

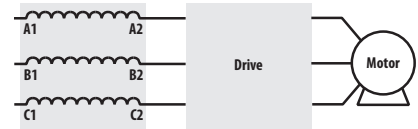
## 1321-3R, 1321-3RA, and 1321-3RB Series Line Reactors

### Applying Allen-Bradley Line Reactors

#### At the Input of the Drive

At the input of a drive, line reactors help protect against surges or spikes on the incoming power lines and help reduce harmonic distortion.

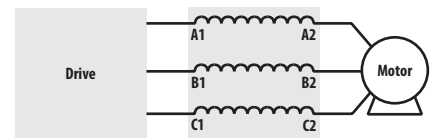
- Eliminate Nuisance Tripping
- Improve True Power Factor
- Extend Semiconductor Life
- Reduce Voltage Notching
- Reduce Harmonic Distortion
- Meet IEEE-519 or EN-61800



#### At the Output of the Drive

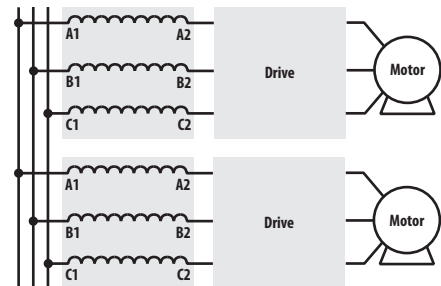
In long motor lead applications, Allen-Bradley load reactors located between the drive and motor help reduce dv/dt and motor terminal peak voltages. The use of a load reactor also helps protect the drive from surge currents caused by rapid changes in the load.

- Protect Motors from Long Lead Effects
- Reduce Surge Currents
- Reduce Output Voltage dv/dt
- Reduce Motor Temperature
- Extend Semiconductor Life
- Reduce Audible Motor Noise



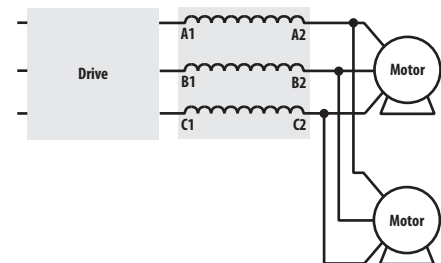
#### With Multiple Drives

Multiple drives on a common power line should each have their own line reactor. Individual line reactors provide filtering between each drive to help reduce any crosstalk while providing optimum surge protection for each drive.



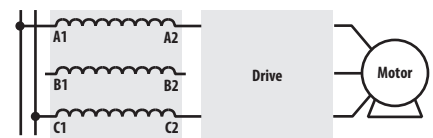
#### With Multiple Motors

When more than one motor is controlled by a single drive, a single line reactor can typically be used between the drive and all the motors. Size the line reactor based on the total motor/load horsepower.



#### With Single-Phase Input

A three-phase reactor can be used for single-phase applications by routing each of the two input power conductors to the outside two coils, and leaving the center coil disconnected. The sum of the inductance of the two coils is the total inductance applied to the circuit. Contact Rockwell Automation Technical Support for assistance in specifying the proper reactor.



## Selecting the Correct Impedance Rating

### *Why is the Right Impedance Rating Important?*

Selecting the correct impedance rating is critical for your job. An impedance value too low may not limit peak current. Too high of an impedance may reduce input voltage. Allen-Bradley line reactors offer two impedance ratings.

### *3% Impedance Rated Reactors to Reduce Nuisance Trips*

Allen-Bradley line reactors rated at 3% are typically sufficient to absorb line spikes and motor current surges and will help prevent nuisance tripping of drive and circuit breakers in most applications.

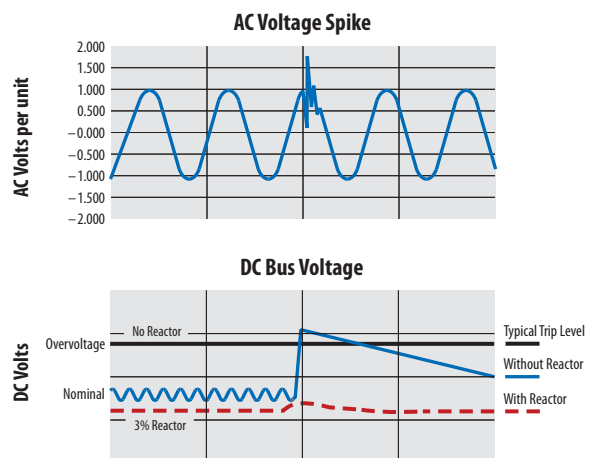
### *5% Impedance Rated Reactors to Reduce Harmonic Content*

Allen-Bradley reactors rated at 5% are best for reducing harmonic current and frequencies. These line reactors help comply with IEEE-519 (not normally used as load reactors).

### *Voltage Spike Protection*

Voltage spikes on AC power lines can cause elevation of the DC bus voltage which may cause the drive to trip on an overvoltage condition.

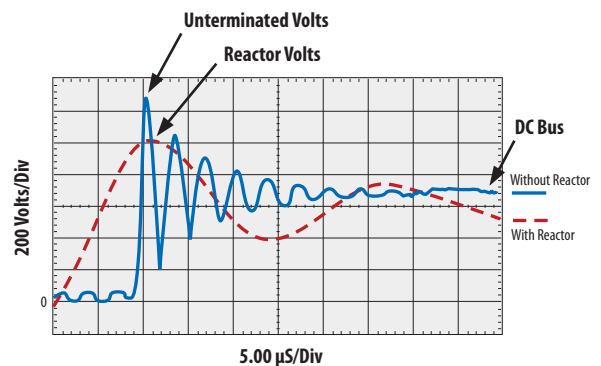
3% impedance reactors are very effective at protecting drives against voltage spikes and nuisance tripping. Allen-Bradley line reactors absorb these line spikes protecting the drive from nuisance tripping and damage.



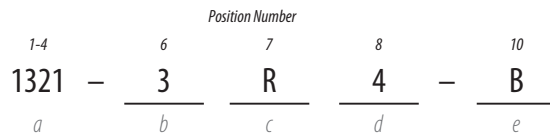
### *Motor Protection*

Allen-Bradley load reactors can help protect motors from high peak voltages.

For IGBT drive applications with long drive-to-motor lead lengths, Allen-Bradley load reactors can help protect against fast dv/dt rise times.



## Catalog Number Explanation



*a*

| Product |                      |
|---------|----------------------|
| Code    | Type                 |
| 1321    | 1321 Power Component |

*b*

| Phases |             |
|--------|-------------|
| Code   | Description |
| 3      | Three-Phase |

*c*

| Device |                                       |
|--------|---------------------------------------|
| Code   | Description                           |
| R      | Reactor, Open                         |
| RA, RB | Reactor, NEMA 1                       |
| RAB    | Reactor, NEMA 1, Cabinet Style 2 Only |

*d*

| Fundamental Amps |      |
|------------------|------|
| Code             | Amps |
| 1                | 1    |
| 2                | 2    |
| 4                | 4    |
| 8                | 8    |
| 12               | 12   |
| 18               | 18   |
| 25               | 25   |
| 35               | 35   |
| 45               | 45   |
| 55               | 55   |
| 80               | 80   |
| 100              | 100  |
| 130              | 130  |
| 160              | 160  |
| 200              | 200  |
| 250              | 250  |
| 320              | 320  |
| 400              | 400  |
| 500              | 500  |
| 600              | 600  |
| 750              | 750  |
| 850              | 850  |
| 1000             | 1000 |

*e*

| Inductance Rating |   |
|-------------------|---|
| Code              | Description   |
| A                 | Each reactor current rating has four inductance ratings also available. See the IP00 dimension table. |
| B                 |   |
| C                 |   |
| D                 |   |

## Common Specifications

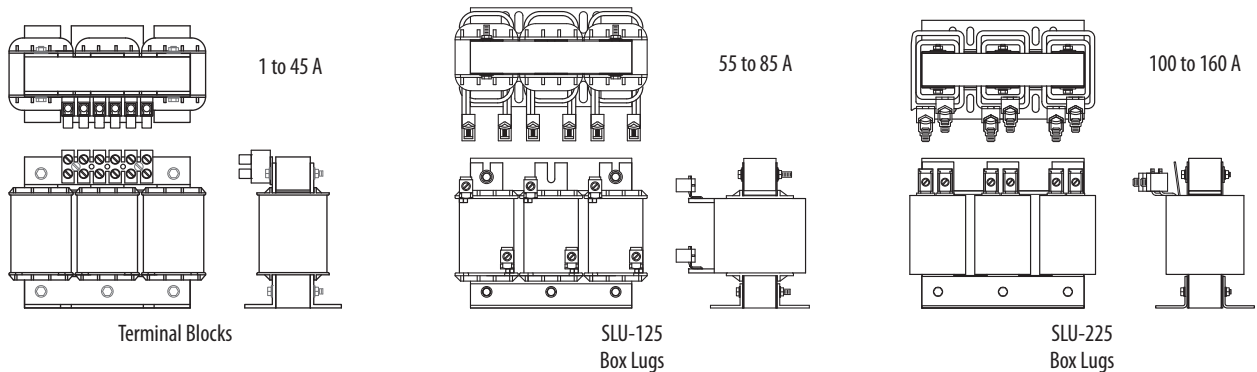
| Specification   |  | Rating  |
|---|--|---|
| Material  | Enclosures   | IP11 (NEMA/UL Type 1) – Sheet steel in accordance with UL, NEMA requirements  |
|   |  | IP00 (Open) or IP20 (Open – with finger safe terminals)   |
|   | Terminations   | 1...45 Amp (fundamental) Ratings – Finger guard IP20 terminal block   |
|   |  | 80...160 Amp (fundamental) Ratings – Solid copper box lugs  |
| 200...400 Amp (fundamental) Ratings – Copper tab terminals <sup>(1)</sup> |  |   |
|   |  | 401 Amps and above – Copper tab terminals <sup>(1)</sup>  |
| Harmonic Compensation   | All line reactors are compensated for the additional currents and high frequencies caused by the presence of harmonics |   |
| General Protection  | Impedance  | 3% or 5% based on the fundamental current ratings   |
|   | Overload Rating  | 200% of fundamental current for 30 minutes<br>300% of fundamental current for 1 minute  |
|   | dv/dt Protection   | Meets NEMA MG-1, part 31  |
| Electrical  | Max. Rated Voltage   | 600V AC (units with terminal blocks)<br>690V AC (units with box lugs or tab terminals)  |
|   | Max. Switching Freq.   | 20 kHz  |
|   | Fundamental Frequency  | Line/Load - 50/60 Hz  |
|   | Temperature Rise   | 135 °C average  |
|   | Dielectric Strength  | 3000 Volts rms (4243 volts peak)  |
|   | Inductance Curve (Typical)   | 100% at 100% current<br>100% at 150% current<br>50% at 350% current (minimum)   |
|   | Inductance Tolerance   | ±10%  |
|   | Insulation System  | Class N (200 °C)  |
|   | Impregnation   | High bond strength solventless epoxy, 200 °C, UL94HB recognized   |
| Environmental   | Ambient Temperature  | 45 °C (maximum)   |
|   | Altitude   | 1000 meters (3280 feet)   |
| Agency Approvals  | UL-508   | File E180243 Component Listed (1...2400 amps)<br>File E180243 UL Listed NEMA Type 1 units (1...2400 amps)<br>Note: Short Circuit rating not required under Exception No.1 of UL508A SB4.2.1 effective 4/25/06 |
|   | CSA C22.2, Class N, 200 °C   | File LR29753-13 CSA Certified (1...2400 amps)<br>File E66214, Type 200-18, UL Recognized Insulation System  |
|   | CE   | TUV certified to EN61558-2-20:2000  |

(1) For applications with reactors rated 200 Amps or more, cable-style connections are recommended.

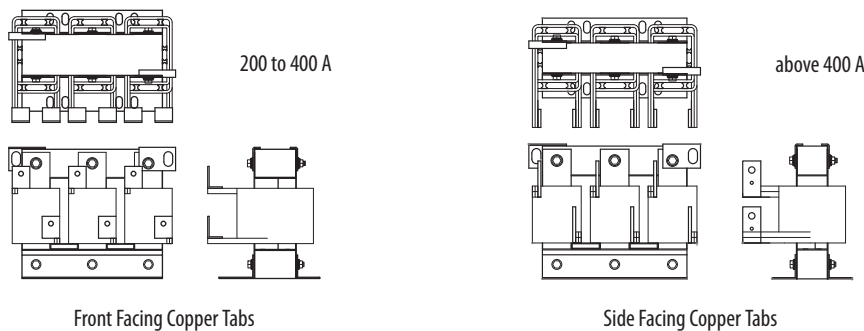
## Termination

Allen-Bradley reactors rated 45 Amps (fundamental) and below are supplied with an integral-mounted terminal block. Reactors rated from 55 to 160 Amps (fundamental) are supplied with box lugs. Reactors rated 200 to 400 Amps (fundamental) are supplied with front facing copper tabs for cable connections. Above 400 Amps (fundamental), side facing copper tabs are used for cable connections. The '3R' and '3RA' designations for the 1321 line reactors indicate the following: 3R = Open Enclosure Line Reactor and 3RA = NEMA 1 Enclosure Line Reactor.

### Typical Termination Types and Specifications



| Reactor Catalog Number       |                                | Termination         | Max/Min Wire Size     | Max Torque  |
|------------------------------|--------------------------------|---------------------|-----------------------|-------------|
| IP00 (Open) or IP20          | IP11 (NEMA/UL Type 1)          | Type                | mm <sup>2</sup> (AWG) | N·m (lb·in) |
| 1321-3R1-A to 1321-3R8-D     | 1321-3RA1-A to 1321-3RA8-D     | 20 A Terminal Block | 2.1/0.3 (14/22)       | 0.51 (4.5)  |
| 1321-3R12-A to 1321-3R35-B   | 1321-3RA12-A to 1321-3RA35-B   | 65 A Terminal Block | 16.0/0.3 (5/22)       | 1.81 (16)   |
| 1321-3R35-C to 1321-3R45-C   | 1321-3RA35-C to 1321-3RA45-C   | 85 A Terminal Block | 21.2/0.8 (4/18)       | 2.26 (20)   |
| 1321-3R55-A to 1321-3R80-C   | 1321-3RA55-A to 1321-3RA80-C   | SLU-125 Box Lug     | 50.0/10.0 (0/6)       | 5.09 (45)   |
| 1321-3R100-A to 1321-3R160-C | 1321-3RA100-A to 1321-3RA160-C | SLU-225 Box Lug     | 120.0-27.0 (0000/2)   | 16.95 (150) |

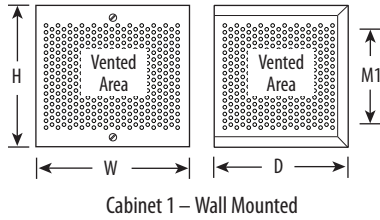


| Reactor Catalog Number         |                                  | Termination             | Contact Surface (H x W)   | Hole Diameter                   | Thickness    |
|--------------------------------|----------------------------------|-------------------------|---------------------------|---------------------------------|--------------|
| IP00 (Open) or IP20            | IP11 (NEMA/UL Type 1)            | Type                    | mm (in.)                  | mm (in.)                        | mm (in.)     |
| 1321-3R200-A to 1321-3R200-C   | 1321-3RA200-A to 1321-3RA200-C   | Front Facing Copper Tab | 41.3 x 25.4 (1.63 x 1.0)  | 10.36 (0.408)                   | 3.18 (0.125) |
| 1321-3RB250-B to 1321-3RB250-C | 1321-3RAB250-A to 1321-3RAB250-C |                         | 57.2 x 19.1 (2.25 x 0.75) | 10.31 (0.406)                   | 4.75 (0.187) |
| 1321-3RB320-B to 1321-3R400-C  | 1321-3RAB320-A to 1321-3RA400-A  |                         | 44.5 x 38.1 (1.75 x 1.5)  | 10.31 (0.406)                   | 3.18 (0.125) |
| 1321-3R500-A to 1321-3R500-C   | 1321-3RA500-A to 1321-3RA500-C   | Side Facing Copper Tab  | 44.5 x 38.1 (1.75 x 1.5)  | 10.31 (0.406)                   | 3.18 (0.125) |
| 1321-3R600-A to 1321-3R600-C   | 1321-3RA600-A to 1321-3RA-600-C  |                         | 76.2 x 38.1 (3.00 x 1.5)  | 13.49 and 6.35 (0.531 and 0.25) | 6.35 (0.25)  |
| 1321-3R750-A to 1321-3R750-C   | 1321-3RA750-A to 1321-3RA850-C   |                         | 44.5 x 38.1 (1.75 x 1.5)  | 10.31 (0.406)                   | 3.18 (0.125) |
| 1321-3R850-B to 1321-3R1000-C  | 1321-3RA850-B to 1321-3RA1000-C  |                         | 44.5 x 38.1 (1.75 x 1.5)  | 10.31 (0.406)                   | 3.18 (0.125) |

## Mounting Dimensions and Weights

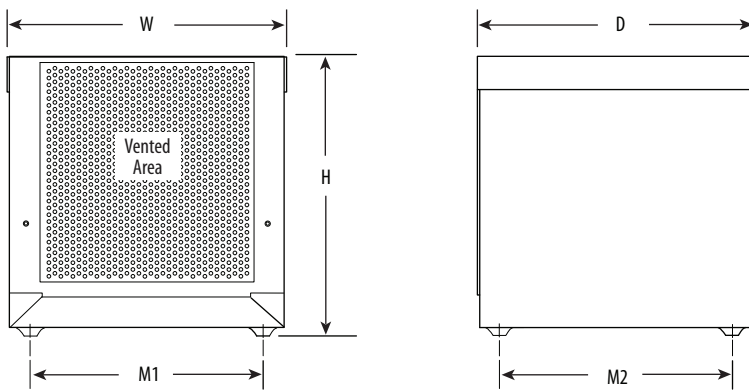
**IMPORTANT** The dimensions and weights provided on the following pages are for estimating purposes only. Conduit entry locations for floor mounted enclosures are the responsibility of the installer. Contact your Allen-Bradley Sales Office if certified drawings are required for planning and installation.

### IP11 (NEMA/UL Type 1)



Cabinet 1 – Wall Mounted

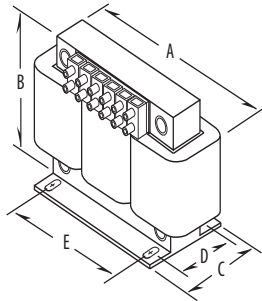
| Catalog Number<br>1321- ... | Unit      | Dimensions in mm (in.) and Weights in kg (lb) |           |           |           |                       |
|-----------------------------|-----------|---|-----------|-----------|-----------|-----------------------|
|                             |           | H   | W         | D         | M1        | Weight (Cabinet Only) |
| 3RA1-A to 3RA18-B           | Cabinet 1 | 203 (8.0)                                     | 203 (8.0) | 152 (6.0) | 140 (5.5) | 3.2 (7)               |



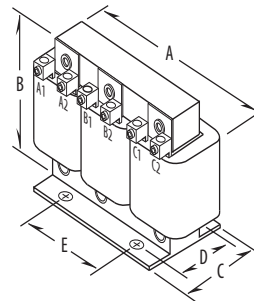
Cabinet 2 – Floor Mounted

| Catalog Number<br>1321- ... | Unit      | Dimensions in mm (in.) and Weights in kg (lb) |            |            |            |            |                       |
|-----------------------------|-----------|---|------------|------------|------------|------------|-----------------------|
|                             |           | H   | W          | D          | Feet M1    | Feet M2    | Weight (Cabinet Only) |
| 3RA18-C to 3RAB250-A        | Cabinet 2 | 330 (13.0)                                    | 336 (13.2) | 332 (13.1) | 279 (11.0) | 279 (11.0) | 8.2 (18)              |

*IP00/Open*



IP00 /Open, 45 Amps (fundamental) and Below



IP00/Open, 80 Amps (fundamental) and Above

Sizing Guidelines

Fundamental amps are used for sizing the reactor to be equal to or slightly higher than the total motor FLA. Sizing reactors to drive ampere ratings alone may result in mis-sizing the reactor.

| Catalog Number | Fundamental Amps | Inductance - mH<br>(Based on Fundamental Amps) | Watts Loss | Dimensions in mm (in.) and Weight in kg (lb) |            |            |                  |           |           |
|----------------|------------------|--|------------|--|------------|------------|------------------|-----------|-----------|
|                |                  |  |            | A  | B          | C          | D <sup>(1)</sup> | E         | Weight    |
| 1321-3R1-A     | 1                | 100.0  | 14         | 112 (4.40)                                   | 104 (4.10) | 79 (3.10)  | 60 (2.35)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R1-B     |                  | 50.0   | 14.8       | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R1-C     |                  | 36.0   | 12         | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.4 (3)   |
| 1321-3R1-D     |                  | 18.0   | 5          | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.4 (3)   |
| 1321-3R2-A     | 2                | 12.0   | 7.5        | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R2-B     |                  | 20.0   | 11.3       | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R2-C     |                  | 32.0   | 16         | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R2-D     |                  | 6.0  | 10.7       | 112 (4.40)                                   | 104 (4.10) | 64 (2.50)  | 44 (1.73)        | 37 (1.44) | 1.4 (3)   |
| 1321-3R4-A     | 4                | 3.0  | 14.5       | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R4-B     |                  | 6.5  | 20         | 112 (4.40)                                   | 104 (4.10) | 71 (2.80)  | 50 (1.98)        | 37 (1.44) | 1.8 (4)   |
| 1321-3R4-C     |                  | 9.0  | 20         | 112 (4.40)                                   | 104 (4.10) | 86 (3.40)  | 60 (2.35)        | 37 (1.44) | 2.3 (5)   |
| 1321-3R4-D     |                  | 12.0   | 21         | 112 (4.40)                                   | 104 (4.10) | 86 (3.40)  | 66 (2.60)        | 37 (1.44) | 2.7 (6)   |
| 1321-3R8-A     | 8                | 1.5  | 19.5       | 152 (6.00)                                   | 121 (4.75) | 76 (3.00)  | 53 (2.10)        | 51 (2.00) | 3.2 (7)   |
| 1321-3R8-B     |                  | 3.0  | 29         | 152 (6.00)                                   | 121 (4.75) | 76 (3.00)  | 53 (2.10)        | 51 (2.00) | 3.6 (8)   |
| 1321-3R8-C     |                  | 5.0  | 25.3       | 152 (6.00)                                   | 121 (4.75) | 86 (3.40)  | 67 (2.62)        | 51 (2.00) | 5.0 (11)  |
| 1321-3R8-D     |                  | 7.5  | 28         | 152 (6.00)                                   | 121 (4.75) | 86 (3.40)  | 63 (2.48)        | 51 (2.00) | 5.9 (13)  |
| 1321-3R12-A    | 12               | 1.25   | 26         | 152 (6.00)                                   | 127 (5.00) | 84 (3.30)  | 53 (2.10)        | 51 (2.00) | 4.1 (9)   |
| 1321-3R12-B    |                  | 2.5  | 31         | 152 (6.00)                                   | 127 (5.00) | 84 (3.30)  | 53 (2.10)        | 51 (2.00) | 4.5 (10)  |
| 1321-3R12-C    |                  | 4.2  | 41         | 152 (6.00)                                   | 127 (5.00) | 99 (3.90)  | 70 (2.75)        | 51 (2.00) | 8.2 (18)  |
| 1321-3R18-A    | 18               | 0.8  | 36         | 152 (6.00)                                   | 135 (5.30) | 81 (3.20)  | 53 (2.10)        | 51 (2.00) | 4.1 (9)   |
| 1321-3R18-B    |                  | 1.5  | 43         | 152 (6.00)                                   | 135 (5.30) | 89 (3.50)  | 63 (2.48)        | 51 (2.00) | 5.5 (12)  |
| 1321-3R18-C    |                  | 2.5  | 43         | 206 (8.10)                                   | 155 (6.10) | 102 (4.00) | 66 (2.60)        | 76 (3.00) | 7.3 (16)  |
| 1321-3R25-A    | 25               | 0.5  | 48         | 183 (7.20)                                   | 147 (5.80) | 89 (3.50)  | 60 (2.35)        | 76 (3.00) | 5.0 (11)  |
| 1321-3R25-B    |                  | 1.2  | 52         | 183 (7.20)                                   | 147 (5.80) | 89 (3.50)  | 60 (2.35)        | 76 (3.00) | 6.4 (14)  |
| 1321-3R25-C    |                  | 1.8  | 61         | 183 (7.20)                                   | 147 (5.80) | 109 (4.30) | 79 (3.10)        | 76 (3.00) | 9.1 (20)  |
| 1321-3R35-A    | 35               | 0.4  | 49         | 183 (7.20)                                   | 147 (5.80) | 102 (4.00) | 66 (2.60)        | 76 (3.00) | 6.4 (14)  |
| 1321-3R35-B    |                  | 0.8  | 54         | 183 (7.20)                                   | 147 (5.80) | 102 (4.00) | 70 (2.75)        | 76 (3.00) | 7.3 (16)  |
| 1321-3R35-C    |                  | 1.2  | 54         | 229 (9.00)                                   | 188 (7.40) | 119 (4.70) | 80 (3.16)        | 76 (3.00) | 14.0 (30) |

Table continued on next page.

| Catalog Number               | Fundamental Amps | Inductance - mH<br>(Based on Fundamental Amps) | Watts Loss | Dimensions in mm (in.) and Weight in kg (lb) |             |             |                  |            |             |
|------------------------------|------------------|--|------------|--|-------------|-------------|------------------|------------|-------------|
|                              |                  |  |            | A  | B           | C           | D <sup>(1)</sup> | E          | Weight      |
| 1321-3R45-A                  | 45               | 0.3  | 54         | 229 (9.00)                                   | 188 (7.40)  | 119 (4.70)  | 80 (3.16)        | 76 (3.00)  | 10.0 (22)   |
| 1321-3R45-B                  |                  | 0.7  | 62         | 229 (9.00)                                   | 188 (7.40)  | 119 (4.70)  | 80 (3.16)        | 76 (3.00)  | 13.0 (28)   |
| 1321-3R45-C                  |                  | 1.2  | 65         | 229 (9.00)                                   | 185 (7.30)  | 135 (5.30)  | 93 (3.66)        | 76 (3.00)  | 18.0 (39)   |
| 1321-3R55-A                  | 55               | 0.25   | 64         | 229 (9.00)                                   | 185 (7.30)  | 135 (5.30)  | 80 (3.16)        | 76 (3.00)  | 11.0 (24)   |
| 1321-3R55-B                  |                  | 0.5  | 67         | 229 (9.00)                                   | 178 (7.00)  | 135 (5.30)  | 80 (3.16)        | 76 (3.00)  | 12.0 (26)   |
| 1321-3R55-C                  |                  | 0.85   | 71         | 229 (9.00)                                   | 178 (7.00)  | 152 (6.00)  | 99 (3.91)        | 76 (3.00)  | 16.0 (35)   |
| 1321-3R80-A                  | 80               | 0.2  | 82         | 229 (9.00)                                   | 183 (7.20)  | 160 (6.30)  | 88 (3.47)        | 92 (3.63)  | 11.3 (25)   |
| 1321-3R80-B                  |                  | 0.4  | 86         | 229 (9.00)                                   | 183 (7.20)  | 165 (6.50)  | 88 (3.47)        | 92 (3.63)  | 14.9 (33)   |
| 1321-3R80-C                  |                  | 0.7  | 96         | 274 (10.80)                                  | 216 (8.50)  | 173 (6.80)  | 106 (4.16)       | 92 (3.63)  | 28.0 (61)   |
| 1321-3R100-A                 | 100              | 0.15   | 94         | 229 (9.00)                                   | 185 (7.30)  | 165 (6.50)  | 84 (3.30)        | 92 (3.63)  | 13.1 (29)   |
| 1321-3R100-B                 |                  | 0.3  | 84         | 229 (9.00)                                   | 185 (7.30)  | 173 (6.80)  | 93 (3.66)        | 92 (3.63)  | 16.8 (37)   |
| 1321-3R100-C                 |                  | 0.45   | 108        | 274 (10.80)                                  | 210 (8.30)  | 156 (6.20)  | 106 (4.16)       | 92 (3.63)  | 34.0 (74)   |
| 1321-3R130-A                 | 130              | 0.1  | 108        | 229 (9.00)                                   | 178 (7.00)  | 118 (4.70)  | 80 (3.16)        | 76 (3.00)  | 13.1 (29)   |
| 1321-3R130-B                 |                  | 0.2  | 180        | 229 (9.00)                                   | 183 (7.20)  | 173 (6.80)  | 93 (3.66)        | 92 (3.63)  | 19.5 (43)   |
| 1321-3R130-C                 |                  | 0.3  | 128        | 279 (11.00)                                  | 216 (8.50)  | 156 (6.20)  | 106 (4.16)       | 92 (3.63)  | 29.0 (64)   |
| 1321-3R160-A                 | 160              | 0.075  | 116        | 229 (9.00)                                   | 183 (7.20)  | 173 (6.80)  | 80 (3.16)        | 92 (3.63)  | 18.6 (41)   |
| 1321-3R160-B                 |                  | 0.15   | 149        | 274 (10.80)                                  | 211 (8.30)  | 152 (6.00)  | 88 (3.47)        | 92 (3.63)  | 23.0 (50)   |
| 1321-3R160-C                 |                  | 0.23   | 138        | 292 (11.50)                                  | 216 (8.50)  | 229 (9.00)  | 119 (4.69)       | 92 (3.63)  | 30.0 (67)   |
| 1321-3R200-A                 | 200              | 0.055  | 124        | 229 (9.00)                                   | 191 (7.50)  | 185 (7.30)  | 106 (4.16)       | 76 (3.00)  | 17.2 (38)   |
| 1321-3R200-B <sup>(1)</sup>  |                  | 0.110  | 168        | 229 (9.00)                                   | 191 (7.50)  | 211 (8.30)  | 112 (4.41)       | 76 (3.00)  | 24.5 (54)   |
| 1321-3R200-C <sup>(1)</sup>  |                  | 0.185  | 146        | 274 (10.80)                                  | 211 (8.30)  | 254 (10.00) | 150 (5.91)       | 92 (3.63)  | 45.4 (100)  |
| 1321-3RB250-B <sup>(1)</sup> | 250              | 0.090  | 231        | 274 (10.80)                                  | 216 (8.50)  | 229 (9.00)  | 131 (5.16)       | 117 (4.60) | 36.3 (80)   |
| 1321-3RB250-C <sup>(1)</sup> |                  | 0.150  | 219        | 366 (14.40)                                  | 284 (11.20) | 262 (10.30) | 148 (5.82)       | 117 (4.60) | 57.0 (125)  |
| 1321-3RB320-A <sup>(1)</sup> | 320              | 0.040  | 224        | 274 (10.80)                                  | 229 (9.00)  | 211 (8.30)  | 131 (5.16)       | 117 (4.60) | 36.3 (80)   |
| 1321-3RB320-B <sup>(1)</sup> |                  | 0.075  | 264        | 274 (10.80)                                  | 229 (9.00)  | 254 (10.00) | 149 (5.88)       | 117 (4.60) | 46.3 (102)  |
| 1321-3RB320-C <sup>(1)</sup> |                  | 0.125  | 351        | 366 (14.40)                                  | 286 (11.30) | 267 (10.50) | 181 (7.13)       | 117 (4.60) | 72.6 (160)  |
| 1321-3RB400-A <sup>(1)</sup> | 400              | 0.030  | 231        | 274 (10.80)                                  | 254 (10.00) | 254 (10.00) | 131 (5.16)       | 117 (4.60) | 38.1 (84)   |
| 1321-3RB400-B <sup>(1)</sup> |                  | 0.060  | 333        | 381 (15.00)                                  | 286 (11.30) | 292 (11.50) | 172 (6.76)       | 117 (4.60) | 53.5 (118)  |
| 1321-3RB400-C <sup>(1)</sup> |                  | 0.105  | 293        | 366 (14.40)                                  | 286 (11.30) | 318 (12.50) | 184 (7.26)       | 117 (4.60) | 67.6 (149)  |
| 1321-3R500-A <sup>(1)</sup>  | 500              | 0.025  | 266        | 274 (10.80)                                  | 229 (9.00)  | 267 (10.50) | 140 (5.50)       | 117 (4.60) | 42.2 (93)   |
| 1321-3R500-B <sup>(1)</sup>  |                  | 0.050  | 340        | 366 (14.40)                                  | 292 (11.50) | 292 (11.50) | 172 (6.76)       | 117 (4.60) | 53.5 (118)  |
| 1321-3R500-C <sup>(1)</sup>  |                  | 0.085  | 422        | 366 (14.40)                                  | 292 (11.50) | 338 (13.30) | 248 (9.76)       | 117 (4.60) | 95.3 (210)  |
| 1321-3R600-A <sup>(1)</sup>  | 600              | 0.020  | 307        | 366 (14.40)                                  | 292 (11.50) | 254 (10.00) | 134 (5.26)       | 117 (4.60) | 54.4 (120)  |
| 1321-3R600-B <sup>(1)</sup>  |                  | 0.040  | 414        | 366 (14.40)                                  | 286 (11.30) | 305 (12.00) | 203 (8.00)       | 117 (4.60) | 79.4 (175)  |
| 1321-3R600-C <sup>(1)</sup>  |                  | 0.065  | 406        | 366 (14.40)                                  | 286 (11.30) | 381 (15.00) | 235 (9.26)       | 117 (4.60) | 122.5 (270) |
| 1321-3R750-A <sup>(1)</sup>  | 750              | 0.015  | 427        | 366 (14.40)                                  | 292 (11.50) | 279 (11.00) | 168 (6.63)       | 183 (7.20) | 63.5 (140)  |
| 1321-3R750-B <sup>(1)</sup>  |                  | 0.029  | 630        | 366 (14.40)                                  | 292 (11.50) | 318 (12.50) | 204 (8.01)       | 183 (7.20) | 86.2 (190)  |
| 1321-3R750-C <sup>(1)</sup>  |                  | 0.048  | 552        | 366 (14.40)                                  | 368 (14.50) | 356 (14.00) | 235 (9.26)       | 183 (7.20) | 120.2 (265) |
| 1321-3R750-E <sup>(1)</sup>  |                  | 0.060  | 810        | 366 (14.40)                                  | 368 (14.50) | 381 (15.00) | 276 (10.88)      | 183 (7.20) | 147.4 (325) |
| 1321-3R850-A <sup>(1)</sup>  | 850              | 0.015  | 799        | 451 (17.80)                                  | 394 (15.50) | 368 (14.50) | 191 (7.50)       | 183 (7.20) | 88.0 (195)  |
| 1321-3R850-B <sup>(1)</sup>  |                  | 0.027  | 756        | 451 (17.80)                                  | 394 (15.50) | 394 (15.50) | 208 (8.20)       | 183 (7.20) | 98.0 (215)  |
| 1321-3R850-C <sup>(1)</sup>  |                  | 0.042  | 758        | 451 (17.80)                                  | 400 (15.80) | 445 (17.50) | 208 (8.20)       | 183 (7.20) | 143.0 (315) |
| 1321-3R1000-B <sup>(1)</sup> | 1000             | 0.022  | 964        | 514 (20.25)                                  | 425 (16.80) | 330 (13.00) | 216 (8.50)       | 183 (7.20) | 185.0 (408) |
| 1321-3R1000-C <sup>(1)</sup> |                  | 0.038  | 960        | 514 (20.25)                                  | 425 (16.80) | 381 (15.00) | 273 (10.76)      | 183 (7.20) | 267.2 (589) |

(1) Removable lifting rings are supplied with the unit.