







General Safety Instructions

	Be sure to read, understand, and follow all safety instructions.
	Only qualified electricians should carry out all electrical installation and maintenance work on reactors.
	All wiring must be in accordance with the National Electrical Code (NEC) and/or any other codes that apply to the installation site.
	Disconnect all power before working on the equipment. Do not attempt any work on a powered reactor.
	The reactor, VFD, motor, and other connected equipment must be properly grounded.
	The VFD terminals and connected cables are at a dangerously high voltage when power is applied to the VFD, regardless of motor operation.

Din Rail Kit

Part Number	Description	Dimensions
LR2-DR1	35mm DIN Rail Mount for: LR2-20P2-1PH, LR2-20P2, LR2-20P5, LR2-40xx, LR2-41xx, LR2-42xx, LR2-43xx, LR2-51xx, LR2-52xx	Clips 1.8"x0.6" Screws 10/32
LR2-DR2	35mm DIN Rail Mount for: LR2-20P5-1PH, LR2-20P7, LR2-21P0, LR2-21P5, LR2-22P0, LR2-44P0, LR2-45P0, LR2-47P5, LR2-53P0, LR2-54P0, LR2-55P0, LR2-57P5	4.25" x 4.13"

Adapter Plate Kit

Part Number	Description	Dimensions
LR2-AP1	Universal Mount for: LR2-20P2-1PH, LR2-20P2, LR2-20P5, LR2-40xx, LR2-41xx, LR2-42xx, LR2-43xx LR2-51xx, LR2-52xx	4.45" x 2.63"
LR2-AP2	Universal Mount for: LR2-20P2-1PH, LR2-20P2, LR2-20P5, LR2-40xx, LR2-41xx, LR2-42xx, LR2-43xx LR2-51xx, LR2-52xx	4.45" x 3.51"

Torque Tables

Part Number	Terminal Torque
LR2-20P2	9 lb-in
LR2-20P5	9 lb-in
LR-20P5	10 lb-in
LR2-20P7	9 lb-in
LR2-21P0	9 lb-in
LR-21P0	10 lb-in
LR2-21P5	9 lb-in
LR2-22P0	9 lb-in
LR-22P0	10 lb-in
LR-23P0	10 lb-in
LR-25P0	20 lb-in
LR-27P5	20 lb-in
LR-2010	20 lb-in
LR-2015	20 lb-in
LR-2020	20 lb-in
LR-2025	35 lb-in
LR-2030	50 lb-in
LR-2040	50 lb-in
LR-2050	375 lb-in
LR-2060	375 lb-in
LR-2075	500 lb-in
LR-2100	500 lb-in
LR2-40P2	9 lb-in
LR2-40P3	9 lb-in
LR2-40P5	9 lb-in
LR2-40P7	9 lb-in
LR2-41P0	9 lb-in
LR-41P0	10 lb-in
LR2-41P5	9 lb-in
LR2-42P0	9 lb-in
LR-42P0	10 lb-in
LR2-43P0	9 lb-in
LR-43P0	10 lb-in

Part Number	Terminal Torque
LR2-44P0	9 lb-in
LR2-45P0	9 lb-in
LR-45P0	10 lb-in
LR2-47P5	9 lb-in
LR-47P5	10 lb-in
LR-4010	10 lb-in
LR-4015	20 lb-in
LR-4020	20 lb-in
LR-4025	20 lb-in
LR-4030	20 lb-in
LR-4040	20 lb-in
LR-4050	35 lb-in
LR-4060	35 lb-in
LR-4075	120 lb-in
LR-4100	375 lb-in
LR-4125	375 lb-in
LR-4150	375 lb-in
LR-4200	500 lb-in
LR-4250	375 lb-in
LR-4300	375 lb-in
LR2-51P0	9 lb-in
LR-51P0	10 lb-in
LR2-51P5	9 lb-in
LR2-52P0	9 lb-in
LR-52P0	10 lb-in
LR2-53P0	9 lb-in
LR-53P0	10 lb-in
LR2-54P0	9 lb-in
LR2-55P0	9 lb-in
LR-55P0	10 lb-in
LR2-57P5	9 lb-in
LR-5010	10 lb-in

AutomationDirect

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Cumming, GA, USA 30040
800-633-0405



Three-Phase Reactor Installation Guide

AutomationDirect

automationdirect.com

LRx-3ph_QSP – 1st Ed, Rev A – 03/25/2020

Warnings and Cautions

	Warning Dangerous Voltage Warning: warns of situations in which a high voltage can cause injury and/or equipment damage. The text next to this symbol describes ways to avoid danger.
	Warning General Warning: warns of situations that can cause physical injury and/or equipment damage by means other than electrical. The text next to this symbol describes ways to avoid the danger.

Three-phase Line Reactor Installation Instruction

INPUT

When installing line reactors on the INPUT side of the Variable Frequency Drive (VFD), please use the following guidelines when wiring the unit:

The line reactor is a three-phase device and should be wired in series and positioned on the input side of the VFD.

Termination connections are illustrated on the product label. A1, B1, and C1 are the input terminals where the 3 phases of incoming power are to be wired. As a result, A2, B2, and C2 are the output terminals. In these cases, either the upper terminals or lower terminals can be used as the input terminals as long as the selection is consistent. For example, if an upper terminal is selected as the input, all upper terminals must be input terminals. Wiring from the output terminals should connect to the input of the VFD.

Refer to NEC wiring practices for appropriate wire sizes for your application.

Power Wiring: Only use 75°C copper conductors unless the wire connector is marked for Al/Cu, then the use of aluminum wire is permitted.

In standard 40°C ambient or less installations, a clearance of 3 inches on all sides of the reactors and its enclosure is recommended for assisting in heat dissipation and ample wire bending space. This is a general guideline for typical applications. If the reactor is being installed next to a heat sensitive instrument or control

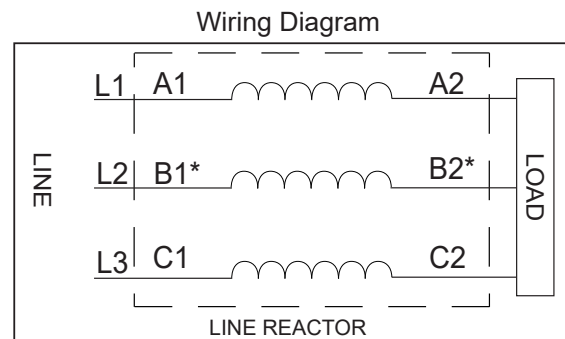
device, we recommend reviewing specific requirements or heat limitations. Line reactor heat loss information is available on the web at automationdirect.com.

These reactors are designed to be floor-mounted or wall-mounted. Large open-style devices should be panel mounted by incorporating a bracket that would act as a shelf to support the reactor and/or enclosure. When installing an open style device in an existing control cabinet, drive cabinet, motor control center, or other large enclosure, the reactor should be mounted in the lower half of the cabinet to prevent hot spots or pockets of heat (this typically allows better thermal dissipation and heat convection).

Field Wiring Information

Below is the typical wiring diagram for the 3-phase reactor applied to the front end of the Variable Frequency Drive (VFD).

Single-phase applications are acceptable, however, it is important to size the unit based on the single phase Full Load Amperage of the VFD. The input and output connections should be on terminals A and C to ensure proper performance.



* For single-phase applications, use coils A and C. Insulate terminals B1 and B2.

OUTPUT

When installing the Reactors on the OUTPUT side of the Variable Frequency Drive (VFD), please use the following guidelines:

Reactors should be mounted as close to the output terminals of the VFD as possible

Reactors are sized by the Full Load Amperage located on the motor nameplate.

Motors with high pole counts (1200RPM, 900RPM) typically draw more current than 1800RPM motors. A 1200RPM motor may require a larger reactor than an 1800RPM motor of the same HP.

Higher carrier frequencies can overheat reactors connected on the output side of a VFD. VFDs that are factory supplied or are adjustable to higher carrier frequency settings should be adjusted to a maximum of 8 kHz when running current is near the reactor FLA rating.

Please contact Technical Support for application information regarding the use of these reactors on the load or output side of the VFD or in applications where inductors are used.

Product Specifications

- 3-Phase, 600 Volt Class
- UL Listed; File E197592
- CE Marked
- Current-rated device
- 200% rated current for 3 minutes
- Ambient Temperature: LR = 40°C max; LR2 = 50°C max
- Maximum Temperature Rise:
≤80A = 135°C; >80A = 155°C