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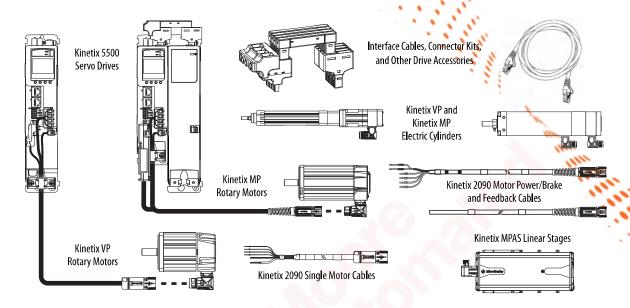
Design Guide

Original Instructions



Kinetix 5500 Servo Drive System

Catalog Numbers 2198-H003-ERS, 2198-H008-ERS, 2198-H015-ERS, 2198-H025-ERS, 2198-H040-ERS, 2198-H070-ERS, 2198-H003-ERS2, 2198-H008-ERS2, 2198-H015-ERS2, 2198-H025-ERS2, 2198-H040-ERS2, 2198-H070-ERS2, 2198-CAPMOD-1300

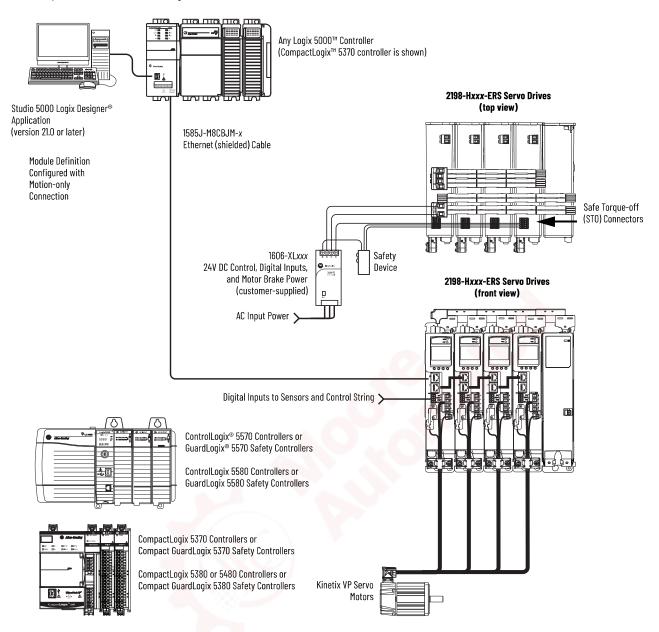


Topic						
Introduction	2					
Safe Torque-off Configuration Options	2					
Determine What You Need	6					
Kinetix 5500 Shared-bus System Examples	10					
Kinetix 2090 Single Motor Cable Overview	13					
Kinetix 2090 Motor Power/Brake and Feedback Cables Overview	14					
Rotary Motion System Combinations						
Kinetix VPL Low-inertia Motors	15					
Kinetix VPF Food-grade Motors						
Kinetix VPH Hygienic Stainless-steel Motors						
Kinetix VPS Stainless-steel Motors						

Topic, continued						
Kinetix MPL Low-inertia Motors						
Kinetix MPM Medium-inertia Motors	62					
Kinetix MPF Food-grade Motors	70					
Kinetix MPS Stainless-steel Motors						
Linear Motion System Combinations	•					
Kinetix LDAT Integrated Linear Thrusters						
Kinetix MPAS Integrated Linear Stages						
Kinetix VPAR Electric Cylinders						
Kinetix MPAR Electric Cylinders						
Kinetix MPAI Heavy-duty Electric Cylinders						
Additional Resources						



Safe Torque-off (hardwired) Configuration



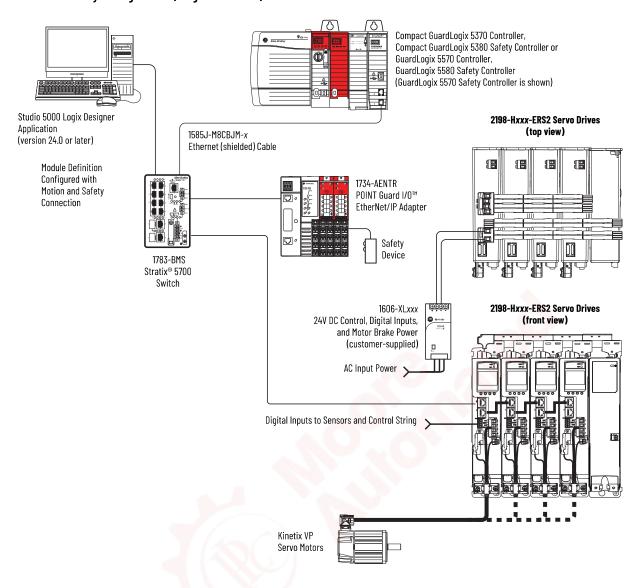
Integrated Safety Configurations

The GuardLogix 5570 or Compact GuardLogix 5370 safety controller issues the safe torque-off (STO) command over the EtherNet/IP network and the 2198-Hxxx-ERS2 drive executes the STO command.

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

IMPORTANT If only one controller is used in an application with Motion and Safety connections, it must be a GuardLogix 5570 or Compact GuardLogix 5370 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-Hxxx-ERS2 integrated safety 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 5570 or Compact GuardLogix 5370 safety controller and the Motion-only connection must be a ControlLogix 5570 or CompactLogix 5370 controller.

Determine What You Need

For each Kinetix 5500 drive system, the drive and motor/actuator catalog numbers are required to determine the motor cable catalog number. Ethernet cables and a 24V DC power supply are also required.

- 2198-KITCON-DSL (2-pin) connector kits are used for motor feedback from Kinetix VP motors (high-resolution absolute feedback). Kits are included with the drive and can also be purchased separately. Use these kits with 2090-CSxM1DF or 2090-CSxM1DG cables.
- 2198-H2DCK feedback converter kits (2-pin, Hiperface-to-DSL, series B or later) feedback converter kits are required for Kinetix LDAT linear thrusters and Kinetix MP motors and actuators. Use these kits with 2090-CFBM7DF feedback cables.
- Shared-bus connector kits are required for shared-bus configurations.

Optional equipment includes the following:

- · Kinetix 5500 capacitor module
- 2198-ABQE encoder output module
- Bulletin 2198 AC line filters
- Bulletin 2097 shunt resistors

Example diagrams of the required and optional equipment are provided.

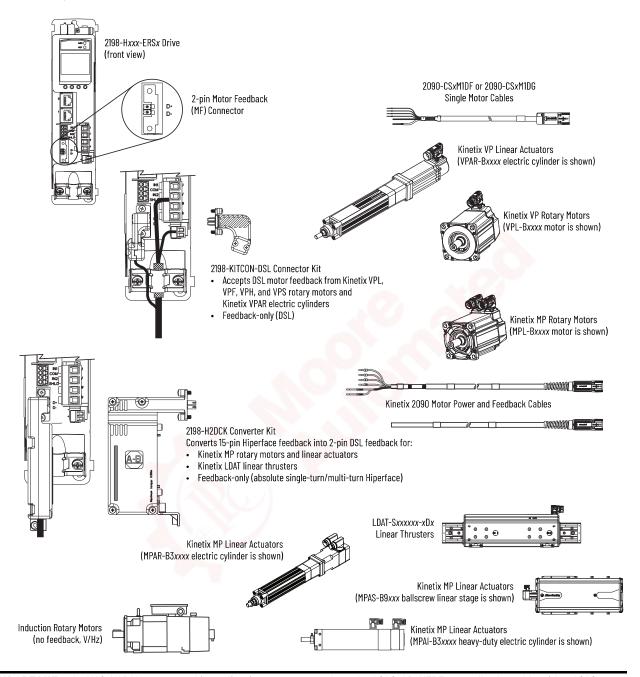
Kinetix 5500 Servo Drives

Drive Cat. No. (hardwired STO)	Drive Cat. No. (integrated STO)	Frame	Input Voltage	Continuous Output Power kW	Continuous Output Current A O-pk	Peak Output Current A 0-pk (1)	Features	
2198-H003-ERS	2198-H003-ERS2	-1	1	195264V rms,	0.2 kW 0.3 kW 0.6 kW	1.4	3.5	Single-axis, single or three- phase Multi-axis, three-phase bus-
2198-H008-ERS	2198-H008-ERS2		single-phase 195264V rms, three-phase 324528V rms,	0.5 kW 0.8 kW 1.6 kW	3.5	8.8	sharing • Designed for optimum performance with Kinetix VP	
2198-H015-ERS	2198-H015-ERS2		three-phase	1.0 kW 1.5 KW 3.2 kW	7.1	17.7	servo motors - Single cable technology - Safe torque-off	
2198-H025-ERS	2198-H025-ERS2	2		2.4 kW 5.1 kW	11.3	28.3	Single-axis, three-phase Multi-axis, three-phase bus-	
2198-H040-ERS	2198-H040-ERS2		195264V rms, three-phase 324528V rms,	4.0 kW 8.3 kW	18.4	45.9	sharing Designed for optimum performance with Kinetix VP	
2198-H070-ERS	2198-H070-ERS2	3	three-phase	7.0 kW 14.6 kW	32.5	81.3	servo motors Single cable technology Safe Torque-off	

⁽¹⁾ Peak current duration (TPK_{max}) equals 1.0 second.

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. These examples illustrate how you can use the Bulletin 2198 connector kits for making these connections.

Feedback Configuration Examples



IMPORTANT

In 2198-H2DCK converter kit applications, you can replace the 2090-CPxM7DF power/brake cable with a 2090-CSxM1DF/DG single motor cable, and reuse the 2090-CFBM7DF feedback cable. This increases the maximum cable length for 18 and 14 AWG single cables to 50 m (164 ft). 2090-CSBM1DF-10AFxx or 2090-CSBM1DG-10xxxx (10 AWG) cables do not support this 50 m (164 ft) option.

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