Allen-Bradley

Kinetix 5500 Servo Drives

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

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About the Kinetix 5500 Drives

Kinetix® 5500 servo drives provide an Integrated Motion over the EtherNet/IP network solution for applications with output power and current requirements in the range of 0.2...14.6 kW and 1.4...32.5 A 0-pk, respectively.

Refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for detailed information on wiring, applying power, troubleshooting, and integration with ControlLogix® EtherNet/IP network modules or CompactLogix™ 5370 controllers.

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

Labels may also be on or inside the equipment to provide specific precautions.

SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.

BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

Catalog Number Explanation

This publication applies to the following Kinetix 5500 servo drives. For connecting safe torque-off signals, hard-wired drives use the safe torque-off (STO) connector and ship with the protective cover removed. Networked safe torque-off drives do not use the STO connector and ship with the protective cover in place. Refer to Connector Data on page 9 to locate the cover.

Kinetix 5500 Drive Catalog Numbers

Drive Cat. No. (hard-wired STO)	Drive Cat. No. (networked 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

Before You Begin

Remove all packing material, wedges, and braces from within and around the components. After unpacking, check the item nameplate catalog number against the purchase order.

Parts List

The Kinetix 5500 servo drives ship with the following:

- Wiring plug connector set for mains input power (IPD), 24V control input power (CP), digital inputs (IOD), motor power (MP), motor brake (BC), and safe torque-off (STO)
- 2198-KITCON-DSL connector kit for motor feedback connections
- Wiring plug connector for shunt power (RC) connections installed on the drive
- These installation instructions, publication 2198-IN001

TIP Replacement connector sets are also available. Refer to the Kinetix Servo Drives Specifications Technical Data, publication GMC-TD003, for more information.

Removing the Grounding Screws in Ungrounded Power Configurations

Removing the grounding screw is necessary only when using ungrounded or corner-grounded power configurations. Removing the screws involves gaining access, opening the side door, and removing the screws.

IMPORTANT If you have grounded wye power distribution, you do not need to remove the screws. Go to Install the Kinetix 5500 Servo Drive on page 5.

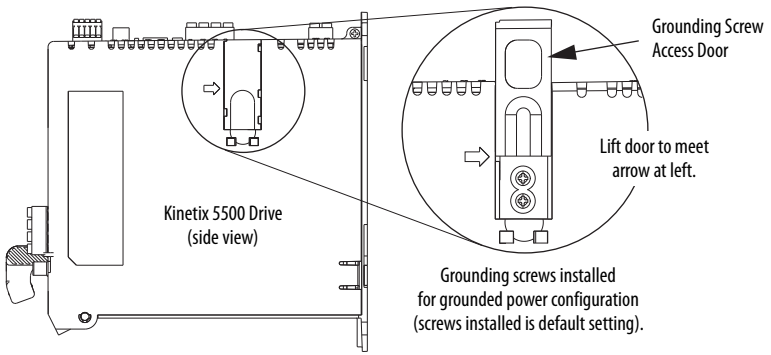
Removing the ground screws can affect EMC performance.

Removing the grounding screws in multi-axis configurations is best done when the drive is removed from the panel and placed on its side on a solid surface equipped as a grounded static-safe workstation.

ATTENTION: By removing the grounding screw for ungrounded power configurations, you no longer maintain line-to-neutral voltage protection.

ATTENTION: This drive contains electrostatic discharge (ESD) sensitive parts and assemblies. You are required to follow static-control precautions when you install, test, service, or repair this assembly. If you do not follow ESD control procedures, components can be damaged. If you are not familiar with static control procedures, refer to Guarding Against Electrostatic Damage, publication 8000-4.5.2, or any other applicable ESD awareness handbook.

Remove the Grounding Screws



ATTENTION: Risk of equipment damage exists. The drive ground configuration must be accurately determined. Leave the grounding screws installed for grounded power configurations (default). Remove the screws for ungrounded power.

Grounding Screw Configurations

Ground Configuration (1)	Grounding Screw Configuration	Benefits of Configuration
Grounded (wye)	Both screws installed (default setting)	• UL and EMC compliance • Reduced electrical noise • Most stable operation • Reduced voltage stress on components and motor bearings
• B-phase corner ground • AC fed ungrounded	Both screws removed	• Helps avoid severe equipment damage when ground fault occurs • Reduced leakage current

(1) Refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for example configurations.

Install the Kinetix 5500 Servo Drive

These procedures assume you have prepared your panel and understand how to bond your system. For installation instructions regarding equipment and accessories not included here, refer to the instructions that came with those products.

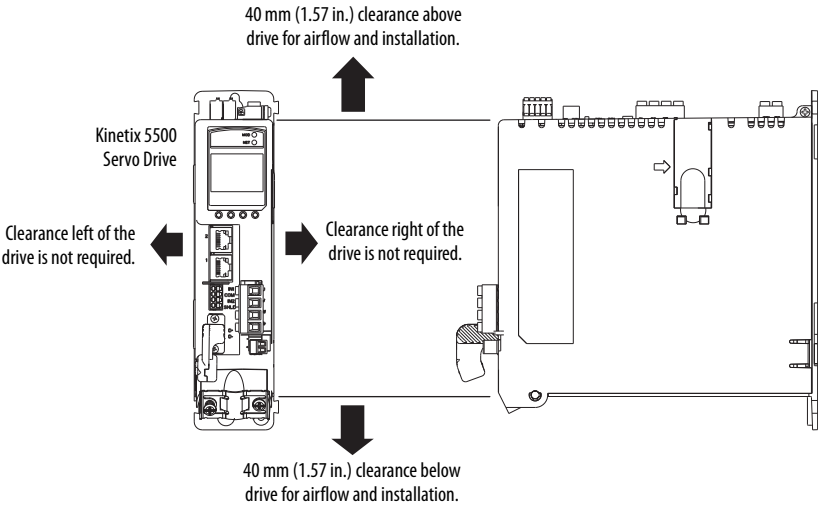
SHOCK HAZARD: To avoid hazard of electrical shock, perform all mounting and wiring of the Kinetix 5500 drive prior to applying power. Once power is applied, connector terminals can have voltage present even when not in use.

ATTENTION: Plan the installation of your system so that you can perform all cutting, drilling, tapping, and welding with the system removed from the enclosure. Because the system is of the open type construction, be careful to keep any metal debris from falling into it. Metal debris or other foreign matter can become lodged in the circuitry and result in damage to components.

Mount the Kinetix 5500 Drive

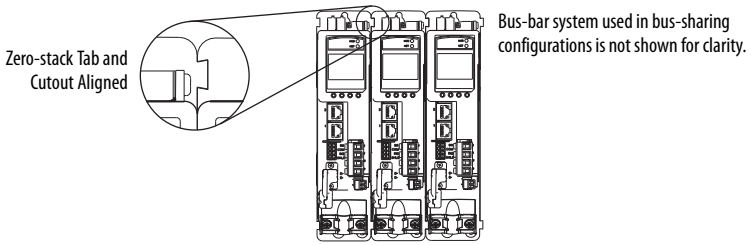
Follow these steps to mount the drive in single-axis configurations.

1. Observe these clearance requirements when mounting a single drive to the panel:
   - Additional clearance is required for cables and wires connected to the top of the drive.
   - Additional clearance left and right of the drive is required when mounted adjacent to noise sensitive equipment or clean wire ways.
   - The recommended minimum cabinet depth is 300 mm (11.81 in.).



IMPORTANT Mount the drive in an upright position as shown. Do not mount the drive on its side.

In multi-axis shared-bus configurations, drives must be spaced by aligning the zero-stack tab and cutout. For mounting, sizing, and configuring shared-bus configurations, refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001.

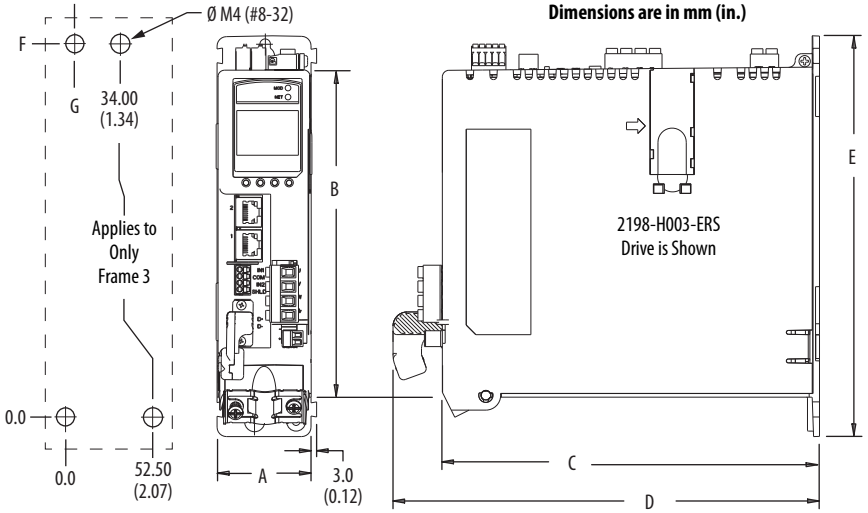


2. Mount the Kinetix 5500 drive to the cabinet subpanel with M4 (#8-32) steel machine screws torqued to 2.0 N•m (17.7 lb•in), max.

Product Dimensions

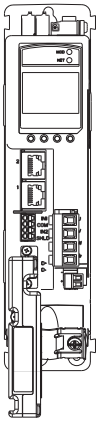
Included in this figure are the drill hole patterns for standalone drives. Refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for multi-axis drill-hole patterns.

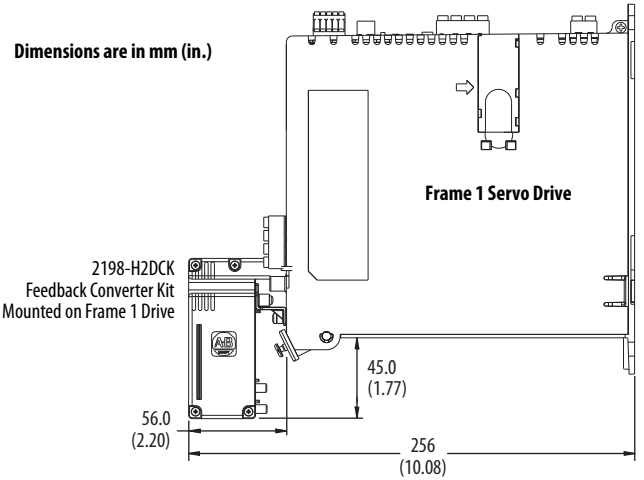
Kinetix 5500 Drives with 2198-KITCON-DSL Connector Kit

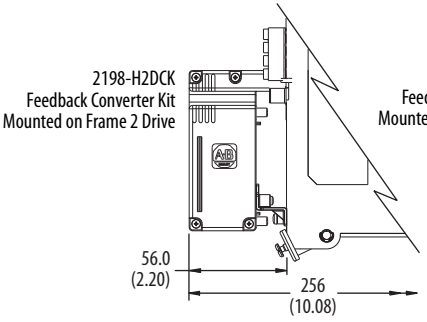


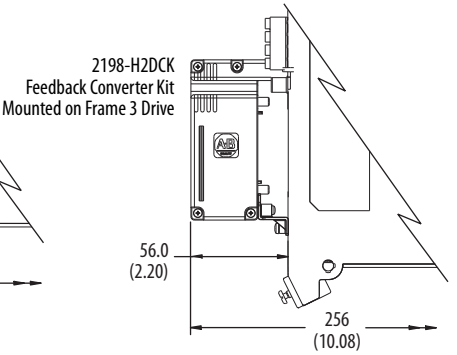
Kinetix 5500 Drive Cat. No.	Frame	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	E mm (in.)	Drill Hole Patterns	
							F mm (in.)	G mm (in.)
2198-H003-ERS*x*	1	50 (1.97)	170 (6.69)	200 (7.87)	226 (8.90)	215 (8.46)	193.68 (7.62)	4.51 (0.18)
2198-H008-ERS*x*								
2198-H015-ERS*x*	2	55 (2.16)	225 (8.86)			265 (10.43)	243.84 (9.60)	5.00 (0.20)
2198-H025-ERS*x*								
2198-H040-ERS*x*								
2198-H070-ERS*x*	3	85.2 (3.35)	250 (9.84)			294 (11.57)	273.70 (10.78)	0.0

Kinetix 5500 Drives with 2198-H2DCK Converter Kit







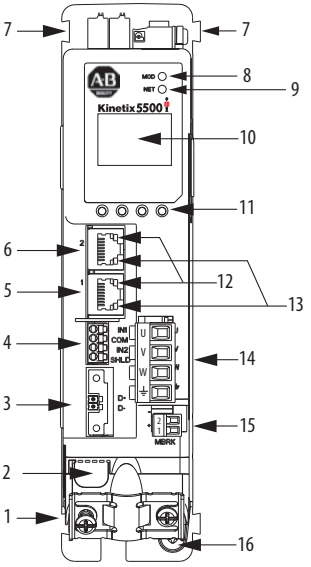


Refer to Kinetix Servo Drives Technical Data, publication GMC-RM003, for motor/actuator compatibility with the 2198-H2DCK converter kit and product dimensions.

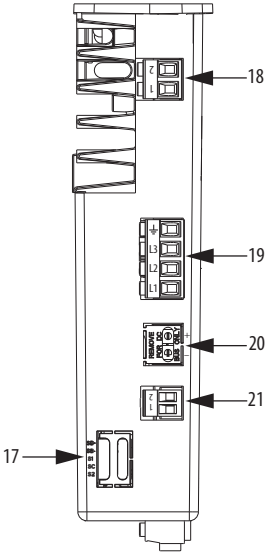
Connector Data

Use this illustration to identify the Kinetix 5500 drive features and indicators.

Kinetix 5500 Drive Features and Indicators



Kinetix 5500 Drive, Front View
(2198-H003-ERS*x* drive is shown)



Kinetix 5500 Drive, Top View
(2198-H003-ERS2 drive is shown)

Item	Description
1	Motor cable shield clamp
2	Converter kit mounting hole (under cover) (1)
3	Motor feedback (MF) connector
4	Digital inputs (IOD) connector
5	Ethernet (PORT1) RJ45 connector
6	Ethernet (PORT2) RJ45 connector
7	Zero-stack mounting tab/cutout
8	Module status indicator
9	Network status indicator
10	LCD display
11	Navigation push buttons

Item	Description
12	Link speed status indicators
13	Link/Activity status indicators
14	Motor power (MP) connector
15	Motor brake (BC) connector
16	Ground terminal
17	Safe torque-off (STO) connector (2) (applies to only 2198-H*xxx*-ERS drives)
18	Shunt resistor (RC) connector
19	AC mains input power (IPD) connector
20	DC bus (DC) connector (under cover) (3)
21	24V control input power (CP) connector

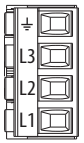
(1) Protective knock-out covers the 2198-H2DCK converter kit mounting hole. Remove knock-out for use with the converter kit.
(2) Protective knock-out cover is removed on 2198-H*xxx*-ERS (hard-wired STO) drives.
(3) DC bus connector ships with protective knock-out cover that can be removed for use in shared-bus configurations.

Kinetix 5500 Drive Connectors

Designator	Description	Connector
IPD	AC mains input power	4-position plug, terminal screws
DC	DC common bus power	2-position (T-connector used in shared-bus configurations)
CP	24V control input power	2-position plug, terminal screws
RC	Shunt power	2-position plug, terminal screws
MP	Motor power	4-position plug, terminal screws
MF	Motor feedback	2-position plug, spring terminals
BC	Brake power	2-position plug, terminal screws
IOD	Digital inputs	4-position plug, spring terminals
STO	Safe torque off	5-position plugs, spring terminals, 2x (2 rows of 5 pins)
PORT1, PORT2	Ethernet communication ports	RJ45 Ethernet

Mains Input Power (IPD) Connector

IPD Pin	Description	Signal
⏚	Chassis ground	⏚
L3	Three-phase input power	L3
L2		L2
L1		L1



Shunt Power (RC) Connector Pinout

RC Pin	Description	Signal
1	Shunt connections (frames 2 and 3)	DC+
2		SH
1	Shunt connections (frame 1)	SH
2		DC+

DC Bus (DC) Connector Pinout

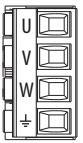
DC Pin	Description	Signal
1	DC bus connections	DC-
2		DC+

Control Input Power (CP) Connector Pinout

CP Pin	Description	Signal
1	24V power supply, customer-supplied	24V+
2	24V common	24V-

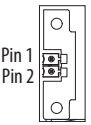
Motor Power (MP) Connector Pinout

MP Pin	Description	Signal	Color
U	Three-phase motor power	U	Brown
V		V	Black
W		W	Blue
⏚	Chassis ground	⏚	Green



Motor Feedback (MF) Connector Pinout

MF Pin (1)	Description	Signal
1	Bidirectional data and power for digital encoder interface	D+
2		D-
SHIELD	Cable shield and grounding plate (internal to 2198-KITCON-DSL connector kit) termination point	SHIELD
	Cable shield and shield clamp (internal to 2198-H2DCK converter kit) termination point	



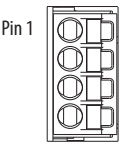
(1) Refer to Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for installation instructions.

Motor Brake (BC) Connector Pinout

BC Pin	Description	Signal
1	Motor brake connections	MBRK+
2		MBRK-

Digital Inputs (IOD) Connector Pinout

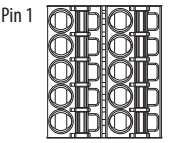
IOD Pin	Description	Signal
1	High-speed Registration/Home position input. A low/high or high/low transition triggers a registration event. This is a dual-function input.	IN1 (1)
2	I/O common for customer-supplied 24V supply.	COM
3	High speed registration input. A low/high or high/low transition triggers a registration event.	IN2
4	I/O cable shield termination point.	SHLD



(1) This signal has dual-functionality. You can use IN1 (IOD-1) as registration or Home input.

Safe Torque Off (STO) Connector Pinout

STO Pin	Description	Signal
1	Safety bypass plus signal. This signal is jumped to the safety inputs to enable motion without safety	SB+
2	Safety bypass minus signal. This signal is jumped to safety common to enable motion without safety	SB-
3	Safe-stop input channel 1	S1
4	Safe-stop input common	SC
5	Safe-stop input channel 2	S2

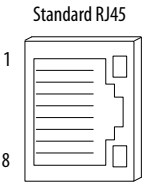


IMPORTANT The safe torque-off (STO) connector applies to only the 2198-H*xxx*-ERS drives.

The 2198-H*xxx*-ERS drives ship with the safe torque-off function enabled. Connect the safe torque-off inputs to a safety circuit or install bypass wiring to enable motion. Refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for more information.

Ethernet Communication PORT1 and PORT2 Pinout

Port Pin	Description	Signal
1	Transmit port (+) data terminal	+ TX
2	Transmit port (-) data terminal	- TX
3	Receive port (+) data terminal	+ RX
4	–	–
5	–	–
6	Receive port (-) data terminal	- RX
7	–	–
8	–	–



Wiring Requirements

Wire must be copper with 75 °C (167 °F) minimum rating. Phasing of mains AC power is arbitrary and earth ground connection is required for safe and proper operation.

IMPORTANT The National Electrical Code and local electrical codes take precedence over the values and methods provided.

Kinetix 5500 Drive Power and I/O Wiring Requirements

Kinetix 5500 Drive Cat. No.	Description	Connects to Terminals		Wire Size mm^2 (AWG)	Strip Length mm (in.)	Torque Value N•m (lb•in)
		Pin	Signal			
2198-H003-ERS*x* 2198-H008-ERS*x* 2198-H015-ERS*x* 2198-H025-ERS*x* 2198-H040-ERS*x*	Mains input power	IPD-1 IPD-2 IPD-3 IPD-4	L1 L2 L3 ⏚	1.5…4 (16…12)	8.0 (0.31)	0.5…0.6 (4.4…5.3)
2198-H070-ERS*x*				1.5…6 (16…10)	10.0 (0.39)	
2198-H003-ERS*x* 2198-H008-ERS*x* 2198-H015-ERS*x* 2198-H025-ERS*x* 2198-H040-ERS*x*	Motor power	MP-1 MP-2 MP-3 MP-4	⏚ W V U	Motor power cable depends on motor/drive combination. 0.75…2.5 (1) (18…14)	8.0 (0.31)	0.5…0.6 (4.4…5.3)
2198-H070-ERS*x*				2.5…6 (1) (14…10)	10.0 (0.39)	
2198-H*xxx*-ERS*x*	PELV/SELV 24V power	CP-1 CP-2	24V+ 24V-	2.5…0.5 (14…20)	7.0 (0.28)	0.22…0.25 (1.9…2.2)
	Brake power	BC-1 BC-2	MBRK+ MBRK-	N/A		
	DC Bus power	DC-1 DC-2	DC+ DC-	N/A (2)	N/A (2)	N/A (2)
	Shunt power (frames 2 and 3)	RC-1 RC-2	DC+ SH	4…0.5 (12…20)	8.0 (0.31)	0.5…0.6 (4.4…5.3)
	Shunt power (frame 1)	RC-1 RC-2	SH DC+			
	Safety (3)	ST0-1 ST0-2 ST0-3 ST0-4 ST0-5	SB+ SB- S1 SC S2	1.5…0.2 (16…24)	10.0 (0.39)	N/A (4)
	Digital inputs	IOD-1 IOD-2 IOD-3 IOD-4	IN1 (5) COM IN2 SHLD	1.5…0.2 (16…24)	10.0 (0.39)	N/A (4)

(1) Building your own cables or using third-party cables is not an option. Use single motor cable catalog number 2090-CS*x*M1DF-*xx*AA*xx*. Refer to the Kinetix Motion Accessories Specifications Technical Data, publication GMC-TD004, for cable specifications.

(2) DC bus connections are always made from drive-to-drive over the bus bar connection system. These terminals do not receive discrete wires.

(3) These signals and the safe torque-off (STO) connector apply to only the 2198-H*xxx*-ERS drives.

(4) This connector uses spring tension to hold wires in place.

(5) This signal has dual-functionality. You can use IN1 (IOD-1) as registration or Home input.

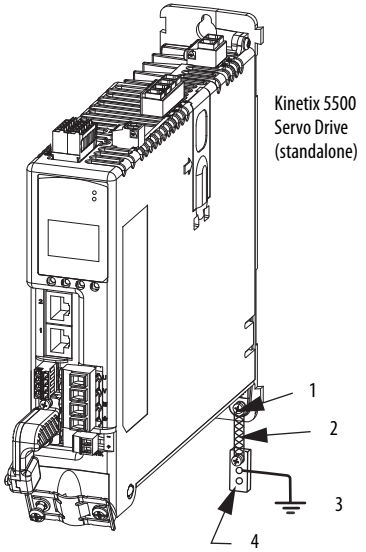
ATTENTION: To avoid personal injury and/or equipment damage, observe the following:

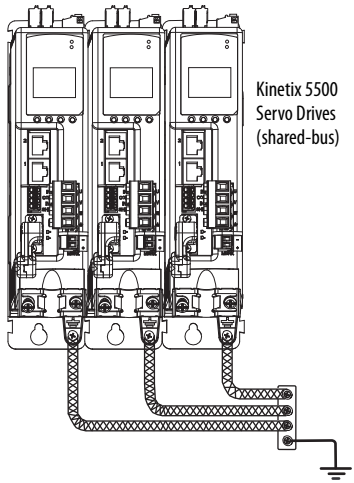
- Make sure installation complies with specifications regarding wire types, conductor sizes, branch circuit protection, and disconnect devices. The National Electrical Code (NEC) and local codes outline provisions for safely installing electrical equipment.
- Use motor power connectors only for connection purposes. Do not use them to turn the unit on and off.
- Ground shielded power cables to prevent potentially high voltages on the shield.

Ground Your Kinetix 5500 Drive to the Subpanel

Ground Kinetix 5500 drives and 2198-CAPMOD-1300 capacitor modules to a bonded cabinet ground bus with a braided ground strap or 4.0 mm^2 (12 AWG) copper wire.

Connecting the Braided Ground Strap





Item	Description
1	Ground screw (green) 2.0 N•m (17.5 lb•in), max
2	Braided ground strap (customer supplied)
3	Ground grid or power distribution ground
4	Bonded cabinet ground bus (customer supplied)

Attach the Motor Cable Shield Clamp

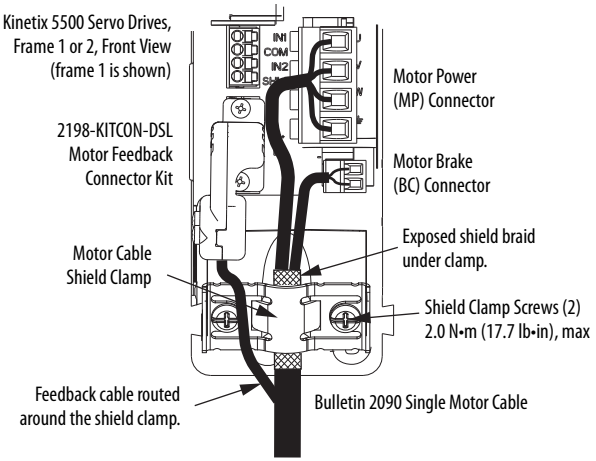
A shield clamp and two screws are supplied with each Kinetix 5500 drive. Use the clamp to bond the motor cable shield-braid to chassis ground.

- Routing the conductors with service loops provides stress relief.
- Make sure the cable clamp tightens around the cable shield and provides a good bond between the cable shield and the drive chassis.

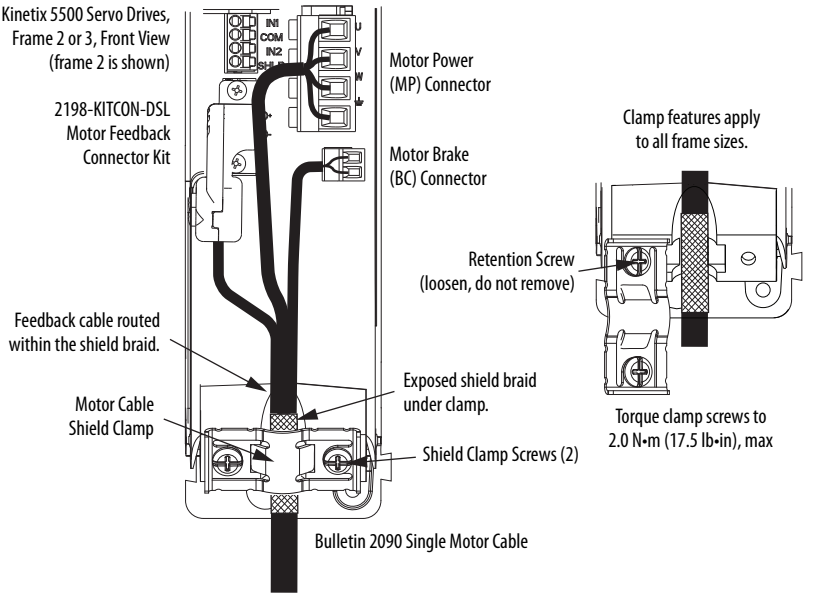
Kinetix VP Servo Motors

Kinetix VP motors have single cable technology and use the 2198-KITCON-DSL connector kit with 2090-CS*x*M1DF-*xx*A*xxx* motor cables. Route conductors as shown in theses examples.

18 AWG Cable Installation



14 and 10 AWG Cable Installation

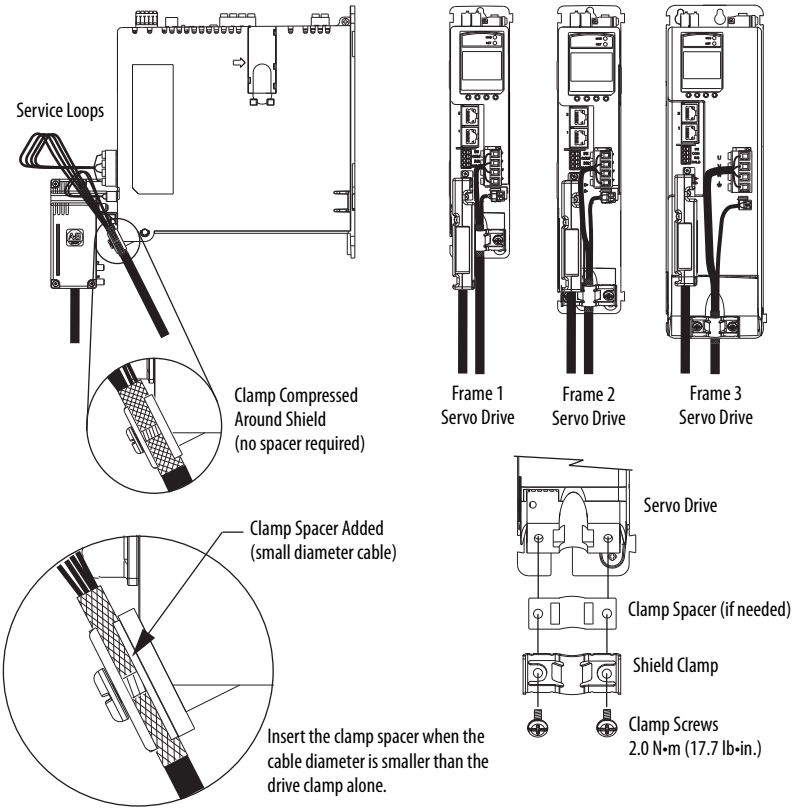


Other Allen-Bradley Motors and Actuators

For other compatible Allen-Bradley motors and actuators, use the 2198-H2DCK converter kit for wiring motor feedback. A clamp spacer is included with the kit for motor power/brake cable diameters that are too small for a tight fit within the drive clamp alone.

IMPORTANT If the power/brake cable shield has a loose fit inside the shield clamp, insert the clamp spacer between the shield clamp and the drive to reduce the clamp diameter. When the clamp screws are tight, 2.0 N•m (17.7 lb•in), the result must be a high-frequency bond between the cable shield and the drive chassis.

Cable Clamp Attachment



Refer to the Kinetix 5500 Servo Drives User Manual, publication 2198-UM001, for detailed information on wiring the 2198-H2DCK feedback converter kit and attaching the motor power/brake shield clamp.

Motor Overload Protection

This servo drive uses solid-state motor overload protection that operates in accordance with UL 508C. Motor overload protection is provided by algorithms (thermal memory) that predict actual motor temperature based on operating conditions as long as control power is continuously applied. However, when control power is removed, thermal memory is not retained.

In addition to thermal memory protection, this drive provides an input for an external temperature sensor/thermistor device, embedded in the motor, to support the UL requirement for motor overload protection.

Servo drives using DSL (digital servo link) encoder technology require the encoder to perform motor temperature monitoring and transmit the data over the single motor cable. Kinetix VP motors use DSL technology that performs this function. No additional wiring is required.

Some motors supported by this drive do not contain temperature sensors/thermistors; therefore, motor overload protection against excessive consecutive motor overloads with power cycling is not supported.

This servo drive meets the following UL 508C requirements for solid-state overload protection.

Motor Overload Protection Trip Point	Value
Ultimately	100% overload
Within 8 minutes	200% overload
Within 20 seconds	600% overload

ATTENTION: To avoid damage to your motor due to overheating caused by excessive, successive motor overload trips, follow the wiring diagram provided in the user manual for your motor and drive combination.

Refer to your servo drive user manual for the interconnect diagram that illustrates the wiring between your motor and drive.

Additional Resources

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

Resource	Description
Kinetix 5500 Servo Drives User Manual, publication 2198-UM001	Information on installing, configuring, starting, and troubleshooting your Kinetix 5500 servo drive system.
Kinetix 5500 Feedback Connector Kit Installation Instructions, publication 2198-IN002	Information on installing and wiring the Kinetix 5500 motor feedback connector kit.
Kinetix 5500 AC Line Filter Installation Instructions, publication 2198-IN003	Information on installing and wiring the Kinetix 5500 AC line filters.
Hiperface-to-DSL Feedback Converter Kit Installation Instructions, publication 2198-IN006	Information on installing and wiring the Hiperface-to-DSL feedback converter kit.
Kinetix 300 Shunt Resistor Installation Instructions, publication 2097-IN002	Information on installing and wiring Kinetix 300 external shunt resistors.
Kinetix Servo Drives Specifications Technical Data, publication GMC-TD003	Provides product specifications for the Kinetix Integrated Motion over EtherNet/IP network, Integrated Motion over sercos interface, EtherNet/IP networking, and component servo drive families.
Kinetix Motion Accessories Specifications Technical Data, publication GMC-TD004	Provides product specifications for Bulletin 2090 motor and interface cables, low-profile connector kits, drive power components, and other servo drive accessory items.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

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

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products.
At http://www.rockwellautomation.com/support you can find technical and application notes, sample code, and links to software service packs. You can also visit our Support Center at https://rockwellautomation.custhelp.com/ for software updates, support chats and forums, technical information, FAQs, and to sign up for product notification updates.

In addition, we offer multiple support programs for installation, configuration, and troubleshooting. For more information, contact your local distributor or Rockwell Automation representative, or visit http://www.rockwellautomation.com/services/online-phone.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/rockwellautomation/support/overview.page, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation tests all of its products to help ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete this form, publication RA-DU002, available at http://www.rockwellautomation.com/literature/.

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