

Installation Instructions



Allen-Bradley
by ROCKWELL AUTOMATION

Original Instructions

Kinetix 5100 AC Line Filter

Catalog Numbers 2198-DB111-F, 2198-DB127-F, 2198-DB310-F, 2198-DB324-F, 2198-DB335-F, 2198-DB356-F, 2198-DB418-F, 2198-DB433-F

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This publication provides installation instructions for the AC line filters used with Kinetix® 5100 servo drives. Use these instructions for installing and wiring your AC line filter. For more information on installing and wiring your AC line filter, see Kinetix 5100 Single-axis EtherNet/IP™ Servo Drives Users Manual, publication [2198-UM004](#).

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated dimension on three-phase leads to 600 mm (23.62 in) for: 2198-DB310-F, 2198-DB324-F, 2198-DB418-F, 2198-DB335-F, and 2198-DB433-F.	3...5
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Before You Begin

For general guidelines when laying out your panel and mounting your AC line filter, refer to the System Design for Control of Electrical Noise Reference Manual, publication [GMC-RM001](#).

For guidelines specific to your application, refer to the Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication [2198-UM004](#).



ATTENTION: To avoid personal injury or damage to equipment due to hazardous voltages, follow these guidelines when installing your AC line filter. NEC and local regulations always take precedence.

- Disconnect mains power before installation.
- Verify that the rated voltage is compatible with the local supply voltage.
- Connect the earth ground connection first when you make connections.

Install the AC Line Filter

Mount the line filter to the cabinet panel with hardware as specified in this table.

Cat. No.	Mounting Bolt	Torque Value N•m (lb•in)	Mounting Bolt ⁽¹⁾ (for piggyback mounting of the drive)	Torque Value ⁽¹⁾ N•m (lb•in)
2198-DB111-F	M5 (#10-24)	1.6...2.0 (13.9...17.70)	M5 (#10-24)	1.6...2.0 (13.9...17.70)
2198-DB127-F				
2198-DB310-F				
2198-DB324-F				
2198-DB335-F			—	—
2198-DB356-F			—	—
2198-DB418-F			M5 (#10-24)	1.6...2.0 (13.9...17.70)
2198-DB433-F			—	—

(1) Piggyback mounting of the drive to the line filter is available only for 2198-DB418-F and hardware Rev 1.1 or later of 2198-DB111-F, 2198-DB127-F, 2198-DB310-F, and 2198-DB324-F.

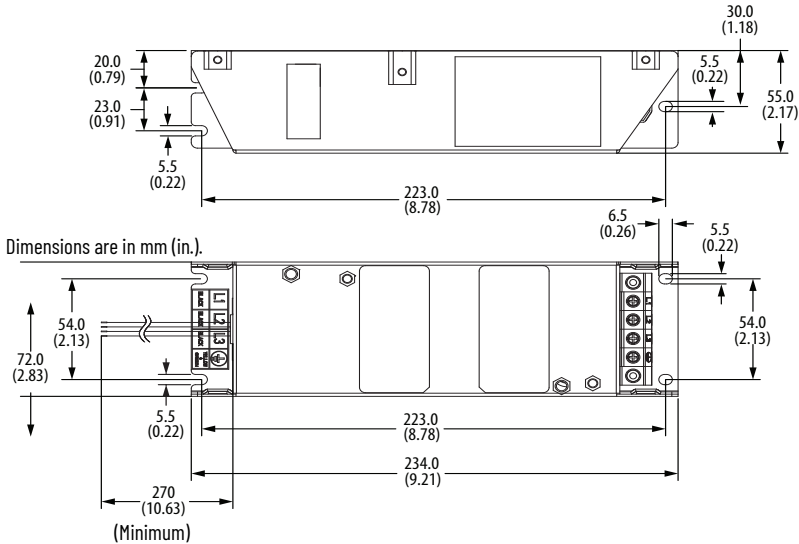
See the System Design for Control of Electrical Noise Reference Manual, publication [GMC-RM001](#), for techniques on how to make proper high-frequency (HF) bonds to improve overall system performance.

For wiring guidelines specific to your application, see the Kinetix 5100 Single-axis EtherNet/IP Servo Drives User Manual, publication [2198-UM004](#).

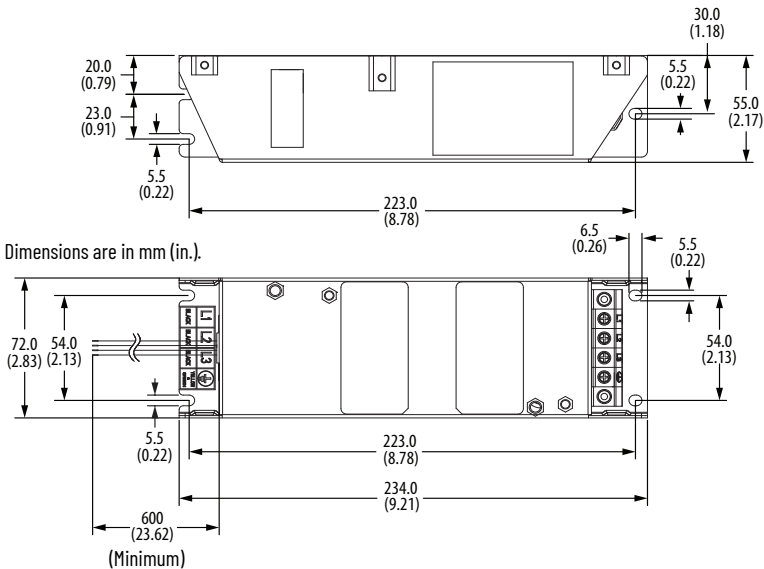
AC Line Filter Dimensions

For line filter dimensions specific to your application, see the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#).

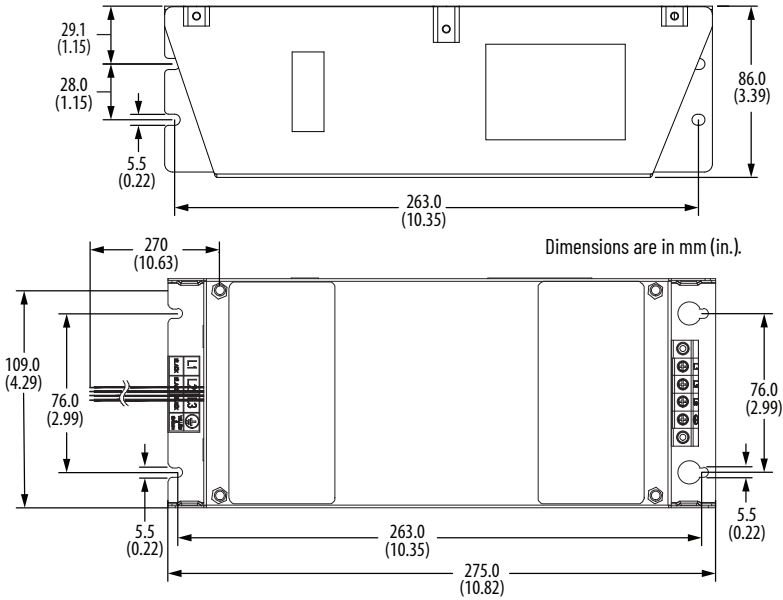
AC Line Filter Dimensions (Catalog number 2198-DB111-F)



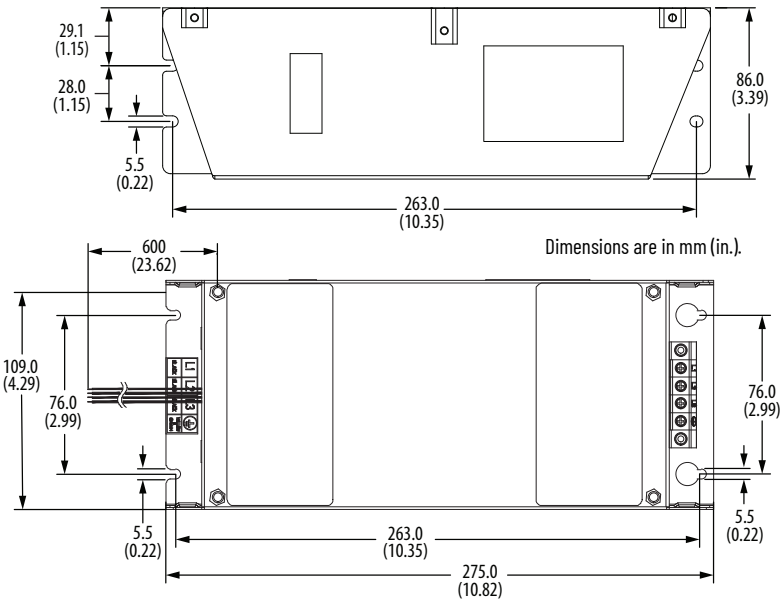
AC Line Filter Dimensions (Catalog number 2198-DB310-F)



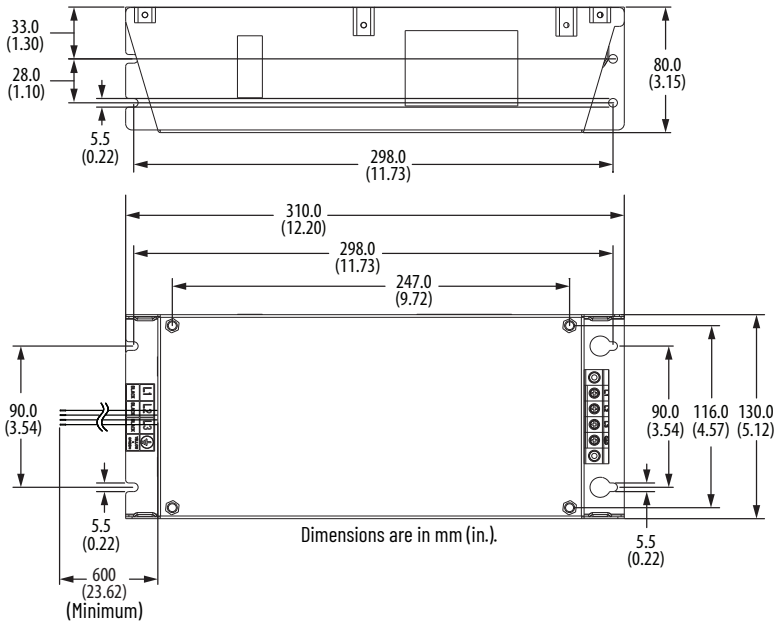
AC Line Filter Dimensions (Catalog numbers 2198-DB127-F)



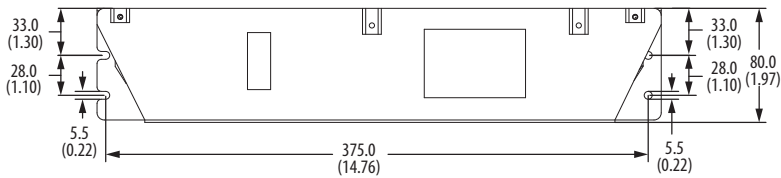
AC Line Filter Dimensions (Catalog numbers 2198-DB324-F and 2198-DB418-F)



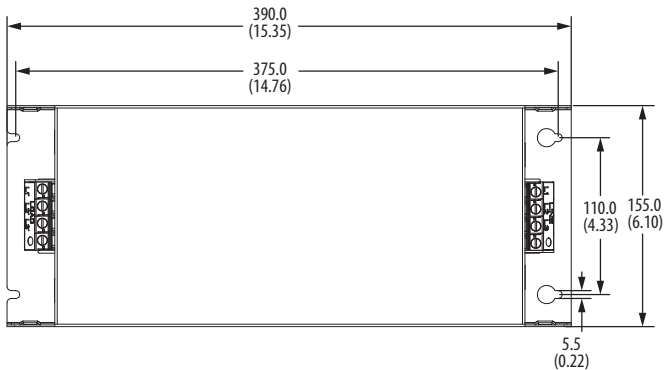
AC Line Filter Dimensions (Catalog numbers 2198-DB335-F and 2198-DB433-F)



AC Line Filter Dimensions (Catalog number 2198-DB356-F)



Dimensions are in mm (in.).



AC Line Filter Specifications

Cat. No.	Voltage Rating ⁽¹⁾	Current Rating A @ 50 °C (122 °F)	Power Loss W	Leakage Current mA, typical	Weight, approx kg (lb)	Operating Temperature (Surrounding Air, max.)
2198-DB111-F	120V single-phase, 50/60 Hz	11	4.9	52.9	1.05 (2.314)	50 °C (122 °F)
2198-DB127-F	200...230V single- phase, 50/60 Hz	27	15.5	54.9	1.80 (3.968)	
2198-DB310-F	120V single-phase, 50/60 Hz	10	4.7	37.4	1.10 (2.425)	
2198-DB324-F	200...230V single- phase, 50/60 Hz	24	9.7	90	1.95 (3.968)	
2198-DB310-F	200...240V AC, three-phase, 50/60 Hz	10	14.0	3.9	1.10 (2.425)	
2198-DB324-F	200...240V AC, three-phase, 50/60 Hz	24	29.0	9.3	1.95 (3.968)	
2198-DB335-F	240V AC, three-phase, 48...63 Hz	34.8	30.0	5.8	2.90 (6.393)	
2198-DB356-F	240V AC, three-phase, 48...63 Hz	56	57.0	2.8	4.00 (8.818)	
2198-DB418-F	480V AC three-phase, 48...63 Hz	18.4	16.0	4.21	1.20 (2.65)	
2198-DB433-F	480V AC three-phase, 48...63 Hz	33	35.0	3.58	1.90 (4.19)	

(1) SCCR Rating of 5kA when used with UL branch circuit protection as listed in Kinetix 5100 EtherNet/IP Indexing Servo Drives, publication [2198-UM004](#).

For more information about AC line filters, see AC Line Filters Installation Instructions, publication [2198-IN003](#).

Additional Resources

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

Resource	Description
Kinetix Servo Drives Specifications Technical Data, publication KNX-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 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.
AC Line Filters Installation Instructions, publication 2198-IN003	Provides information on how to install and wire AC line filters used with the Kinetix 5500 and Kinetix 5700 servo drive systems and the Kinetix 5700 iTRAK® power supply.
Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication 2198-UM004	Information on how to install, configure, start, and troubleshoot your Kinetix 5100 servo drive system.
Servo Drive Installation Best Practices Application Technique, publication MOTION-AT004	Provides best practice examples to help reduce the number of potential noise or electromagnetic interference (EMI) sources in your system and to make sure that the noise-sensitive components are not affected by the remaining noise.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website: rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at [rok.auto/literature](#).

Notes:

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

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