

# Current-compensated chokes

# RN Series

- 0.3 to 10A ratings
- 0.7 to 100mH inductances (dual choke configurations)
- 100kHz-3MHz common-mode resonance frequencies
- 11 different PCB-mount housing sizes
- Nennströme zwischen 0.3 und 10A
- Induktivitäten zwischen 0.7 und 100mH (Konfigurationen mit zwei Wicklungen)
- Gleichtakt-Resonanzfrequenzen zwischen 100kHz und 3MHz
- 11 verschiedene Gehäuse für Leiterplatten-Montage
- Courant de service entre 0,3 et 10A
- Inductance de 0,7 à 100mH (selfs monophasées)
- Fréquence de résonance en mode commun de 100kHz à 3MHz
- 11 dimensions de boîtier pour montage sur carte électronique



**Choke selection table** Choose the choke **RN ?xx** offering the required current rating and inductance characteristics. ? determines package style: insert 1 for a lower profile , 2 for a taller component with a smaller footprint. Example: RN 122-1/02 is a lower profile choke.

| Choke type<br>? (1 =  2 = ) | Nominal current<br>A@40°C | Inductance<br>L*<br>mH/path | Circuit<br>symbol | R'<br>mΩ/<br>path | Weight<br>approx.g<br>/ |
|-----------------------------|---------------------------|-----------------------------|-------------------|-------------------|-------------------------|
| RN ?02-0.3/02               | 0.3                       | 12                          |                   | 1275              | 2/3                     |
| RN ?02-0.6/02               | 0.6                       | 4.4                         |                   | 385               | 2/3                     |
| RN ?02-1/02                 | 1                         | 3                           |                   | 205               | 2/3                     |
| RN ?02-1.5/02               | 1.5                       | 1.6                         |                   | 100               | 2/3                     |
| RN ?02-2/02                 | 2                         | 1.1                         |                   | 70                | 2/3                     |
| RN ?12-0.4/02               | 0.4                       | 39                          |                   |                   | 1460                    |
| RN ?12-0.5/02               | 0.5                       | 27                          | 1250              |                   | 5/6                     |
| RN ?12-0.6/02               | 0.6                       | 15                          | 465               |                   | 5/6                     |
| RN ?12-0.8/02               | 0.8                       | 10                          | 370               |                   | 5/6                     |
| RN ?12-1.2/02               | 1.2                       | 6.8                         | 245               |                   | 5/6                     |
| RN ?12-1.5/02               | 1.5                       | 3.3                         | 135               |                   | 5/6                     |
| RN ?12-2/02                 | 2                         | 1.8                         | 75                |                   | 5/6                     |
| RN ?12-4/02                 | 4                         | 0.7                         | 27                |                   | 5/6                     |
| RN ?14-0.3/02               | 0.3                       | 47                          |                   | 1750              | 9/12                    |
| RN ?14-0.5/02               | 0.5                       | 39                          |                   | 810               | 9/12                    |
| RN ?14-0.8/02               | 0.8                       | 27                          |                   | 500               | 9/12                    |
| RN ?14-1/02                 | 1                         | 15                          |                   | 375               | 9/12                    |
| RN ?14-1.2/02               | 1.2                       | 10                          |                   | 200               | 9/12                    |
| RN ?14-1.5/02               | 1.5                       | 6.8                         |                   | 130               | 9/12                    |
| RN ?14-2/02                 | 2                         | 4.2                         |                   | 102               | 9/12                    |
| RN ?14-2.5/02               | 2.5                       | 3.3                         |                   | 72                | 9/12                    |
| RN ?14-3/02                 | 3                         | 2                           |                   | 55                | 9/12                    |
| RN ?14-4/02                 | 4                         | 1.5                         |                   | 35                | 9/12                    |

| Choke type<br>? (1 =  2 = ) | Nominal current<br>A@40°C | Inductance<br>L*<br>mH/path | Circuit<br>symbol | R'<br>mΩ/<br>path | Weight<br>approx.g<br>/ |
|-----------------------------|---------------------------|-----------------------------|-------------------|-------------------|-------------------------|
| RN ?22-0.6/02               | 0.6                       | 47                          |                   | 1180              | 17/21                   |
| RN ?22-0.8/02               | 0.8                       | 39                          |                   | 1000              | 17/21                   |
| RN ?22-1/02                 | 1                         | 18                          |                   | 610               | 17/21                   |
| RN ?22-1.5/02               | 1.5                       | 10                          |                   | 220               | 17/21                   |
| RN ?22-2/02                 | 2                         | 6.8                         |                   | 147               | 17/21                   |
| RN ?22-2.5/02               | 2.5                       | 5.6                         |                   | 105               | 17/21                   |
| RN ?22-3/02                 | 3                         | 4.5                         |                   | 80                | 17/21                   |
| RN ?22-4/02                 | 4                         | 3.3                         |                   | 45                | 17/21                   |
| RN ?42-0.5/02               | 0.5                       | 82                          |                   | 2700              | 32                      |
| RN ?42-1/02                 | 1                         | 33                          |                   | 810               | 32                      |
| RN ?42-1.4/02               | 1.4                       | 27                          |                   | 500               | 32                      |
| RN ?42-2/02                 | 2                         | 6.8                         |                   | 190               | 32                      |
| RN ?42-4/02                 | 4                         | 3.3                         |                   | 66                | 32                      |
| RN ?42-6/02                 | 6                         | 1.8                         |                   | 20                | 32                      |
| RN 143-0.5/02               | 0.5                       | 100                         |                   | 2900              | 33                      |
| RN 143-1/02                 | 1                         | 47                          |                   | 880               | 33                      |
| RN 143-2/02                 | 2                         | 10                          |                   | 230               | 33                      |
| RN 143-4/02                 | 4                         | 3.9                         |                   | 58                | 33                      |
| RN 143-6/02                 | 6                         | 1.8                         |                   | 20                | 33                      |
| RN 152-1/02                 | 1                         | 68                          |                   | 1300              | 54                      |
| RN 152-2/02                 | 2                         | 18                          |                   | 350               | 54                      |
| RN 152-4/02                 | 4                         | 6.8                         |                   | 87                | 54                      |
| RN 152-6/02                 | 6                         | 3.9                         |                   | 41                | 54                      |
| RN 152-8/02                 | 8                         | 2.7                         |                   | 22                | 54                      |
| RN 152-10/02                | 10                        | 1.8                         |                   | 14                | 54                      |

**Environmental ratings**

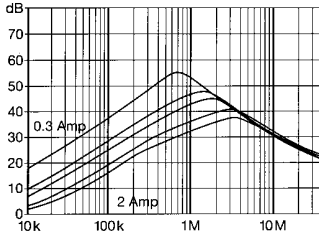
Maximum operating voltage: 250V at 40°C  
 High potential test voltage winding-to-winding at 25°C: 1500VAC, 1 minute, guaranteed 1500V, 50Hz, 2 sec, factory test  
 winding-to-housing at 25°C: 4000VAC, 1 minute, guaranteed  
 Surge current at 10msec: 20 x I<sub>nominal</sub> at 25°C  
 Power operating frequency: DC to 1kHz at 40°C  
 Operating temperature: -40°C to +125°C  
 Storage temperature: -40°C to +125°C  
 Climatic class per IEC 68: 40/125/56  
 Flammability: UL94V0

**Test conditions**

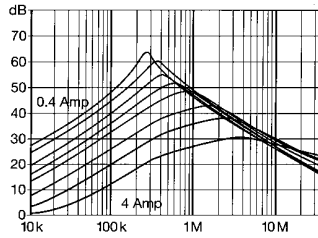
\* Measuring frequency: 10kHz; 5mA < 16μH; 500μA > 16μH < 160μH; 50μA > 160μH < 16mH; 50mV > 16mH < 160mH; inductance tolerance +50%, -30%  
 † Resistance: tolerance max. ±15% at 25°C; ≤ 20mΩ 1A; > 20mΩ ≤ 200mΩ 100mA; > 200mΩ ≤ 2Ω 10mA  
 Electrical characteristics at 25°C ±2°C

## Typical attenuation/resonance frequency characteristics

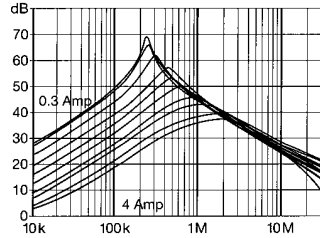
**RN ?02**



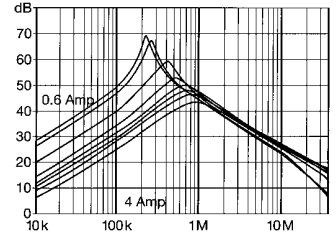
**RN ?12**



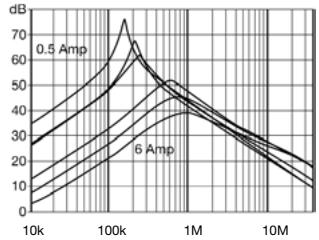
**RN ?14**



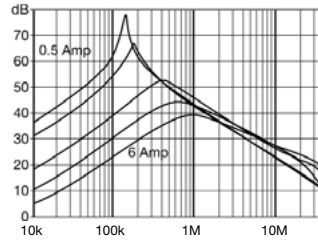
**RN ?22**



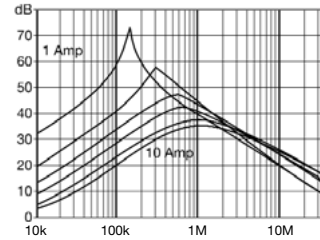
**RN ?42**



**RN 143**



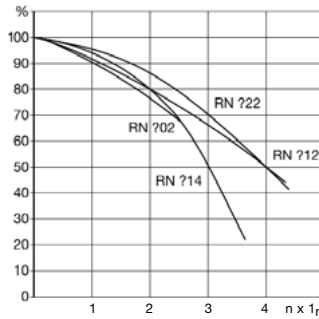
**RN 152**



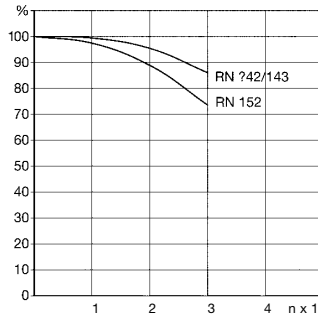
## Typical saturation characteristics

Inductance (typical value in %) vs. nominal current (A DC)

**RN ?02/?12/?14/?22**



**RN ?42/143/152**



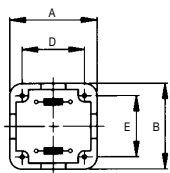
## Mechanical data

| Choke | RN 102  | RN 112 | RN 114 | RN 122 | RN 202 | RN 212 | RN 214 | RN 222 | RN 142<br>RN 143 | RN 242 | RN 152 | Tol.*<br>mm |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|------------------|--------|--------|-------------|
| A     | 14      | 17.7   | 22.5   | 28     | 18.2   | 18     | 23     | 31     | 33.1             | 31     | 43     | ± 0.3       |
| B     | 14      | 17.1   | 21.5   | 27     | 8.8    | 12.5   | 15.5   | 18     | 32.5             | 18     | 41.8   | ± 0.3       |
| C     | 9       | 12.6   | 13.2   | 16.5   | 13.5   | 20     | 25     | 29.3   | 19.7             | 34.3   | 25     | ± 0.3       |
| D     | 10      | 15     | 20.1   | 25     | 15.21  | 15     | 10     | 12.5   | 30               | 12.5   | 40     | ± 0.2       |
| E     | 10      | 12.5   | 15     | 5.08   | 10     | 12.5   | 15     | 20     | 15               | 15     | 15     | ± 0.2       |
| F     | 4 ± 0.6 |        |        |        | 4.5    | 4      |        | 4.3    | 4.2              | 4.5    | 4.5    | ± 0.5       |
| G     | 0.6     | 0.8    |        |        |        |        | 1.2    |        |                  |        |        | ± 0.1       |

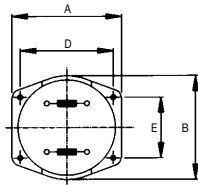
Dimensions in mm; 1 inch = 25.4mm

\* Measurements share this common tolerance unless otherwise stated

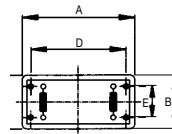
### Bottom



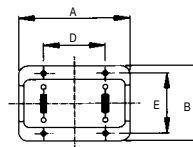
RN 102



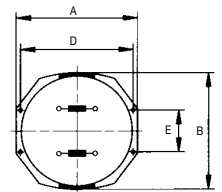
RN 112, 114, 122, 142, 143



RN 202



RN 212, 214, 222, 242



RN 152

### Side

