

## AC Line Filters Installation Instructions

For guidelines specific to your application, refer to your drive-family user manual listed in Additional Resources on [page 10](#).



**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.

## Install the AC Line Filter

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

AC Line Filter Cat. No.		Mounting Bolts	Torque Value N·m (lb·in)
2198-DBR20-F	2198-DB08-F	M5 (#10-32)	2.0 (17.7)
	2198-DB20-F		
2198-DBR40-F	2198-DB42-F	M6 (1/4x20)	4.5 (39.8)
2198-DBR90-F	2198-DB80-F		
2198-DBR200-F	-		
-	2198-DB290-F	M10 (3/8x16)	30 (266)

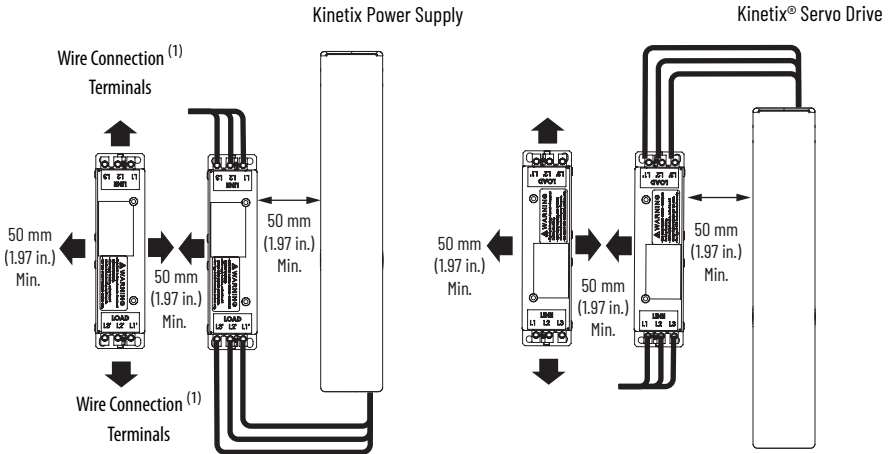
See the System Design for Control of Electrical Noise Reference Manual, publication [GMC-RM001](#), for proper high-frequency (HF) bonding techniques to improve overall system performance.

For wiring guidelines specific to your application, see your drive-family user manual listed in Additional Resources on [page 10](#).

## Mounting Clearance Specifications

Minimum clearance on either side of the Bulletin 2198 AC line filters is 50 mm (1.97 in.). When line filter units are positioned side-by-side on the panel, only 50 mm (1.97 in.) minimum is required between them.

**IMPORTANT** Minimize the wire length between the line filter and the input to the servo drive.

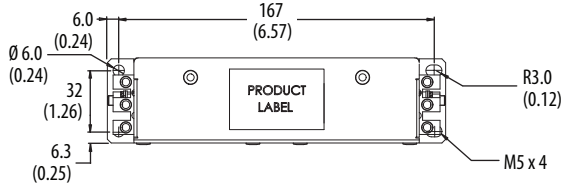


(1) Clearance required at the terminals for NEC specified bend radius depends on the wire size in use.

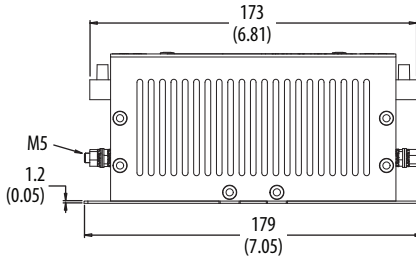
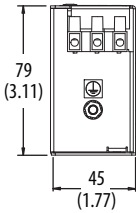
## AC Line Filter Dimensions

For line filter dimensions specific to your application, see the drive-family technical data, publication [KNX-TD003](#).

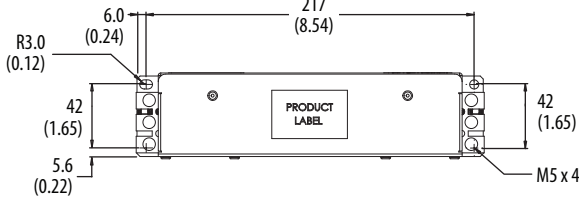
### AC Line Filter Dimensions (catalog number 2198-DB08-F)



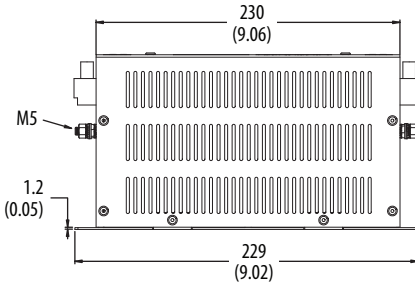
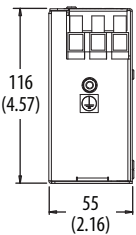
Dimensions are in mm (in.).



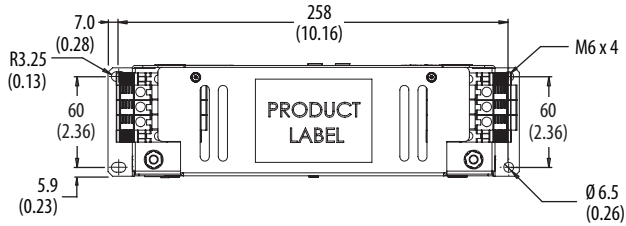
### AC Line Filter Dimensions (catalog number 2198-DB20-F)



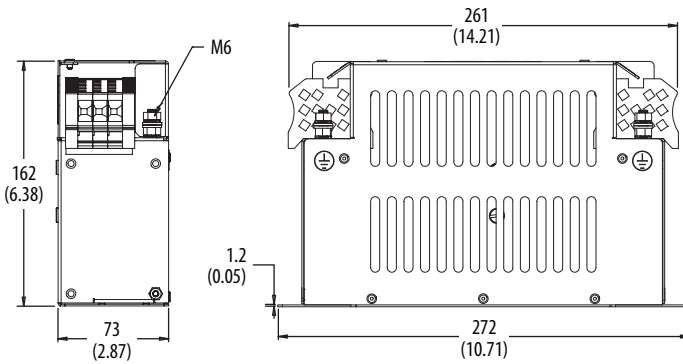
Dimensions are in mm (in.).



AC Line Filter Dimensions (catalog number 2198-DB42-F)

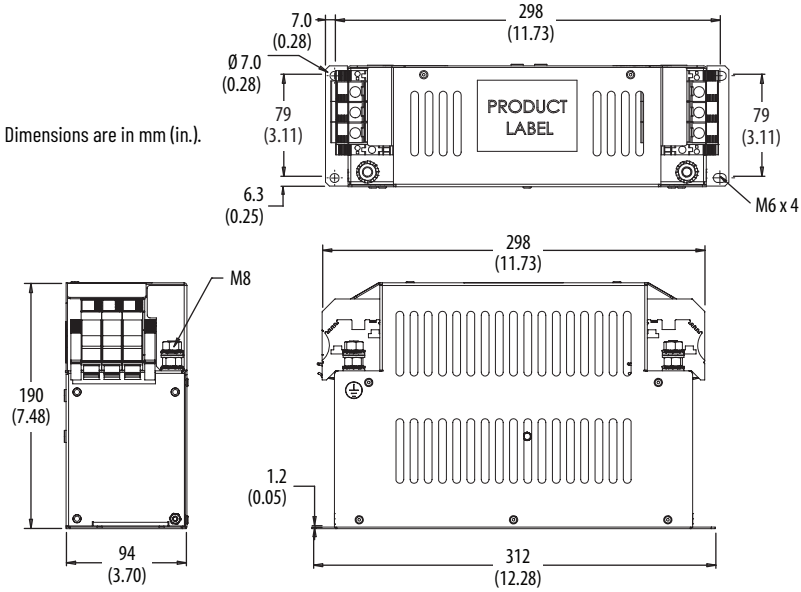


Dimensions are in mm (in.).

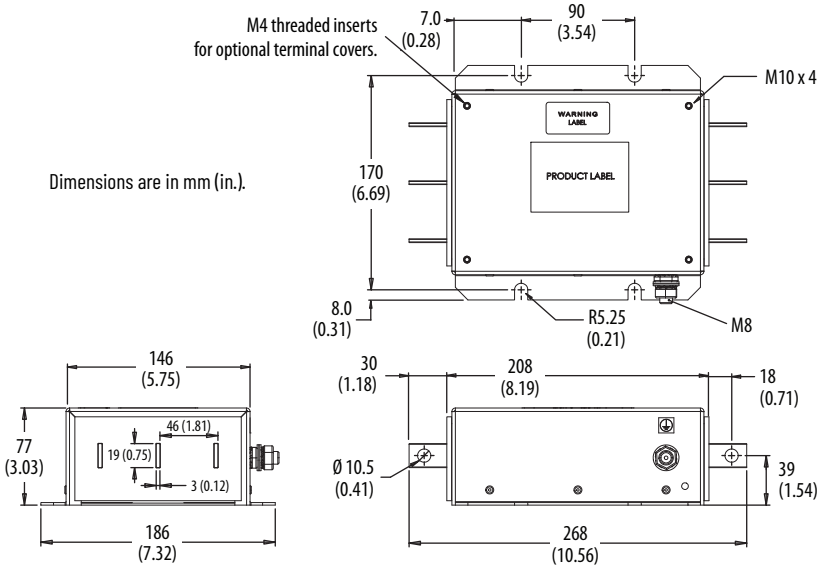


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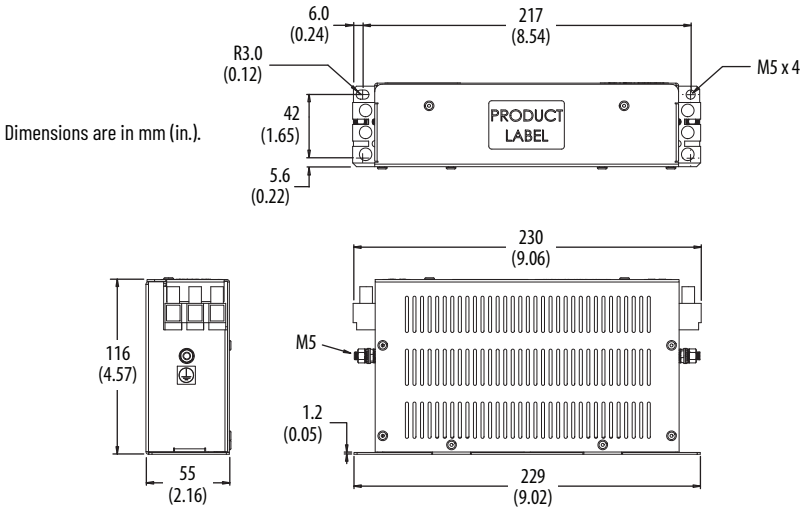
### AC Line Filter Dimensions (catalog number 2198-DB80-F)



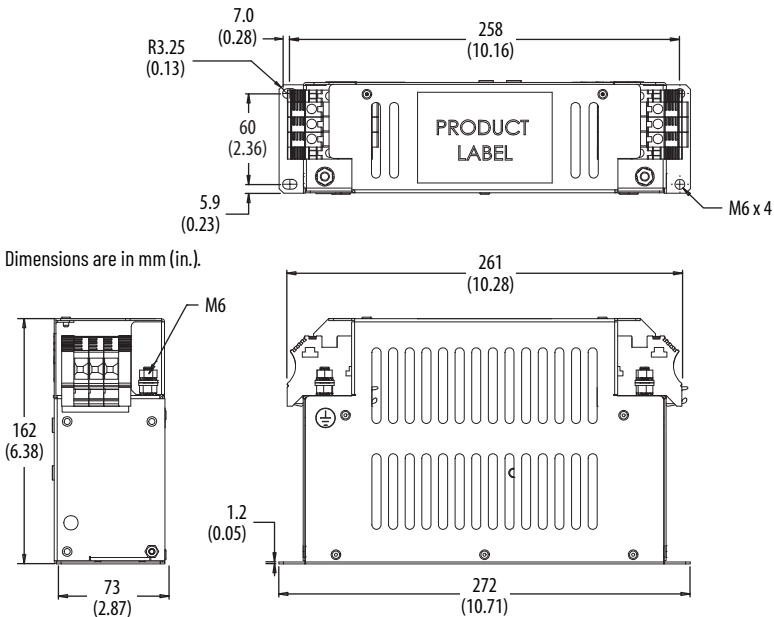
### AC Line Filter Dimensions (catalog number 2198-DB290-F)



**AC Line Filter Dimensions (catalog number 2198-DBR20-F)**

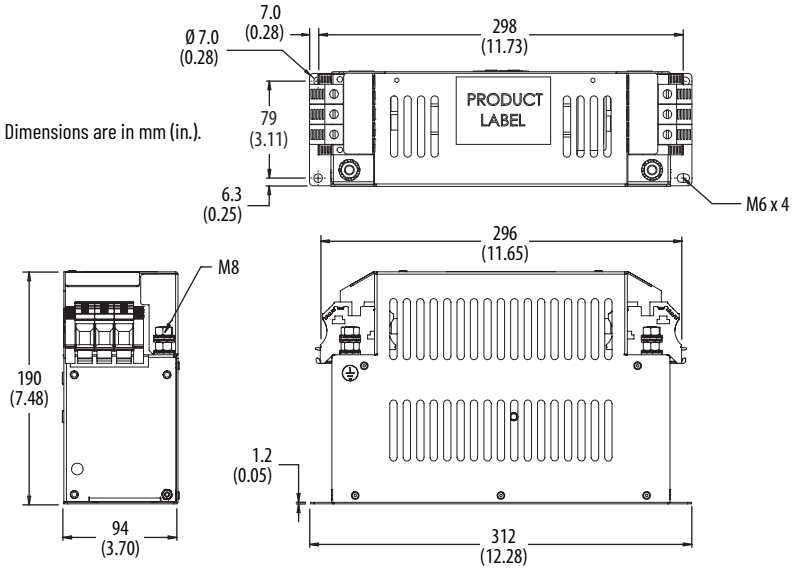


**AC Line Filter Dimensions (catalog number 2198-DBR40-F)**

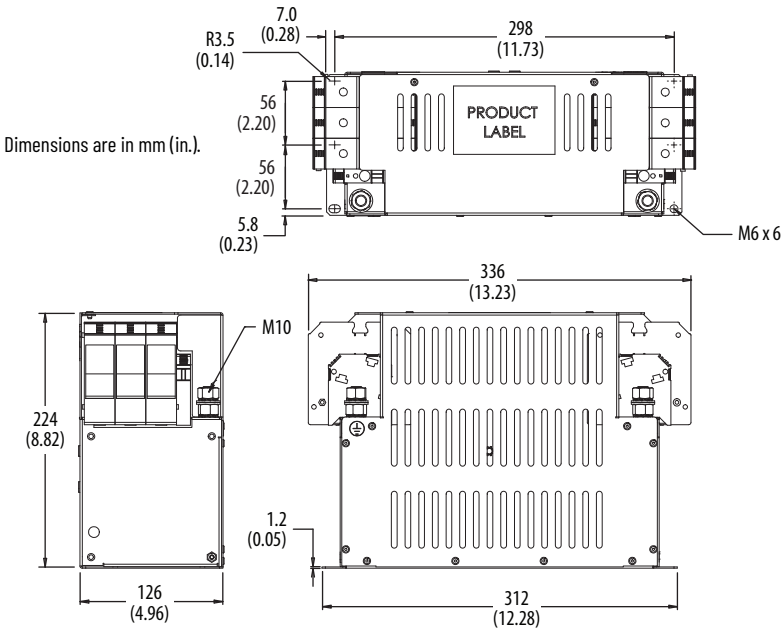


## AC Line Filters Installation Instructions

### AC Line Filter Dimensions (catalog number 2198-DBR90-F)



### AC Line Filter Dimensions (catalog number 2198-DBR200-F)



# AC Line Filter Specifications

## Technical Specifications

AC Line Filter Cat. No.	Voltage <sup>(1)</sup> Rating, max	Current Rating A @ 50 °C (122 °F)	Power Loss @ Rated Current W	Leakage Current, typ mA	Weight, approx kg (lb)	Operating Temperature	
2198-DBR20-F	528V AC single and three-phase 50/60 Hz	20	4.2	30	1.0 (2.20)	0...50 °C (32...122 °F)	
2198-DBR40-F		54	15		3.3 (7.28)		
2198-DBR90-F		90	16.8		34.0		4.1 (9.04)
2198-DBR200-F		200	34.5		46.0		7.2 (15.87)
2198-DB08-F	528V AC single and three-phase 50/60 Hz	7.5	3.6	2.5	0.77 (1.70)	0...50 °C (32...122 °F)	
2198-DB20-F		20	5.1	5.2	1.63 (3.59)		
2198-DB42-F		42	14.7	4.0	2.70 (5.95)		
2198-DB80-F		80	18.3	13.0	3.95 (8.71)		
2198-DB290-F		290	32.7	19.4	4.20 (9.26)		

(1) SCCR rating = 200 kA.

## Wiring Specifications

AC Line Filter Cat. No.	Signal	Recommended <sup>(1)</sup> Wire Size mm <sup>2</sup> , AWG	AC Line Filter Strip Length mm (in.)	Terminal Torque Values N•m (lb•in)
2198-DB08-F <sup>(2)</sup>	L1, L1' L2, L2' L3, L3'	0.5...6 (20...10)	7.5 (0.30)	0.8 (7.1)
2198-DBR20-F 2198-DB20-F		2.5...10 (14...8)	9.0 (0.35)	2.0 (17.7)
2198-DBR40-F 2198-DB42-F			12.0 (0.47)	1.9 (16.8)
2198-DBR90-F 2198-DB80-F		2.5...35 (14...0)	18.0 (0.71)	4.5 (39.8)
2198-DBR200-F		21.1...120 (4...250 kcmil)	27.0 (1.06)	12 (106)
2198-DB290-F		Bus-bar <sup>(3)</sup>	N/A	30 (266)

(1) The wire size of the input power wiring depends on the system configuration. Consult your machine builder, the NEC, and applicable local codes.

(2) Applies to installations with single-phase or three-phase input power.

(3) Apply crimp eyelet terminals to lug connections by using the supplier-recommended tooling.