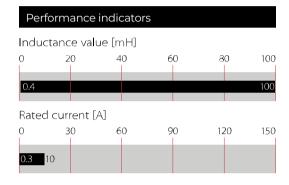


Current-compensated Chokes



- Rated currents from 0.3 to 10 A
- DC to 400 Hz frequency
- 100 kHz to 3 MHz common-mode resonance frequency
- Dual-choke configurations
- Multiple PCB-mounting options





Technical Specifications

Nominal operating voltage	300 VAC
Rated currents	0.3 to 10 A @ 40°C
Operating frequency	DC to 400 Hz
Rated inductance	0.4 to 100 mH
Stray inductance	Typically 1% of Ln
Inductance reduction (DC bias with IN)	Less than 10% (25°C)
Surge current @ 10 msec	20 x nominal current @ 25°C
Temperature range (operation and storage)	-40°C to 100°C (40/100/56) acc. IEC 60068-1
High potential test voltage winding-to- winding @ 25°C	1500 VAC, 60 sec, guaranteed 1500 VAC, 2 sec, factory test
Winding-to-housing @ 25°C	Winding-to-housing @ 25°C
Flammability corresponding to	Housing UL 94V-0 Potting compound UL 94V-0
Design corresponding to	UL 1283, IEC/EN 60938-1
MTBF (Mil-HB-217F)	>5,000,000 h @ 40°C/230 V

Approvals & Compliances









RN chokes are attenuating common-mode or asymmetric (P/N > E) interference signals, by being connected in series with the phase and neutral lines of an AC powerline input. Symmetrical components of the noise are also attenuated by the leakage inductance (stray inductance) of the windings. These chokes are typically used in conjunction with suppression capacitors.

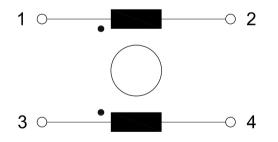
Features and Benefits

- High saturation resistance and excellent thermal behavior
- Through hole pin connections
- Dual-choke configuration
- Small compact design
- Multiple housing options
- Custom-specific versions are available on request
- Higher temperature versions
- Fully potted design usable for ruggedized applications

Typical Applications

- Switch-mode power applications
- Suppressing common-mode interference levels
- EMI input filters
- For suppression-equipment with no earth connection
- Phase-angle control circuits in combination with saturating chokes

Typical electrical schematic



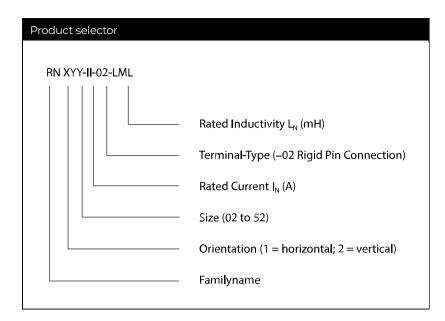
Choke Selection Table

Choke	Buy	Current (I _N)	@ ambient temperature	Inductance (L _N)	Resistance (R _{DC})	А	В	н	Weight
		[A]	[° C]	[mH]	[mOhm]	[mm]	[mm]	[mm]	(g)
RN102-0.3-02-22M	\	0.3	40	22.0	1300	10.0	10.0	9.0	4
RN102-0.3-02-12M	₩	0.3	40	12.0	1100	10.0	10.0	9.0	3
RN102-0.6-02-4M4	\	0.6	40	4.4	380	10.0	10.0	9.0	3
RN102-1-02-3M0	\.	1.0	40	3.0	210	10.0	10.0	9.0	3
RN102-1.5-02-1M6	\.	1.5	40	1.6	94	10.0	10.0	9.0	3
RN102-2-02-1M1	₩.	2.0	40	1.1	70	10.0	10.0	9.0	3
RN112-0.4-02-39M		0.4	40	39.0	1500	15.0	10.0	12.6	6
RN112-0.4-02-27M	₩	0.4	40	27.0	1400	15.0	10.0	12.6	6
RN112-0.5-02-27M	₩	0.5	40	27.0	1200	15.0	10.0	12.6	6
RN112-0.5-02-18M	₩	0.5	40	18.0	1100	15.0	10.0	12.6	6
RN112-0.5-02-15M	\ ±	0.5	40	15.0	700	15.0	10.0	12.6	6
RN112-0.6-02-15M	₩	0.6	40	15.0	490	15.0	10.0	12.6	6
RN112-0.8-02-10M	\ ±	0.8	40	10.0	380	15.0	10.0	12.6	6
RN112-1.2-02-6M8	₩	1.2	40	6.8	250	15.0	10.0	12.6	6
RN112-1.5-02-3M3	\.	1.5	40	3.3	102	15.0	10.0	12.6	6
RN112-2-02-1M8	¥	2.0	40	1.8	74	15.0	10.0	12.6	6
RN112-2-02-1M0	\	2.0	40	1.0	70	15.0	10.0	12.6	6
RN112-2.6-02-0M4	¥	2.6	40	0.4	40	15.0	10.0	12.6	6
RN112-3.6-02-0M4	\	3.6	40	0.4	27	15.0	10.0	12.6	6
RN112-4-02-0M7	\ ⊉	4.0	40	0.7	24	15.0	10.0	12.6	6
RN114-0.3-02-47M	₩	0.3	40	47.0	1700	20.1	12.5	13.2	10
RN114-0.5-02-39M	₩.	0.5	40	39.0	830	20.1	12.5	13.2	11
RN114-0.8-02-27M	₩	0.8	40	27.0	500	20.1	12.5	13.2	11
RN114-1-02-15M	₩	1.0	40	15.0	370	20.1	12.5	13.2	10
RN114-1.2-02-10M		1.2	40	10.0	195	20.1	12.5	13.2	10
RN114-1.5-02-6M8	₩	1.5	40	6.8	123	20.1	12.5	13.2	11
RN114-2-02-4M2	₩	2.0	40	4.2	100	20.1	12.5	13.2	11
RN114-2.5-02-3M3	₩.	2.5	40	3.3	72	20.1	12.5	13.2	11
RN114-3-02-2M0	₩.	3.0	40	2.0	52	20.1	12.5	13.2	10
RN114-4-02-1M5	₩	4.0	40	1.5	34	20.1	12.5	13.2	11
RN116-0.5-02-47M		0.5	60	47.0	960	20.1	12.5	13.2	11
RN116-0.5-02-39M	₩.	0.5	60	39.0	920	20.1	12.5	13.2	11
RN116-0.5-02-27M	₩.	0.5	60	27.0	790	20.1	12.5	13.2	11
RN116-0.8-02-27M	₩.	0.8	60	27.0	370	20.1	12.5	13.2	13
RN116-1-02-15M	₩	1.0	60	15.0	260	20.1	12.5	13.2	12
RN116-1-02-10M	₩.	1.0	60	10.0	210	20.1	12.5	13.2	11
RN116-1.3-02-6M8	₩.	1.3	60	6.8	140	20.1	12.5	13.2	12
RN116-1.5-02-10M	₩	1.5	60	10.0	148	20.1	12.5	13.2	12
RN116-1.7-02-4M0	₩	1.7	60	4.0	87	20.1	12.5	13.2	12
RN116-2-02-3M3	₩.	2.0	60	3.3	70	20.1	12.5	13.2	12
RN116-2-02-2M2	₩	2.0	60	2.2	66	20.1	12.5	13.2	11
RN122-0.5-02-56M		0.5	40	56.0	1800	25.0	15.0	16.5	20
RN122-0.6-02-47M	¥	0.6	40	47.0	1300	25.0	15.0	16.5	20
RN122-0.8-02-39M	₩	0.8	40	39.0	1000	25.0	15.0	16.5	20
RN122-1-02-18M	¥	1.0	40	18.0	630	25.0	15.0	16.5	19
RN122-1-02-10M	¥	1.0	40	10.0	560	25.0	15.0	16.5	19
RN122-1-52-10M	Ť	1.5	40	10.0	250	25.0	15.0	16.5	20
RN122-1.5-02-10M	¥	2.0	40	6.8	156	25.0	15.0	16.5	20
RN122-2-02-5M0	¥	2.0	40	5.0	140	25.0	15.0	16.5	21
RN122-2.5-02-5M6	¥	2.5	40	5.6	110	25.0	15.0	16.5	20
RN122-3-02-4M5	₩	3.0	40	4.5	80	25.0	15.0	16.5	21
RN122-4-02-3M3	¥	4.0	40	3.3	46	25.0	15.0	16.5	22
RN122-4-02-1M8	Ť	4.0	40	1.8	42	25.0	15.0	16.5	22
RIVIZZ-4-UZ-IIVIO	₩	4.0	40	1.0	42	23.0	13.0	10.5	22

3

Choke	Buy	Current	@ ambient	Inductance	Resistance	Α	В	н	Weight
		(I _N)	temperature	(L _N)	(R _{DC})				
		[A]	[°C]	[mH]	[mOhm]	[mm]	[mm]	[mm]	(g)
RN214-2-02-2M2	₾	2.0	40	2.2	67	12.5	10.0	25.0	14
RN214-2.5-02-3M3	₾	2.5	40	3.3	72	12.5	10.0	25.0	15
RN214-3-02-2M0	\#_	3.0	40	2.0	52	12.5	10.0	25.0	14
RN214-4-02-1M5	\#_	4.0	40	1.5	34	12.5	10.0	25.0	15
RN216-0.5-02-47M	\.	0.5	60	47.0	960	12.5	10.0	25.0	15
RN216-0.5-02-39M	\.	0.5	60	39.0	920	12.5	10.0	25.0	15
RN216-0.5-02-27M	\	0.5	60	27.0	790	12.5	10.0	25.0	15
RN216-0.8-02-27M	\	0.8	60	27.0	370	12.5	10.0	25.0	16
RN216-1-02-15M	\	1.0	60	15.0	260	12.5	10.0	25.0	16
RN216-1-02-10M	\	1.0	60	10.0	210	12.5	10.0	25.0	15
RN216-1.3-02-6M8	\	1.3	60	6.8	140	12.5	10.0	25.0	16
RN216-1.5-02-10M	₩	1.5	60	10.0	148	12.5	10.0	25.0	16
RN216-1.7-02-4M0	\	1.7	60	4.0	87	12.5	10.0	25.0	16
RN216-2-02-3M3	\	2.0	60	3.3	70	12.5	10.0	25.0	16
RN216-2-02-2M2	Ť	2.0	60	2.2	66	12.5	10.0	25.0	15
RN218-0.4-02-100M	\.	0.4	40	100	2800	10.0	12.5	20.0	8
RN218-0.6-02-47M	₩	0.6	40	47.0	1200	10.0	12.5	20.0	8
RN218-0.7-02-39M	₩	0.7	40	39.0	1150	10.0	12.5	20.0	8
RN218-0.9-02-27M	₩	0.9	40	27.0	620	10.0	12.5	20.0	8
RN218-1-02-22M	₩	1.0	40	22.0	520	10.0	12.5	20.0	8
RN218-1.1-02-15M	₩	1.1	40	15.0	420	10.0	12.5	20.0	8
RN218-1.4-02-10M	₩	1.4	40	10.0	330	10.0	12.5	20.0	8
RN218-1.7-02-6M8	₩	1.7	40	6.8	180	10.0	12.5	20.0	8
RN218-2.2-02-3M3	₩	2.2	40	3.3	100	10.0	12.5	20.0	8
RN222-0.5-02-56M	\ ±	0.5	40	56.0	1800	15.0	12.5	29.3	27
RN222-0.6-02-47M	\#_	0.6	40	47.0	1300	15.0	12.5	29.3	26
RN222-0.8-02-39M	\ .	0.8	40	39.0	1000	15.0	12.5	29.3	27
RN222-1-02-33M	\ ₫	1.0	40	33.0	1300	15.0	12.5	29.3	29
RN222-1-02-18M	\ ⊉	1.0	40	18.0	630	15.0	12.5	29.3	26
RN222-1.5-02-10M	\ ⊉	1.5	40	10.0	250	15.0	12.5	29.3	26
RN222-2-02-6M8	\ ±	2.0	40	6.8	156	15.0	12.5	29.3	28
RN222-2.5-02-5M6	\ .	2.5	40	5.6	110	15.0	12.5	29.3	27
RN222-3-02-4M5	\ ⊉	3.0	40	4.5	80	15.0	12.5	29.3	28
RN222-4-02-3M3	Ť	4.0	40	3.3	46	15.0	12.5	29.3	28
RN232-0.6-02-47M	¥	0.6	40	47.0	1300	15.0	12.5	34.3	37
RN232-1-02-18M	₩	1.0	40	18.0	390	15.0	12.5	34.3	38
RN232-1.6-02-10M	₩	1.6	40	10.0	170	15.0	12.5	34.3	38
RN232-2.5-02-5M6	₩.	2.5	40	5.6	86	15.0	12.5	34.3	38
RN232-4-02-3M3	₩.	4.0	40	3.3	54	15.0	12.5	34.3	38
RN242-0.5-02-82M	¥	0.5	40	82.0	2700	15.0	12.5	34.3	37
RN242-1-02-33M	\#	1.0	40	33.0	810	15.0	12.5	34.3	38
RN242-1.4-02-27M	¥	1.4	40	27.0	500	15.0	12.5	34.3	38
RN242-2-02-6M8	₩	2.0	40	6.8	192	15.0	12.5	34.3	37
RN242-4-02-3M3	¥	4.0	40	3.3	67	15.0	12.5	34.3	38
RN242-6-02-1M8	Ä	6.0	40	1.8	20	15.0	12.5	34.3	41

 $Test\ conditions:\ Measuring\ frequency:\ 10\ kHz;\ 50\ mV;\ Inductance\ tolerance:\ +50\%,\ -30\%;\ Resistance\ tolerance:\ \pm15\%\ @\ 25^\circ C;\ Electrical\ characteristics\ electr$ $\pm 2^{\circ}$ C; Stray Inductance measurement between pin 1 and 2 (pin 3 and 4 shorted) For mechanical tolerances refer to mechanical data section.



Distribution Inventory

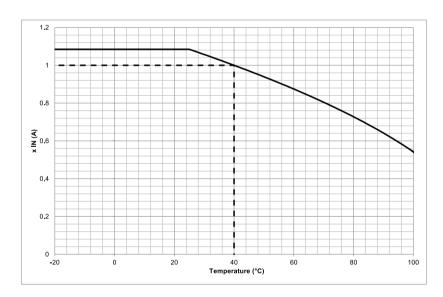
Up-to-date inventory levels for global distributors is available at https://products.schaffner.com/stock

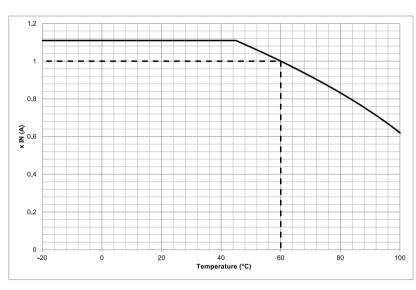


Thermal Derating

If higher ambient temperatures than the specified apply, the nominal current needs to be reduced according to the graph below.

Graph on the left side applies to RN with rated ambient temperature of 40 °C, right side for rated ambient temperature of 60 °C.

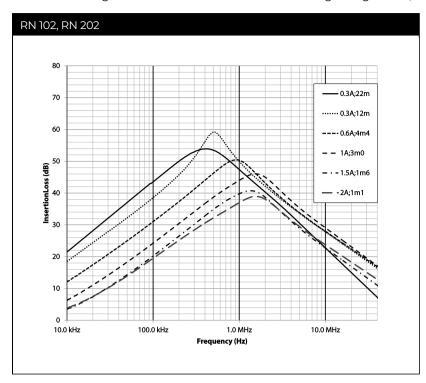


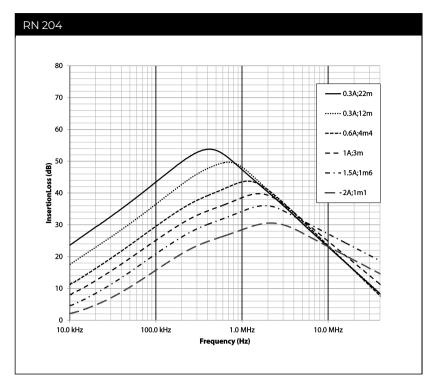


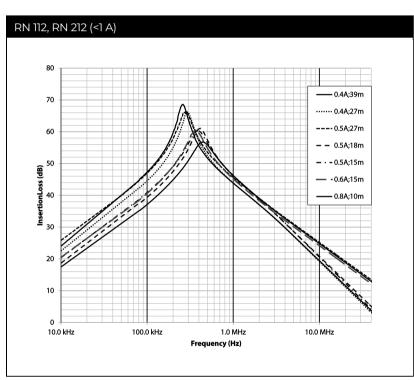
Typical Attenuation/Resonance Frequency Characteristics

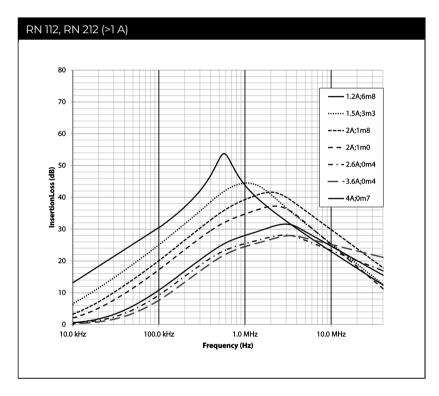
Per CISPR 17; 50 Ω /50 Ω asym

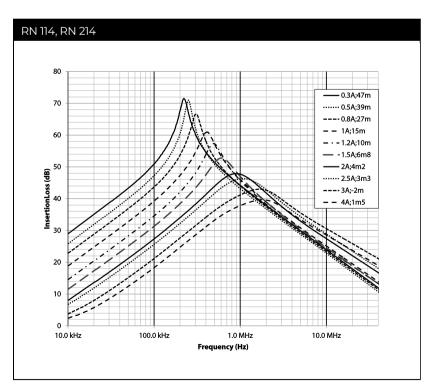
X can be exchanged with either 1 or 2 for different housing configuration, attenuation is similar

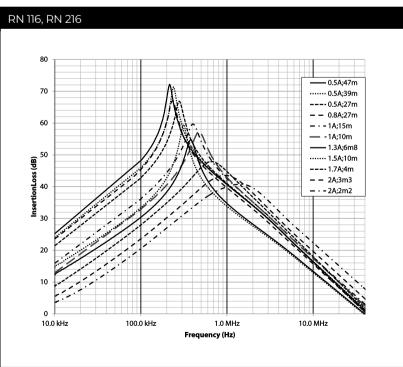


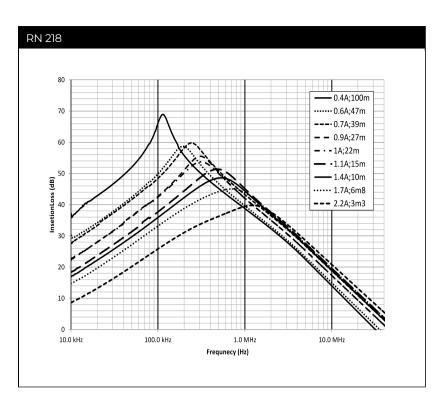


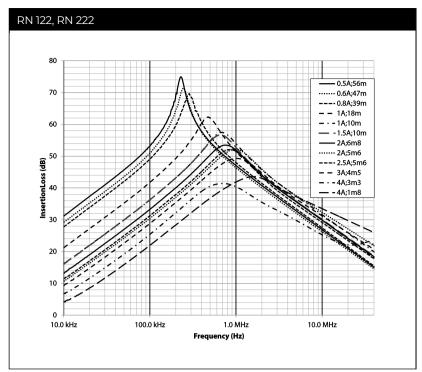


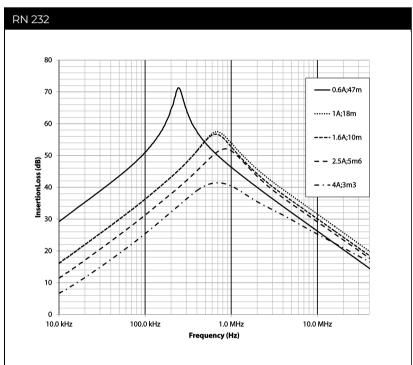


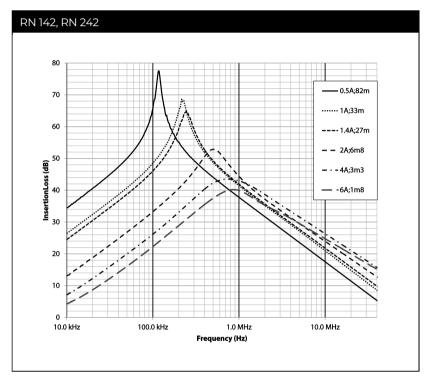


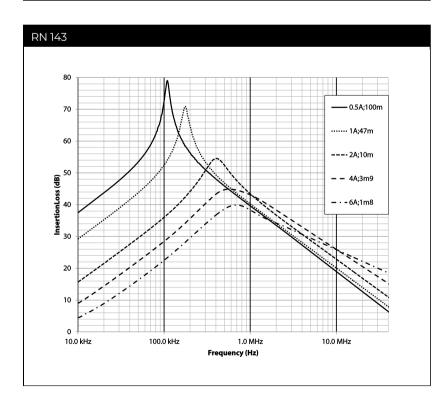


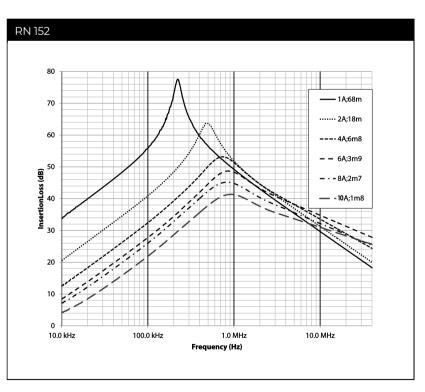




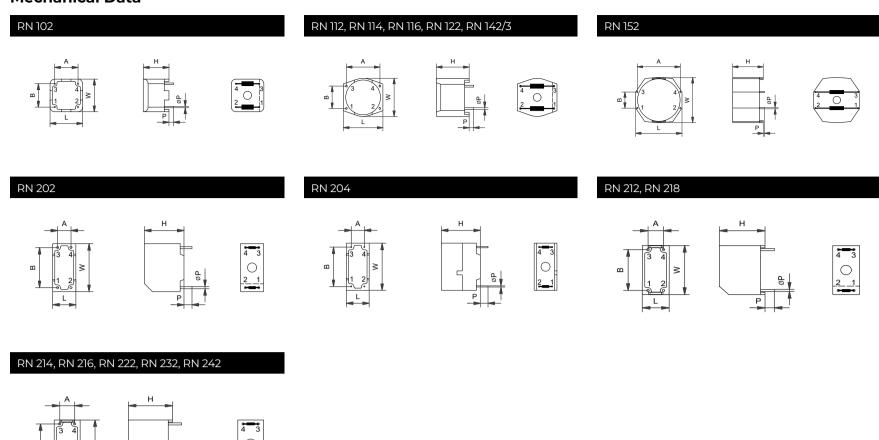








Mechanical Data



Pin material: Steel (base), Cu (under plating), Sn (final plating 6µm)

Dimensions

	А	В	н	L	w	Р	ØP
	(±0.6 mm)	(±0.6 mm)	(±0.3 mm)	(±0.3 mm)	(±0.3 mm)	(±0.5 mm)	(±0.1 mm)
RN 102	10.0 mm	10.0 mm	9.0 mm	14.0 mm	14.0 mm	4.0 mm	0.6 mm
RN 112	15.0 mm	10.0 mm	12.6 mm	17.7 mm	17.1 mm	4.0 mm	0.8 mm
RN 114	20.1 mm	12.5 mm	13.2 mm	22.5 mm	21.5 mm	4.0 mm	0.8 mm
RN 116	20.1 mm	12.5 mm	13.2 mm	22.5 mm	21.5 mm	4.0 mm	0.8 mm
RN 122	25.0 mm	15.0 mm	16.5 mm	28.0 mm	27.0 mm	4.0 mm	0.8 mm
RN 142	30.0 mm	20.0 mm	19.7 mm	33.1 mm	32.5 mm	4.3 mm	0.8 mm
RN 143	30.0 mm	20.0 mm	19.7 mm	33.1 mm	32.5 mm	4.3 mm	0.8 mm
RN 152	40.0 mm	15.0 mm	25.0 mm	43.0 mm	41.8 mm	4.5 mm	1.2 mm
RN 202	5.1 mm	15.2 mm	13.5 mm	8.8 mm	18.2 mm	4.5 mm	0.8 mm
RN 204	7.6 mm	10.0 mm	14.3 mm	9.0 mm	14.0 mm	4.0 mm	0.5 mm
RN 212	10.0 mm	15.0 mm	20.0 mm	12.5 mm	18.0 mm	4.0 mm	0.8 mm
RN 214	12.5 mm	10.0 mm	25.0 mm	15.5 mm	23.0 mm	4.0 mm	0.8 mm
RN 216	12.5 mm	10.0 mm	25.0 mm	15.5 mm	23.0 mm	4.0 mm	0.8 mm
RN 218	10.0 mm	12.5 mm	20.0 mm	12.5 mm	18.0 mm	4.0 mm	0.8 mm
RN 222	15.0 mm	12.5 mm	29.3 mm	18.0 mm	31.0 mm	4.0 mm	0.8 mm
RN 232	15.0 mm	12.5 mm	34.3 mm	18.0 mm	31.0 mm	4.2 mm	0.8 mm
RN 242	15.0 mm	12.5 mm	34.3 mm	18.0 mm	31.0 mm	4.2 mm	0.8 mm

Please visit <u>www.schaffner.com</u> to find more details on filter connections.

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group

Industrie Nord Nordstrasse 11e 4542 Luterbach

+41 32 681 66 26

info@schaffner.com

To find your local partner within Schaffner's global network <u>schaffner.com</u>

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Sales and Application **Centers**

Finland

Schaffner Oy

Lohjanharjuntie 1109

08500

Lohja

+ 358 50 468 72 84

finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

16-20 Rue Louis Rameau

95875

Bezons

+33 1 34 34 30 60

francesales@schaffner.com

Germany

Schaffner Deutschland GmbH

Ohiostr. 8 76149 Karlsruhe +49 721 56910

germanysales@schaffner.com

Schaffner EMC S.r.l.

Via Ticino, 30 20900 Monza (MB)

+39 039 21 41 070

italysales@schaffner.com

Schaffner EMC K.K.

ISM Sangenjaya 7F 1-32-12 Kamiuma Setagaya-ku

154-0011 Tokyo

+81 3 5712 3650

japansales@schaffner.com

Singapore

Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1 #05-09 Kampong Ubi Industrial Estate

408705

Singapore

+65 63773283

singaporesales@schaffner.com

Sweden

Schaffner EMC AB

Östermalmstrorg 1 114 42 Stockholm

+46 8 5050 2425

swedensales@schaffner.com

Switzerland

Schaffner EMV AG

Industrie Nord Nordstrasse 11e 4542 Luterbach

+41 32 681 66 26

switzerlandsales@schaffner.com

India

Schaffner India Pvt. Ltd

Regus World Trade Centre WTC 22nd Floor Unit No 2238 Brigade Gateway Campus 26/1 Dr. Rajkumar Road Malleshwaram (W)

560055

Bangalore

+91 8067935355

indiasales@schaffner.com

United Kingdom

Schaffner Ltd.

Suite 1 Oakmede Place Terrace Road

RG42 4JF

Binfield

+44 118 9770070

uksales@schaffner.com

United States

Schaffner EMC Inc.

52 Mayfield Avenue Edison, New Jersey +1 732 225 9533

usasales@schaffner.com

Mouser Electronics

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RN122-0.8-02-39M RN116-1.5-02-10M RN116-2-02-2M2 RN102-0.3-02-12M RN114-1.2-02-10M RN116-1-02-10M RN216-0.5-02-39M RN242-0.5-02-82M RN222-0.5-02-56M RN142-6-02-1M8 RN143-0.5-02-100M RN212-1.5-02-3M3 RN212-2-02-1M8 RN214-0.5-02-39M RN214-0.5-02-56M RN216-1-02-10M RN212-0.5-02-18M RN212-4-02-0M7 RN214-0.3-02-47M RN216-0.5-02-47M RN202-1.5-02-1M6 RN212-0.4-02-39M RN212-2-02-1M0 RN216-1.3-02-6M8 RN202-0.6-02-4M4 RN212-0.5-02-15M RN202-0.3-02-12M RN116-0.5-02-47M RN152-10-02-1M8 RN202-1-02-3M0 RN216-1.7-02-4M0 RN222-1-02-33M RN222-0.8-02-39M RN214-1.5-02-6M8 RN222-2-02-6M8 RN242-1-02-33M RN232-2.5-02-5M6 RN152-6-02-3M9 RN112-4-02-0M7 RN116-1.7-02-4M0 RN142-1-02-33M RN143-1-02-47M RN122-2-02-5M0 RN143-6-02-1M8 RN242-6-02-1M8 RN222-0.6-02-47M RN216-0.8-02-27M RN232-0.6-02-47M RN242-1.4-02-27M RN112-0.5-02-18M RN216-2-02-3M3 RN222-2.5-02-5M6 RN222-3-02-4M5 RN216-2-02-2M2 RN222-4-02-3M3 RN222-1.5-02-10M RN122-0.5-02-56M RN114-2-02-4M2 RN214-2.5-02-3M3 RN222-1-02-18M RN143-4-02-3M9 RN152-4-02-6M8 RN214-1-02-15M RN112-0.8-02-10M RN114-1.5-02-6M8 RN116-1.3-02-6M8 RN112-0.5-02-15M RN114-0.8-02-27M RN214-2-02-2M2 RN216-0.5-02-27M RN232-1-02-18M RN214-3-02-2M0 RN122-1.5-02-10M RN212-0.6-02-15M RN122-4-02-1M8 RN212-0.4-02-27M RN204-0.3-02-12M RN204-0.3-02-22M RN202-2-02-1M1 RN214-0.8-02-27M RN112-0.4-02-39M RN114-2.5-02-3M3 RN114-0.5-02-39M RN116-2-02-3M3 RN116-1-02-15M RN142-2-02-6M8 RN242-4-02-3M3 RN112-0.4-02-27M RN112-1.5-02-3M3 RN114-3-02-2M0 RN116-0.5-02-39M RN142-0.5-02-82M RN114-4-02-1M5 RN143-2-02-10M RN142-4-02-3M3 RN204-0.6-02-4M4 RN212-2.6-02-0M4 RN212-3.6-02-0M4 RN122-3-02-4M5 RN122-1-02-18M