



# RL-1328

## COMMON MODE CHOKES

### U-CORE DESIGN

#### DESCRIPTION

- Common Mode Chokes
- U-Core Design

#### ENVIRONMENTAL DATA

- Storage temperature range: -55°C to +130°C
- Operating temperature range: -55°C to +130°C

#### PACKAGING INFORMATION

- Packaging information: pg. 493

#### FEATURES & APPLICATIONS

- Wide range of standard inductances with current ratings up to 35 A
- Leads are pre-tinned for ease of soldering in PCB mounting applications
- Typical applications include: filters, SCR and TRIAC controls, power supplies, and RFI suppression
- Windings balanced within 1%
- At +80°C ambient, +40C° rise
- Dielectric withstanding voltage rated at 2500 VAC line to line

Verify operation with sample in actual circuit. Order samples at [www.rencousa.com](http://www.rencousa.com).

#### MECHANICAL DIMENSIONS

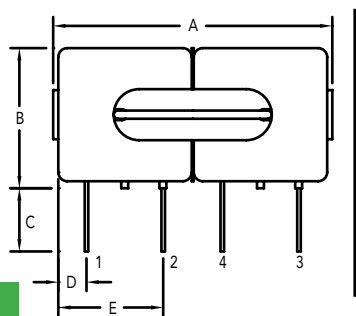
U.S. Standard (mm)

| PART NUMBER | A (MAX.)      | B (MAX.)      | C (MIN.)      | D (REF.)     | E (REF.)      | F (REF.)      | G (MAX.)      |
|-------------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|
| RL-1328     | 2.410 (61.11) | 1.250 (31.75) | 0.500 (12.70) | 0.250 (6.35) | 0.915 (23.24) | 0.720 (18.24) | 2.000 (50.80) |

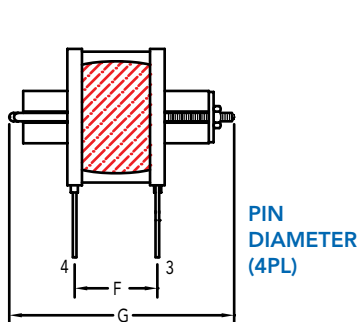
| H (REF.)      | I (REF.)      | J (REF.)      | K (REF.)      | L (REF.)      |
|---------------|---------------|---------------|---------------|---------------|
| 1.910 (48.41) | 1.220 (30.94) | 0.720 (18.24) | 1.220 (30.94) | 0.690 (17.53) |

| PART NUMBER | PART WEIGHT     |
|-------------|-----------------|
| RL-1328     | 125.0g (4.41oz) |

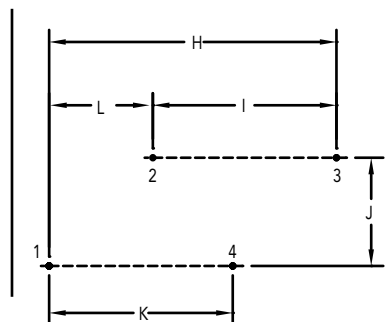
FRONT VIEW



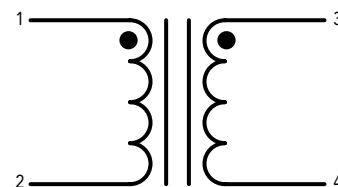
SIDE VIEW



RECOMMENDED PCB LAYOUT



SCHEMATIC



# RL-1328-3, RL-1328-5

| Renco Part No.<br>RL-1328-3 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|-----------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-3-100               | 100.0                    | 0.033                 | 20.0                                     |
| RL-1328-3-150               | 150.0                    | 0.034                 | 25.0                                     |
| RL-1328-3-180               | 180.0                    | 0.035                 | 28.0                                     |
| RL-1328-3-220               | 220.0                    | 0.036                 | 32.0                                     |
| RL-1328-3-270               | 270.0                    | 0.037                 | 37.0                                     |
| RL-1328-3-330               | 330.0                    | 0.038                 | 40.0                                     |
| RL-1328-3-390               | 390.0                    | 0.039                 | 45.0                                     |
| RL-1328-3-470               | 470.0                    | 0.040                 | 49.0                                     |
| RL-1328-3-560               | 560.0                    | 0.041                 | 50.0                                     |
| RL-1328-3-680               | 680.0                    | 0.042                 | 53.0                                     |
| RL-1328-3-820               | 820.0                    | 0.044                 | 66.0                                     |
| RL-1328-3-1000              | 1000.0                   | 0.050                 | 80.0                                     |
| RL-1328-3-1200              | 1200.0                   | 0.055                 | 93.0                                     |
| RL-1328-3-1500              | 1500.0                   | 0.060                 | 117.0                                    |
| RL-1328-3-1800              | 1800.0                   | 0.066                 | 150.0                                    |
| RL-1328-3-2200              | 2200.0                   | 0.073                 | 177.0                                    |
| RL-1328-3-2700              | 2700.0                   | 0.083                 | 220.0                                    |
| RL-1328-3-3300              | 3300.0                   | 0.088                 | 270.0                                    |
| RL-1328-3-3900              | 3900.0                   | 0.100                 | 320.0                                    |
| RL-1328-3-4700              | 4700.0                   | 0.115                 | 386.0                                    |
| RL-1328-3-5600              | 5600.0                   | 0.121                 | 462.0                                    |
| RL-1328-3-6800              | 6800.0                   | 0.133                 | 510.0                                    |
| RL-1328-3-8200              | 8200.0                   | 0.144                 | 688.0                                    |
| RL-1328-3-10000             | 10000.0                  | 0.165                 | 825.0                                    |
| RL-1328-3-12000             | 12000.0                  | 0.188                 | 980.0                                    |
| RL-1328-3-15000             | 15000.0                  | 0.209                 | 1210.0                                   |
| RL-1328-3-18000             | 18000.0                  | 0.290                 | 1430.0                                   |
| RL-1328-3-22000             | 22000.0                  | 0.315                 | 1730.0                                   |
| RL-1328-3-27000             | 27000.0                  | 0.350                 | 2123.0                                   |
| RL-1328-3-33000             | 33000.0                  | 0.500                 | 2640.0                                   |
| RL-1328-3-39000             | 39000.0                  | 0.540                 | 3080.0                                   |

| Renco Part No.<br>RL-1328-5 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|-----------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-5-100               | 100.0                    | 0.010                 | 17.0                                     |
| RL-1328-5-120               | 120.0                    | 0.012                 | 19.0                                     |
| RL-1328-5-150               | 150.0                    | 0.013                 | 21.0                                     |
| RL-1328-5-180               | 180.0                    | 0.014                 | 24.0                                     |
| RL-1328-5-220               | 220.0                    | 0.015                 | 26.0                                     |
| RL-1328-5-270               | 270.0                    | 0.017                 | 28.0                                     |
| RL-1328-5-330               | 330.0                    | 0.019                 | 30.0                                     |
| RL-1328-5-390               | 390.0                    | 0.020                 | 32.0                                     |
| RL-1328-5-470               | 470.0                    | 0.022                 | 35.0                                     |
| RL-1328-5-560               | 560.0                    | 0.024                 | 39.0                                     |
| RL-1328-5-680               | 680.0                    | 0.027                 | 48.0                                     |
| RL-1328-5-820               | 820.0                    | 0.028                 | 60.0                                     |
| RL-1328-5-1000              | 1000.0                   | 0.031                 | 72.0                                     |
| RL-1328-5-1200              | 1200.0                   | 0.034                 | 94.0                                     |
| RL-1328-5-1500              | 1500.0                   | 0.037                 | 100.0                                    |
| RL-1328-5-1800              | 1800.0                   | 0.041                 | 130.0                                    |
| RL-1328-5-2200              | 2200.0                   | 0.047                 | 167.0                                    |
| RL-1328-5-2700              | 2700.0                   | 0.052                 | 208.0                                    |
| RL-1328-5-3300              | 3300.0                   | 0.057                 | 248.0                                    |
| RL-1328-5-3900              | 3900.0                   | 0.063                 | 286.0                                    |
| RL-1328-5-4700              | 4700.0                   | 0.075                 | 349.0                                    |
| RL-1328-5-5600              | 5600.0                   | 0.078                 | 417.0                                    |
| RL-1328-5-6800              | 6800.0                   | 0.088                 | 506.0                                    |
| RL-1328-5-8200              | 8200.0                   | 0.100                 | 603.0                                    |
| RL-1328-5-10000             | 10000.0                  | 0.110                 | 733.0                                    |
| RL-1328-5-12000             | 12000.0                  | 0.127                 | 883.0                                    |

## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 5 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms

## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 3 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms



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# RL-1328-10, RL-1328-15

| Renco Part No.<br>RL-1328-10 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|------------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-10-100               | 100.0                    | 0.0080                | 10.0                                     |
| RL-1328-10-120               | 120.0                    | 0.0085                | 11.0                                     |
| RL-1328-10-150               | 150.0                    | 0.0090                | 13.0                                     |
| RL-1328-10-180               | 180.0                    | 0.0095                | 14.0                                     |
| RL-1328-10-220               | 220.0                    | 0.0100                | 16.0                                     |
| RL-1328-10-270               | 270.0                    | 0.0120                | 22.0                                     |
| RL-1328-10-330               | 330.0                    | 0.0130                | 26.0                                     |
| RL-1328-10-390               | 390.0                    | 0.0140                | 29.0                                     |
| RL-1328-10-470               | 470.0                    | 0.0160                | 38.0                                     |
| RL-1328-10-560               | 560.0                    | 0.0170                | 43.0                                     |
| RL-1328-10-680               | 680.0                    | 0.0190                | 53.0                                     |
| RL-1328-10-820               | 820.0                    | 0.0200                | 63.0                                     |
| RL-1328-10-1000              | 1000.0                   | 0.0220                | 75.0                                     |
| RL-1328-10-1200              | 1200.0                   | 0.0240                | 94.0                                     |
| RL-1328-10-1500              | 1500.0                   | 0.0270                | 119.0                                    |
| RL-1328-10-1800              | 1800.0                   | 0.0320                | 140.0                                    |
| RL-1328-10-2200              | 2200.0                   | 0.0350                | 176.0                                    |
| RL-1328-10-2700              | 2700.0                   | 0.0390                | 215.0                                    |
| RL-1328-10-3300              | 3300.0                   | 0.0450                | 267.0                                    |
| RL-1328-10-3900              | 3900.0                   | 0.0490                | 316.0                                    |
| RL-1328-10-4700              | 4700.0                   | 0.0560                | 380.0                                    |
| RL-1328-10-5600              | 5600.0                   | 0.0660                | 460.0                                    |

## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 10 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE  
APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms

| Renco Part No.<br>RL-1328-15 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|------------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-15-100               | 100.0                    | 0.007                 | 8.0                                      |
| RL-1328-15-120               | 120.0                    | 0.007                 | 12.0                                     |
| RL-1328-15-150               | 150.0                    | 0.007                 | 14.0                                     |
| RL-1328-15-180               | 180.0                    | 0.007                 | 16.0                                     |
| RL-1328-15-220               | 220.0                    | 0.007                 | 18.0                                     |
| RL-1328-15-270               | 270.0                    | 0.008                 | 21.0                                     |
| RL-1328-15-330               | 330.0                    | 0.008                 | 26.0                                     |
| RL-1328-15-390               | 390.0                    | 0.010                 | 29.0                                     |
| RL-1328-15-470               | 470.0                    | 0.011                 | 38.0                                     |
| RL-1328-15-560               | 560.0                    | 0.012                 | 42.0                                     |
| RL-1328-15-680               | 680.0                    | 0.013                 | 51.0                                     |
| RL-1328-15-820               | 820.0                    | 0.014                 | 62.0                                     |
| RL-1328-15-1000              | 1000.0                   | 0.015                 | 85.0                                     |
| RL-1328-15-1200              | 1200.0                   | 0.018                 | 93.0                                     |
| RL-1328-15-1500              | 1500.0                   | 0.019                 | 115.0                                    |
| RL-1328-15-1800              | 1800.0                   | 0.021                 | 146.0                                    |
| RL-1328-15-2200              | 2200.0                   | 0.024                 | 170.0                                    |
| RL-1328-15-2700              | 2700.0                   | 0.027                 | 208.0                                    |

## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 15 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE  
APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms



# RL-1328-22, RL-1328-35

| Renco Part No.<br>RL-1328-22 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|------------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-22-47                | 47.0                     | 0.0025                | 7.0                                      |
| RL-1328-22-68                | 68.0                     | 0.0028                | 8.0                                      |
| RL-1328-22-100               | 100.0                    | 0.0032                | 9.0                                      |
| RL-1328-22-120               | 120.0                    | 0.0037                | 10.0                                     |
| RL-1328-22-150               | 150.0                    | 0.0040                | 15.0                                     |
| RL-1328-22-180               | 180.0                    | 0.0043                | 18.0                                     |
| RL-1328-22-220               | 220.0                    | 0.0047                | 20.0                                     |
| RL-1328-22-270               | 270.0                    | 0.0050                | 25.0                                     |
| RL-1328-22-330               | 330.0                    | 0.0055                | 31.0                                     |
| RL-1328-22-390               | 390.0                    | 0.0060                | 35.0                                     |
| RL-1328-22-470               | 470.0                    | 0.0065                | 38.0                                     |
| RL-1328-22-560               | 560.0                    | 0.0070                | 45.0                                     |
| RL-1328-22-680               | 680.0                    | 0.0080                | 50.0                                     |

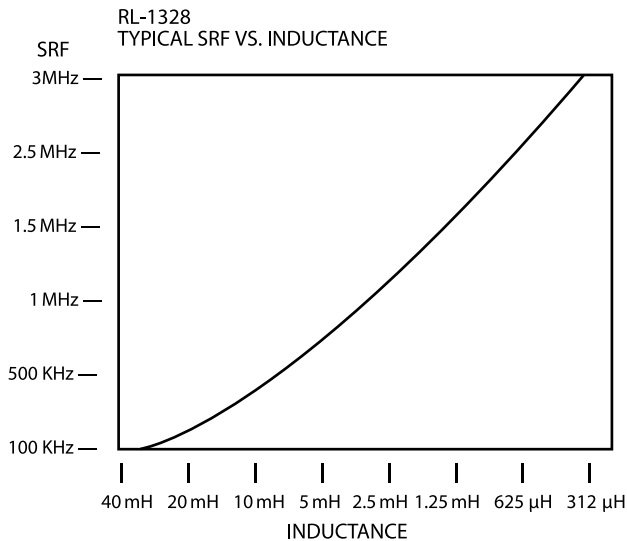
## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 22 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms

| Renco Part No.<br>RL-1328-35 | Inductance<br>( $\mu$ H) | DCR<br>Max.<br>(Ohms) | Leakage<br>Inductance<br>( $\mu$ H) Max. |
|------------------------------|--------------------------|-----------------------|------------------------------------------|
| RL-1328-35-47                | 47.0                     | 0.0020                | 5.0                                      |
| RL-1328-35-68                | 68.0                     | 0.0021                | 6.0                                      |
| RL-1328-35-100               | 100.0                    | 0.0023                | 9.0                                      |
| RL-1328-35-120               | 120.0                    | 0.0025                | 10.0                                     |
| RL-1328-35-150               | 150.0                    | 0.0026                | 11.0                                     |
| RL-1328-35-180               | 180.0                    | 0.0028                | 15.0                                     |
| RL-1328-35-220               | 220.0                    | 0.0032                | 18.0                                     |
| RL-1328-35-270               | 270.0                    | 0.0037                | 24.0                                     |
| RL-1328-35-330               | 330.0                    | 0.0040                | 27.0                                     |

## NOTES:

1. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
2.  $I_{rms}$  - 35 Amps
3.  $I_{rms}$  - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
4. INDUCTANCE VALUES  $\pm$  25% TESTED AT 1 kHz, 1.0 Vrms



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