

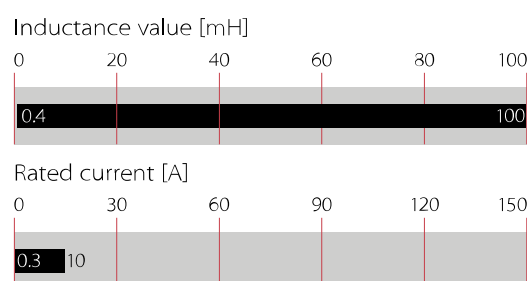
Current-compensated Chokes



- 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



Performance indicators



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

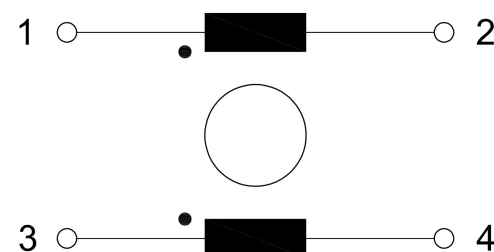
Technical Specifications

Operating voltage	300 VAC
Operating frequency	DC to 400 Hz
Rated currents	0.3 to 10 A @ rated ambient temperature
Rated inductance	0.4 to 100 mH
Stray inductance	Typically 1% of L_N
Inductance reduction (DC bias with IN)	Less than 10% (25°C)
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	4000 VAC, 60 sec, guaranteed
MTBF @ 40°C/230 V (Mil-HB-217F)	>5,000,000 hours
Surge current @ 10 msec	20 x I_N @ 25°C
Temperature range (operation and storage)	-40°C to 100°C (40/100/56) acc. IEC 60068-1
Flammability corresponding to	Housing UL 94V-0 Potting compound UL 94V-0 Ringcore coating UL 94V-0
Design corresponding to	UL 1283, IEC/EN 60938-1
Frequency (DC)	1 kHz






















































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 (In) [A]	@ ambient temperature [°C]	Inductance (LN) [mH]	Resistance (RDC) [mOhm]	A [mm]	B [mm]	H [mm]	Weight (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
RN122-1.5-02-10M		1.5	40	10.0	250	25.0	15.0	16.5	20
RN122-2-02-6M8		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		4.0	40	1.8	42	25.0	15.0	16.5	22

Choke	Buy	Current (In) [A]	@ ambient temperature [°C]	Inductance (Ln) [mH]	Resistance (R DC) [mOhm]	A [mm]	B [mm]	H [mm]	Weight (g)
RN142-0.5-02-82M		0.5	40	82.0	2700	30.0	20.0	19.7	36
RN142-1-02-33M		1.0	40	33.0	810	30.0	20.0	19.7	37
RN142-1.4-02-27M		1.4	40	27.0	500	30.0	20.0	19.7	40
RN142-2-02-6M8		2.0	40	6.8	192	30.0	20.0	19.7	36
RN142-4-02-3M3		4.0	40	3.3	67	30.0	20.0	19.7	38
RN142-6-02-1M8		6.0	40	1.8	20	30.0	20.0	19.7	40
RN143-0.5-02-100M		0.5	40	100.0	2900	30.0	20.0	19.7	36
RN143-1-02-47M		1.0	40	47.0	890	30.0	20.0	19.7	38
RN143-2-02-10M		2.0	40	10.0	240	30.0	20.0	19.7	42
RN143-4-02-3M9		4.0	40	3.9	59	30.0	20.0	19.7	39
RN143-6-02-1M8		6.0	40	1.8	20	30.0	20.0	19.7	42
RN152-1-02-68M		1.0	40	68.0	1300	40.0	15.0	25.0	75
RN152-2-02-18M		2.0	40	18.0	450	40.0	15.0	25.0	64
RN152-4-02-6M8		4.0	40	6.8	87	40.0	15.0	25.0	74
RN152-6-02-3M9		6.0	40	3.9	42	40.0	15.0	25.0	68
RN152-8-02-2M7		8.0	40	2.7	22	40.0	15.0	25.0	73
RN152-10-02-1M8		10.0	40	1.8	14	40.0	15.0	25.0	73
RN202-0.3-02-22M		0.3	40	22.0	1300	5.1	15.2	13.5	4
RN202-0.3-02-12M		0.3	40	12.0	1100	5.1	15.2	13.5	4
RN202-0.6-02-4M4		0.6	40	4.4	380	5.1	15.2	13.5	4
RN202-1-02-3M0		1.0	40	3.0	210	5.1	15.2	13.5	4
RN202-1.5-02-1M6		1.5	40	1.6	94	5.1	15.2	13.5	4
RN202-2-02-1M1		2.0	40	1.1	70	5.1	15.2	13.5	4
RN204-0.3-02-22M		0.3	40	22.0	1300	7.6	10.0	14.3	3
RN204-0.3-02-12M		0.3	40	12.0	960	7.6	10.0	14.3	3
RN204-0.6-02-4M4		0.6	40	4.4	350	7.6	10.0	14.3	3
RN204-1-02-3M0		1.0	40	3.0	192	7.6	10.0	14.3	3
RN204-1.5-02-1M6		1.5	40	1.6	96	7.6	10.0	14.3	3
RN204-2-02-1M1		2.0	40	1.1	57	7.6	10.0	14.3	3
RN212-0.4-02-39M		0.4	40	39.0	1500	10.0	15.0	20.0	8
RN212-0.4-02-27M		0.4	40	27.0	1400	10.0	15.0	20.0	8
RN212-0.5-02-27M		0.5	40	27.0	1200	10.0	15.0	20.0	8
RN212-0.5-02-18M		0.5	40	18.0	1100	10.0	15.0	20.0	8
RN212-0.5-02-15M		0.5	40	15.0	700	10.0	15.0	20.0	8
RN212-0.6-02-15M		0.6	40	15.0	490	10.0	15.0	20.0	8
RN212-0.8-02-10M		0.8	40	10.0	380	10.0	15.0	20.0	8
RN212-1.2-02-6M8		1.2	40	6.8	250	10.0	15.0	20.0	8
RN212-1.5-02-3M3		1.5	40	3.3	102	10.0	15.0	20.0	8
RN212-2-02-1M8		2.0	40	1.8	74	10.0	15.0	20.0	8
RN212-2-02-1M0		2.0	40	1.0	70	10.0	15.0	20.0	8
RN212-2.6-02-0M4		2.6	40	0.4	40	10.0	15.0	20.0	8
RN212-3.6-02-0M4		3.6	40	0.4	27	10.0	15.0	20.0	8
RN212-4-02-0M7		4.0	40	0.7	24	10.0	15.0	20.0	8
RN214-0.3-02-47M		0.3	40	47.0	1700	12.5	10.0	25.0	14
RN214-0.5-02-56M		0.5	40	56.0	1700	12.5	10.0	25.0	15
RN214-0.5-02-39M		0.5	40	39.0	830	12.5	10.0	25.0	14
RN214-0.8-02-27M		0.8	40	27.0	500	12.5	10.0	25.0	15
RN214-1-02-15M		1.0	40	15.0	370	12.5	10.0	25.0	14
RN214-1.2-02-10M		1.2	40	10.0	195	12.5	10.0	25.0	15
RN214-1.5-02-6M8		1.5	40	6.8	123	12.5	10.0	25.0	15
RN214-2-02-4M2		2.0	40	4.2	100	12.5	10.0	25.0	14

Choke	Buy	Current (In) [A]	@ ambient temperature [°C]	Inductance (L _N) [mH]	Resistance (R _{DC}) [mOhm]	A [mm]	B [mm]	H [mm]	Weight (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		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		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		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: ±15% @ 25°C; Electrical characteristics @ 25°C: ±2°C; Stray Inductance measurement between pin 1 and 2 (pin 3 and 4 shorted)

For mechanical tolerances refer to mechanical data section.

Product selector

RN XYY-II-02-LML

- Rated Inductivity L_N (mH)
- Terminal-Type (-02 Rigid Pin Connection)
- Rated Current I_N (A)
- Size (02 to 52)
- Orientation (1 = horizontal; 2 = vertical)
- Familyname

Distribution Inventory

Up-to-date inventory levels for global distributors is available at

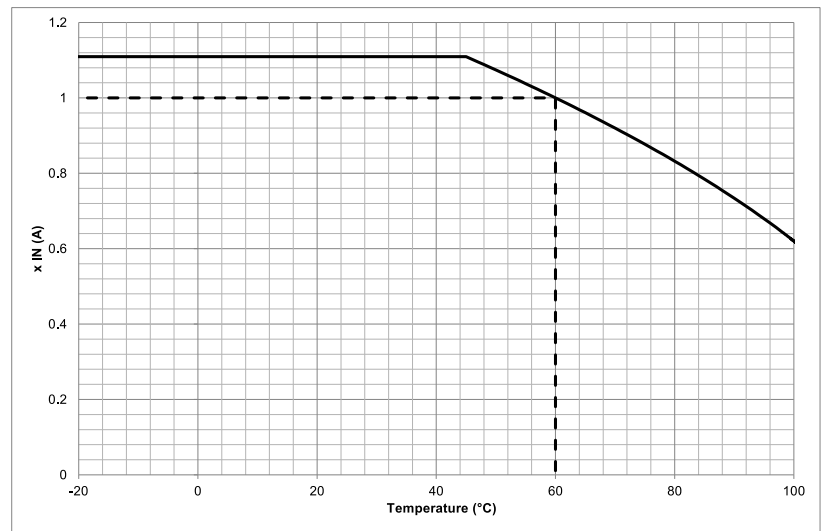
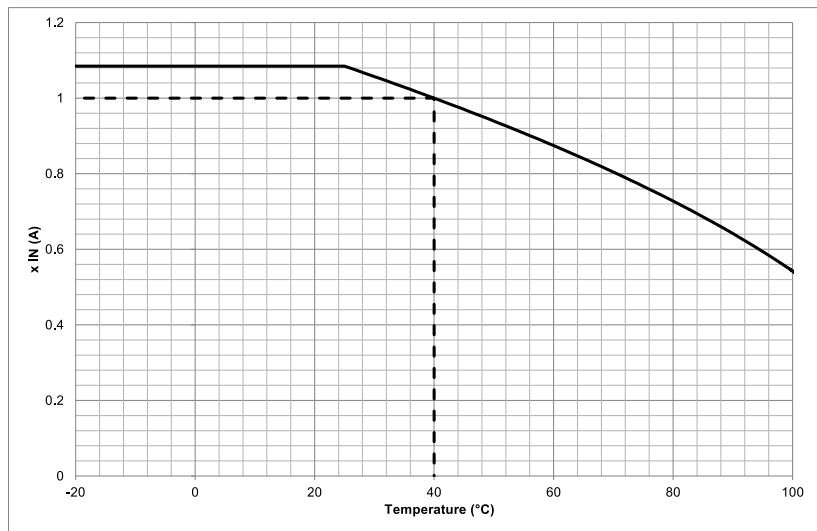
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Thermal Derating

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

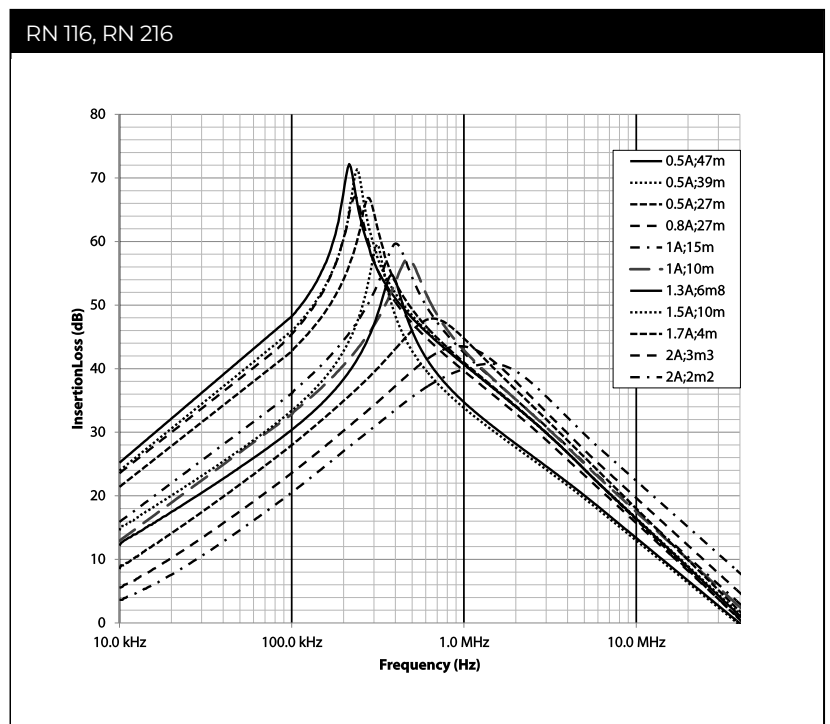
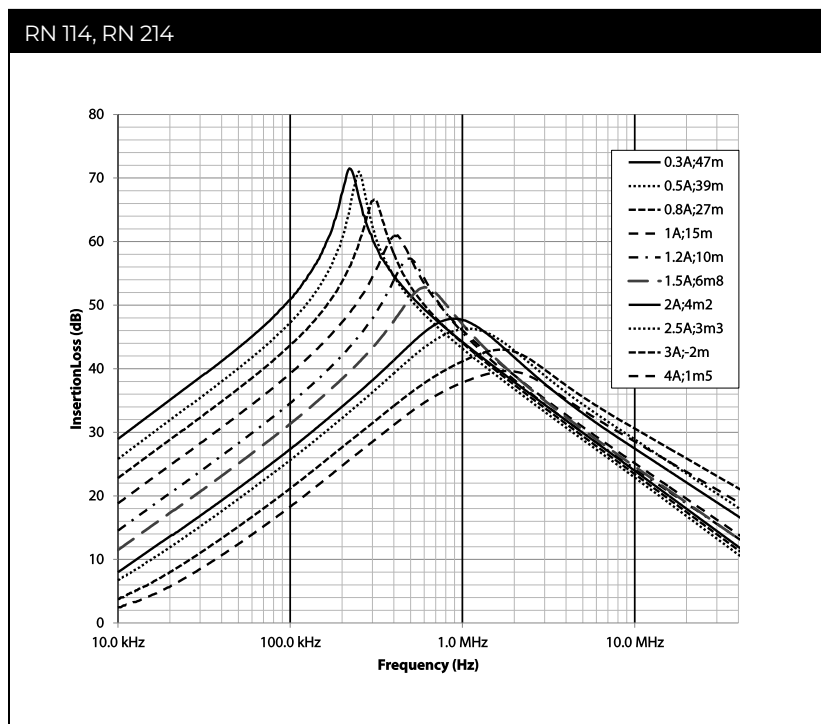
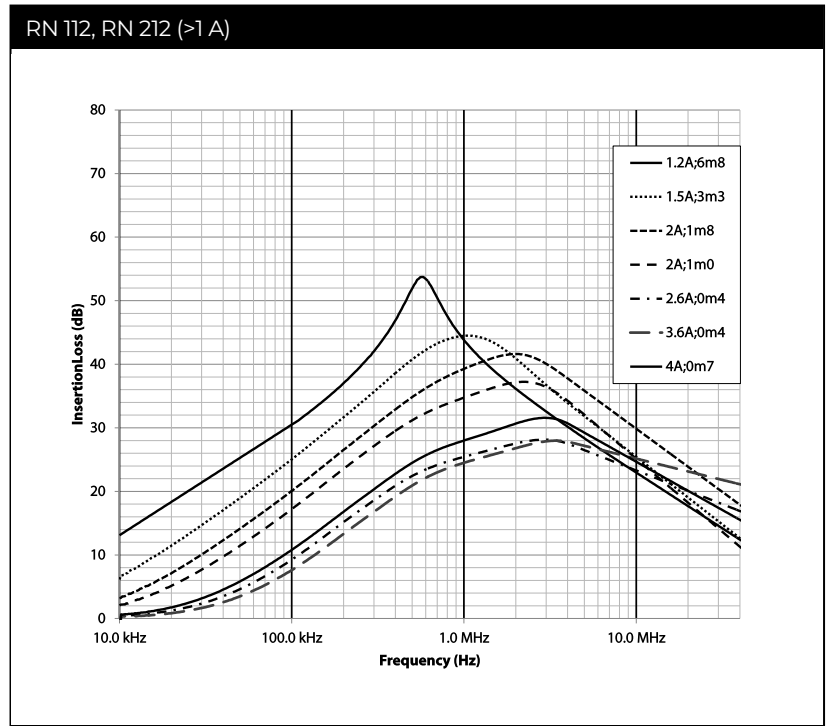
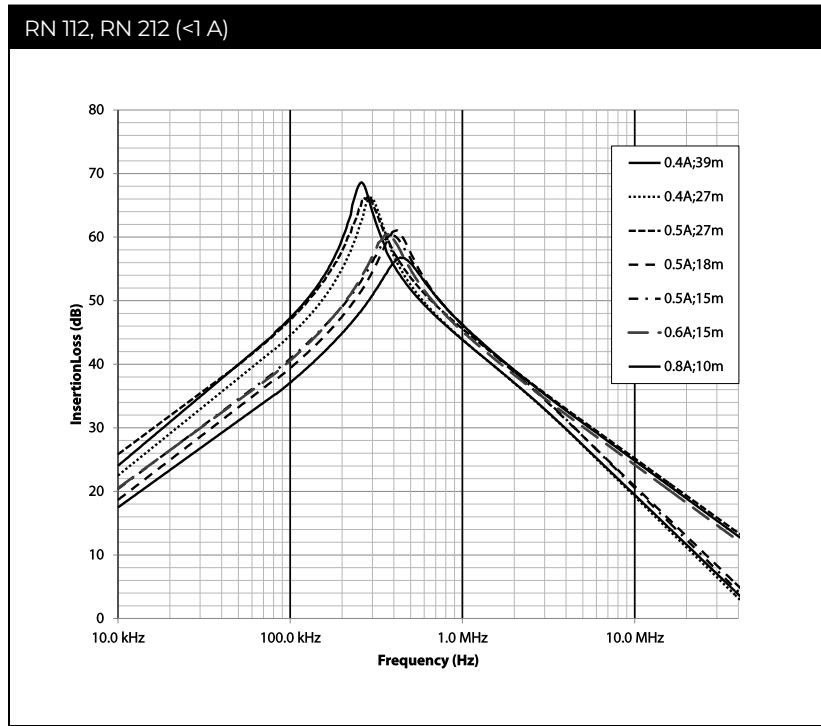
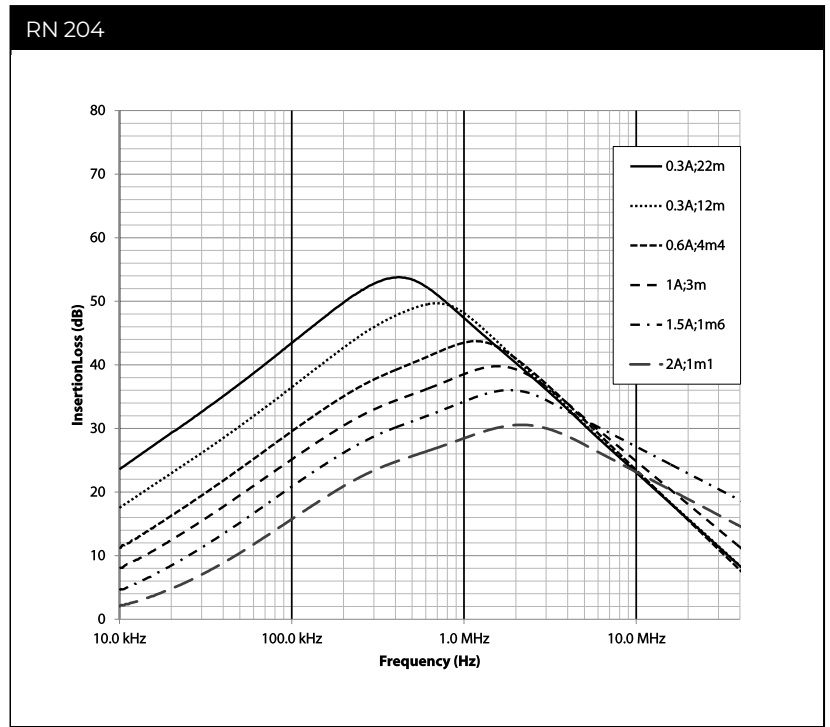
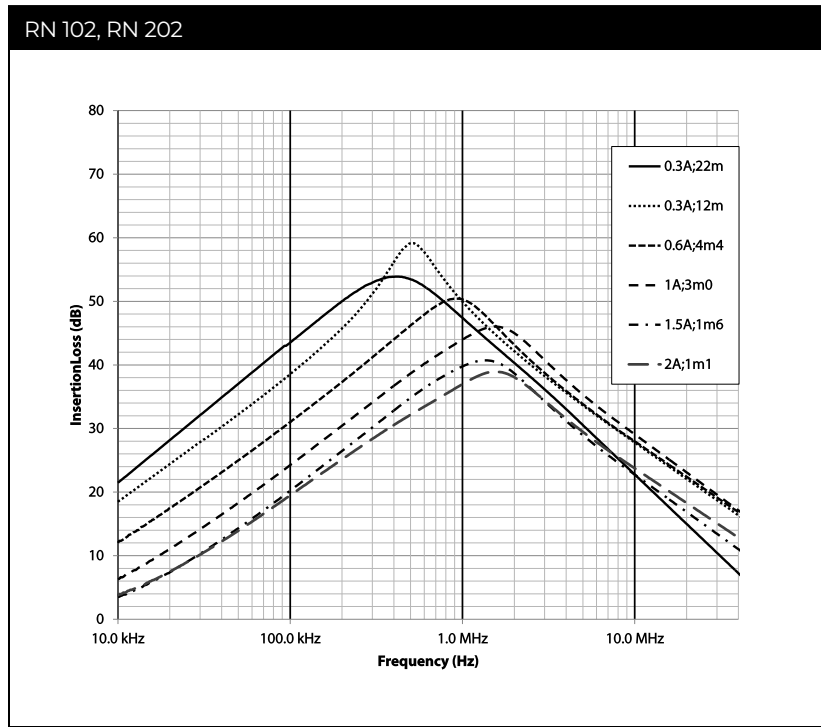
Graph on the left side applies to RN with rated ambient temperature of 40 °C, right side for rated ambient temperature of 60 °C.

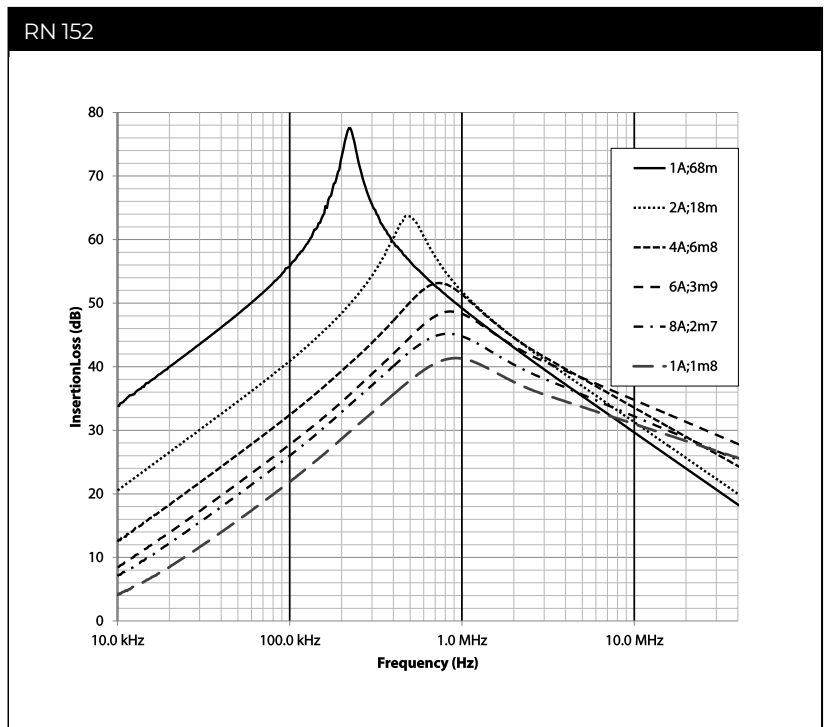
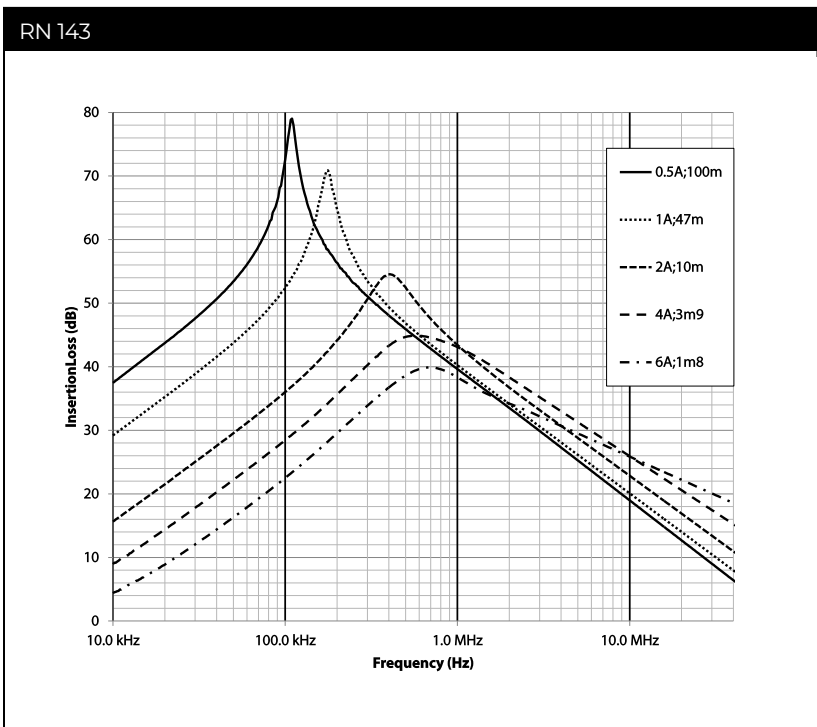
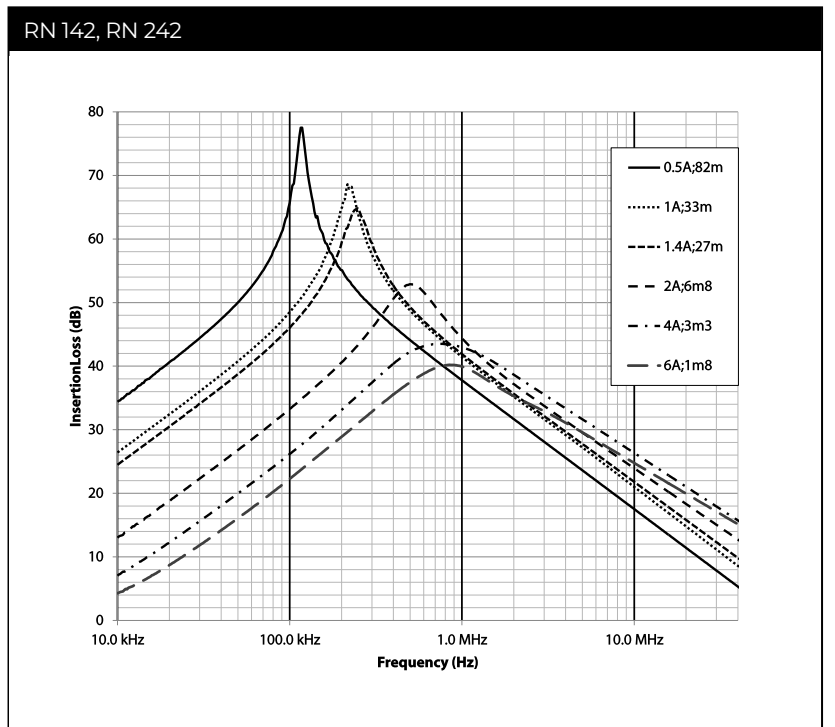
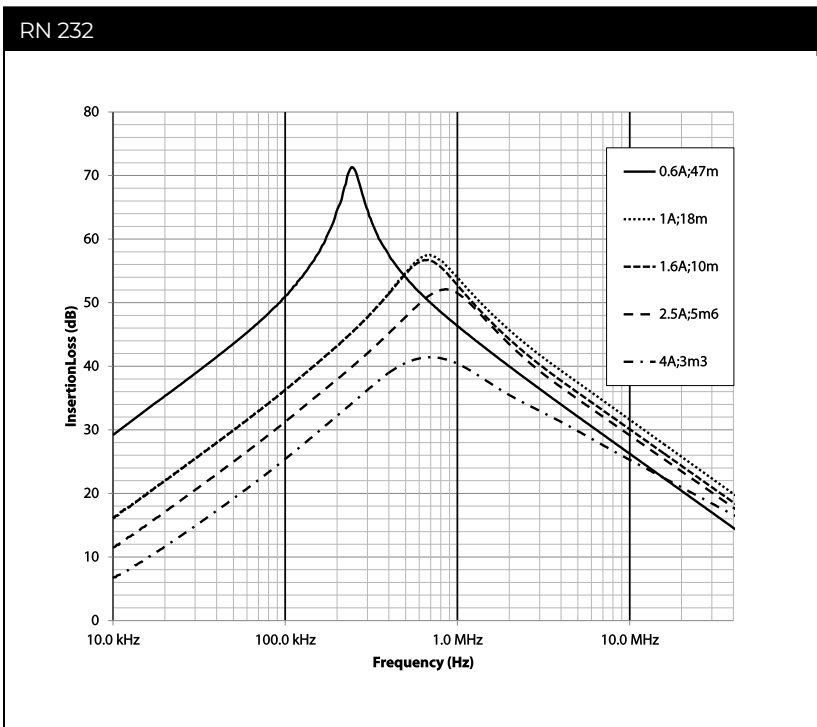
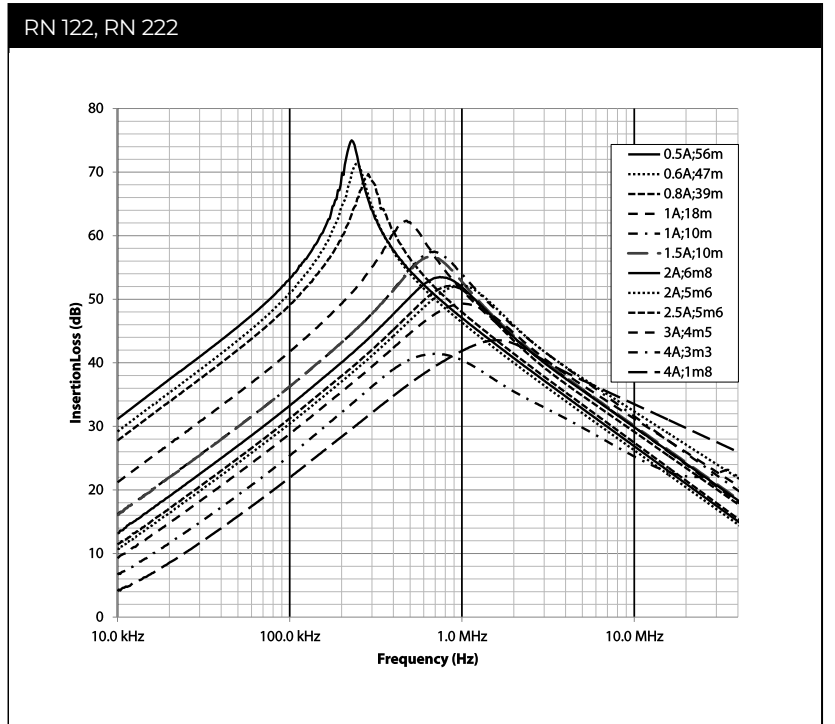
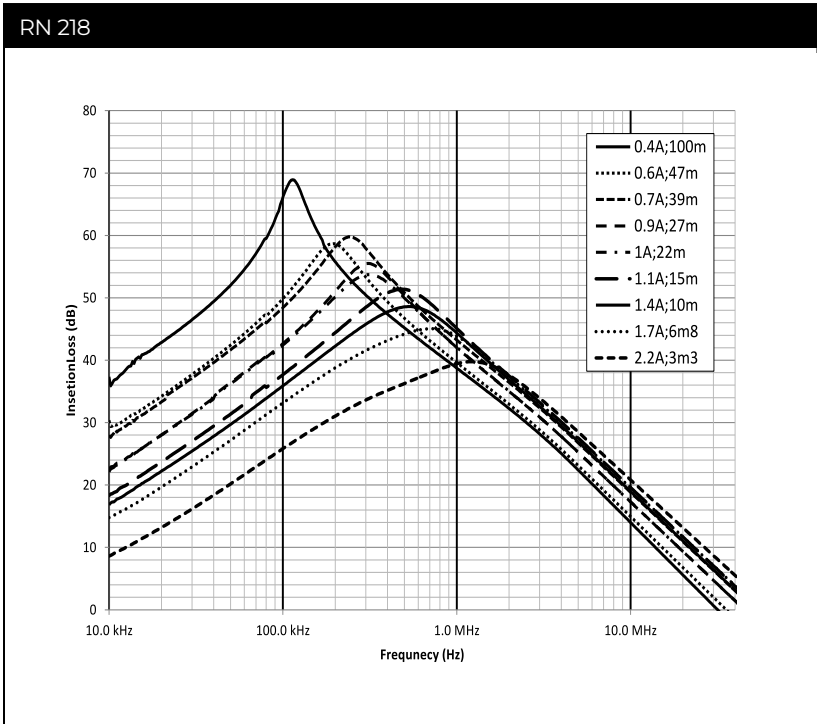


Typical Attenuation/Resonance Frequency Characteristics

Per CISPR 17; 50 Ω/50 Ω asym

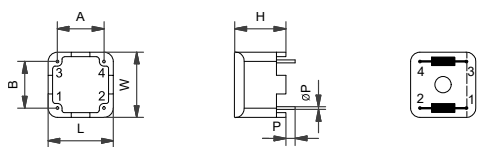
X can be exchanged with either 1 or 2 for different housing configuration, attenuation is similar



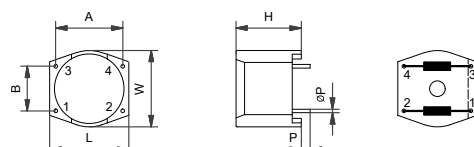


Mechanical Data

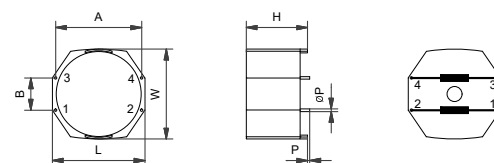
RN 102



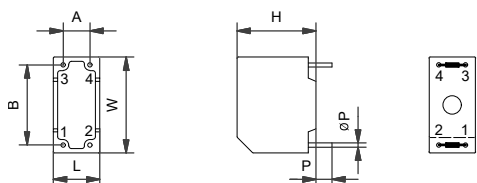
RN 112, RN 114, RN 116, RN 122, RN 142/3



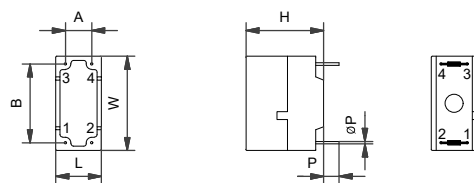
RN 152



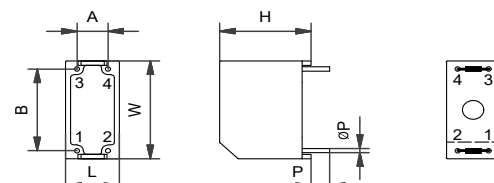
RN 202



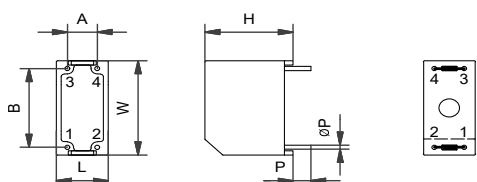
RN 204



RN 212, RN 218



RN 214, RN 216, RN 222, RN 232, RN 242



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

Dimensions

	A (±0.6 mm)	B (±0.6 mm)	H (±0.3 mm)	L (±0.3 mm)	W (±0.3 mm)	P (±0.5 mm)	ØP (±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 www.schaffner.com to find more details on filter connections.

Headquarters, Global Innovation and Development

Switzerland

Schaffner Holding AG

Industrie Nord
Nordstrasse 11e
4542
Luterbach
+41 32 681 66 26
info@schaffner.com

Sales and Application Centers

China

Schaffner EMC Ltd. Shanghai

T20-3 C, No 565 Chuangye Road, Pudong district
201201
Shanghai
+86 2138139500
cschina@schaffner.com

Finland

Schaffner Oy

Sauvonrinne 19 H
8500
Lohja
+358 50 468 7284
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

Schoemperlenstrasse 12B
76185
Karlsruhe
+49 721 56910
germanysales@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

Italy

Schaffner EMC S.r.l.

Via Ticino, 30
20900
Monza (MB)
+39 039 21 41 070
italysales@schaffner.com

Japan

Schaffner EMC K.K.

ISM Sangenjaya 7F
1-32-12 Kamiyama, 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

Spain

Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E El Soto de Moraleja, Alcobendas
28109
Madrid
+34 917 912 900
spainsales@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

Taiwan

Schaffner EMV Ltd.

U-Town
20 Floor-2, No 97, Section 1, XinTai 5th Road, XiZhi District
22175
New Taipei City
+886 226975500
taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.

Sathorn Square Tower
Room 3780, 37FL, 98 North-Sathorn Rd, Silom, Bangrak
10500
Bangkok
+66 621056397
thailandsales@schaffner.com

United Kingdom

Schaffner Ltd.

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

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