK-E1307E	3000	5000	102.0	96.0 (849)	217.0	202 (1788)	29.8 (39.9)	2198-S160-ERS*x*
HPK-E1308E			112.8	107 (947)	217.7	200 (1770)	33.2 (45.0)	2198-S160-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

These linear motion families are compatible with Kinetix 5700 servo drives.

Linear Motion Family	Page
LDAT-Series integrated linear thrusters	66
MP-Series (Bulletin MPAS) integrated linear stages	70
Kinetix VP (Bulletin VPAR) electric cylinders	70
MP-Series (Bulletin MPAR) electric cylinders	71
LDC-Series linear motors	71
MP-Series (Bulletin MPAI) heavy-duty electric cylinders	72

For Kinetix 5700 drive system combinations that include cable catalog number selection and force/velocity curves, refer to the Kinetix 5700 Drive Systems Design Guide, publication KNX-RM010.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com

LDAT-Series Performance Specifications with Kinetix 5700 Drives

Performance Specifications with Frame 30 Linear Thrusters

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 5700 Drives (480V AC input)
LDAT-S031010-D*xx*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2198-D012-ERS*x*
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	2198-D020-ERS*x*
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	2198-D012-ERS*x*
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-D*xx*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2198-D032-ERS*x*
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		0.67	2198-D012-ERS*x*
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 the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with Frame 50 Linear Thrusters

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 5700 Drives (480V AC input)
LDAT-S051010-D*xx*	2.8	3.1	119 (27)	11.4	363 (82)	0.34	2198-D012-ERS*x*
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	2198-D020-ERS*x*
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	2198-D012-ERS*x*
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-D*xx*	4.1	9.4	378 (85)	34.2	1093 (246)	1.56	2198-D032-ERS*x*
LDAT-S053020-D*xx*	5.0					1.87	
LDAT-S053030-D*xx* ... LDAT-S053050-D*xx*							
LDAT-S053010-E*xx* ... LDAT-S053050-E*xx*	3.5	3.1		11.4		1.04	2198-D012-ERS*x*
LDAT-S054010-D*xx*	4.4	12.4	509 (114)	45.5	1453 (327)	2.26	2198-D032-ERS*x*
LDAT-S054020-D*xx* ... LDAT-S054050-D*xx*	5.00					2.53	
LDAT-S054010-E*xx*	4.4	6.2		22.7		1.87	2198-D020-ERS*x*
LDAT-S054020-E*xx* ... LDAT-S054050-E*xx*	5.0					2.05	

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications and Frame 70 Linear Thrusters

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 5700 Drives (480V AC input)
LDAT-S072010-D*xx*	3.9	6.0	364 (82)	22.0	1055 (237)	1.37	2198-D020-ERS*x*
LDAT-S072020-D*xx*	5.0					1.64	
LDAT-S072030-D*xx* ... LDAT-S072070-D*xx*							
LDAT-S072010-E*xx*	3.5	3.0		11.0		1.03	2198-D012-ERS*x*
LDAT-S072020-E*xx* ... LDAT-S072070-E*xx*							
LDAT-S073010-D*xx*	4.4	9.0	554 (125)	32.8	1576 (354)	2.27	2198-D032-ERS*x*
LDAT-S073020-D*xx* ... LDAT-S073070-D*xx*	5.0					2.50	
LDAT-S073010-E*xx* ... LDAT-S073070-E*xx*	2.4	3.0		10.9		1.01	2198-D012-ERS*x*
LDAT-S074010-D*xx*	4.7	11.9	730 (164)	43.5	2088 (469)	3.15	2198-D032-ERS*x*
LDAT-S074020-D*xx* ... LDAT-S074070-D*xx*	5.0					3.30	
LDAT-S074010-E*xx* ... LDAT-S074070-E*xx*	3.5	6.0		21.7		2.08	2198-D020-ERS*x*
LDAT-S076010-D*xx*	5.0	18.2	1122 (252)	66.4	3189 (717)	5.02	2198-D057-ERS*x*
LDAT-S076020-D*xx* ... LDAT-S076070-D*xx*							
LDAT-S076010-E*xx* ... LDAT-S076070-E*xx*	3.5	9.1		33.2		3.18	2198-D032-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with Frame 100 Linear Thrusters

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 5700 Drives (480V AC input)
LDAT-S102010-D*xx*	3.4	5.7	456 (103)	21.0	1289 (290)	1.44	2198-D020-ERS*x*
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	2198-D012-ERS*x*
LDAT-S103010-D*xx*	3.8	8.6	702 (158)	31.5	1935 (435)	2.41	2198-D032-ERS*x*
LDAT-S103020-D*xx*	5.0					2.93	
LDAT-S103030-D*xx* ... LDAT-S103090-D*xx*							
LDAT-S103010-E*xx* ... LDAT-S103090-E*xx*	1.8	2.9		10.5		0.92	2198-D012-ERS*x*
LDAT-S104010-D*xx*	4.1	11.5	929 (209)	42.0	2578 (580)	3.76	2198-D032-ERS*x*
LDAT-S104020-D*xx*	5.0					4.29	
LDAT-S104030-D*xx* ... LDAT-S104090-D*xx*							
LDAT-S104010-E*xx* ... LDAT-S104090-E*xx*	2.7	5.7		21.0		2.07	2198-D020-ERS*x*
LDAT-S106010-D*xx*	4.5	17.3	1403 (315)	63.0	3871 (870)	5.41	2198-D057-ERS*x*
LDAT-S106020-D*xx* ... LDAT-S106090-D*xx*	5.0					5.87	
LDAT-S106010-E*xx* ... LDAT-S106090-E*xx*	2.7	8.6		31.5		2.94	2198-D032-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with Frame 150 Linear Thrusters

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 5700 Drives (480V AC input)
LDAT-S152010-D*xx*	3.2	5.3	643 (145)	19.5	1799 (404)	1.76	2198-D020-ERS*x*
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	2198-D012-ERS*x*
LDAT-S153010-D*xx* ... LDAT-S153090-D*xx*	3.6	8.0	978 (220)	29.1	2680 (602)	2.87	2198-D032-ERS*x*
LDAT-S153010-E*xx* ... LDAT-S153090-E*xx*	1.2	2.7		9.1		0.80	2198-D012-ERS*x*

Performance Specifications with Frame 150 Linear Thrusters (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 5700 Drives (480V AC input)
LDAT-S154010-D*xx* ... LDAT-S154090-D*xx*	3.5	10.7	1306 (294)	39.1	3597 (809)	3.83	2198-D032-ERS*x*
LDAT-S154010-E*xx* ... LDAT-S154090-E*xx*	1.8	5.3		19.5		1.78	2198-D020-ERS*x*
LDAT-S156010-D*xx* ... LDAT-S156090-D*xx*	3.6	16.3	1997 (449)	59.4	5469 (1229)	5.85	2198-D057-ERS*x*
LDAT-S156010-E*xx* ... LDAT-S156090-E*xx*	1.8	8.1		19.8		2.71	2198-D020-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAS Performance Specifications with Kinetix 5700 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 5700 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-D006-ERS*x*
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	6.60	968 (218)	0.62	2198-D006-ERS*x*
MPAS-B8*xxx*F-ALMO2C	5000 (200)	3.50	189 (42.5)	9.30	456 (103)	0.527	2198-D012-ERS*x*
MPAS-B8*xxx*F-ALMS2C	5000 (200)	3.15	159 (35.7)	8.37	399 (89.7)	0.475	2198-D006-ERS*x*
MPAS-B9*xxx*L-ALMO2C	5000 (200)	3.40	285 (64.1)	9.10	680 (153)	0.768	2198-D012-ERS*x*
MPAS-B9*xxx*L-ALMS2C	5000 (200)	3.03	245 (55.1)	8.19	601 (135)	0.69	2198-D006-ERS*x*

(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 the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPAR Performance Specifications with Kinetix 5700 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 5700 Drives (480V AC input)
VPAR-B1*xxx*B	150	0.41	240 (53.9)	1.34	300 (67.4)	0.11	2198-D006-ERS*x*
VPAR-B1*xxx*E	500	1.20	280 (62.9)	2.10	350 (78.7)	0.24	2198-D006-ERS*x*
VPAR-B2*xxx*C	250	1.25	420 (94.4)	2.67	525 (118)	0.25	2198-D006-ERS*x*
VPAR-B2*xxx*F	640	3.10	640 (144)	5.80	800 (180)	0.56	2198-D012-ERS*x*
VPAR-B3*xxx*E	500	5.10	2000 (450)	13.0	2500 (562)	1.30	2198-D012-ERS*x*
VPAR-B3*xxx*H	1000	8.60	1284 (289)	17.0	1625 (365)	1.68	2198-D020-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAR Performance Specifications with Kinetix 5700 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 5700 Drives (480V AC input)
MPAR-B1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2198-D006-ERS*x*
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	2198-D006-ERS*x*
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	2198-D006-ERS*x*
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2198-D006-ERS*x*
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	2198-D012-ERS*x*
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2198-D012-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

LDC-Series Performance Specifications with Kinetix 5700 (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 5700 Drives (480V AC input)
LDC-C030100-DHT	10.0 (32.8)	4.1…6.1	74…111 (17…25)	12.1	188 (42)	0.37…0.55	2198-D012-ERS*x*
LDC-C030200-DHT		8.1…12.2	148…222 (33…50)	24.3	375 (84)	0.74…1.11	2198-D020-ERS*x*
LDC-C030200-EHT		4.1…6.1		12.1			2198-D012-ERS*x*
LDC-C050100-DHT	10.0 (32.8)	3.9…5.9	119…179 (27…40)	11.7	302 (68)	0.59…0.89	2198-D012-ERS*x*
LDC-C050200-DHT		7.9…11.8	240…359 (54…81)	23.3	600 (135)	1.20…1.79	2198-D020-ERS*x*
LDC-C050200-EHT		3.9…5.9		11.6			2198-D012-ERS*x*
LDC-C050300-DHT		11.8…17.7	363…544 (82…122)	35.9	941 (212)	1.81…2.72	2198-D032-ERS*x*
LDC-C050300-EHT		3.9…5.9		12.0			2198-D012-ERS*x*
LDC-C075200-DHT	10.0 (32.8)	7.7…11.5	348…523 (78…117)	22.9	882 (198)	1.74…2.61	2198-D020-ERS*x*
LDC-C075200-EHT		3.8…5.7		11.5			2198-D012-ERS*x*
LDC-C075300-DHT		11.5…17.2	523…784 (117…176)	35.6	1368 (308)	2.61…3.92	2198-D032-ERS*x*
LDC-C075300-EHT		3.8…5.7		11.9			2198-D012-ERS*x*
LDC-C075400-DHT		15.3…23.0	697…1045 (157…235)	47.4	1824 (410)	3.48…5.22	2198-D032-ERS*x*
LDC-C075400-EHT		7.7…11.5		23.7			2198-D020-ERS*x*
LDC-C100300-DHT	10.0 (32.8)	11.1…16.7	674…1012 (152…227)	34.3	1767 (397)	3.37…5.06	2198-D032-ERS*x*
LDC-C100300-EHT		3.7…5.6		11.4			2198-D012-ERS*x*
LDC-C100400-DHT		14.8…22.2	899…1349 (202…303)	45.7	2356 (530)	4.49…6.74	2198-D032-ERS*x*
LDC-C100400-EHT		7.4…11.1		22.8			2198-D020-ERS*x*
LDC-C100600-DHT		22.2…33.3	1349…2023 (303…455)	68.5	3534 (794)	6.74…10.11	2198-D057-ERS*x*
LDC-C100600-EHT		11.1…16.7		34.3			2198-D032-ERS*x*
LDC-C150400-DHT	10.0 (32.8)	14.1…21.1	1281…1922 (288…432)	45.2	3498 (786)	6.40…9.61	2198-D032-ERS*x*
LDC-C150400-EHT		7.0…10.6		22.6			2198-D020-ERS*x*
LDC-C150600-DHT		21.1…31.7	1922…2882 (432…648)	67.8	5246 (1179)	9.61…14.41	2198-D057-ERS*x*
LDC-C150600-EHT		10.6…15.8		33.9			2198-D032-ERS*x*

(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 the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAI Performance Specifications with Kinetix 5700 Drives

Performance Specifications for (ball screw cylinders) with Kinetix 5700 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 5700 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-D006-ERS*x*
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-D006-ERS*x*
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-D006-ERS*x*
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		2198-D006-ERS*x*
MPAI-B3300EM3								
MPAI-B3450EM3	376 (15)							
MPAI-B4150CM3	279 (11)	5.61	7784 (1750)	6179 (1389)	8.68	8896 (2000)	0.43	2198-D012-ERS*x*
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		2198-D012-ERS*x*
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-D012-ERS*x*
MPAI-B5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	16.70	13,122 (2950)		

Performance Specifications for (roller screw cylinders) with Kinetix 5700 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 5700 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-D006-ERS*x*
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-D006-ERS*x*
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-D012-ERS*x*
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 the motor at 40 °C (104 °F) and the drive at 50 °C (122 °F) ambient temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Kinetix 5500 Servo Drives

The Kinetix® 5500 servo drives and Kinetix VP 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 ControlLogix® 5570 and 5580 controllers or CompactLogix™ 5370 and 5380 controllers by using the Studio 5000® environment and supporting the Integrated Motion on the EtherNet/IP™ network.

Kinetix 5500 2198-H*xxx*-ERS2 (integrated safety) drives use GuardLogix® 5570 and 5580 or Compact GuardLogix 5370 or 5380 safety controllers for connectivity to the distributed POINT Guard I/O™ EtherNet/IP adapter that supports SIL 3 safety control.

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 and integrated safety on the EtherNet/IP network
- TÜV Rheinland certified safe torque-off (STO) control
  - 2198-H*xxx*-ERS: Hardwired safety, PL d, Category 3 according to ISO 13849 and SIL CL2 according to IEC 61508, IEC 61800-5-2, and IEC 62061
  - 2198-H*xxx*-ERS2: Integrated safety, PL e, Category 3 according to ISO 13849 and SIL CL3 according to IEC 61508, IEC 61800-5-2, and IEC 62061
- Versatile AC input voltage range:
  - 195…264V rms, single-phase
  - 195…264V rms, three-phase
  - 324…528V rms, three-phase
- Kinetix VP motor 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
  - Hiperface DSL high-resolution absolute, multi-turn and single-turn encoder feedback
- Support for permanent-magnet servo motors and actuators
- Support for induction motors with open-loop frequency control

To compare drive features across drive families, refer to Servo Drives beginning on page 30.

Kinetix 5500 Servo Drive Components

Kinetix 5500 servo drive systems consist of these required components:

- 2198-H*xxx*-ERS or 2198-H*xxx*-ERS2 servo drives (includes 2198-KITCON-DSL feedback connector kit)
- Kinetix VP servo motors and linear actuators
  - Use 2090-CS*x*M1DF or 2090-CS*x*M1DG flying-lead cables with the 2198-KITCON-DSL feedback connector kit
- MP-Series™ rotary motors, linear actuators, and LDAT-Series linear thrusters
  - Use 2090-CP*x*M7DF power/brake cables and 2090-CFBM7DF feedback cables with the 2198-H2DCK feedback converter kit
- Induction motors with basic volts/hertz, fan/pump V/Hz, and sensorless vector open-loop frequency control methods
- 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
- 2198-ABQE encoder output module
- One 2198-DBR*xx*-F or 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 KNX-RM009.

Kinetix 5500 Servo Drive Selection

Drive Cat. No. (1) **(hardwired STO)**	**Drive Cat. No.** (1) **(integrated STO)**	**Frame Size**	**Input Voltage**	**Continuous Output Power** kW	**Continuous Output Current** A 0-pk
2198-H003-ERS	2198-H003-ERS2	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	2198-H008-ERS2			0.5 kW 0.8 kW 1.6 kW	3.5
2198-H015-ERS	2198-H015-ERS2	2		1.0 kW 1.5 KW 3.2 kW	7.1
2198-H025-ERS	2198-H025-ERS2		195…264V rms, three-phase 324…528V rms, three-phase	2.4 kW 5.1 kW	11.3
2198-H040-ERS	2198-H040-ERS2			4.0 kW 8.3 kW	18.4
2198-H070-ERS	2198-H070-ERS2	3		7.0 kW 14.6 kW	32.5

(1) Throughout this publication, when the Kinetix 5500 drive catalog number ends in -ERSx, for example 2198-H003-ERSx, the variable (x) indicates that the drive catalog number can be -ERS or -ERS2.

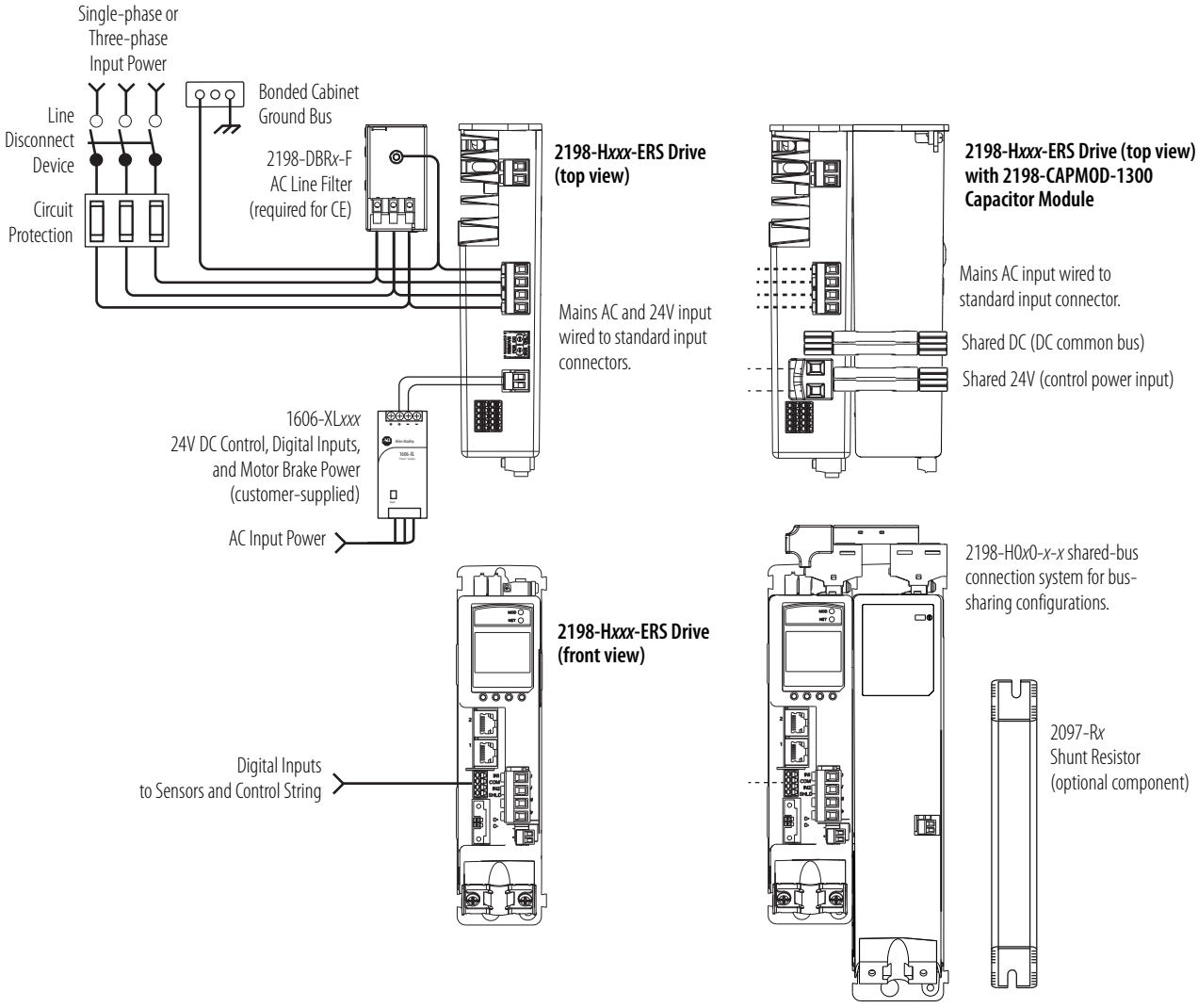
For Kinetix 5500 drive module specifications not included in this publication, refer to the Kinetix Servo Drives Technical Data, publication KNX-TD003.

Typical Hardware Configurations

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

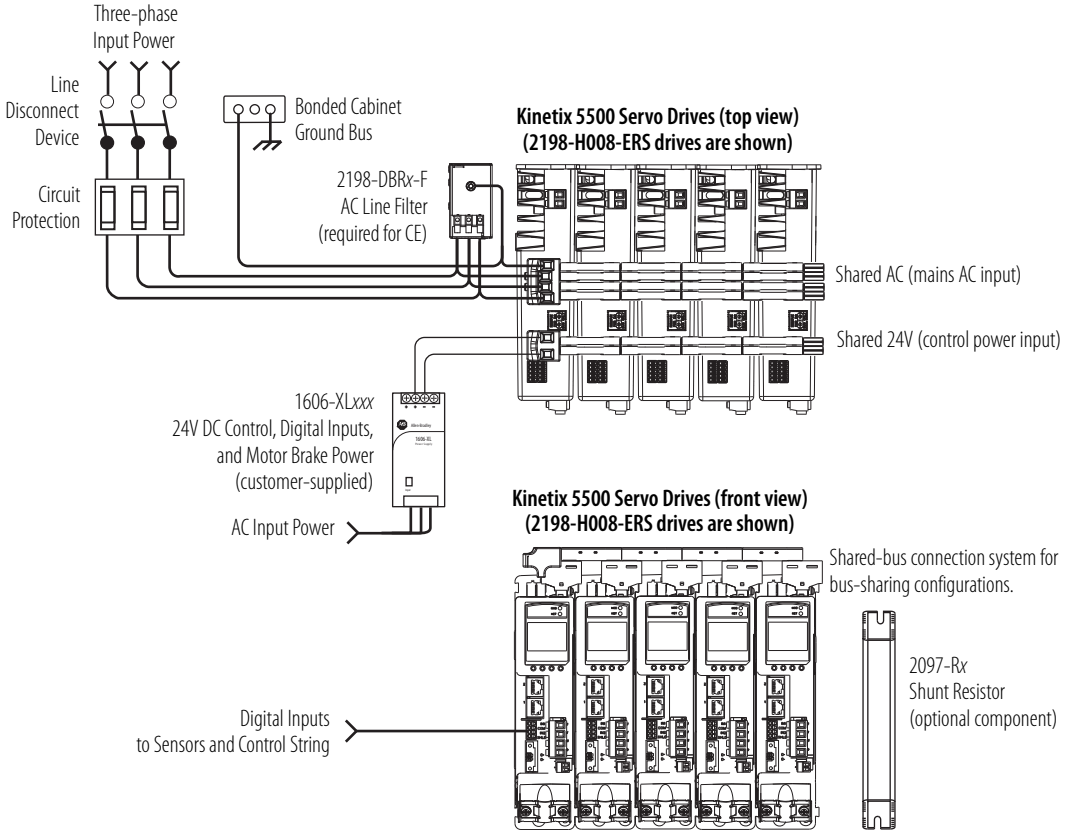
Standalone Configurations

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



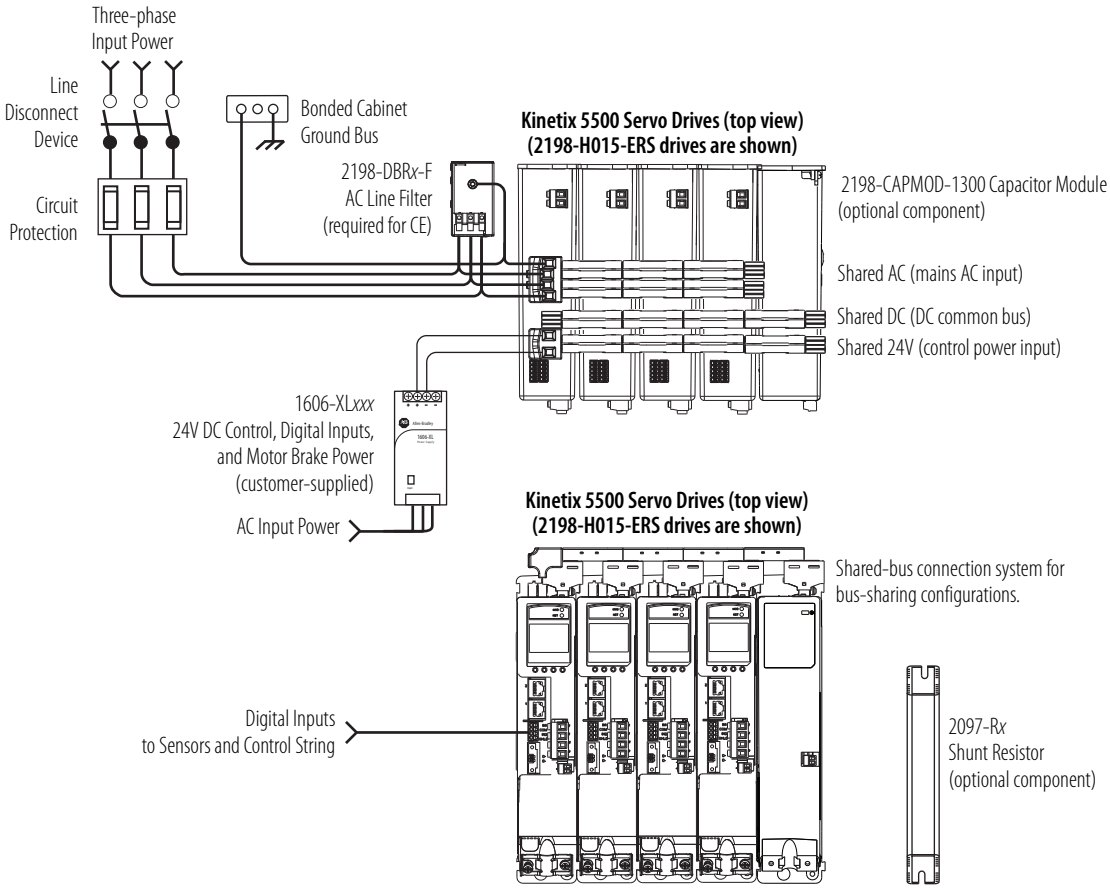
Shared AC Configurations

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.



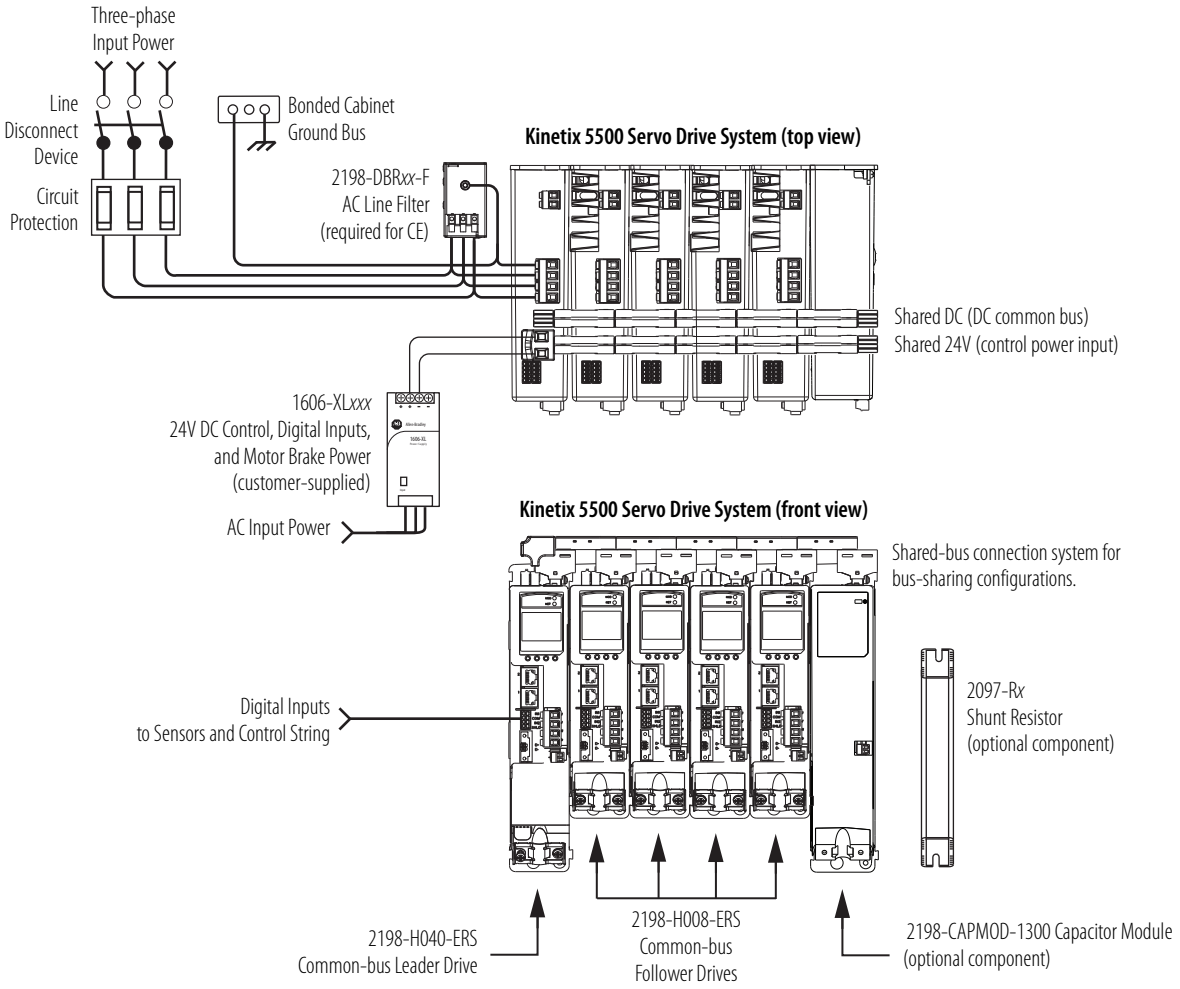
Shared AC/DC Configurations

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).



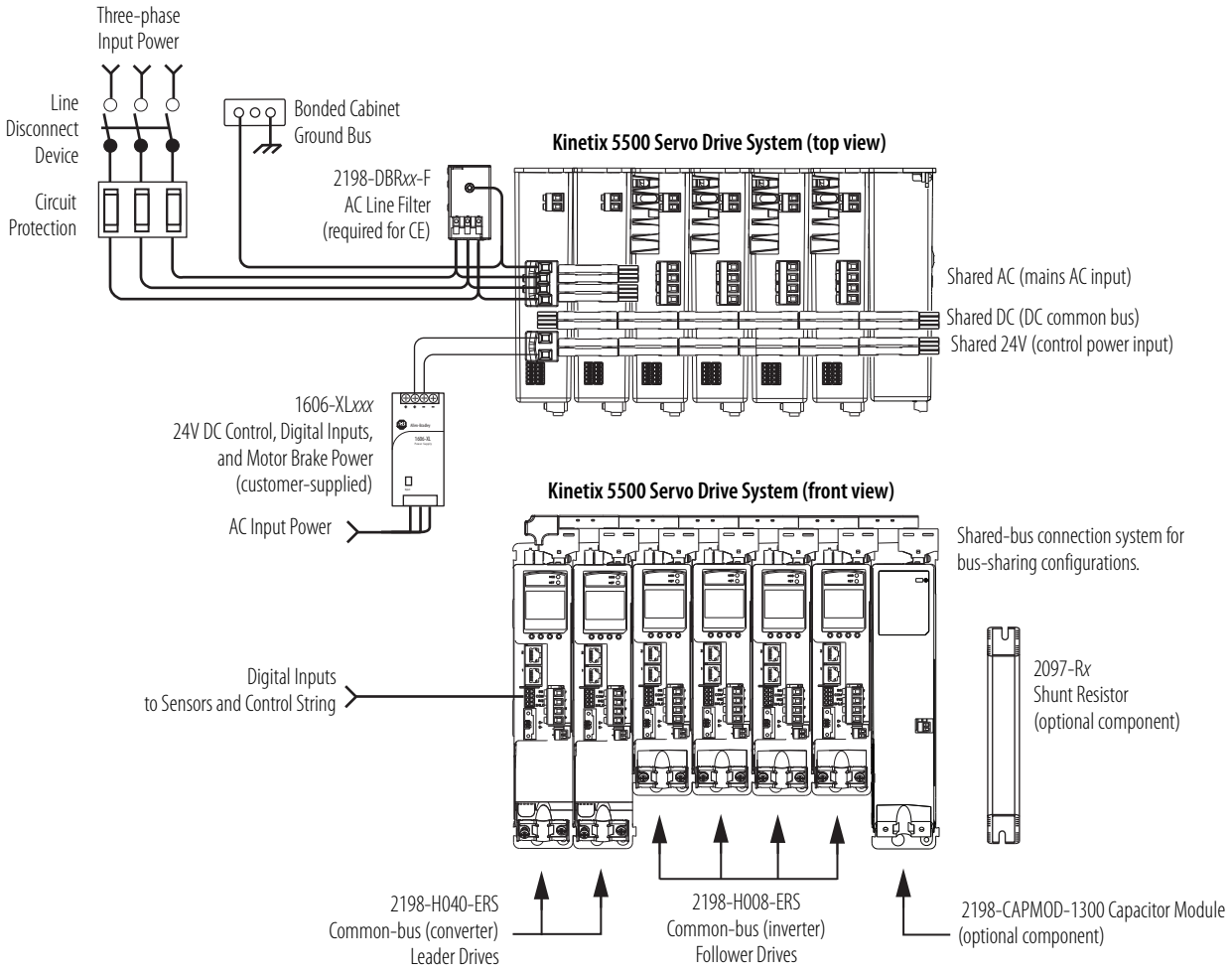
Shared DC (common-bus) Configuration

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.



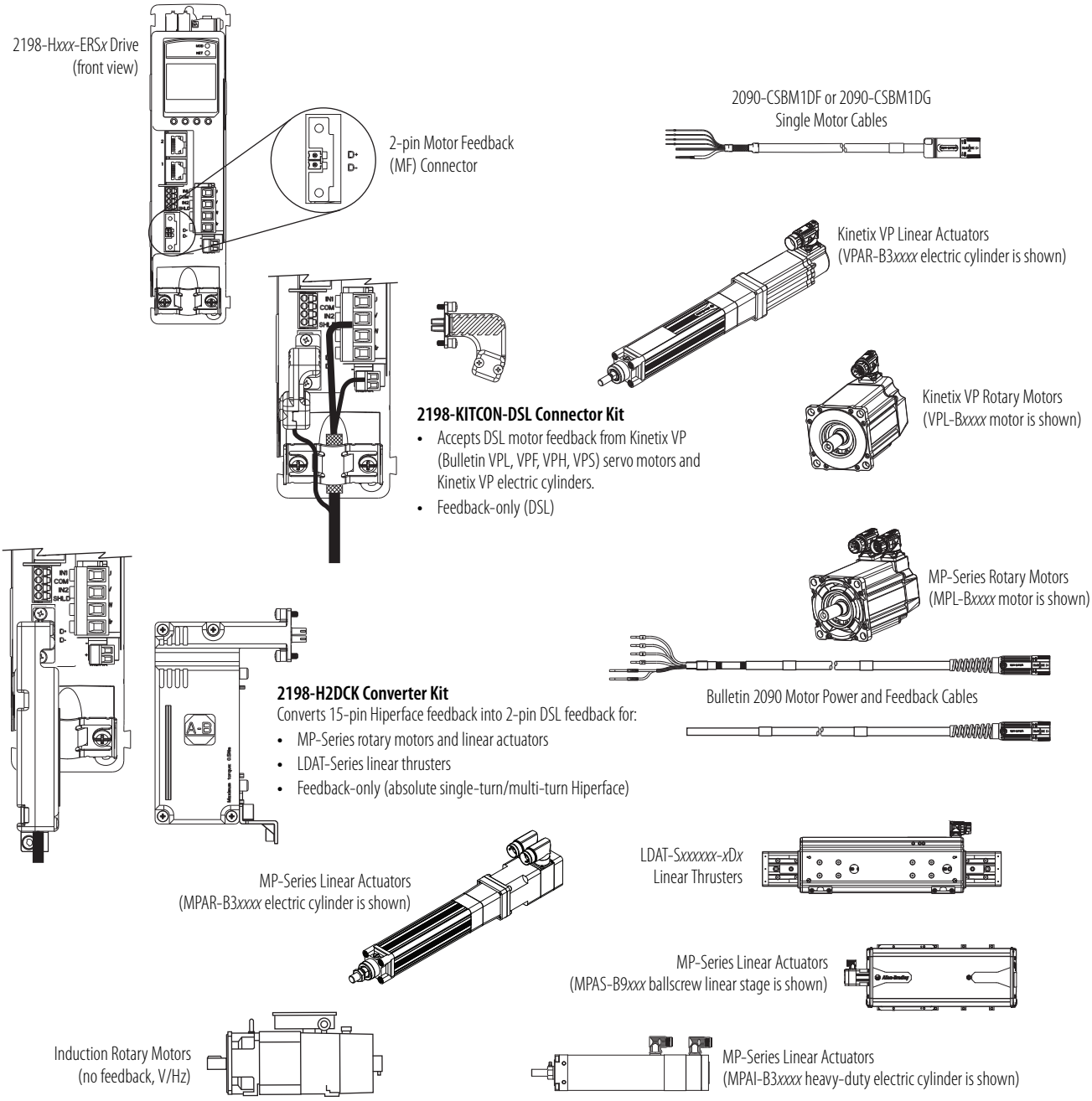
Shared AC/DC Hybrid Configuration

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.



Motor Feedback and Feedback-only Configurations

Feedback connections are made at the 2-pin motor feedback (MF) connector. These examples illustrate how you can use the Bulletin 2198 connector kits for making these connections.

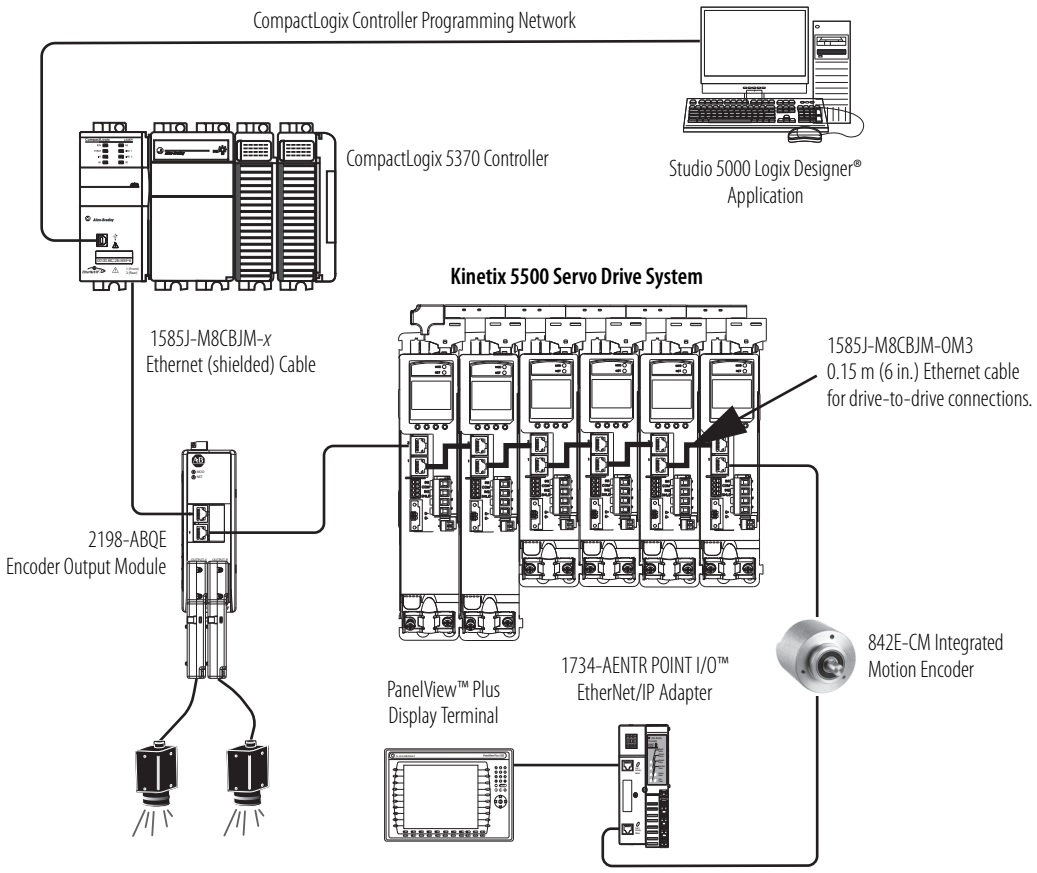


Typical Communication Configurations

The Kinetix 5500 drives support any Ethernet topology including linear, ring, and star by using ControlLogix, GuardLogix, or CompactLogix controllers. These examples feature the CompactLogix 5370 programmable automation controllers (Bulletin 1769) with support for Integrated Motion over the EtherNet/IP network. Refer to CompactLogix Controllers Specifications Technical Data, publication 1769-TD005, for more information on CompactLogix 5370 L1, L2, and L3 controllers.

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.

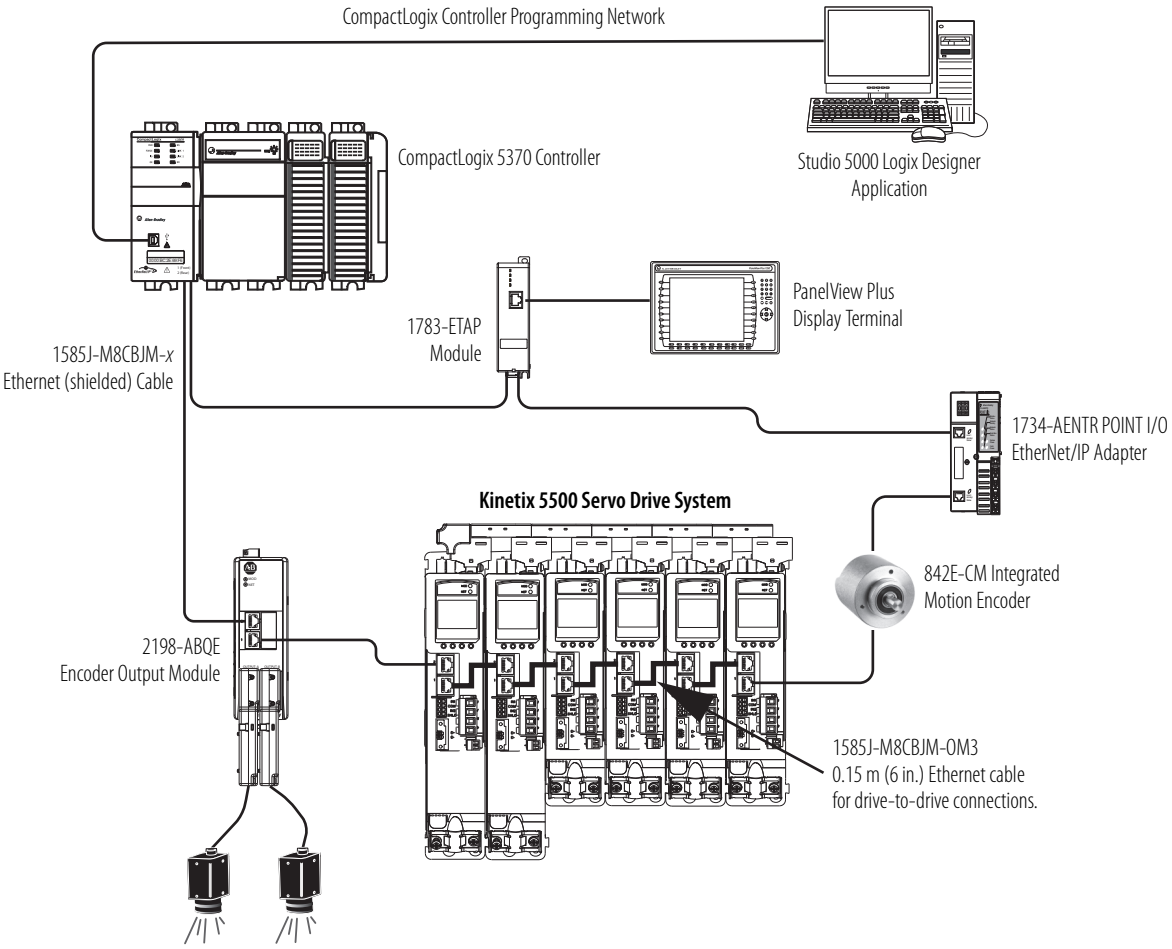
Kinetix 5500 Linear Communication



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.

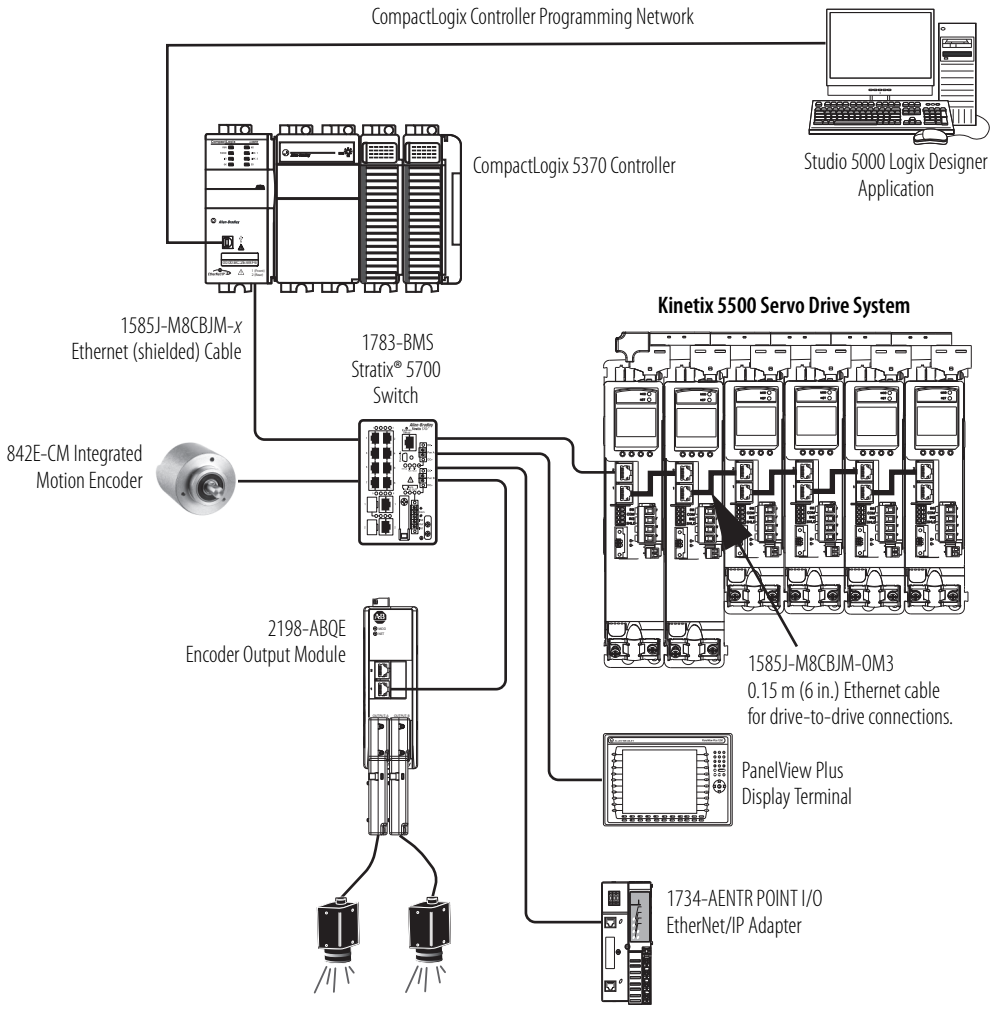
Kinetix 5500 Ring Communication



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 drive system and other devices operate independently. The loss of one device does not impact the operation of other devices.

Kinetix 5500 Star Communication



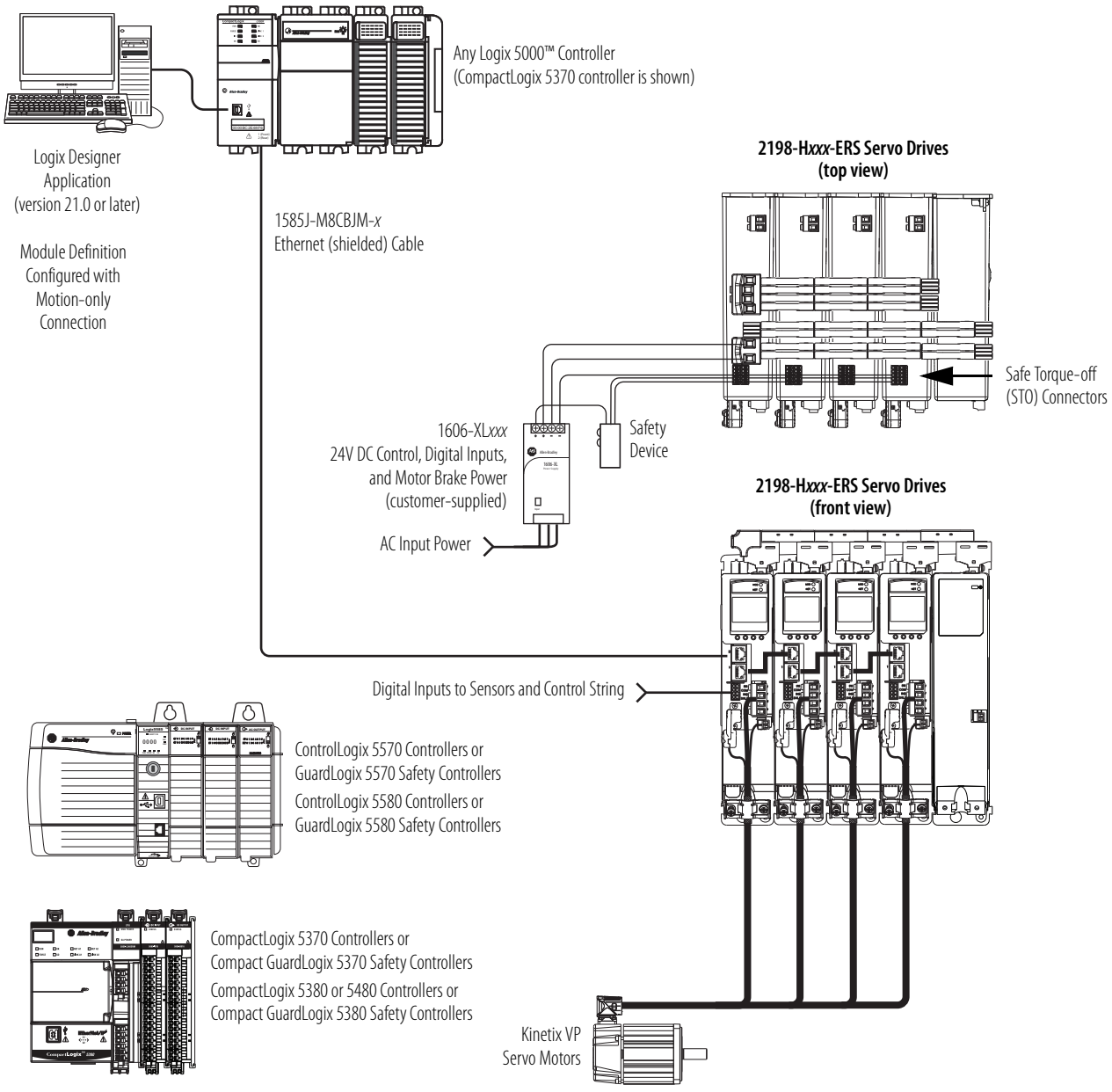
Safe Torque-off Configurations

Kinetix 5500 servo drives are available with safe torque-off over hardwired connections or integrated over the EtherNet/IP network. These examples illustrate the safe torque-off configuration options.

Hardwired Safety Configuration

The 2198-H*xxx*-ERS drives use the safe torque-off (STO) connector for cascading hardwired safety connections from drive-to-drive.

Safe Torque-off (hardwired) Configuration



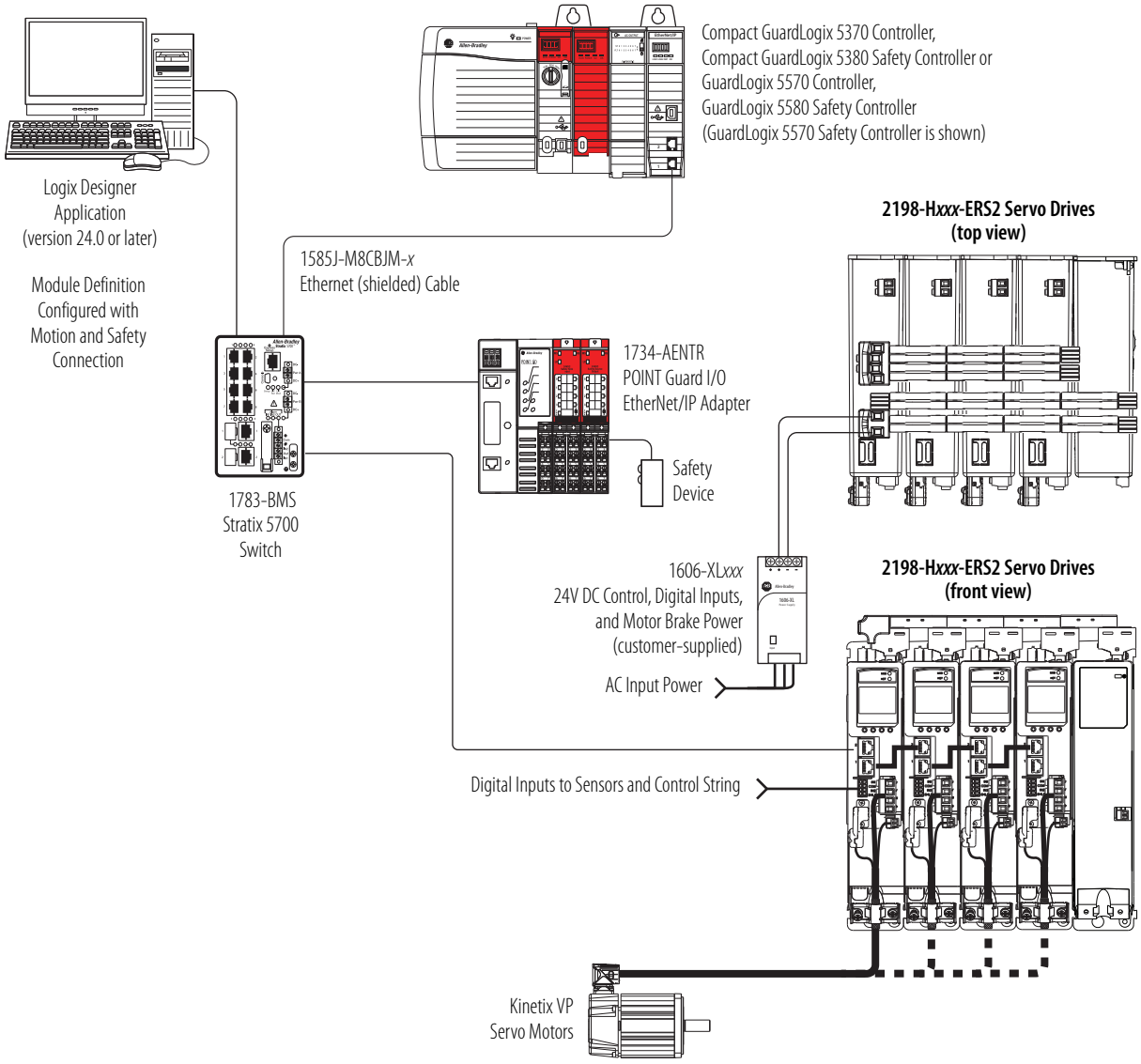
Integrated Safety Configurations

The GuardLogix or Compact GuardLogix safety controller issues the safe torque-off (STO) command over the EtherNet/IP network and the 2198-H*xxx*-ERS2 drive executes the STO command.

In this example, a single GuardLogix safety controller makes Motion and Safety connections with the 2198-H*xxx*-ERS2 drives.

IMPORTANT If only one controller is used in an application with Motion and Safety connections, it must be a GuardLogix or Compact GuardLogix safety controller.

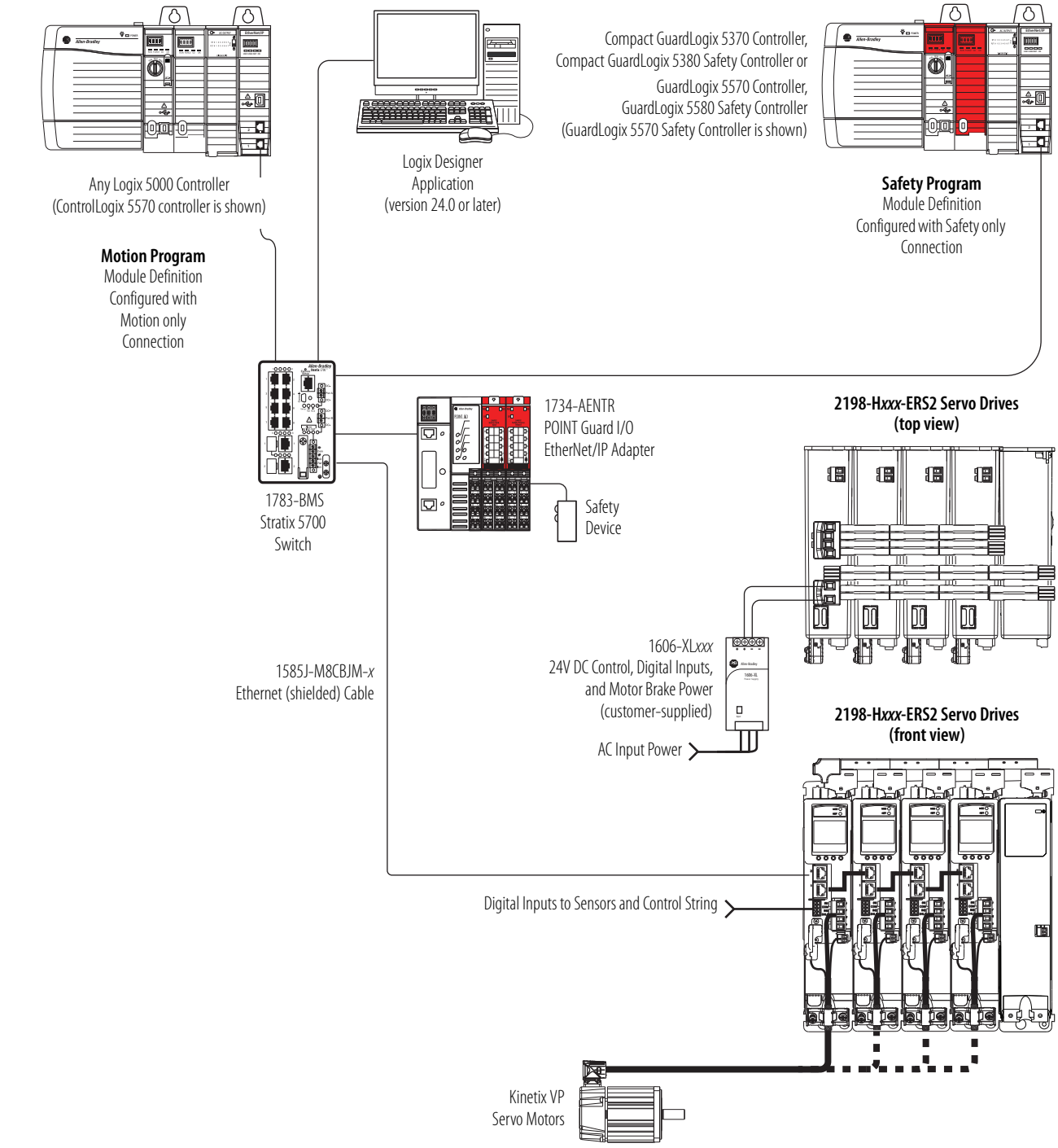
Motion and Safety Configuration (single controller)



In this example, a non-safety controller makes the Motion-only connection and a separate GuardLogix safety controller makes the Safety-only connection with the 2198-H*xxx*-ERS2 drives.

IMPORTANT If two controllers are used in an application with Motion-only and Safety-only connections, the Safety-only connection must be a GuardLogix or Compact GuardLogix safety controller and the Motion-only connection must be any Logix 5000 controller.

Motion and Safety Configuration (multi-controller)



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 KNX-RM009.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

Bulletin VPL Motor Performance Specifications with Kinetix 5500 Drives

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

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

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (240V AC input)
VPL-A1001M	6500	6500	7.15	1.95 (17.0)	20.20	3.31 (29.0)	1.29 (1.73)	2198-H015-ERS*x*
						3.78 (33.0)		2198-H025-ERS*x*
VPL-A1002C	3000	3000	6.24	3.39 (30.0)	20.33	6.80 (60.0)	1.03 (1.38)	2198-H015-ERS*x*
						7.82 (69.0)		2198-H025-ERS*x*
VPL-A1002F	5000	5000	10.04	3.26 (29.0)	34.30	6.77 (60.0)	1.60 (2.14)	2198-H025-ERS*x*
						7.82 (69.0)		2198-H040-ERS*x*
VPL-A1003C	2250	2250	6.14	4.18 (37.0)	20.20	9.76 (86.0)	0.87 (1.17)	2198-H015-ERS*x*
						11.15 (99.0)		2198-H025-ERS*x*
VPL-A1003E	3750	3750	9.58	4.18 (37.0)	28.80	9.76 (86.0)	1.31 (1.76)	2198-H025-ERS*x*
						11.15 (99.0)		2198-H040-ERS*x*
VPL-A1003F	5500	5500	15.62	4.18 (37.0)	50.0	10.25 (90.0)	1.90 (2.55)	2198-H040-ERS*x*
						11.15 (99.0)		2198-H070-ERS*x*
VPL-A1152B	2150	2150	6.17	5.10 (45.0)	21.19	10.95 (96.0)	1.02 (1.37)	2198-H015-ERS*x*
						13.12 (116)		2198-H025-ERS*x*
VPL-A1152E	3300	3300	10.60	5.08 (45.0)	32.10	12.14 (107)	1.47 (1.97)	2198-H025-ERS*x*
						13.12 (116)		2198-H040-ERS*x*
VPL-A1152F	5000	5000	13.56	4.70 (42.0)	45.80	13.12 (116)	2.16 (2.90)	2198-H040-ERS*x*
VPL-A1153C	2300	2300	8.88	6.55 (58.0)	33.0	18.30 (162)	1.35 (1.81)	2198-H025-ERS*x*
						20.33 (180)		2198-H040-ERS*x*
VPL-A1303B	1950	1950	10.34	8.80 (78.0)	31.0	19.85 (175)	1.61 (2.16)	2198-H025-ERS*x*
						20.72 (183)		2198-H040-ERS*x*
VPL-A1303F	4000	4000	18.60	7.75 (69.0)	62.0	15.36 (136)	2.50 (3.35)	2198-H040-ERS*x*
						20.72 (183)		2198-H070-ERS*x*
VPL-A1304A	1600	1600	9.43	10.29 (91.0)	33.76	25.03 (221)	1.55 (2.08)	2198-H025-ERS*x*
						28.45 (252)		2198-H040-ERS*x*
VPL-A1304D	3000	3000	18.40	10.20 (90.0)	58.0	21.48 (190)	2.60 (3.50)	2198-H040-ERS*x*
						27.10 (240)		2198-H070-ERS*x*
VPL-A1306C	2000	2000	14.78	13.38 (118)	55.83	28.50 (252)	2.13 (2.86)	2198-H040-ERS*x*
						34.62 (306)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

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

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

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

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPF Motor Performance Specifications with Kinetix 5500 Drives

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (240V AC input)
VPF-A0632F	4800	4800	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.36 (0.48)	2198-H008-ERS*x*
VPF-A0633C	3000	3000	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.37 (0.50)	2198-H008-ERS*x*
VPF-A0633F	4500	4500	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.47 (0.63)	2198-H008-ERS*x*
					12.60	4.09 (36.0)		2198-H015-ERS*x*
VPF-A0752C	3300	3300	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.49 (0.66)	2198-H015-ERS*x*

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (240V AC input)
VPF-A0752E	4800	4800	4.90	1.61 (14.0)	17.70	4.10 (36.0)	0.63 (0.84)	2198-H015-ERS*x*
					18.90	4.39 (39.0)		2198-H025-ERS*x*
VPF-A0753C	3300	3300	4.09	2.16 (19.0)	17.70	6.55 (58.0)	0.59 (0.79)	2198-H015-ERS*x*
					18.90	7.02 (62.0)		2198-H025-ERS*x*
VPF-A0753E	4600	4600	6.12	2.28 (20.0)	17.70	5.13 (45.0)	0.76 (1.02)	2198-H015-ERS*x*
					25.34	7.35 (65.0)		2198-H025-ERS*x*
VPF-A1001C	2800	2800	3.61	1.93 (17.0)	8.80	3.22 (28.0)	0.56 (0.75)	2198-H008-ERS*x*
					10.38	3.78 (33.0)		2198-H015-ERS*x*
VPF-A1001M	6500	6500	7.15	1.95 (17.0)	17.70	3.31 (29.0)	1.29 (1.73)	2198-H015-ERS*x*
					20.20	3.78 (33.0)		2198-H025-ERS*x*
VPF-A1002C	3000	3000	6.24	3.39 (30.0)	17.70	6.80 (60.0)	1.03 (1.38)	2198-H015-ERS*x*
					20.33	7.82 (69.0)		2198-H025-ERS*x*
VPF-A1002F	5000	5000	10.04	3.26 (29.0)	28.30	6.77 (60.0)	1.60 (2.14)	2198-H025-ERS*x*
					34.30	7.82 (69.0)		2198-H040-ERS*x*
VPF-A1003C	2250	2250	6.14	4.18 (37.0)	17.70	9.76 (86.0)	0.83 (1.11)	2198-H015-ERS*x*
					20.20	11.15 (99.0)		2198-H025-ERS*x*
VPF-A1003E	3750	3750	9.58	4.18 (37.0)	28.30	9.76 (86.0)	1.25 (1.67)	2198-H025-ERS*x*
					28.80	11.15 (99.0)		2198-H040-ERS*x*
VPF-A1003F	5500	5500	15.62	4.18 (37.0)	45.90	10.25 (90.0)	1.81 (2.42)	2198-H040-ERS*x*
					50.0	11.15 (99.0)		2198-H070-ERS*x*
VPF-A1153C	2300	2300	8.88	6.50 (58.0)	28.30	18.30 (162)	1.16 (1.56)	2198-H025-ERS*x*
					33.0	20.33 (180)		2198-H040-ERS*x*
VPF-A1303B	1950	1950	10.34	8.80 (78.0)	28.30	19.85 (175)	1.53 (2.05)	2198-H025-ERS*x*
					31.0	20.72 (183)		2198-H040-ERS*x*
VPF-A1303F	4000	4000	18.60	7.75 (69.0)	45.90	15.36 (136)	2.25 (3.02)	2198-H040-ERS*x*
					62.0	20.72 (183)		2198-H070-ERS*x*
VPF-A1304A	1600	1600	9.43	10.29 (91.0)	28.30	25.03 (221)	1.47 (1.98)	2198-H025-ERS*x*
					33.76	28.45 (252)		2198-H040-ERS*x*
VPF-A1304D	3000	3000	18.40	10.20 (90.0)	45.90	21.48 (190)	1.98 (2.65)	2198-H040-ERS*x*
					58.0	27.10 (240)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (480V AC input)
VPF-B0632F	4600	4600	1.20	0.93 (8.0)	3.50	2.26 (20.0)	0.34 (0.46)	2198-H003-ERS*x*
					4.20	2.69 (24.0)		2198-H008-ERS*x*
VPF-B0632T	8000	8000	2.55	0.93 (8.0)	8.75	2.69 (24.0)	0.41 (0.55)	2198-H008-ERS*x*
VPF-B0633M	6700	6700	2.50	1.27 (11.0)	8.75	4.09 (36.0)	0.49 (0.66)	2198-H008-ERS*x*
VPF-B0633T	8000	8000	3.52	1.27 (11.0)	8.80	2.87 (25.0)	0.48 (0.64)	2198-H008-ERS*x*
					12.60	4.09 (36.0)		2198-H015-ERS*x*

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (480V AC input)
VPF-B0752E	4900	4900	2.70	1.61 (14.0)	8.80	4.10 (36.0)	0.64 (0.86)	2198-H008-ERS*x*
					9.45	4.39 (39.0)		2198-H015-ERS*x*
VPF-B0752F	7000	7000	3.80	1.61 (14.0)	13.30	4.39 (39.0)	0.76 (1.02)	2198-H015-ERS*x*
VPF-B0752M	8000	8000	4.90	1.61 (14.0)	17.70	4.10 (36.0)	0.77 (1.04)	2198-H015-ERS*x*
					18.90	4.39 (39.0)		2198-H025-ERS*x*
VPF-B0753E	4500	4500	3.80	2.28 (20.0)	13.30	7.35 (65.0)	0.77 (1.04)	2198-H015-ERS*x*
VPF-B0753F	6600	6600	4.09	2.16 (19.0)	17.70	6.55 (58.0)	0.61 (0.82)	2198-H015-ERS*x*
					18.90	7.02 (62.0)		2198-H025-ERS*x*
VPF-B0753M	8000	8000	6.12	2.28 (20.0)	17.70	5.13 (45.0)	0.78 (1.05)	2198-H015-ERS*x*
					25.34	7.35 (65.0)		2198-H025-ERS*x*
VPF-B1001M	6000	6000	3.61	1.93 (17.0)	8.80	3.22 (28.0)	1.14 (1.53)	2198-H008-ERS*x*
					10.38	3.78 (33.0)		2198-H015-ERS*x*
VPF-B1002E	3300	3300	3.44	3.39 (30.0)	8.80	6.47 (57.0)	1.12 (1.50)	2198-H008-ERS*x*
					10.69	7.82 (69.0)		2198-H015-ERS*x*
VPF-B1002M	6000	6000	6.24	3.39 (30.0)	17.70	6.80 (60.0)	1.86 (2.49)	2198-H015-ERS*x*
					20.33	7.82 (69.0)		2198-H025-ERS*x*
VPF-B1003C	2500	2500	3.41	4.18 (37.0)	8.80	9.29 (82.0)	0.91 (1.23)	2198-H008-ERS*x*
					10.61	11.15 (99.0)		2198-H015-ERS*x*
VPF-B1003F	4750	4750	6.14	4.18 (37.0)	17.70	9.76 (86.0)	1.57 (2.10)	2198-H015-ERS*x*
					20.20	11.15 (99.0)		2198-H025-ERS*x*
VPF-B1003T	7000	7000	9.58	4.18 (37.0)	28.30	9.76 (86.0)	1.68 (2.25)	2198-H025-ERS*x*
					28.80	11.15 (99.0)		2198-H040-ERS*x*
VPF-B1153E	3200	3200	6.13	6.50 (58.0)	17.70	16.85 (149)	1.40 (1.88)	2198-H015-ERS*x*
					21.33	20.33 (180)		2198-H025-ERS*x*
VPF-B1153F	5000	5000	8.88	6.50 (58.0)	28.30	18.30 (162)	1.49 (2.00)	2198-H025-ERS*x*
					33.0	20.33 (180)		2198-H040-ERS*x*
VPF-B1303C	2250	2250	6.30	8.80 (78.0)	17.70	19.83 (175)	1.74 (2.33)	2198-H015-ERS*x*
					18.47	20.72 (183)		2198-H025-ERS*x*
VPF-B1303F	4000	4000	10.10	8.80 (78.0)	28.30	19.85 (175)	2.54 (3.40)	2198-H025-ERS*x*
					31.0	20.72 (183)		2198-H040-ERS*x*
VPF-B1304C	2150	2150	7.0	10.29 (91.0)	17.70	22.55 (199)	1.49 (2.00)	2198-H015-ERS*x*
					22.3	28.45 (252)		2198-H025-ERS*x*
VPF-B1304E	3500	3500	9.44	10.29 (91.0)	28.30	25.03 (221)	2.40 (3.21)	2198-H025-ERS*x*
					33.76	28.45 (252)		2198-H040-ERS*x*
VPF-B1652C	2700	2700	16.0	19.40 (172)	45.90	44.78 (396)	4.18 (5.60)	2198-H040-ERS*x*
					49.88	48.60 (430)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPH Motor Performance Specifications with Kinetix 5500 Drives

Bulletin VPH (non-brake) Performance Specifications with Kinetix 5500 (200V-class operation) Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (240V AC input)
VPH-A0633F-*xxx*2	4500	4500	2.06	1.09 (9.7)	8.80	2.79 (24.7)	0.45 (0.61)	2198-H008-ERS*x*
					13.60	4.30 (38.1)		2198-H015-ERS*x*
VPH-A0753F-*xxx*2	4600	4600	3.73	1.90 (16.8)	17.70	4.88 (43.2)	0.68 (0.92)	2198-H015-ERS*x*
					25.34	7.00 (62.0)		2198-H025-ERS*x*
VPH-A1003F-*xxx*2	5500	5500	8.45	3.41 (30.1)	28.3	4.97 (44.0)	1.32 (1.77)	2198-H025-ERS*x*
					71.10	12.50 (111)		2198-H070-ERS*x*
VPH-A1152E-*xxx*2	3300	3300	5.66	4.04 (35.8)	17.70	7.94 (70.3)	1.07 (1.43)	2198-H015-ERS*x*
					33.20	14.91 (132)		2198-H040-ERS*x*
VPH-A1153C-*xxx*2	2300	2300	4.99	5.17 (45.8)	17.70	11.72 (104)	1.11 (1.49)	2198-H015-ERS*x*
					33.00	21.88 (194)		2198-H040-ERS*x*
VPH-A1304D-*xxx*2	3000	3000	10.03	8.44 (74.7)	28.30	14.00 (124)	1.79 (2.40)	2198-H025-ERS*x*
					61.20	30.30 (268)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (240V AC input)
VPH-A0633F-*xxx*4	4500	4500	2.06	1.07 (9.5)	8.80	2.79 (24.7)	0.43 (0.57)	2198-H008-ERS*x*
					13.60	4.30 (38.1)		2198-H015-ERS*x*
VPH-A0753F-*xxx*4	4600	4600	3.53	1.73 (15.3)	17.70	4.88 (43.2)	0.60 (0.80)	2198-H015-ERS*x*
					25.34	7.00 (62.0)		2198-H025-ERS*x*
VPH-A1003F-*xxx*4	5500	5500	8.27	3.18 (28.2)	28.30	4.97 (44.0)	1.06 (1.42)	2198-H025-ERS*x*
					71.10	12.50 (111)		2198-H070-ERS*x*
VPH-A1152E-*xxx*4	3300	3300	5.54	4.00 (35.4)	17.70	7.94 (70.3)	1.07 (1.43)	2198-H015-ERS*x*
					33.20	14.91 (132)		2198-H040-ERS*x*
VPH-A1153C-*xxx*4	2300	2300	4.90	5.03 (44.5)	17.70	11.72 (104)	1.11 (1.49)	2198-H015-ERS*x*
					33.00	21.88 (194)		2198-H040-ERS*x*
VPH-A1304D-*xxx*4	3000	3000	9.70	8.27 (73.2)	28.30	14.00 (124)	1.79 (2.40)	2198-H025-ERS*x*
					61.20	30.30 (268)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPH (non-brake) Performance Specifications with Kinetix 5500 (400V-class operation) Drives

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (480V AC input)
VPH-B0632T-*xxx*2	8000	8000	1.73	0.84 (7.5)	8.80	2.37 (21.0)	0.52 (0.69)	2198-H008-ERS*x*
					10.30	2.76 (24.4)		2198-H015-ERS*x*
VPH-B0633M-*xxx*2	6700	6700	1.45	1.03 (9.2)	8.75	4.16 (36.8)	0.50 (0.67)	2198-H008-ERS*x*
VPH-B0753F-*xxx*2	6600	6600	2.60	1.87 (16.6)	8.80	3.41 (30.2)	0.74 (0.99)	2198-H008-ERS*x*
					18.90	7.30 (64.6)		2198-H025-ERS*x*
VPH-B1001F-*xxx*2	5000	5000	1.55	1.44 (12.8)	7.80	3.90 (34.5)	0.70 (0.93)	2198-H008-ERS*x*
VPH-B1003F-*xxx*2	4750	4750	3.49	3.43 (30.4)	17.70	10.33 (91.4)	1.36 (1.83)	2198-H015-ERS*x*
					20.20	11.80 (104)		2198-H025-ERS*x*
VPH-B1152F-*xxx*2	4500	4500	3.64	4.03 (35.7)	17.70	12.11 (107)	1.37 (1.84)	2198-H015-ERS*x*
					21.90	15.00 (133)		2198-H025-ERS*x*
VPH-B1153E-*xxx*2	3900	5000	5.02	5.13 (45.4)	17.70	10.93 (96.7)	1.27 (1.70)	2198-H015-ERS*x*
					34.60	21.40 (189)		2198-H040-ERS*x*
VPH-B1304E-*xxx*2	3500	3500	5.73	8.41 (74.5)	17.70	14.43 (128)	2.15 (2.88)	2198-H015-ERS*x*
					37.00	30.20 (267)		2198-H040-ERS*x*
VPH-B1653D-*xxx*2	3000	3000	10.41	18.67 (165)	28.30	27.14 (240)	3.16 (4.23)	2198-H025-ERS*x*
					76.60	73.50 (651)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (480V AC input)
VPH-B0632T-*xxx*4	7200	8000	1.72	0.80 (7.1)	8.80	2.37 (21.0)	0.40 (0.54)	2198-H008-ERS*x*
					10.30	2.76 (24.4)		2198-H015-ERS*x*
VPH-B0633M-*xxx*4	6700	6700	1.39	1.01 (8.9)	8.75	4.16 (36.8)	0.50 (0.67)	2198-H008-ERS*x*
VPH-B0753F-*xxx*4	6600	6600	2.47	1.81 (16.0)	8.80	3.41 (30.2)	0.68 (0.92)	2198-H008-ERS*x*
					18.90	7.30 (64.6)		2198-H025-ERS*x*
VPH-B1001F-*xxx*4	5000	5000	1.56	1.42 (12.6)	7.80	3.90 (34.5)	0.68 (0.91)	2198-H008-ERS*x*
VPH-B1003F-*xxx*4	4750	4750	3.46	3.29 (29.1)	17.70	10.33 (91.4)	1.16 (1.56)	2198-H015-ERS*x*
					20.20	11.80 (104)		2198-H025-ERS*x*
VPH-B1152F-*xxx*4	4500	4500	3.89	4.03 (35.7)	17.70	12.11 (107)	1.37 (1.84)	2198-H015-ERS*x*
					21.90	15.00 (133)		2198-H025-ERS*x*
VPH-B1153E-*xxx*4	3900	5000	4.99	5.13 (45.4)	17.70	10.93 (96.7)	1.08 (1.45)	2198-H015-ERS*x*
					34.60	21.40 (189)		2198-H040-ERS*x*
VPH-B1304E-*xxx*4	3500	3500	5.85	8.24 (73.0)	17.70	14.43 (128)	1.76 (2.36)	2198-H015-ERS*x*
					37.00	30.20 (267)		2198-H040-ERS*x*
VPH-B1653D-*xxx*4	3000	3000	10.55	18.67 (165)	28.30	27.14 (240)	2.91 (3.91)	2198-H025-ERS*x*
					76.60	73.50 (651)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPS Motor Performance Specifications with Kinetix 5500 Drives

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

Motor Cat. No.	Rated Speed 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 (Hp)	Kinetix 5500 Drives (480V AC input)
VPS-B1304D	3000	3000	7.1	8.1 (72.0)	17.7	17.9 (158)	1.40 (1.9)	2198-H015-ERS*x*
					26.0	27.1 (240)		2198-H025-ERS*x*
VPS-B1653D	3000	3000	17.0	21.0 (186)	45.9	50.1 (443)	3.29 (4.4)	2198-H040-ERS*x*
					68.0	67.8 (600)		2198-H070-ERS*x*

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPL Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit.

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

Motor Cat. No.	Rated Speed 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 (240V AC input)
MPL-A1510V	8000	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2198-H003-ERS*x*
MPL-A1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2198-H008-ERS*x*
MPL-A1530U	7000	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2198-H015-ERS*x*
MPL-A210V	8000	8000	3.09	0.55 (4.8)	10.2	1.52 (13.4)	0.37	2198-H015-ERS*x*
MPL-A220T	6000	6000	4.54	1.61 (14.2)	15.5	4.74 (41.9)	0.62	2198-H015-ERS*x*
MPL-A230P	5000	5000	5.40	2.10 (18.6)	23.0	8.2 (73.0)	0.86	2198-H025-ERS*x*
MPL-A310F	3000	3000	3.24	1.58 (14.0)	8.80	3.44 (30.4)	0.46	2198-H008-ERS*x*
					9.30	3.61 (31.9)		2198-H015-ERS*x*
MPL-A310P	5000	5000	4.91	1.58 (14.0)	14.0	3.61 (31.9)	0.73	2198-H015-ERS*x*
MPL-A320H	3500	3500	6.10	3.05 (27.0)	19.3	7.91 (70.0)	1.0	2198-H025-ERS*x*
MPL-A320P	5000	5000	9.00	3.05 (27.0)	28.3	7.60 (44.8)	1.3	2198-H025-ERS*x*
					29.5	7.91 (70.0)		2198-H040-ERS*x*
MPL-A330P	5000	5000	12.0	4.18 (37.0)	38.0	11.1 (98.2)	1.8	2198-H040-ERS*x*
MPL-A420P	5000	5000	12.9	4.79 (42.3)	46.0	13.6 (119)	2.0	2198-H040-ERS*x*
MPL-A430H	3500	3500	12.2	6.21 (55.0)	45.0	19.8 (175)	1.8	2198-H040-ERS*x*
MPL-A430P	5000	5000	16.80	5.99 (52.9)	67.0	19.8 (175)	2.2	2198-H070-ERS*x*
MPL-A4530F	2800	2800	13.40	8.36 (74.0)	42.0	20.3 (179)	1.9	2198-H040-ERS*x*
MPL-A4530K	4000	4000	19.50	8.13 (71.9)	62.0	20.3 (179)	2.5	2198-H070-ERS*x*
MPL-A4540C	1500	1500	9.55	10.30 (91.1)	28.3	26.23 (232)	1.5	2198-H025-ERS*x*
					29.0	27.1 (239)		2198-H040-ERS*x*
MPL-A4540F	3000	3000	18.40	10.19 (90.1)	45.9	22.09 (195)	2.6	2198-H040-ERS*x*
					58.0	27.1 (239)		2198-H070-ERS*x*
MPL-A4560F	3000	3000	22.0	14.1 (125)	66.0	34.4 (305)	3.0	2198-H070-ERS*x*
MPL-A520K	4000	4000	15.0	10.77 (95.2)	65.0	24.2 (214)	3.5	2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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)
MPL-B1510V	8000	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2198-H003-ERS*x*
MPL-B1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2198-H008-ERS*x*
MPL-B1530U	7000	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	2198-H008-ERS*x*
MPL-B210V	8000	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2198-H008-ERS*x*
MPL-B220T	6000	6000	3.30	1.61 (14.2)	8.80	3.67 (32.5)	0.62	2198-H008-ERS*x*
					11.3	4.74 (41.9)		2198-H015-ERS*x*
MPL-B230P	5000	5000	2.60	2.10 (18.6)	8.80	6.39 (56.6)	0.86	2198-H008-ERS*x*
					11.3	8.20 (73.0)		2198-H015-ERS*x*
MPL-B310P	5000	5000	2.4	1.6 (14.1)	7.10	3.6 (32)	0.77	2198-H008-ERS*x*
MPL-B320P	5000	5000	4.5	3.10 (27)	14.0	8.2 (72.5)	1.5	2198-H015-ERS*x*
MPL-B330P	5000	5000	6.1	4.18 (37)	17.7	10.4 (92.0)	1.8	2198-H015-ERS*x*
					19.0	11.1 (98)		2198-H025-ERS*x*
MPL-B420P	5000	5000	6.3	4.74 (42)	17.7	11.3 (100)	1.9	2198-H015-ERS*x*
					22.0	13.5 (119)		2198-H025-ERS*x*
MPL-B430P	5000	5000	9.2	6.55 (58)	28.3	17.6 (156)	2.2	2198-H025-ERS*x*
					32.0	19.8 (175)		2198-H040-ERS*x*
MPL-B4530F	3000	3000	6.7	8.36 (74)	17.7	17.7 (157)	2.1	2198-H015-ERS*x*
					21.0	20.3 (180)		2198-H025-ERS*x*
MPL-B4530K	4000	4000	9.9	8.25 (73)	28.3	18.7 (166)	2.6	2198-H025-ERS*x*
					31.0	20.3 (179)		2198-H040-ERS*x*
MPL-B4540F	3000	3000	9.1	10.20 (90)	28.3	26.2 (232)	2.6	2198-H025-ERS*x*
					29.0	27.1 (240)		2198-H040-ERS*x*
MPL-B4560F	3000	3000	11.3	13.85 (123)	28.3	28.4 (251)	3.2	2198-H025-ERS*x*
			11.8	14.0 (124)	36.0	34.4 (304)		2198-H040-ERS*x*
MPL-B520K	3500	4000	11.3	10.4 (92)	28.3	20.6 (182)	3.5	2198-H025-ERS*x*
			11.5	10.7 (95)	33.0	23.2 (205)		2198-H040-ERS*x*
MPL-B540D	2000	2000	10.5	19.4 (172)	23.0	41.0 (362)	3.4	2198-H025-ERS*x*
MPL-B540K	4000	4000	20.4	19.4 (171)	60.0	48.6 (430)	5.4	2198-H070-ERS*x*
MPL-B560F	3000	3000	20.6	26.8 (237)	68.0	67.8 (600)	5.5	2198-H070-ERS*x*
MPL-B580F	3000	3000	26.0	34.0 (300)	81.3	78.9 (698)	7.1	2198-H070-ERS*x*
MPL-B580J	3800	3800	32.0	34.0 (301)	81.3	71.52 (633)	7.9	2198-H070-ERS*x*
MPL-B640F	2000	3000	32.0	36.7 (325)	65.0	72.3 (640)	6.1	2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPM Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit.

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

Motor Cat. No.	Base Speed rpm	Rated Speed 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 (240V AC input)
MPM-A1151M	4500	5000	6000	7.65	2.3 (20.3)	28.3	6.2 (54.9)	0.90	2198-H025-ERS*x*
						30.5	6.6 (58.4)		2198-H040-ERS*x*
MPM-A1152F	3000	4000	5000	11.30	4.4 (38.9)	28.3	9.4 (83.2)	1.40	2198-H025-ERS*x*
				11.93	4.7 (41.6)	44.8	13.5 (119)		2198-H040-ERS*x*
MPM-A1153F	3000	4000	5000	16.18	6.5 (57.5)	45.9	15.3 (135)	1.45	2198-H040-ERS*x*
						64.5	19.8 (175)		2198-H070-ERS*x*
MPM-A1302F	3000	4000	4500	17.28	6.6 (58.4)	45.9	12.7 (112)	1.65	2198-H040-ERS*x*
						50.2	13.5 (119)		2198-H070-ERS*x*
MPM-A1304F	3000	3500	4000	19.65	9.3 (82.0)	45.9	18.6 (165)	2.20	2198-H040-ERS*x*
						48.3	19.3 (171)		2198-H070-ERS*x*
MPM-A1651F	3000	3000	5000	30.96	10.7 (94.7)	73.8	20.5 (181)	2.50	2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Speed, base rpm	Rated Speed 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	4000	5000	2.71	2.3 (20.3)	8.8	6.0 (53.1)	0.75	2198-H008-ERS*x*
						9.9	6.6 (58.0)		2198-H015-ERS*x*
MPM-B1151T	6000	5000	7000	5.62	2.3 (20.3)	17.7	5.3 (46.9)	0.90	2198-H015-ERS*x*
						20.5	5.9 (52.2)		2198-H025-ERS*x*
MPM-B1152C	1500	2500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2198-H015-ERS*x*
MPM-B1152F	3000	4000	5200	6.17	5.0 (44.2)	17.7	11.7 (103)	1.40	2198-H015-ERS*x*
						21.1	13.5 (119)		2198-H025-ERS*x*
MPM-B1152T	6000	4000	7000	11.02	5.0 (44.2)	28.3	10.7 (94.7)	1.40	2198-H025-ERS*x*
						37.9	13.5 (119)		2198-H040-ERS*x*
MPM-B1153E	2250	3000	3500	6.21	6.5 (57.5)	17.7	16.9 (149)	1.40	2198-H015-ERS*x*
						21.6	19.8 (175)		2198-H025-ERS*x*
MPM-B1153F	3000	4000	5500	9.20	6.5 (57.5)	28.3	17.9 (158)	1.40	2198-H025-ERS*x*
						32.0	19.8 (175)		2198-H040-ERS*x*
MPM-B1153T	6000	4000	7000	15.95	6.5 (57.5)	45.9	14.8 (131)	1.45	2198-H040-ERS*x*
						55.5	16.5(146)		2198-H070-ERS*x*
MPM-B1302F	3000	4000	4500	8.57	6.6 (58.4)	22.1	13.5 (119)	1.65	2198-H025-ERS*x*
MPM-B1302M	4500	4000	6000	12.57	6.6 (58.4)	32.4	13.5 (119)	1.65	2198-H040-ERS*x*
MPM-B1302T	6000	4000	7000	16.83	6.7 (59.3)	43.4	13.5 (119)	1.65	2198-H040-ERS*x*
MPM-B1304C	1500	1870	2750	7.00	10.3 (91.1)	17.7	22.8 (202)	2.00	2198-H015-ERS*x*
						21.5	27.1 (240)		2198-H025-ERS*x*

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

Motor Cat. No.	Speed, base rpm	Rated Speed 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-B1304E	2250	3500	4000	10.75	10.2 (90.3)	28.3	23.4 (207)	2.20	2198-H025-ERS*x*
						34.2	27.1 (240)		2198-H040-ERS*x*
MPM-B1304M	4500	3500	6000	19.02	10.4 (92.0)	60.6	27.1 (240)	2.20	2198-H070-ERS*x*
MPM-B1651C	1500	3000	3500	10.21	11.4 (101)	28.3	22.7 (201)	2.50	2198-H025-ERS*x*
						29.2	23.2 (205)		2198-H040-ERS*x*
MPM-B1651F	3000	3000	5000	17.75	11.4 (101)	45.9	21.9 (194)	2.50	2198-H040-ERS*x*
						50.9	23.2 (205)		2198-H070-ERS*x*
MPM-B1651M	4500	3000	5000	22.46	11.4 (101)	56.8	23.2 (205)	2.50	2198-H070-ERS*x*
MPM-B1652C	1500	2500	2500	11.51	16.0 (142)	33.6	40.0 (354)	3.80	2198-H040-ERS*x*
MPM-B1652E	2250	3500	3500	20.94	21.1 (187)	60.5	48.0 (425)	4.30	2198-H070-ERS*x*
MPM-B1652F	3000	3500	4500	28.74	21.1 (187)	84.1	48.0 (425)	4.30	2198-H070-ERS*x*
MPM-B1653C	1500	2000	2500	20.05	26.7 (236)	59.2	67.8 (600)	4.60	2198-H070-ERS*x*
MPM-B1653E	2250	3000	3500	27.00	26.8 (237)	72.9	62.0 (549)	5.10	2198-H070-ERS*x*
MPM-B2152C	1500	2000	2500	27.40	36.7 (325)	55.4	72.3 (640)	5.60	2198-H070-ERS*x*
MPM-B2153B	1250	1750	2000	24.06	48.0 (425)	60.0	101.1 (895)	6.80	2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPF Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit.

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

Motor Cat. No.	Rated Speed 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 (240V AC input)
MPF-A310P	4750	5000	4.50	1.58 (14.0)	14.0	3.61 (31.9)	0.73	2198-H015-ERS*x*
MPF-A320H	3350	3500	6.10	3.05 (27.0)	17.7	7.33 (64.9)	1.0	2198-H015-ERS*x*
					19.3	7.91 (70.0)		2198-H025-ERS*x*
MPF-A320P	4750	5000	9.00	3.05 (27.0)	28.3	7.59 (67.2)	1.3	2198-H025-ERS*x*
					29.5	7.91 (70.0)		2198-H040-ERS*x*
MPF-A330P	5000	5000	12.0	3.85 (34.0)	38.0	10.32 (91.2)	1.6	2198-H040-ERS*x*
MPF-A430H	3500	3500	12.2	6.21 (55.0)	45.0	19.82 (175)	1.8	2198-H040-ERS*x*
MPF-A430P	5000	5000	16.80	5.94 (52.5)	45.9	14.4 (127)	1.9	2198-H040-ERS*x*
					67.0	19.80 (175)		2198-H070-ERS*x*
MPF-A4530K	4000	4000	19.50	8.08 (71.4)	62.0	20.30 (179)	2.3	2198-H070-ERS*x*
MPF-A4540F	3000	3000	18.40	10.15 (89.7)	45.9	22.09 (195)	2.5	2198-H040-ERS*x*
					58.0	27.10 (239)		2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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)
MPF-B310P	5000	5000	2.30	1.60 (14)	7.10	3.6 (32)	0.77	2198-H008-ERS*x*
MPF-B320P	5000	5000	4.24	3.10 (27)	14.0	7.8 (69)	1.5	2198-H015-ERS*x*
MPF-B330P	5000	5000	5.70	4.18 (37)	17.7	10.4 (92.0)	1.6	2198-H015-ERS*x*
					19.0	11.1 (98)		2198-H025-ERS*x*
MPF-B430P	5000	5000	9.20	6.55 (58)	28.3	17.6 (156)	2.0	2198-H025-ERS*x*
					32.0	19.8 (175)		2198-H040-ERS*x*
MPF-B4530K	4000	4000	9.90	8.25 (73)	28.3	18.7 (165)	2.4	2198-H025-ERS*x*
					31.0	20.3 (179)		2198-H040-ERS*x*
MPF-B4540F	3000	3000	9.10	10.20 (90)	28.3	26.2 (232)	2.5	2198-H025-ERS*x*
					29.0	27.1 (240)		2198-H040-ERS*x*
MPF-B540K	4000	4000	20.5	19.4 (171)	60.0	48.6 (430)	4.1	2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPS Motor Performance Specifications with Kinetix 5500 Drives

These motors require the 2198-H2DCK feedback converter kit.

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

Motor Cat. No.	Rated Speed 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 (240V AC input)
MPS-A330P	5000	5000	9.80	3.60 (32.0)	28.3	8.79 (77.8)	1.3	2198-H025-ERS*x*
					38.0	11.10 (98.2)		2198-H040-ERS*x*
MPS-A4540F	3000	3000	14.4	8.1 (72)	45.9	22.84 (202)	1.4	2198-H040-ERS*x*
					56.0	27.1 (240)		2198-H070-ERS*x*

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

Motor Cat. No.	Rated Speed 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)
MPS-B330P	5000	5000	4.9	3.60 (32)	17.7	10.5 (92.9)	1.3	2198-H015-ERS*x*
					19.0	11.0 (97.2)		2198-H025-ERS*x*
MPS-B4540F	3000	3000	7.1	8.1 (72)	17.7	19.2 (170)	1.4	2198-H015-ERS*x*
					26.0	27.1 (240)		2198-H025-ERS*x*
MPS-B560F	3000	3000	17.0	21.5 (190)	45.9	49.7 (440)	3.5	2198-H040-ERS*x*
					68.0	67.8 (600)		2198-H070-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

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

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 KNX-RM009.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

LDAT-Series Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit.

Performance Specifications with 200V-class Drive Operation and Frame 30 Linear Thrusters

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 5500 Drives (240V AC input)
LDAT-S031010-DD*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2198-H015-ERS*x*
LDAT-S031020-DD*x*	3.1					0.25	
LDAT-S031030-DD*x*	3.5					0.29	
LDAT-S031040-DD*x*	3.8					0.31	
LDAT-S032010-DD*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.44	2198-H025-ERS*x*
LDAT-S032020-DD*x*	4.1					0.52	
LDAT-S032030-DD*x*	4.7					0.59	
LDAT-S032040-DD*x*	5.0					0.63	
LDAT-S032010-ED*x*	3.1	3.7		12.2		0.40	2198-H015-ERS*x*
LDAT-S032020-ED*x*	4.1					0.47	
LDAT-S032030-ED*x*	4.7					0.52	
LDAT-S032040-ED*x*	5.0					0.55	
LDAT-S033010-DD*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2198-H040-ERS*x*
LDAT-S033020-DD*x*	4.7					0.88	
LDAT-S033030-DD*x*	5.0					0.95	
LDAT-S033040-DD*x*							
LDAT-S033010-ED*x*	3.5	3.7		12.2		0.55	2198-H015-ERS*x*
LDAT-S033020-ED*x*	4.4					0.65	
LDAT-S033030-ED*x*							
LDAT-S033040-ED*x*							

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 200V-class Drive Operation and Frame 50 Linear Thrusters

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 5500 Drives (240V AC input)
LDAT-S051010-DD*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.31	2198-H015-ERS*x*
LDAT-S051020-DD*x*	3.7					0.38	
LDAT-S051030-DD*x*	4.1					0.42	
LDAT-S051040-DD*x*	4.4					0.44	
LDAT-S051050-DD*x*	4.7					0.46	
LDAT-S052010-DD*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.79	2198-H025-ERS*x*
LDAT-S052020-DD*x*	4.8					0.97	
LDAT-S052030-DD*x*	5.00					1.01	
LDAT-S052040-DD*x*							
LDAT-S052050-DD*x*							
LDAT-S052010-ED*x* ... LDAT-S052050-ED*x*	2.6	3.1		11.4		0.50	2198-H015-ERS*x*
LDAT-S053010-DD*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.31	2198-H040-ERS*x*
LDAT-S053020-DD*x*	5.0					1.53	
LDAT-S053030-DD*x* ... LDAT-S053050-DD*x*	5.0					1.53	
LDAT-S053010-ED*x* ... LDAT-S053050-ED*x*	1.7	3.1		11.4		0.47	2198-H015-ERS*x*
LDAT-S054010-DD*x*	4.4	12.4	509 (114)	45.5	1453 (327)	1.87	2198-H040-ERS*x*
LDAT-S054020-DD*x* ... LDAT-S054050-DD*x*	5.0					2.05	
LDAT-S054010-ED*x* ... LDAT-S054050-ED*x*	2.6	6.2		22.7		1.02	2198-H025-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 200V-class Drive Operation and Frame 70 Linear Thrusters

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 5500 Drives (240V AC input)
LDAT-S072010-DD*x* … LDAT-S072070-DD*x*	3.5	6.0	364 (82)	22.0	1055 (237)	1.03	2198-H025-ERS*x*
LDAT-S072010-ED*x* … LDAT-S072070-ED*x*	1.7	3.0		11.0		0.47	2198-H015-ERS*x*
LDAT-S073010-DD*x* … LDAT-S073070-DD*x*	3.5	9.0	554 (125)	32.8	1576 (354)	1.57	2198-H040-ERS*x*
LDAT-S073010-ED*x* … LDAT-S073070-ED*x*	1.2	3.0		10.9		0.41	2198-H015-ERS*x*
LDAT-S074010-DD*x* … LDAT-S074070-DD*x*	3.5	11.9	730 (164)	43.5	2088 (469)	2.08	2198-H040-ERS*x*
LDAT-S074010-ED*x* … LDAT-S074070-ED*x*	1.8	6.0		21.7		0.95	2198-H025-ERS*x*
LDAT-S076010-DD*x* … LDAT-S076070-DD*x*	3.5	18.2	1122 (252)	66.4	3189 (717)	3.17	2198-H070-ERS*x*
LDAT-S076010-ED*x* … LDAT-S076070-ED*x*	1.8	9.1		33.2		1.45	2198-H040-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 200V-class Drive Operation and Frame 100 Linear Thrusters

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 5500 Drives (240V AC input)
LDAT-S102010-DD*x* … LDAT-S102090-DD*x*	2.6	5.7	456 (103)	21.0	1289 (290)	0.96	2198-H025-ERS*x*
LDAT-S102010-ED*x* … LDAT-S102090-ED*x*	1.3	2.9		10.5		0.42	2198-H015-ERS*x*
LDAT-S103010-DD*x* … LDAT-S103090-DD*x*	2.7	8.6	702 (158)	31.5	1935 (435)	1.47	2198-H040-ERS*x*
LDAT-S103010-ED*x* … LDAT-S103090-ED*x*	0.9	2.9		10.5	1388 (312)	0.30	2198-H015-ERS*x*
LDAT-S104010-DD*x* … LDAT-S104090-DD*x*	2.7	11.5	929 (209)	42.0	2578 (580)	2.07	2198-H040-ERS*x*
LDAT-S104010-ED*x* … LDAT-S104090-ED*x*	1.3	5.7		21.0		0.86	2198-H025-ERS*x*
LDAT-S106010-DD*x* … LDAT-S106090-DD*x*	2.7	17.3	1403 (315)	63.0	3871 (870)	2.94	2198-H070-ERS*x*
LDAT-S106010-ED*x* … LDAT-S106090-ED*x*	1.3	8.6		31.5		1.28	2198-H040-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 200V-class Drive Operation and Frame 150 Linear Thrusters

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 5500 Drives (240V AC input)
LDAT-S152010-DD*x* … LDAT-S152090-DD*x*	1.8	5.3	643 (145)	19.5	1799 (404)	0.87	2198-H025-ERS*x*
LDAT-S152010-ED*x* … LDAT-S152090-ED*x*	0.9	2.7		9.8	1679 (377)	0.34	2198-H015-ERS*x*
LDAT-S153010-DD*x* … LDAT-S153090-DD*x*	1.8	8.0	978 (220)	29.1	2680 (602)	1.33	2198-H040-ERS*x*
LDAT-S154010-DD*x* … LDAT-S154090-DD*x*	1.8	10.7	1306 (294)	39.1	3597 (809)	1.78	2198-H040-ERS*x*
LDAT-S154010-ED*x* … LDAT-S154090-ED*x*	0.9	5.3		19.5	3383 (761)	0.70	2198-H025-ERS*x*
LDAT-S156010-DD*x* … LDAT-S156090-DD*x*	1.8	16.3	1997 (449)	59.4	5469 (1229)	2.71	2198-H070-ERS*x*
LDAT-S156010-ED*x* … LDAT-S156090-ED*x*	0.9	8.1		19.8	5110 (1149)	1.05	2198-H025-ERS*x*

Performance Specifications with 400V-class Drive Operation and Frame 30 Linear Thrusters

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 5500 Drives (480V AC input)
LDAT-S031010-DD*x*	2.4	4.8	81 (18)	12.2	168 (38)	0.20	2198-H015-ERS*x*
LDAT-S031020-DD*x*	3.1					0.25	
LDAT-S031030-DD*x*	3.5					0.29	
LDAT-S031040-DD*x*	3.8					0.31	
LDAT-S032010-DD*x*	3.1	7.4	126 (28)	24.3	336 (76)	0.40	2198-H025-ERS*x*
LDAT-S032020-DD*x*	4.1					0.52	
LDAT-S032030-DD*x*	4.7					0.59	
LDAT-S032040-DD*x*	5.0					0.63	
LDAT-S032010-ED*x*	3.1	3.7		12.2		0.40	2198-H015-ERS*x*
LDAT-S032020-ED*x*	4.1					0.52	
LDAT-S032030-ED*x*	4.7					0.59	
LDAT-S032040-ED*x*	5.0					0.63	
LDAT-S033010-DD*x*	3.5	11.1	190 (43)	36.5	504 (113)	0.67	2198-H040-ERS*x*
LDAT-S033020-DD*x*	4.7					0.88	
LDAT-S033030-DD*x*	5.0					0.95	
LDAT-S033040-DD*x*							
LDAT-S033010-ED*x*	3.5	3.7		12.2		0.67	2198-H015-ERS*x*
LDAT-S033020-ED*x*	4.7					0.87	
LDAT-S033030-ED*x*	5.0					0.91	
LDAT-S033040-ED*x*							

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 400V-class Drive Operation and Frame 50 Linear Thrusters

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 5500 Drives (480V AC input)
LDAT-S051010-DD*x*	2.8	3.1	119 (27)	11.4	363 (82)	0.34	2198-H015-ERS*x*
LDAT-S051020-DD*x*	3.7					0.43	
LDAT-S051030-DD*x*	4.1					0.49	
LDAT-S051040-DD*x*	4.4					0.53	
LDAT-S051050-DD*x*	4.7					0.55	
LDAT-S052010-DD*x*	3.7	6.2	251 (56)	22.7	727 (163)	0.92	2198-H025-ERS*x*
LDAT-S052020-DD*x*	4.8					1.20	
LDAT-S052030-DD*x*	5.0					1.24	
LDAT-S052040-DD*x*							
LDAT-S052050-DD*x*							
LDAT-S052010-ED*x*	3.7	3.1		11.4		0.80	2198-H015-ERS*x*
LDAT-S052020-ED*x*	4.6					0.98	
LDAT-S052030-ED*x*	4.6					1.02	
LDAT-S052040-ED*x*							
LDAT-S052050-ED*x*							
LDAT-S053010-DD*x*	4.1	9.4	378 (85)	34.2	1093 (246)	1.56	2198-H040-ERS*x*
LDAT-S053020-DD*x*	5.0					1.87	
LDAT-S053030-DD*x* ... LDAT-S053050-DD*x*							
LDAT-S053010-ED*x* ... LDAT-S053050-ED*x*	3.5	3.1		11.4		1.04	2198-H015-ERS*x*
LDAT-S054010-DD*x*	4.4	12.4	509 (114)	45.5	1453 (327)	2.26	2198-H040-ERS*x*
LDAT-S054020-DD*x* ... LDAT-S054050-DD*x*	5.00					2.53	
LDAT-S054010-ED*x*	4.4	6.2		22.7		1.87	2198-H025-ERS*x*
LDAT-S054020-ED*x* ... LDAT-S054050-ED*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 40 °C (104 °F) ambient temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 400V-class Drive Operation and Frame 70 Linear Thrusters

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 5500 Drives (480V AC input)
LDAT-S072010-DD*x*	3.9	6.0	364 (82)	22.0	1055 (237)	1.37	2198-H025-ERS*x*
LDAT-S072020-DD*x*	5.0					1.64	
LDAT-S072030-DD*x* ... LDAT-S072070-DD*x*							
LDAT-S072010-ED*x*	3.5	3.0		11.0		1.03	2198-H015-ERS*x*
LDAT-S072020-ED*x* ... LDAT-S072070-ED*x*							
LDAT-S073010-DD*x*	4.4	9.0	554 (125)	32.8	1576 (354)	2.27	2198-H040-ERS*x*
LDAT-S073020-DD*x* ... LDAT-S073070-DD*x*	5.0					2.50	
LDAT-S073010-ED*x* ... LDAT-S073070-ED*x*	2.4	3.0		10.9		1.01	2198-H015-ERS*x*
LDAT-S074010-DD*x*	4.7	11.9	730 (164)	43.5	2088 (469)	3.15	2198-H040-ERS*x*
LDAT-S074020-DD*x* ... LDAT-S074070-DD*x*	5.0					3.30	
LDAT-S074010-ED*x* ... LDAT-S074070-ED*x*	3.5	6.0		21.7		2.08	2198-H025-ERS*x*
LDAT-S076010-DD*x*	5.0	18.2	1122 (252)	66.4	3189 (717)	5.02	2198-H070-ERS*x*
LDAT-S076020-DD*x* ... LDAT-S076070-DD*x*							
LDAT-S076010-ED*x* ... LDAT-S076070-ED*x*	3.5	9.1		33.2		3.18	2198-H040-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 400V-class Drive Operation and Frame 100 Linear Thrusters

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 5500 Drives (480V AC input)
LDAT-S102010-DD*x*	3.4	5.7	456 (103)	21.0	1289 (290)	1.44	2198-H025-ERS*x*
LDAT-S102020-DD*x*	4.4					1.74	
LDAT-S102030-DD*x*	5.0					1.91	
LDAT-S102040-DD*x*							
LDAT-S102050-DD*x* ... LDAT-S102090-DD*x*							
LDAT-S102010-ED*x* ... LDAT-S102090-ED*x*	2.6	2.9		10.5		0.96	2198-H015-ERS*x*
LDAT-S103010-DD*x*	3.8	8.6	702 (158)	31.5	1935 (435)	2.41	2198-H040-ERS*x*
LDAT-S103020-DD*x*	5.0					2.93	
LDAT-S103030-DD*x* ... LDAT-S103090-DD*x*							
LDAT-S103010-ED*x* ... LDAT-S103090-ED*x*	1.8	2.9		10.5		0.92	2198-H015-ERS*x*
LDAT-S104010-DD*x*	4.1	11.5	929 (209)	42.0	2578 (580)	3.76	2198-H040-ERS*x*
LDAT-S104020-DD*x*	5.0					4.29	
LDAT-S104030-DD*x* ... LDAT-S104090-DD*x*							
LDAT-S104010-ED*x* ... LDAT-S104090-ED*x*	2.7	5.7		21.0		2.07	2198-H025-ERS*x*
LDAT-S106010-DD*x*	4.5	17.3	1403 (315)	63.0	3871 (870)	5.41	2198-H070-ERS*x*
LDAT-S106020-DD*x* ... LDAT-S106090-DD*x*	5.0					5.87	
LDAT-S106010-ED*x* ... LDAT-S106090-ED*x*	2.7	8.6		31.5		2.94	2198-H040-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Performance Specifications with 400V-class Drive Operation and Frame 150 Linear Thrusters

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 5500 Drives (480V AC input)
LDAT-S152010-DD*x*	3.2	5.3	643 (145)	19.5	1799 (404)	1.76	2198-H025-ERS*x*
LDAT-S152020-DD*x* ... LDAT-S152090-DD*x*	3.5					1.89	
LDAT-S152010-ED*x* ... LDAT-S152090-ED*x*	1.8	2.7		9.8		0.87	2198-H015-ERS*x*
LDAT-S153010-DD*x* ... LDAT-S153090-DD*x*	3.6	8.0	978 (220)	29.1	2680 (602)	2.87	2198-H040-ERS*x*
LDAT-S153010-ED*x* ... LDAT-S153090-ED*x*	1.2	2.7		9.1		0.80	2198-H015-ERS*x*

Performance Specifications with 400V-class Drive Operation and Frame 150 Linear Thrusters (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 5500 Drives (480V AC input)
LDAT-S154010-DD*x* … LDAT-S154090-DD*x*	3.5	10.7	1306 (294)	39.1	3597 (809)	3.83	2198-H040-ERS*x*
LDAT-S154010-ED*x* … LDAT-S154090-ED*x*	1.8	5.3		19.5		1.78	2198-H025-ERS*x*
LDAT-S156010-DD*x* … LDAT-S156090-DD*x*	3.6	16.3	1997 (449)	59.4	5469 (1229)	5.85	2198-H070-ERS*x*
LDAT-S156010-ED*x* … LDAT-S156090-ED*x*	1.8	8.1		19.8		2.71	2198-H025-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAS Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit.

Performance Specifications with Kinetix 5500 (200V-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 (240V AC input)
MPAS-A*xxxx*1-V05S*x*A	200 (7.9) (1)	3.09	521 (117)	6.10	1212 (272)	0.37	2198-H008-ERS*x*
MPAS-A*xxxx*2-V20S*x*A	1124 (44.3) (2)	4.54	462 (104)	9.10	968 (218)	0.62	2198-H015-ERS*x*

(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 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*x*
MPAS-B*xxxx*2-V20S*x*A	1124 (44.3) (2)	3.30	462 (104)	6.60	968 (218)	0.62	2198-H008-ERS*x*

(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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin VPAR Performance Specifications with Kinetix 5500 Drives

Performance Specifications with Kinetix 5500 (200V-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 (240V AC input)**
VPAR-A1*xxx*B	150	0.88	240 (53.9)	2.90	300 (67.4)	0.11	2198-H008-ERS*x*
VPAR-A1*xxx*E	500	1.66	280 (62.9)	2.90	350 (78.7)	0.23	2198-H008-ERS*x*
VPAR-A2*xxx*C	250	1.74	420 (94.4)	3.72	525 (118)	0.25	2198-H008-ERS*x*
VPAR-A2*xxx*F	640	4.45	640 (144)	8.40	800 (180)	0.56	2198-H015-ERS*x*
VPAR-A3*xxx*E	500	12.30	2000 (450)	31.70	2500 (562)	1.30	2198-H040-ERS*x*
VPAR-A3*xxx*H	1000	13.50	1284 (289)	27.00	1625 (365)	1.56	2198-H040-ERS*x*

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)**
VPAR-B1*xxx*B	150	0.41	240 (53.9)	1.34	300 (67.4)	0.11	2198-H003-ERS*x*
VPAR-B1*xxx*E	500	1.20	280 (62.9)	2.10	350 (78.7)	0.24	2198-H003-ERS*x*
VPAR-B2*xxx*C	250	1.25	420 (94.4)	2.67	525 (118)	0.25	2198-H003-ERS*x*
VPAR-B2*xxx*F	640	3.10	640 (144)	5.80	800 (180)	0.56	2198-H008-ERS*x*
VPAR-B3*xxx*E	500	5.10	2000 (450)	13.0	2500 (562)	1.30	2198-H015-ERS*x*
VPAR-B3*xxx*H	1000	8.60	1284 (289)	17.0	1625 (365)	1.68	2198-H015-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAR Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit.

Performance Specifications with Kinetix 5500 (200V-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 (240V AC input)**
MPAR-A1*xxx*B	150	1.15	240 (53.9)	1.35	300 (67.4)	0.036	2198-H003-ERS*x*
MPAR-A1*xxx*E	500	2.16	280 (62.9)	2.48	350 (78.7)	0.140	2198-H008-ERS*x*
MPAR-A2*xxx*C	250	2.42	420 (94.4)	2.72	525 (118)	0.105	2198-H008-ERS*x*
MPAR-A2*xxx*F	640	4.54	640 (144)	5.41	800 (180)	0.410	2198-H015-ERS*x*
MPAR-A3*xxx*E	500	10.33	2000 (450)	12.34	2500 (562)	1.00	2198-H025-ERS*x*
MPAR-A3*xxx*H	1000	12.20	1300 (292)	16.40	1625 (365)	1.30	2198-H040-ERS*x*

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*x*
MPAR-B1*xxx*E	500	1.49	280 (62.9)	1.71	350 (78.7)	0.140	2198-H003-ERS*x*
MPAR-B2*xxx*C	250	1.67	420 (94.4)	1.90	525 (118)	0.105	2198-H003-ERS*x*
MPAR-B2*xxx*F	640	3.29	640 (144)	3.93	800 (180)	0.410	2198-H008-ERS*x*
MPAR-B3*xxx*E	500	5.16	2000 (450)	6.17	2500 (562)	1.00	2198-H015-ERS*x*
MPAR-B3*xxx*H	1000	6.13	1300 (292)	6.79	1625 (365)	1.30	2198-H015-ERS*x*

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPAI Performance Specifications with Kinetix 5500 Drives

These actuators require the 2198-H2DCK feedback converter kit.

Performance Specifications for (ball screw cylinders) and Kinetix 5500 (200V-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 (240V AC input)
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A2076CV1	305 (12)	1.80	890 (200)	706 (159)	4.50	1446 (325)	0.22	2198-H008-ERS*x*
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	2198-H008-ERS*x*
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	2198-H015-ERS*x*
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	2198-H025-ERS*x*
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	2198-H040-ERS*x*
MPAI-A5*xxx*EM3	400 (15.6)		6562 (1475)	5208 (1171)	33.40	13,122 (2950)		

Performance Specifications for (roller screw cylinders) and Kinetix 5500 (200V-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 (240V AC input)
			25 °C (77 °F)	40 °C (104 °F)				
MPAI-A3076RM1	305 (12)	2.87	1557 (350)	1237 (278)	8.90	4862 (1093)	0.27	2198-H008-ERS*x*
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	2198-H015-ERS*x*
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	2198-H025-ERS*x*
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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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*x*
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*x*
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*x*
MPAI-B3300CM3								
MPAI-B3450CM3	188 (7.3)							
MPAI-B3150EM3	559 (22)		2002 (450)	1588 (357)	7.07	4003 (900)		2198-H008-ERS*x*
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*x*
MPAI-B4300CM3								
MPAI-B4450CM3	245 (9.5)							
MPAI-B4150EM3	559 (22)		3892 (875)	3092 (695)	14.14	7784 (1750)		2198-H015-ERS*x*
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*x*
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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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*x*
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*x*
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*x*
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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 Rheinland certified: PL e, Cat 4, according to ISO 13849 and SIL CL3 according to IEC 61508, IEC 61800-5-2 and IEC 61062
  - 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 Studio 5000 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 30.

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 Logix 5000™ 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).

These components are also optional:

- One Kinetix 6000 shunt module, 2094-BSP2 with optional Bulletin 1394 external passive-shunt resistor
- 2094-PRF slot-filler modules
- 2198-ABQE encoder output module
- 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 KNX-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 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 KNX-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

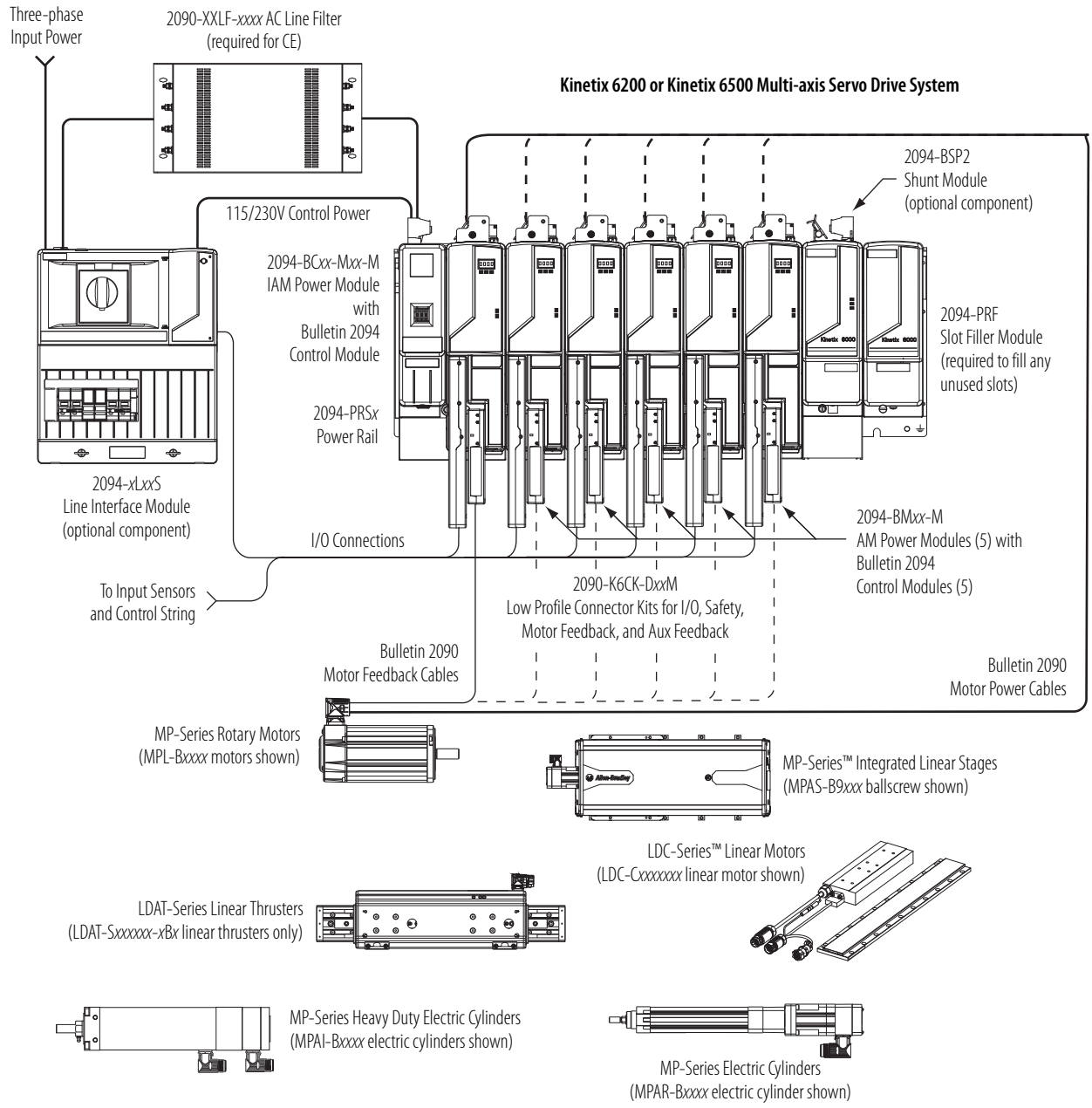
IAM Module	Control Module	2094-BM*xx*-S Kinetix 6000 AM Module	2094-BM*xx*-M AM Power Modules	
			2094-SE02F-M00-S*x* Kinetix 6200 Control Module	2094-EN02D-M01-S*x* Kinetix 6500 Control Module
2094-BC*xx*-M*xx*-S (series B and C)	N/A	Fully compatible	Fully compatible	Not compatible
2094-BC*xx*-M*xx*-M (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 135.

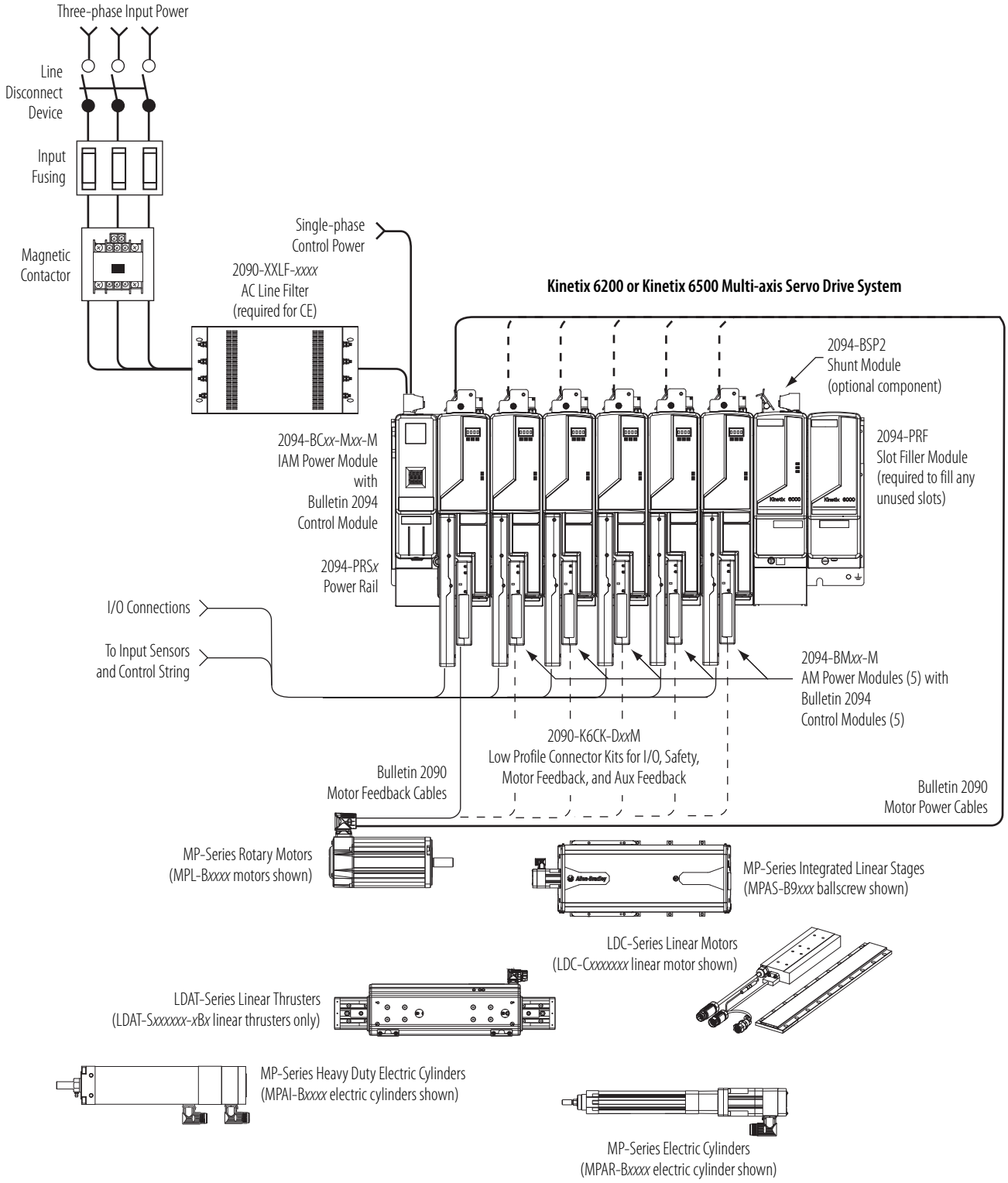
Typical Hardware Configurations

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)

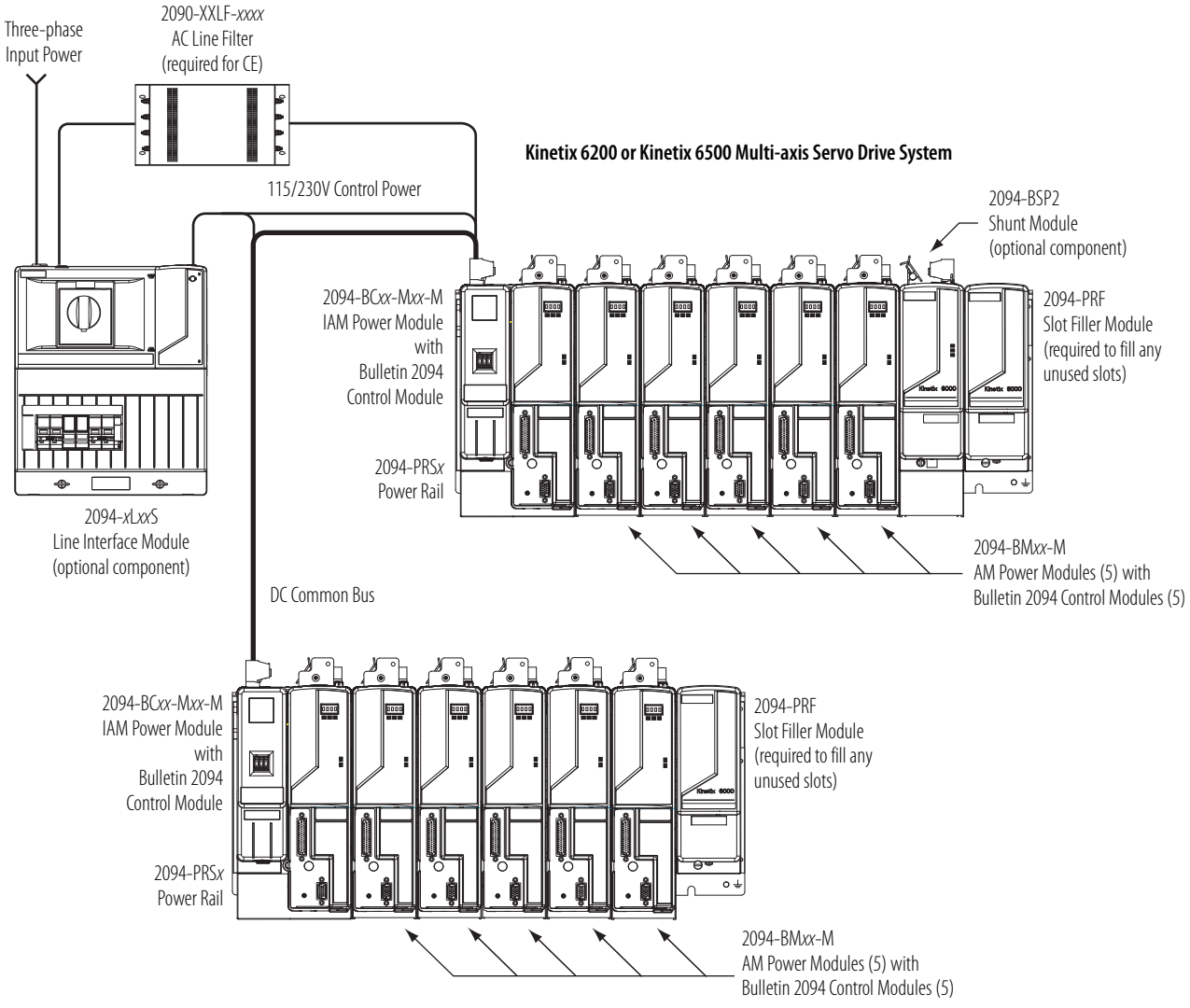


In this system configuration, the leader IAM power module is connected to the follower IAM module via the DC common bus. When planning your panel layout, you must calculate the total bus capacitance of your DC common bus system to make sure that the leader IAM power module is sized sufficiently to pre-charge 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)



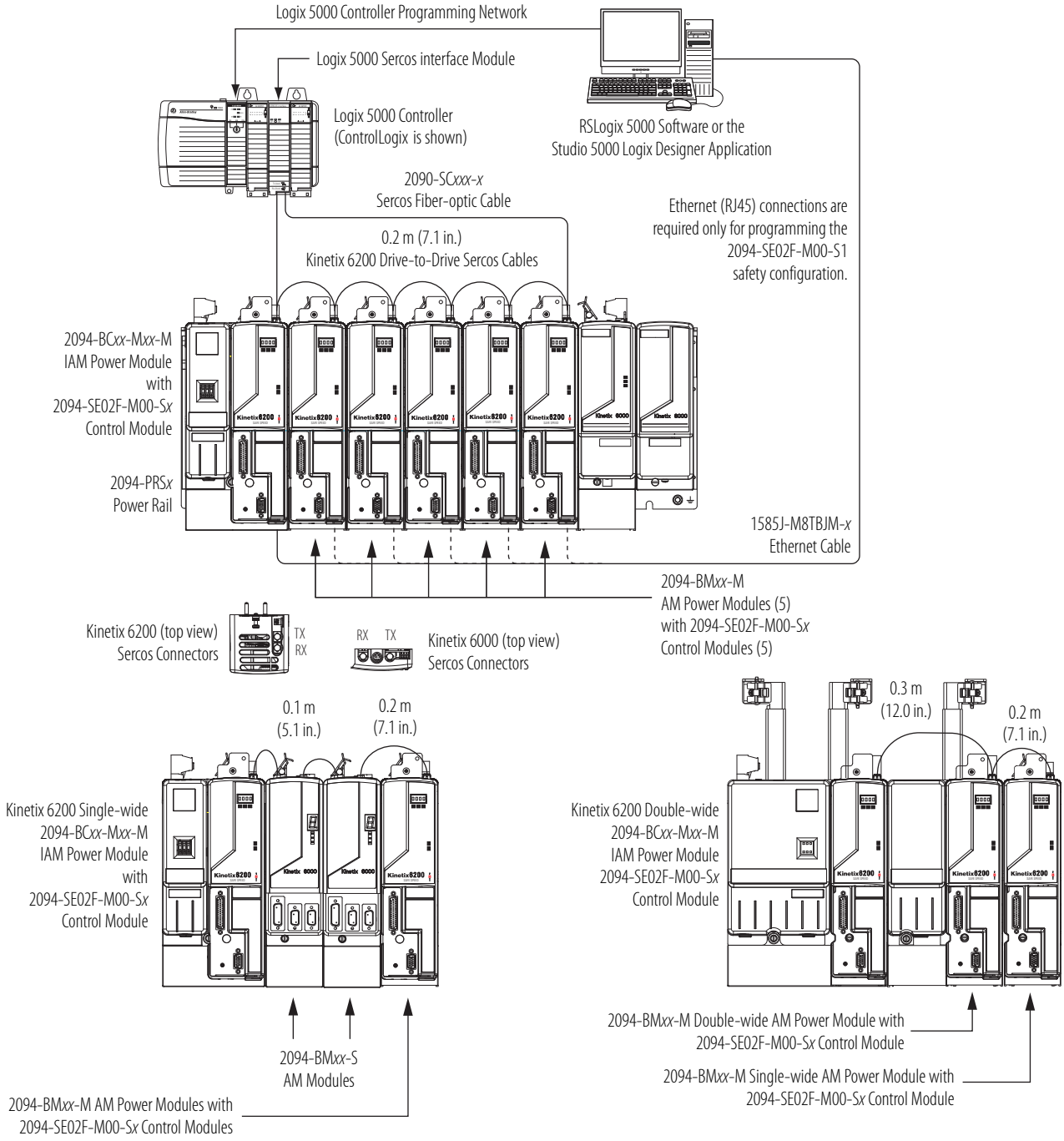
Motors and other details common to both three-phase AC and DC common-bus configurations are removed.

Typical Communication Configurations

The Kinetix 6200 control modules use Sercos interface for configuring the Logix 5000 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)



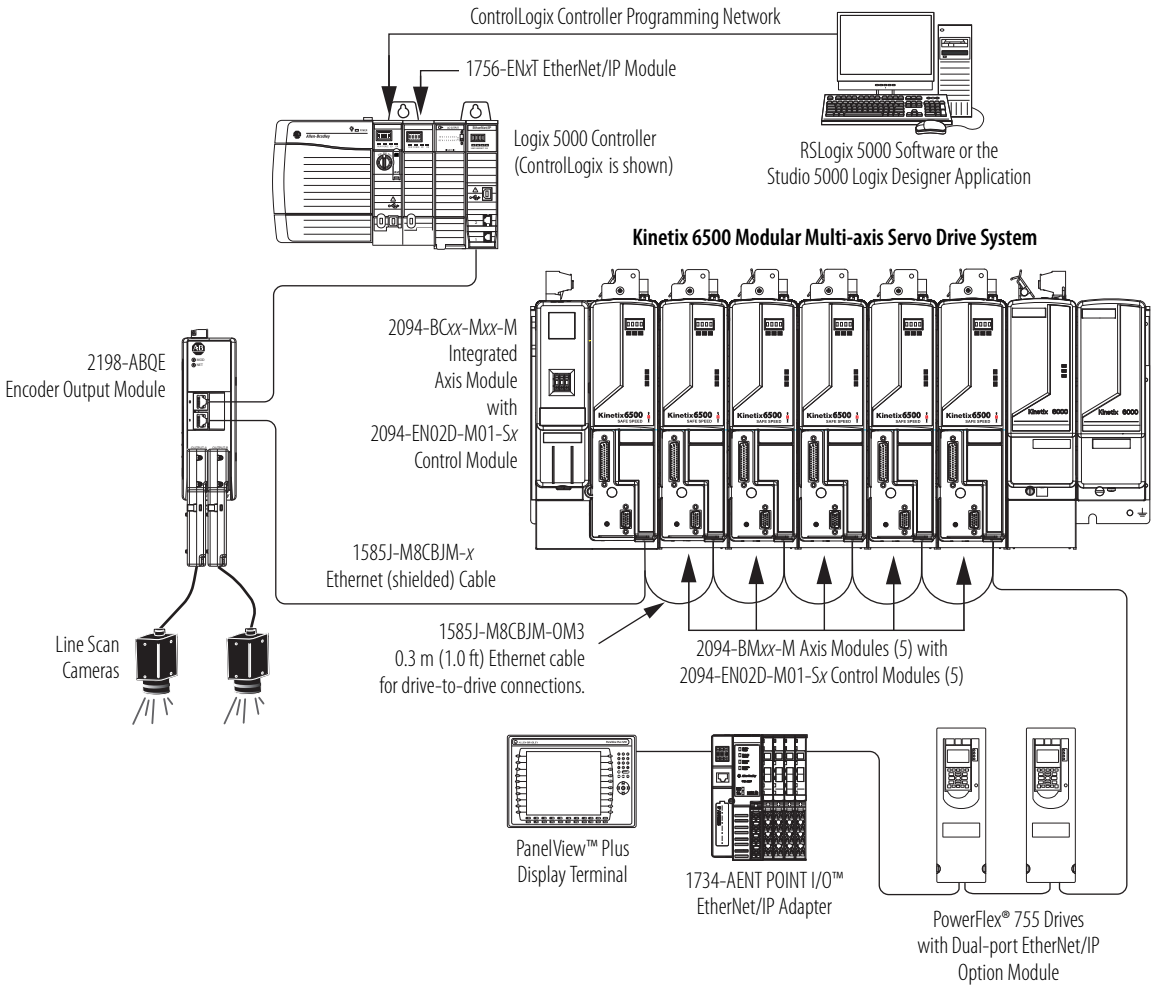
The Kinetix 6500 control modules support any Ethernet topology including linear, ring, and star by using ControlLogix, GuardLogix®, or CompactLogix controllers. These examples feature the ControlLogix 5570 programmable automation controllers with support for integrated motion and integrated safety over the EtherNet/IP network. Other Allen-Bradley® controllers are also compatible with the Kinetix 6500 servo drives.

Refer to ControlLogix Communication Module Specifications Technical Data, publication 1756-TD003, for more information on ControlLogix 1756-EN2T, 1756-EN2TR, and 1756-EN3TR communication modules.

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, 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.

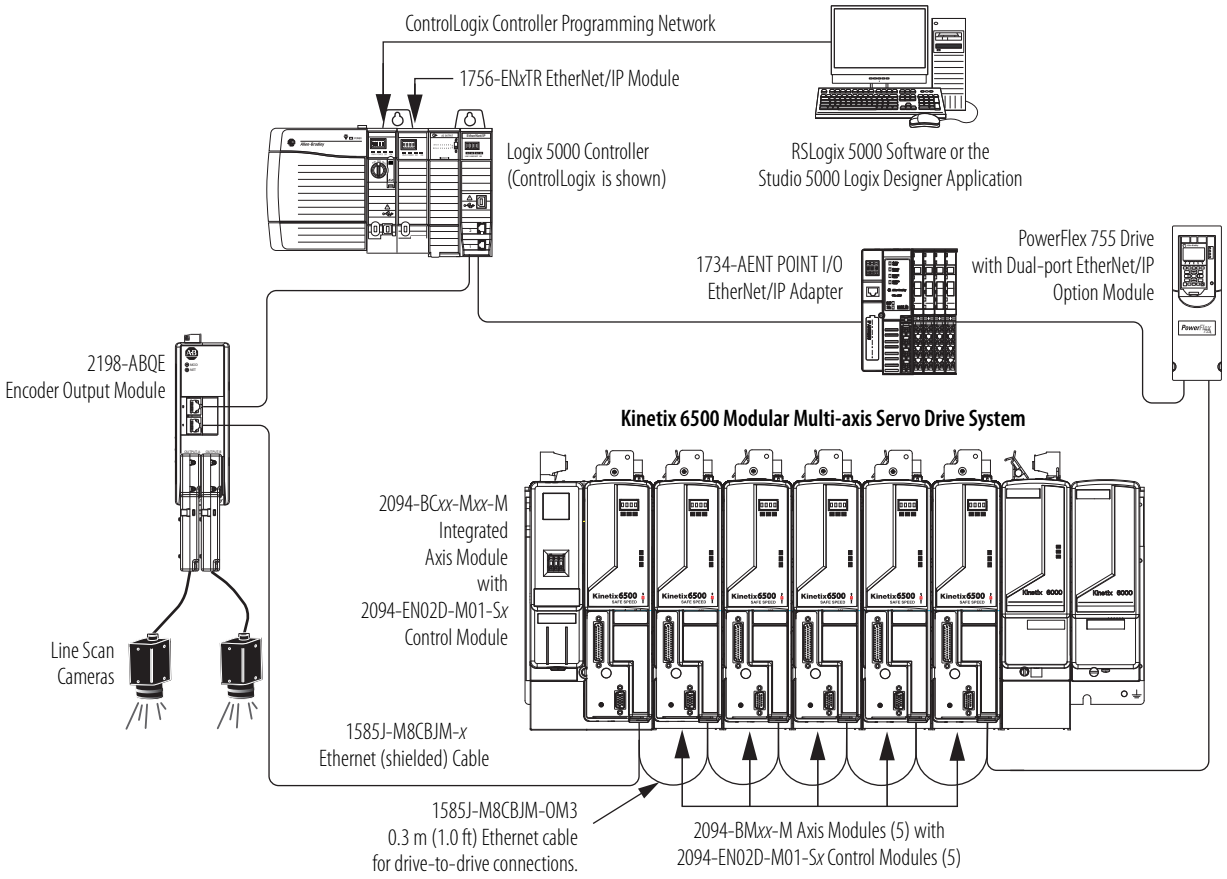
Kinetix 6500 Linear Communication (EtherNet/IP network)



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.

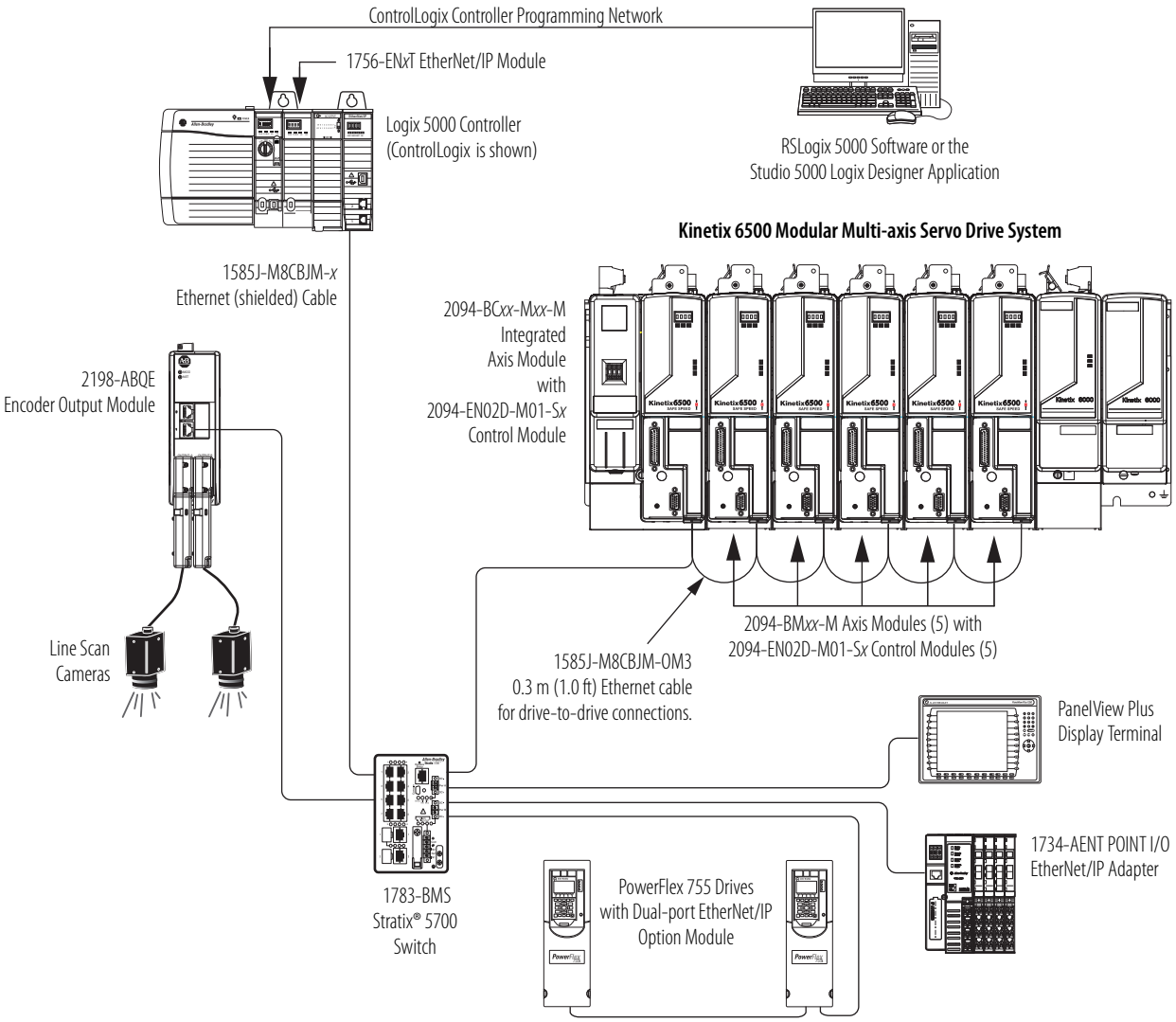
Kinetix 6500 Ring Communication (EtherNet/IP network)



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

Kinetix 6500 control modules have dual ports, so linear topology is maintained from drive-to-drive, but the 2094 power rail modules and other devices operate independently. The loss of one device does not impact the operation of 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.

Rotary Motor Family	Page
MP-Series (Bulletin MPL) low-inertia motors	124
MP-Series (Bulletin MPM) medium-inertia motors	126
MP-Series (Bulletin MPF) food-grade motors	127
MP-Series (Bulletin MPS) stainless-steel motors	127

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 KNX-RM003.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

Bulletin MPL Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Rated Speed 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
MPL-B1510V	8000	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2094-BMP5-M
MPL-B1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2094-BMP5-M
MPL-B1530U	7000	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	2094-BMP5-M
MPL-B210V	8000	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2094-BMP5-M
MPL-B220T	6000	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	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	5000	2.4	1.6 (14.1)	7.10	3.6 (32)	0.77	2094-BMP5-M
MPL-B320P	5000	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	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	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	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	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	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
MPL-B4540F	3000	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

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

Motor Cat. No.	Rated Speed 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
MPL-B4560F	3000	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	3500	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	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	4000	20.4	19.4 (171)	60.0	48.6 (430)	5.4	2094-BM03-M
MPL-B560F	3000	3000	20.6	26.8 (237)	68.0	67.8 (600)	5.5	2094-BM03-M
MPL-B580F	3000	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	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	2000	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	2000	3000	38.5	48.0 (425)	96.0	101 (895)	6.1	2094-BM05-M
MPL-B680D	2000	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	2000	3000	47.9	60.0 (531)	96.0	108 (960)	7.5	2094-BM05-M
MPL-B680H	2000	3500	48.9	58.0 (513)	97.8	107 (947)	7.5	2094-BM05-M
MPL-B860D	2000	2000	47.3	83.0 (735)	95.5	152 (1350)	12.5	2094-BM05-M
MPL-B880C	1500	1500	47.5	110 (973)	97.5	203 (1800)	12.6	2094-BM05-M
MPL-B880D	2000	2000	48.9	79.9 (706)	96.0	147 (1300)	12.6	2094-BM05-M
MPL-B960B	1200	1200	42.5	130 (1150)	94.0	231 (2050)	12.7	2094-BM05-M
MPL-B980B	1000	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPM Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Speed, base rpm	Rated Speed 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	4000	5000	2.71	2.3 (20.3)	9.9	6.6 (58.4)	0.75	2094-BMP5-M
MPM-B1151T	6000	5000	7000	5.62	2.3 (20.3)	20.5	5.8 (51.3)	0.90	2094-BM01-M
MPM-B1152C	1500	2500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2094-BM02-M
MPM-B1152F	3000	4000	5200	6.17	5.0 (44.2)	21.1	13.3 (118)	1.40	2094-BM01-M
MPM-B1152T	6000	4000	7000	11.02	5.0 (44.2)	36.5	13.1 (116)	1.40	2094-BM02-M
MPM-B1153E	2250	3000	3500	6.21	6.5 (57.5)	21.6	19.7 (174)	1.40	2094-BM01-M
MPM-B1153F	3000	4000	5500	9.20	6.4 (56.6)	32.0	19.7 (174)	1.40	2094-BM02-M
MPM-B1153T	6000	4000	7000	15.95	6.4 (56.6)	45.0	14.5 (128)	1.45	2094-BM03-M
MPM-B1302F	3000	4000	4500	8.57	6.6 (58.4)	21.5	13.0 (115)	1.65	2094-BM01-M
MPM-B1302M	4500	4000	6000	12.57	6.6 (58.4)	32.4	13.3 (118)	1.65	2094-BM02-M
MPM-B1302T	6000	4000	7000	16.83	6.7 (59.3)	43.4	13.3 (118)	1.65	2094-BM03-M
MPM-B1304C	1500	1870	2750	7.00	10.3 (91.1)	21.5	26.4 (233)	2.00	2094-BM01-M
MPM-B1304E	2250	3500	4000	10.75	10.2 (90.3)	34.2	27.1 (240)	2.20	2094-BM02-M
MPM-B1304M	4500	3500	6000	19.02	10.4 (92.0)	60.6	27.1 (240)	2.20	2094-BM03-M
MPM-B1651C	1500	3000	3500	10.21	11.4 (101)	29.2	23.2 (205)	2.50	2094-BM02-M
MPM-B1651F	3000	3000	5000	17.75	11.4 (101)	50.9	23.2 (205)	2.50	2094-BM03-M
MPM-B1651M	4500	3000	5000	22.46	11.3 (100)	56.8	21.4 (189)	2.50	2094-BM03-M
MPM-B1652C	1500	2500	2500	11.51	16.4 (145)	33.6	40.2 (356)	3.80	2094-BM02-M
MPM-B1652E	2250	3500	3500	20.94	21.1 (187)	60.5	48.0 (425)	4.30	2094-BM03-M
MPM-B1652F	3000	3500	4500	28.74	21.1 (187)	84.1	48.0 (424)	4.30	2094-BM05-M
MPM-B1653C	1500	2000	2500	20.05	26.7 (236)	59.2	67.7 (599)	4.60	2094-BM03-M
MPM-B1653E	2250	3000	3500	27.00	26.8 (237)	72.9	62.0 (549)	5.10	2094-BM03-M
MPM-B1653F	3000	3000	4000	34.94	31.0 (274)	94.3	56.0 (495)	5.10	2094-BM05-M
MPM-B2152C	1500	2000	2500	27.40	36.7 (325)	55.4	72.2 (639)	5.60	2094-BM03-M
MPM-B2152F	3000	2500	4500	43.54	34.1 (302)	97.8	72.3 (495)	5.90	2094-BM05-M
MPM-B2152M	4500	2500	5000	44.58	34.1 (302)	76.3	52.9 (468)	5.90	2094-BM05-M
MPM-B2153B	1250	1750	2000	24.06	48.0 (425)	60.0	101 (894)	6.80	2094-BM03-M
MPM-B2153E	2250	2000	3000	39.63	47.9 (424)	97.8	101 (894)	7.20	2094-BM05-M
MPM-B2153F	3000	2000	3800	43.86	45.6 (403)	97.8	99.0 (875)	7.20	2094-BM05-M
MPM-B2154B	1250	1750	2000	35.46	62.7 (555)	97.8	154 (1362)	6.90	2094-BM05-M
MPM-B2154E	2250	2000	3000	43.68	55.9 (495)	97.8	112 (990)	7.50	2094-BM05-M
MPM-B2154F	3000	2000	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPF Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Rated Speed 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
MPF-B310P	5000	5000	2.30	1.60 (14)	7.10	3.6 (32)	0.77	2094-BMP5-M
MPF-B320P	5000	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	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	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	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	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPS Motor Performance Specifications with Kinetix 6200/6500 Drives

Motor Cat. No.	Rated Speed 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
MPS-B330P	5000	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	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

These linear motion 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 force/velocity curves, refer to the Kinetix 6000 and Kinetix 6200/6500 Drive Systems Design Guide, publication KNX-RM003.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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
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

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-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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 KNX-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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 can 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 Rheinland certified: PL e, Cat 3, according to ISO 13849 and SIL CL3 according to IEC 61508, IEC 61800-5-2 and IEC 61062
  - Safe torque-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 Studio 5000 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 30.

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).

These components are optional:

- One shunt module, 2094-BSP2 with optional Bulletin 1394 external passive-shunt resistor
- 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 KNX-RM003.

Kinetix 6000 Servo Drive Selection

Drive Module	Drive Module 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 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 KNX-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.

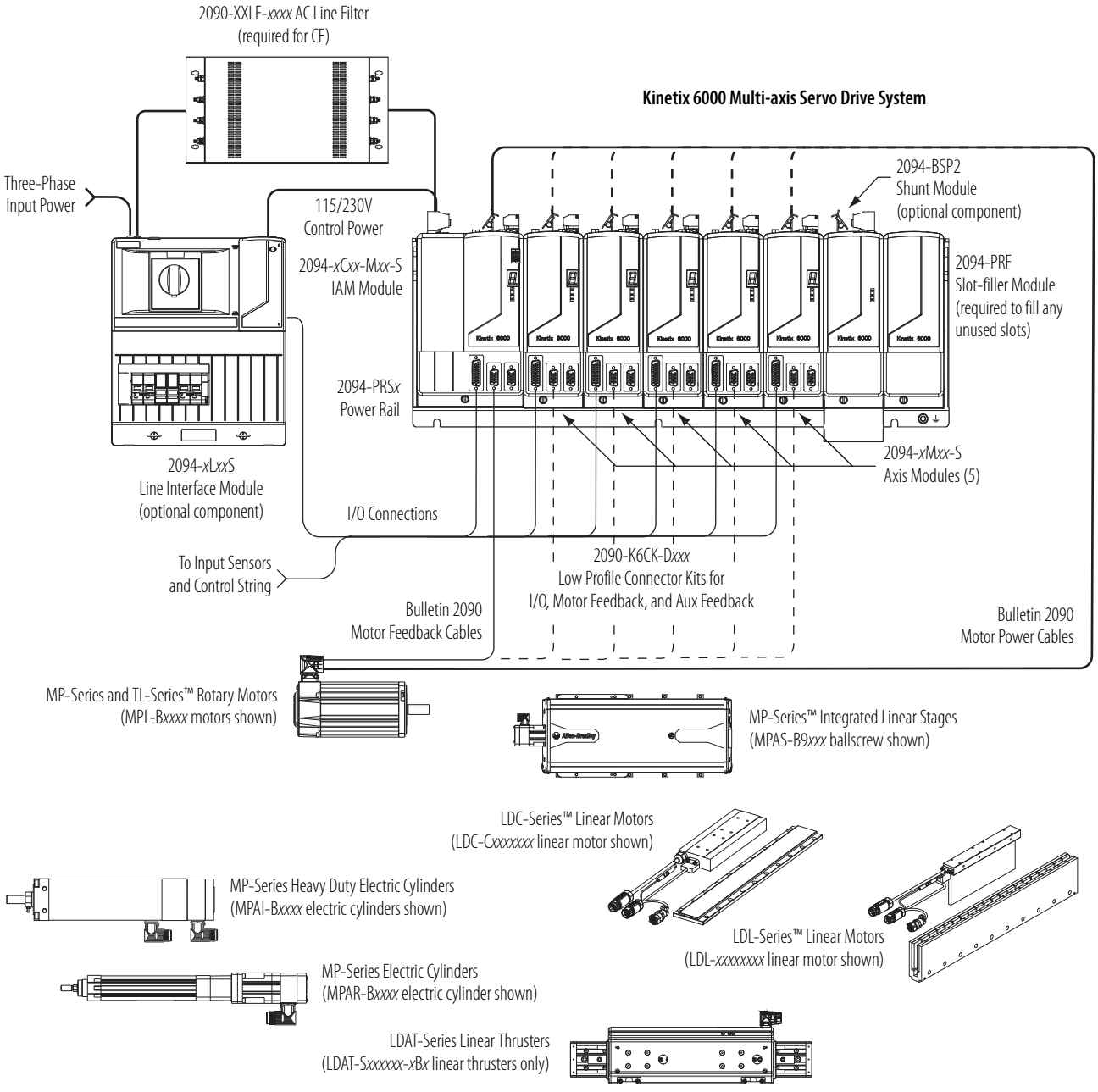
IAM/AM Module Compatibility

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

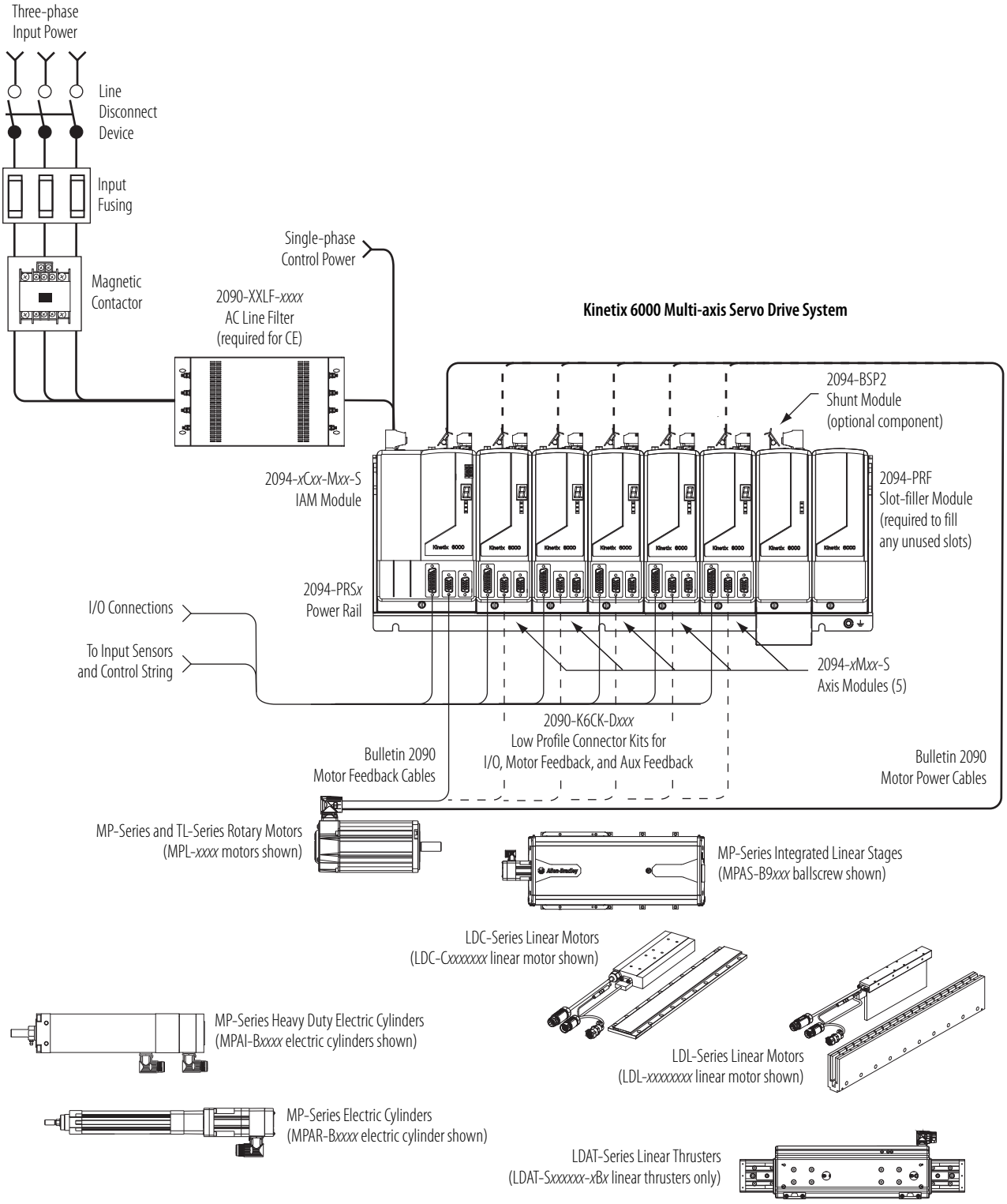
For more information on the Kinetix 6200 modular servo drives, catalog numbers 2094-BC*xx*-M*xx*-M, 2094-BM*xx*-M, and 2094-SE02F-M00-S*x*, refer to Kinetix 6200 and Kinetix 6500 Modular Servo Drives on page 113.

Typical Hardware Configurations

Kinetix 6000 System (with LIM module)



Kinetix 6000 System (without LIM module)

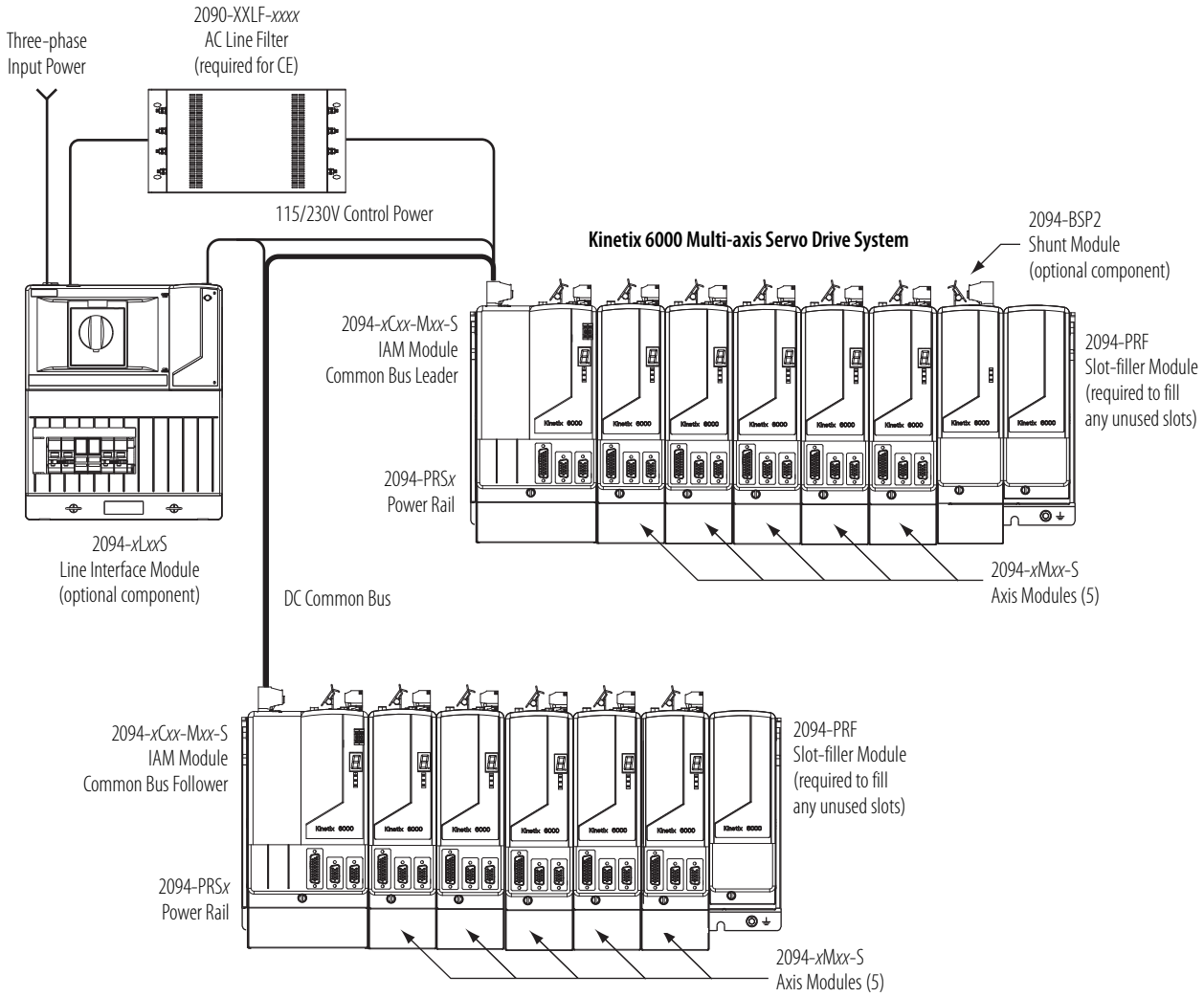


In this system configuration, the leader IAM module is connected to the follower IAM module via the DC common bus. When planning your panel layout, you must calculate the total bus capacitance of your DC common bus system to make sure that the leader IAM module is sized sufficiently to pre-charge the 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)

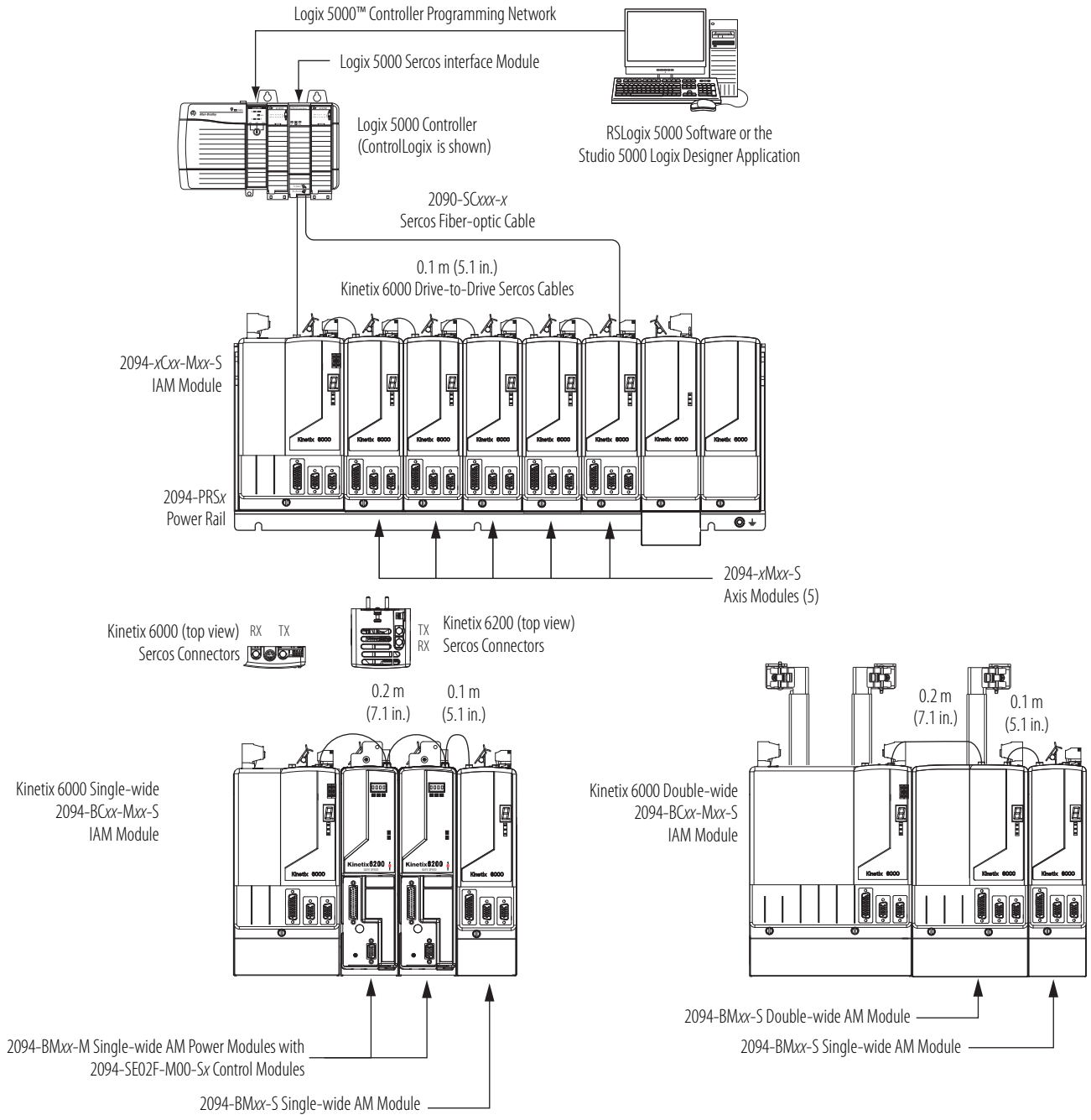


Motors and other details common to both three-phase AC and DC common-bus configurations are removed.

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 KNX-RM003.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

Bulletin MPL Motor Performance Specifications with Kinetix 6000 Drives

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

Motor Cat. No.	Rated Speed 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
MPL-A1510V	8000	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2094-AMP5-S
MPL-A1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	2094-AMP5-S
MPL-A1530U	7000	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2094-AMP5-S
MPL-A210V	8000	8000	3.09	0.55 (4.8)	10.2	1.52 (13.4)	0.37	2094-AMP5-S
MPL-A220T	6000	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	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	3000	3.24	1.58 (14.0)	9.30	3.61 (31.9)	0.46	2094-AMP5-S
MPL-A310P	4750	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	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	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	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	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
MPL-A430H	3500	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

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

Motor Cat. No.	Rated Speed 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
MPL-A430P	5000	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	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	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	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	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	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	3500	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	4000	41.5	19.42 (171)	73.4	31.3 (277)	5.5	2094-AM05-S
MPL-A560F	3000	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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
MPL-B1510V	8000	8000	0.95	0.26 (2.3)	3.10	0.77 (6.8)	0.16	2094-BMP5-S @ 150%
MPL-B1520U	7000	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	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	8000	1.75	0.55 (4.9)	5.80	1.52 (13.4)	0.37	2094-BMP5-S @ 150%
MPL-B220T	6000	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	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	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	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	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	5000	6.3	4.74 (42)	21.6	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	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	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	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	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	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	3500	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	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	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	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	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.	Rated Speed 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
MPL-B580J	3800	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	2000	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	2000	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	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	2000	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	2000	3500	48.9	58.0 (513)	97.8	107 (947)	7.5	2094-BM05-S @ 200%
MPL-B860D	2000	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	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	2000	48.9	79.9 (706)	96.0	147 (1300)	12.6	2094-BM05-M
MPL-B960B	1200	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPM Motor Performance Specifications with Kinetix 6000 Drives

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

Motor Cat. No.	Speed, base rpm	Rated Speed 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	5000	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	4000	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	4000	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	4000	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	3500	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	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	3500	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Base Speed rpm	Rated Speed 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	4000	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	5000	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	2500	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	4000	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	4000	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	3000	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	4000	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	4000	7000	15.95	6.4 (56.6)	45.0	14.5 (128)	1.45	2094-BM03-S @ 150%
MPM-B1302F	3000	4000	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	4000	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	4000	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	1870	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	3500	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	3500	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	3000	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	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	3000	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	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	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	3500	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.	Base Speed rpm	Rated Speed 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	2000	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	3000	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	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	2000	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	2500	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	2500	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	1750	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	2000	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	2000	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	1750	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	2000	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	2000	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPF Motor Performance Specifications with Kinetix 6000 Drives

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

Motor Cat. No.	Rated Speed 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
MPF-A310P	4750	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	3350	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	4750	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	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	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	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	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	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	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.	Rated Speed 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
MPF-B310P	5000	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	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	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	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	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	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPS Motor Performance Specifications with Kinetix 6000 Drives

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

Motor Cat. No.	Rated Speed 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
MPS-A330P	5000	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	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.	Rated Speed 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
MPS-B330P	5000	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	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	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin TLY Motor Performance Specifications with Kinetix 6000 Drives

Performance Specifications (non-brake) with Kinetix 6000 Drives

Motor Cat. No.	Rated Speed 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
TLY-A110T	5000	6000	0.55	0.096 (0.85)	1.50	0.20 (1.75)	0.041	2094-AMP5-S
TLY-A120T	5000		1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2094-AMP5-S
TLY-A130T	5000		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2094-AMP5-S
TLY-A220T	5000		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2094-AMP5-S
TLY-A230T	5000		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	4400	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	4575		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	4000	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.	Rated Speed 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
TLY-A110T	5000	6000	0.50	0.086 (0.76)	1.50	0.20 (1.75)	0.037	2094-AMP5-S
TLY-A120T	5000		0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2094-AMP5-S
TLY-A130T	5000		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2094-AMP5-S
TLY-A220T	5000		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2094-AMP5-S
TLY-A230T	4250		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	3650	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	3750		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	3900	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

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

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 KNX-RM003.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 KNX-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 KNX-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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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)
- TÜV Rheinland certified: PL d, Cat 3, according to ISO 13849 and SIL CL2 according to IEC 61508, IEC 61800-5-2, and IEC 61062
  - Safe torque-off control
- 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 170.

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 5570 and 5580 Programmable Automation Controller (PAC) with 1756-EN*x*T Ethernet module
- CompactLogix 5370, 5380, 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 from ODVA, all built on the Common Industrial Protocol (CIP™), 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 5570 and 5580 controllers
- CompactLogix 5370 and 5380 controllers that support Integrated Motion on the EtherNet/IP network and RSLogix 5000 software (version 20.00.00 or later) or the Studio 5000 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 30.

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 Bulletin 2090 AC line filter
- One 2097-R*x* shunt resistor

Kinetix 350 servo drive systems can include the 2198-ABQE encoder output module.

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

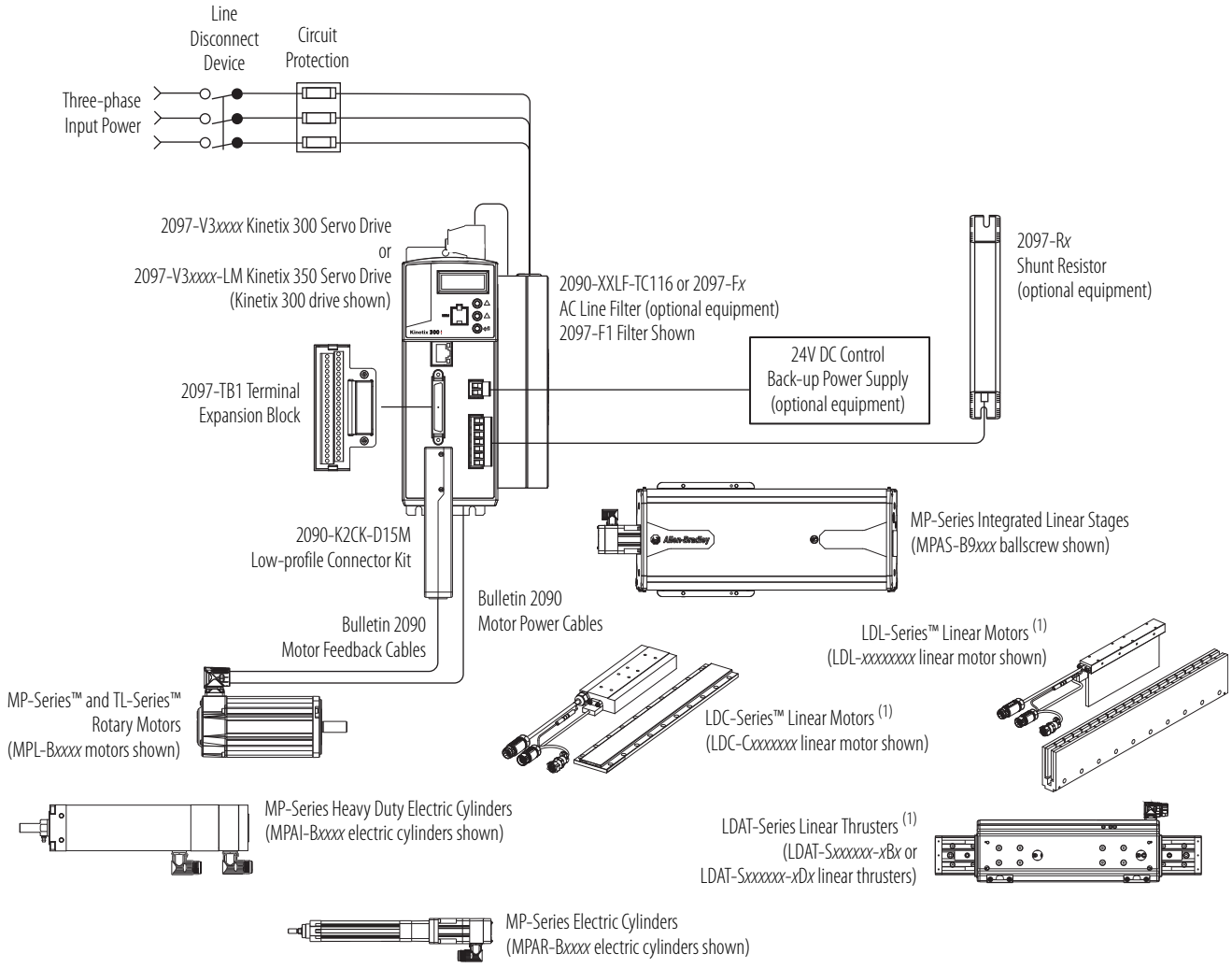
Three-phase Operation with 240V Input	Single-phase Operation with 240V Input		Continuous Output Current A 0-pk	Peak Output Current A 0-pk
2097-V33PR1-*xx*	2097-V32PR0-*xx*	2097-V31PR0-*xx*	2.8	8.5
2097-V33PR3-*xx*	2097-V32PR2-*xx*	2097-V31PR2-*xx*	5.7	17.0
2097-V33PR5-*xx*	2097-V32PR4-*xx*	N/A	11.3	33.9

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

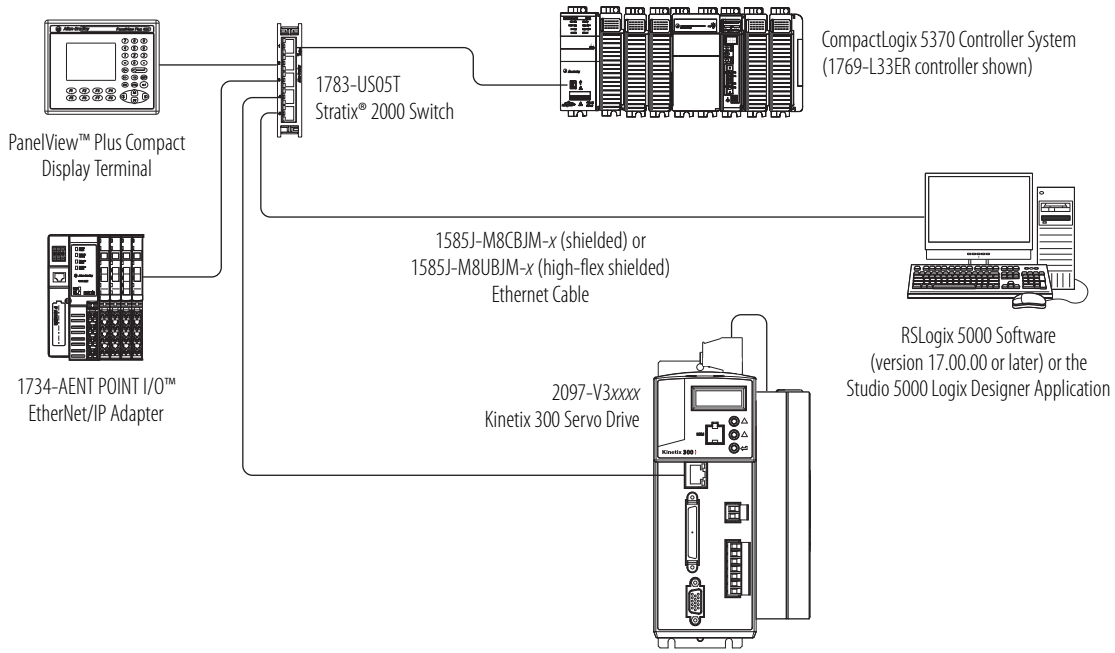


(1) LDC-Series and LDL-Series linear motors, and LDAT-Series linear thrusters are compatible with only Kinetix 300 servo drives.

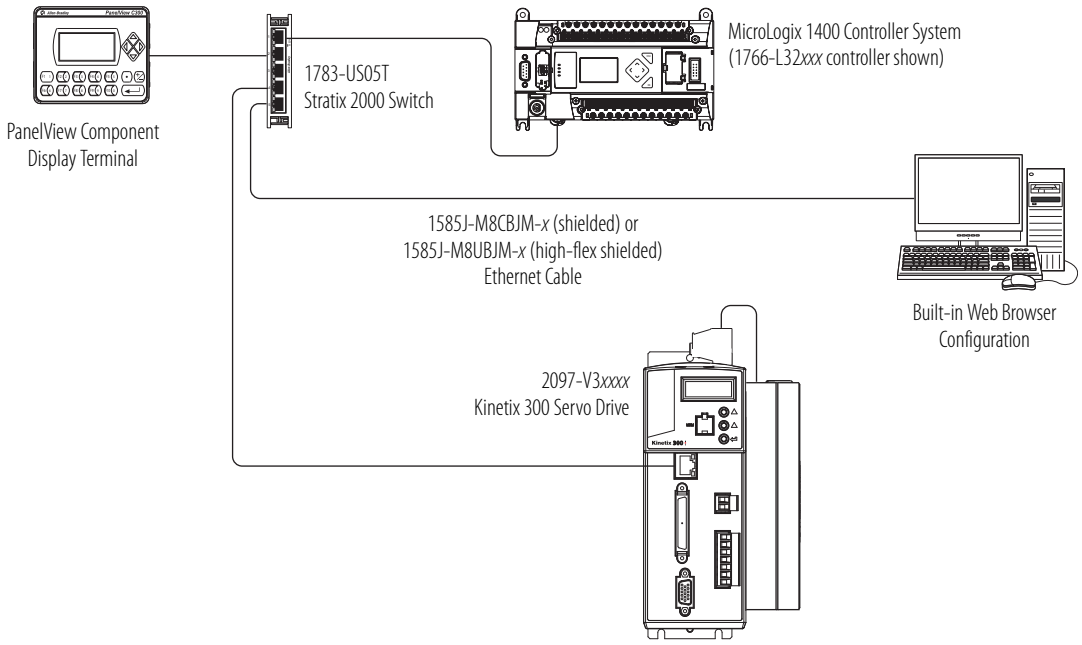
Typical Communication Configurations

The Kinetix 300 and Kinetix 350 servo drives use the EtherNet/IP network for configuring the Logix 5000™ module.

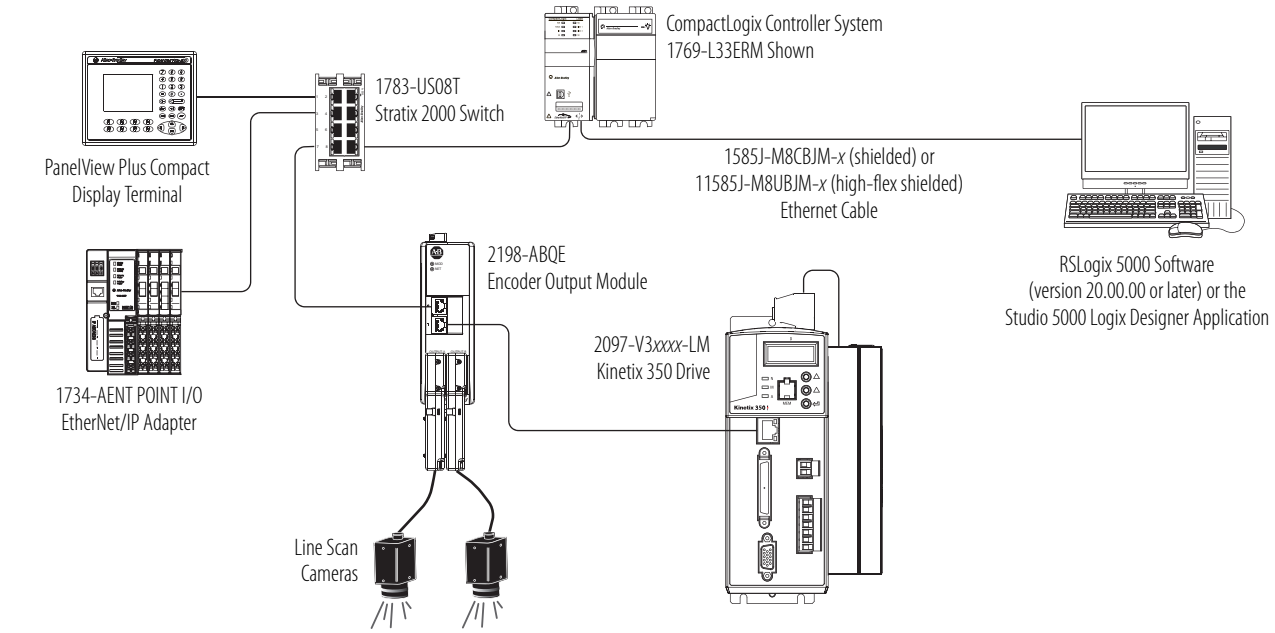
Kinetix 300 Drive System with CompactLogix Controller (PAC)



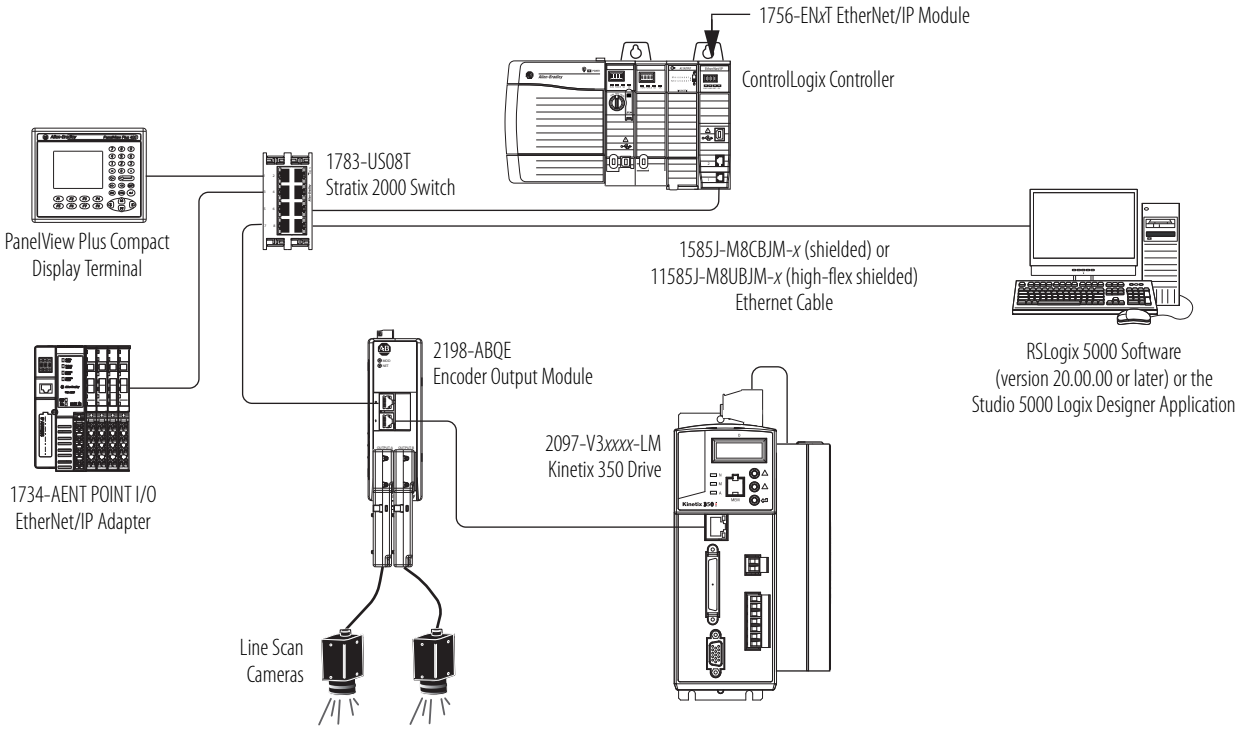
Kinetix 300 Drive System with MicroLogix Controller (PLC)



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 KNX-RM004.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

Bulletin MPL Motor Performance Specifications with Kinetix 300/350 Drives

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

Rotary Motor Cat. No.	Rated Speed 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, Single-phase Drives
MPL-A1510V	8000	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	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-A1530U	7000	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	8000	3.09	0.55 (4.8)	10.2	1.52 (13.5)	0.37	
MPL-A220T	6000	6000	4.54	1.61 (14.2)	15.5	4.74 (41.9)	0.62	
MPL-A230P	5000	5000	5.40	2.10 (18)	23.0	8.2 (72.5)	0.86	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPL-A310F	3000	3000	3.20	1.58 (14)	9.3	3.61 (32)	0.46	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPL-A310P	4750	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	
MPL-A320H	3350	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPL-A320P	4750	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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Motor Cat. No.	Rated Speed 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
MPL-A1510V	8000	8000	1.05	0.26 (2.3)	3.40	0.77 (6.8)	0.16	2097-V33PR1-*xx*
MPL-A1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-A1530U	7000	7000	2.82	0.90 (8.0)	10.1	2.82 (24.9)	0.39	2097-V33PR3-*xx*
MPL-A210V	8000	8000	3.09	0.55 (4.8)	10.2	1.52 (13.5)	0.37	
MPL-A220T	6000	6000	4.54	1.61 (14.2)	15.5	4.74 (41.9)	0.62	
MPL-A230P	5000	5000	5.40	2.10 (18)	23.0	8.2 (72.5)	0.86	2097-V33PR5-*xx*
MPL-A310F	3000	3000	3.20	1.58 (14)	9.3	3.61 (32)	0.46	2097-V33PR3-*xx*
MPL-A310P	4750	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	
MPL-A320H	3350	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx*
MPL-A320P	4750	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	
MPL-A330P	5000	5000	12.0	4.18 (37)	38	11.1 (98)	1.8	2097-V33PR6-*xx*
MPL-A420P	5000	5000	12.7	4.74 (42)	46	13.5 (120)	2.0	
MPL-A430H	3500	3500	12.2	6.21 (55)	45	19.8 (175)	1.8	
MPL-A430P	5000	5000	16.8	5.99 (53)	51	15.7 (139)	2.2	
MPL-A4530F	2800	2800	13.4	8.36 (74)	42	20.3 (180)	1.9	
MPL-A4540C	1500	1500	9.4	10.2 (90)	29	27.1 (240)	1.5	

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

Motor Cat. No.	Rated Speed 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
MPL-B1510V	8000	8000	0.95	0.26 (2.3)	3.10	0.77 (6.80)	0.16	2097-V34PR3-*xx*
MPL-B1520U	7000	7000	1.80	0.49 (4.3)	6.10	1.58 (13.9)	0.27	
MPL-B1530U	7000	7000	2.0	0.90 (8.0)	7.20	2.82 (24.9)	0.39	
MPL-B210V	8000	8000	1.75	0.55 (4.8)	5.80	1.52 (13.5)	0.37	
MPL-B220T	6000	6000	3.30	1.61 (14.2)	11.3	4.74 (41.9)	0.62	2097-V34PR5-*xx*
MPL-B230P	5000	5000	2.60	2.10 (18.6)	11.3	8.20 (73.0)	0.86	
MPL-B310P	5000	5000	2.4	1.58 (14)	7.1	3.61 (32)	0.77	2097-V34PR3-*xx*
MPL-B320P	5000	5000	4.5	2.94 (26)	14.0	7.91 (70)	1.5	2097-V34PR5-*xx*
MPL-B330P	5000	5000	6.1	4.18 (37)	19.0	11.1 (98)	1.8	2097-V34PR6-*xx*
MPL-B420P	5000	5000	6.4	4.74 (42)	22.0	13.5 (120)	1.9	
MPL-B4530F	3000	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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPM Motor Performance Specifications with Kinetix 300/350 Drives

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

Motor Cat. No.	Base Speed rpm	Rated Speed 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	5000	6000	7.65	2.3 (20.3)	30.5	6.6 (58.4)	0.90	2097-V33PR5-*xx*
MPM-A1152F	3000	4000	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.	Base Speed rpm	Rated Speed 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	4000	5000	2.71	2.3 (20.3)	9.9	6.6 (58.4)	0.75	2097-V34PR5-*xx*
MPM-B1151T	6000	5000	7000	5.62	2.3 (20.3)	20.5	5.8 (51.3)	0.90	2097-V34PR6-*xx*
MPM-B1152C	1500	2500	3000	3.61	5.0 (44.2)	12.4	13.5 (119)	1.20	2097-V34PR5-*xx*
MPM-B1152F	3000	4000	5200	6.17	5.0 (44.2)	21.1	13.3 (118)	1.40	2097-V34PR6-*xx*
MPM-B1153E	2250	3000	3500	6.21	6.5 (57.5)	21.6	19.7 (174)	1.40	
MPM-B1302F	3000	4000	4500	8.57	6.6 (58.4)	22.0	13.2 (117)	1.65	
MPM-B1304C	1500	1870	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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPS Motor Performance Specifications with Kinetix 300/350 Drives

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

Motor Cat. No.	Rated Speed 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
MPS-A330P	5000	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	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.	Rated Speed 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
MPS-B330P	5000	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	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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin MPF Motor Performance Specifications with Kinetix 300/350 Drives

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

Motor Cat. No.	Rated Speed 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 Single-phase Drives
MPF-A310P	4750	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	2097-V33PR3-*xx* 2097-V32PR2-*xx* 2097-V31PR2-*xx*
MPF-A320H	3350	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx* 2097-V32PR4-*xx*
MPF-A320P	4750	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.	Rated Speed 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
MPF-A310P	4750	5000	4.85	1.58 (14)	14	3.61 (32)	0.73	2097-V33PR3-*xx*
MPF-A320H	3350	3500	6.1	3.05 (27)	19.3	7.91 (70)	1.0	2097-V33PR5-*xx*
MPF-A320P	4750	5000	9.0	3.05 (27)	29.5	7.91 (70)	1.3	2097-V33PR5-*xx*
MPF-A330P	5000	5000	12.0	4.18 (37)	38	11.1 (98)	1.6	2097-V33PR6-*xx*
MPF-A430H	3500	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.	Rated Speed 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
MPF-B310P	5000	5000	2.30	1.58 (14)	7.1	3.61 (32)	0.77	2097-V34PR3-*xx*
MPF-B320P	5000	5000	4.24	3.05 (27)	14.0	7.34 (65)	1.5	2097-V34PR5-*xx*
MPF-B330P	5000	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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin TLY Motor Performance Specifications with Kinetix 300/350 Drives

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

Rotary Motor Cat. No.	Rated Speed 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 Single-phase or Three-phase Drives
TLY-A110*x*	5000	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*	5000		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*	5000		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*	5000		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*	5000		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	4400	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.69	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A2540P	4575		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A310M	4000	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 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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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

Rotary Motor Cat. No.	Rated Speed 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 Single-phase or Three-phase Drives
TLY-A110*x*	5000	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*	5000		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*	5000		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*	5000		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*	4250		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	3650	5000	10.0	2.60 (23.0)	21.0	5.20 (46.0)	0.55	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A2540P	3750		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.66	2097-V33PR5-*xx* 2097-V32PR4-*xx*
TLY-A310M	3900	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 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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

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

Linear Motion Family	Page
LDAT-Series integrated linear thrusters	182
MP-Series (Bulletin MPAS) integrated linear stages	188
MP-Series (Bulletin MPAR) electric cylinders	189
MP-Series (Bulletin MPAI) heavy-duty electric cylinders	190
LDC-Series iron-core linear motors	193
LDL-Series ironless linear motors	196

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 KNX-RM004.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 KNX-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 KNX-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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 KNX-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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature, and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Notes:

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 30.

Kinetix 3 Servo Drive Selection

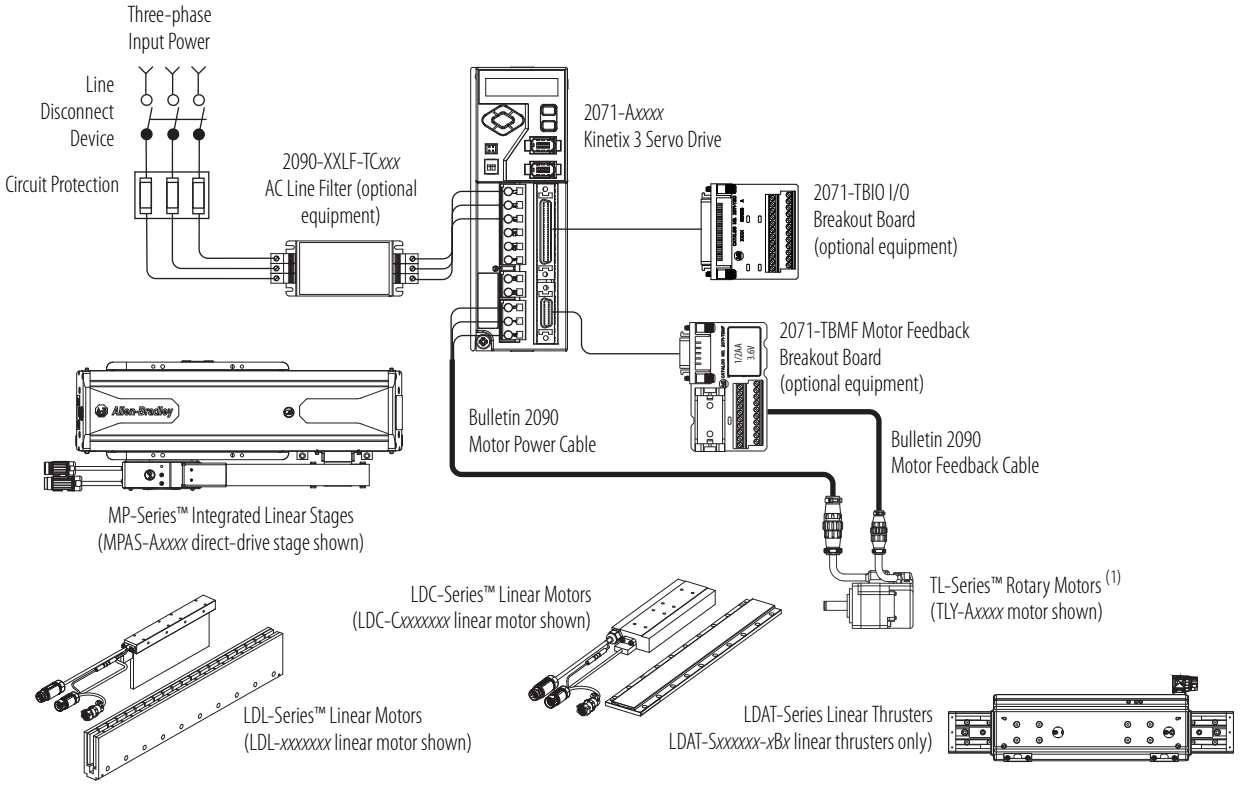
Cat. No.	Input Voltage	Continuous Output Power	Continuous Output Current A 0-pk
2071-AP0	240V AC rms, single-phase	50 W	0.85
2071-AP1		100 W	1.56
2071-AP2		200 W	2.40
2071-AP4		400 W	4.67
2071-AP8	240V AC rms, single-phase or three-phase	800 W	7.07
2071-A10	240V AC rms, three-phase	1.0 kW	9.90
2071-A15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

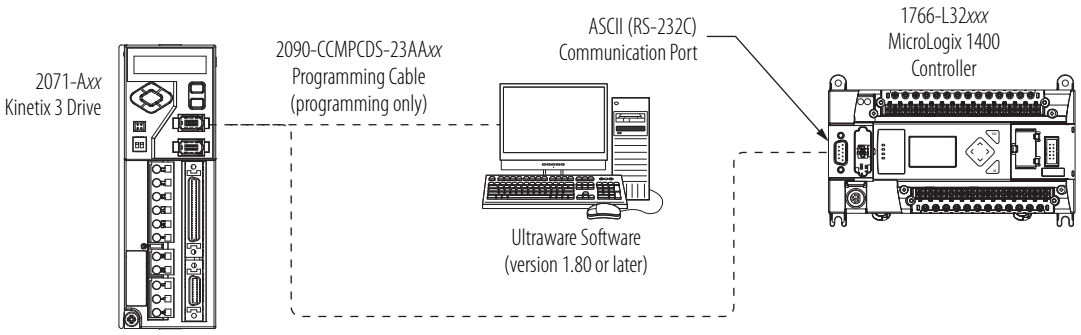


(1) TL-Series (Bulletin TL and TLY) rotary motors require the 2071-TBMF breakout board with 3.6V lithium battery (not included) to maintain absolute position reference. Other Kinetix 3 compatible motors and actuators require the breakout board for flying-lead feedback connections, but not the battery.

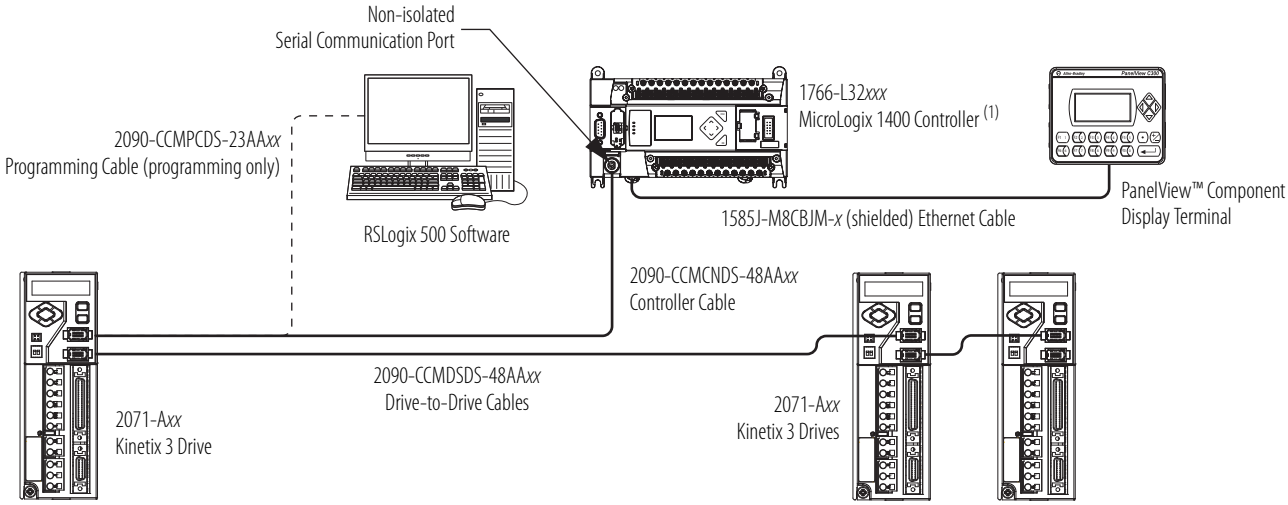
Typical Communication Configurations

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

Kinetix 3 Configuration (ASCII control)

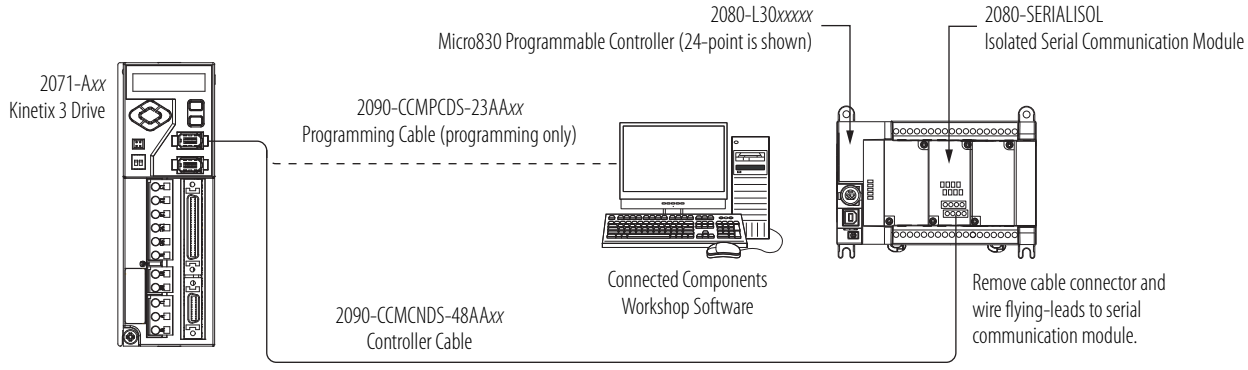


Kinetix 3 Configuration (Modbus control)



(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	202
TL-Series (Bulletin TL) low-inertia motors	203

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 KNX-RM005.

IMPORTANT These system combinations do not include all possible motor/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

Bulletin TLY Motor Performance Specifications with Kinetix 3 Drives

Performance Specifications (non-brake) with Kinetix 3 Drives

Motor Cat. No.	Rated Speed 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 3 200V-series Drives
TLY-A120*x*	5000	6000 (1)	1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2071-AP1
TLY-A130*x*	5000		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2071-AP1
TLY-A220*x*	5000		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2071-AP4
TLY-A230*x*	5000		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2071-AP4
TLY-A2540P	4575	5000	10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2071-AP8
TLY-A310M	4000	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.	Rated Speed 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 3 200V-series Drives
TLY-A120*x*	5000	6000 (1)	0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2071-AP1
TLY-A130*x*	5000		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2071-AP1
TLY-A220*x*	5000		3.15	0.757 (6.70)	7.90	1.48 (13.1)	0.24	2071-AP4
TLY-A230*x*	4250		4.95	1.16 (10.3)	15.5	3.05 (27.0)	0.32	2071-AP4
TLY-A2540P	3750	5000	10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.66	2071-AP8
TLY-A310M	3900	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Bulletin TL Motor Performance Specifications with Kinetix 3 Drives

Performance Specifications (non-brake) with Kinetix 3 Drives

Motor Cat. No.	Rated Speed 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 3 200V-series Drives
TL-A120P	5000	5000	1.03	0.181 (1.60)	2.50	0.36 (3.20)	0.086	2071-AP1
TL-A130P	5000		1.85	0.325 (2.88)	4.90	0.76 (6.70)	0.14	2071-AP1
TL-A220P	5000		3.50	0.836 (7.40)	7.90	1.48 (13.1)	0.35	2071-AP4
TL-A230P	5000		5.50	1.30 (11.5)	15.5	3.05 (27.0)	0.44	2071-AP4
TL-A2540P	4575		10.0	2.94 (26.0)	24.8	7.10 (63.0)	0.86	2071-AP8
TL-A410M	4500	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.	Rated Speed 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 3 200V-series Drives
TL-A120P	5000	5000	0.93	0.163 (1.44)	2.50	0.36 (3.20)	0.077	2071-AP1
TL-A130P	5000		1.67	0.293 (2.59)	4.90	0.76 (6.70)	0.13	2071-AP1
TL-A220P	5000		3.15	0.757 (6.70)	7.90	1.48 (13.10)	0.24	2071-AP4
TL-A230P	4250		4.95	1.160 (10.30)	15.5	3.05 (27.0)	0.32	2071-AP4
TL-A2540P	3750		10.0	2.940 (26.00)	24.8	7.10 (63.0)	0.66	2071-AP8
TL-A410M	4500	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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Linear Motion Performance Specifications

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

Linear Motion Family	Page
LDAT-Series integrated linear thrusters	204
MP-Series (Bulletin MPAS) integrated linear stages	207
LDC-Series iron-core linear motors	207
LDL-Series ironless linear motors	208

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 KNX-RM005.

IMPORTANT These system combinations do not include all possible actuator/drive combinations. Refer to Motion Analyzer to verify compatibility. To access Motion Analyzer, go to: https://motionanalyzer.rockwellautomation.com.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 KNX-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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

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 temperature and rated line voltage. For additional information on ambient temperature and line conditions, refer to Motion Analyzer.

Notes:

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Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	www.rockwellautomation.com/knowledgebase
Local Technical Support Phone Numbers	Locate the phone number for your country.	www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	www.rockwellautomation.com/global/support/direct-dial.page
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