The RM Line Reactor . . .

CORE

The quality and performance of a line reactor is fundamentally dependant on its ability to withstand harmonics and transients in what is clearly a difficult environment. The bonding and clamping techniques of the gapped core also significantly impacts its performance characteristics.

HPS has paid particular attention to these basics to ensure both reliable and consistent performance.

Core materials, manufacturing and assembly processes have been carefully evaluated to produce optimum losses and sound levels necessary for this product.

COILS

Conductors are precision wound for optimum short circuit withstandability and electrical balance are used throughout the RM line. Choice of conductors, winding techniques and cooling ducts are precisely selected to assure the highest continuous, reliable performance.

INSULATION SYSTEM

HPS Line Reactors are designed to meet the most difficult temperature environments. On units up to 160 amps, RM line reactors have a 115°C temperature rise designed for 200°C Insulation Class. This results in a permissible 24 hour maximum ambient of 50°C and an average of 40°C continuously.

On units larger than 160 amps, Class 220 Insulation is used throughout with a maximum permissible continuous ambient temperature of 60°C. These temperature tests are all measured at 150% rated 60 Hz current. The extra 50% current during the temperature test is to consider the worst heating effect due to the present of harmonics in the motor drive system. Generally harmonic heating effect is approximately 30% and depends on individual drive system. For further information on temperature rises, please consult our sales offices.

VPI IMPREGNATION

Every reactor is fully VPI vacuum and pressure processed with VT (vinyl-toluene) Polyester Resin. This modern, vinyl-toluene based resin with its thicker build, offers significant benefits for electrical, mechanical and thermal properties.

This impregnation process and material results in a much improved dielectric constant, dissipation factor, bonding strength and dielectric breakdown (volts per mil) than any other impregnation material including the more traditional oil modified epoxies and varnishes.

Vacuum impregnation is considered vital for the integrity of electrical equipment located in such sensitive locations. The core and coil assembly is finished with a clear resin.

TERMINATIONS

Custom connections are provided for in several ways. Finger-proof-terminal blocks are provided on three model ranges, and terminal pads are supplied on higher current ratings. Refer to the dimensional summary for details. All connections are brazed to ensure electrical integrity.

. . . Features of Construction

ENCLOSURES

Enclosed reactors are standard as either NEMA 2 or 3R. Units in NEMA 3R enclosures are suitable for floor or wall mounting. Wall mounting is available on NEMA 3R units up to 600 lbs. Please consult customer service for details.

Enclosures are finished with a 7 stage phosphate process with baked enamel ANSI 61 grey.

QUALITY CONTROL

Every reactor is production line tested in accordance with the requirements for UL, ANSI, NEMA and CSA. This confirms that every unit meets our highest expectations for Quality Assurance.

Additionally, line reactors have been short circuit tested at a certified laboratory to confirm the withstandability of our reactors to short circuits that may be present in a distribution system. Tests were done in accordance with ANSI C57.12.91 at 25 times rated current for 2 seconds. Those test results are available upon request successfully withstanding this test ensured that the RM line reactor will survive power stresses such as short circuits that may be present in a distribution circuit.

UL and CSA CERTIFICATION

A vital assurance for our customers is the approval of this product line to national standards.

Our open and enclosed style reactors are recognized by UL and certified by CSA as follows:

UL File No.: E61431
CSA File No.: LR3902

This approval is inclusive to 2000 amps and 8.6 kV class, and may be of interest for any special applications.

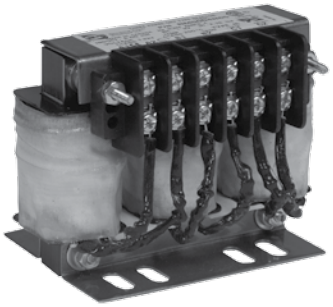
Our products are built in accordance with and meet UL 508, UL 506 and CSA C22.2 NO.66 standards.

INPUT AND OUTPUT SIDE REACTORS

HPS three phase Line Reactors are designed for both the input and output side of variable speed drives including Insulated Gate Bipolar Transistor (IGBT) type inverters.

SPECIALS

For special applications or for any features that you may require beyond the standard line listed, please contact our sales offices.



Standard Three Phase Line Reactor Specifications

RATINGS:

Nominal Inductance +/- 10% @ rated current.
95% of nominal inductance @ 150% rated current.
50% of nominal inductance @ 350% of rated current.

The above performance indicates that even at very substantial overload conditions (even beyond what other equipment in the circuit could tolerate), the RM Line Reactor will still provide current limiting performance against total harmonic distortion generated by the drive system.

TEMPERATURE RISE:

115° C on units up to 160 amps; average ambient of 40°C.
115° C on units larger than 160 amps; average ambient of 60° C.

INSULATION SYSTEM:

200°C Temperature Class up to 160 amps.
220°C Temperature Class over 160 amps.

FREQUENCY:

60 Hz Fundamental Current Maximum.

COOLING METHOD:

Natural convection

SYSTEM VOLTAGE:

600V Class

APPROVALS:

UL File No.: E61431
CSA File No.: LR 3902
CE Mark (IEC 61558-2-20:2000)

SOUND LEVEL:

2 to 18 amps: 58 dBA
130 to 320 amps: 70 dBA
25 to 100 amps: 64 dBA
400 to 1200 amps: 75 dBA

ENCLOSURE: (when specified)

NEMA 2 or NEMA 3R, ANSI 61 Grey, UL50

HARMONIC WITHSTAND:

HPS reactors are designed to withstand typical harmonics associated with both the input and output side of AC variable speed drives including IGBT type inverter drives. For additional information, contact our sales office.

RM Series Line Reactor Selection Tables

Line Reactor Part Number Guide

RM 0002 M 32 _ * _

- Further suffix to follow. **Add suffix "E" for Enclosure.**
- Inductance Value
- The inductance value is preceded with a letter to designate the position of the decimal point to determine the inductance. The letters are as follows:
  - 'M' XX. mH
  - 'N' X.X mH
  - 'P' 0.XX mH
  - 'U' .0XX mH or XX.0 uH
  - Example: M32 is 32.0 mH
- 4 digits for current rating
- In-Line Reactor

Note: As all characters of the P/N represent performance values of the reactor, P/N's are not completely sequential. They are sorted by current rating.

* **Add the Suffix "E" to the standard part number for an Enclosed unit.**

HP Rating	240 Volt - 60 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
0.5	RM0004N65	4	RM0004M12	4
1	RM0004N30	4	RM0004N65	4
1.5	RM0008N30	8	RM0008N50	8
2	RM0008N15	8	RM0008N30	8
3	RM0012N13	12	RM0012N25	12
5	RM0018P80	18	RM0018N15	18
7.5	RM0025P50	25	RM0025N12	25
10	RM0035P40	35	RM0035P80	35
15	RM0045P30	45	RM0055P50	55
20	RM0055P25	55	RM0055P50	55
25	RM0080P20	80	RM0080P40	80
30	RM0080P20	80	RM0080P23	80
40	RM0130P10	130	RM0110P18	110
50	RM0130P10	130	RM0130P20	130
60	RM0160U75	160	RM0160P15	160
75	RM0200U55	200	RM0200P11	200
100	RM0250U45	250	RM0250U90	250
125	RM0320U40	320	RM0320U75	320
150	RM0400U30	400	RM0400U61	400
200	RM0500U25	500	RM0500U50	500
250	RM0600U20	600	RM0600U40	600
300	RM0750U15	750	RM0750U25	750
350	RM0900U13	900	RM0900U26	900
400	RM1000U11	1000	RM1000U18	1000
500	RM1200U10	1200	RM1200U15	1200

HP Rating	480 Volt - 60 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
1	RM0002M12	2	RM0002M20	2
1.5	RM0004N91	4	RM0004M12	4
2	RM0004N65	4	RM0004M12	4
3	RM0008N50	8	RM0008N75	8
5	RM0008N30	8	RM0008N50	8
7.5	RM0012N25	12	RM0012N42	12
10	RM0018N15	18	RM0018N25	18
15	RM0025N12	25	RM0025N20	25
20	RM0035P80	35	RM0035N17	35
25	RM0035P80	35	RM0035N12	35
30	RM0045P70	45	RM0045N12	45
40	RM0055P50	55	RM0055P85	55
50	RM0080P40	80	RM0080P70	80
60	RM0080P40	80	RM0080P70	80
75	RM0110P30	110	RM0110P45	110
100	RM0130P20	130	RM0130P30	130
125	RM0160P15	160	RM0160P23	160
150	RM0200P11	200	RM0200P24	200
200	RM0250U90	250	RM0250P15	250
250	RM0320U75	320	RM0320P13	320
300	RM0400U61	400	RM0400P11	400
350	RM0500U50	500	RM0500U85	500
400	RM0500U50	500	RM0500U85	500
500	RM0600U40	600	RM0600U65	600
600	RM0750U36	750	RM0750U60	750
700	RM0900U26	900	RM0900U43	900
800	RM1000U29	1000	RM1000U38	1000
1000	RM1200U18	1200	RM1200U30	1200

HP Rating	600 Volt - 60 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
1	RM0002M20	2	RM0002M32	2
1.5	RM0002M12	2	RM0002M20	2
2	RM0004M12	4	RM0004M22	4
3	RM0004N91	4	RM0004M12	4
5	RM0008N50	8	RM0008N75	8
7.5	RM0012N31	12	RM0012N51	12
10	RM0012N25	12	RM0012N42	12
15	RM0018N15	18	RM0018N25	18
20	RM0025N12	25	RM0025N20	25
25	RM0035N12	35	RM0035N17	35
30	RM0035P80	35	RM0035N17	35
40	RM0045P70	45	RM0045N12	45
50	RM0055P50	55	RM0055P85	55
60	RM0080P40	80	RM0080P70	80
75	RM0080P40	80	RM0080P70	80
100	RM0110P30	110	RM0110P45	110
125	RM0130P20	130	RM0130P37	130
150	RM0160P23	160	RM0160P32	160
200	RM0200P19	200	RM0200P24	200
250	RM0250P15	250	RM0250P19	250
300	RM0320U96	320	RM0320P16	320
350	RM0400U82	400	RM0400P14	400
400	RM0400U82	400	RM0400P14	400
500	RM0500U57	500	RM0500U96	500
600	RM0600U65	600	RM0600U80	600
700	RM0700U41	700	RM0700U68	700
800	RM0750U36	750	RM0750U60	750
900	RM0900U32	900	RM0900U53	900
1000	RM1000U29	1000	RM1000U48	1000
1200	RM1200U24	1200	RM1200U40	1200

HP Rating	525 Volt - 50 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
1	RM0002M20	2	RM0002M32	2
1.5	RM0002M12	2	RM0002M20	2
2	RM0004M12	4	RM0004M22	4
3	RM0004N65	4	RM0004M12	4
5	RM0008N50	8	RM0008N75	8
7.5	RM0012N31	12	RM0012N51	12
10	RM0012N25	12	RM0012N42	12
15	RM0018N15	18	RM0018N25	18
20	RM0025N12	25	RM0025N20	25
25	RM0035N12	35	RM0035N17	35
30	RM0035P80	35	RM0035N17	35
40	RM0045P70	45	RM0045N12	45
50	RM0055P50	55	RM0055P85	55
60	RM0080P40	80	RM0080P70	80
75	RM0080P40	80	RM0080P70	80
100	RM0110P30	110	RM0110P45	110
125	RM0130P20	130	RM0130P37	130
150	RM0160P23	160	RM0160P32	160
200	RM0200P19	200	RM0200P24	200
250	RM0250P15	250	RM0250P19	250
300	RM0320U96	320	RM0320P16	320
350	RM0400U82	400	RM0400P14	400
400	RM0400U82	400	RM0400P14	400
500	RM0500U57	500	RM0500U96	500
600	RM0600U65	600	RM0600U80	600
700	RM0700U41	700	RM0700U68	700
800	RM0750U36	750	RM0750U60	750
900	RM0900U32	900	RM0900U53	900
1000	RM1000U29	1000	RM1000U48	1000
1200	RM1200U24	1200	RM1200U40	1200

HP Rating	660 Volt - 50 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
1	RM0002M32	2	Consult Factory	2
1.5	RM0002M20	2	RM0002M32	2
2	RM0004M22	4	Consult Factory	4
3	RM0004M12	4	RM0004M22	4
5	RM0008N75	8	Consult Factory	8
7.5	RM0008N50	8	RM0008N75	8
10	RM0012N42	12	Consult Factory	12
15	RM0018N25	18	Consult Factory	18
20	RM0025N20	25	Consult Factory	25
25	RM0025N20	25	Consult Factory	25
30	RM0035N17	35	Consult Factory	35
40	RM0035N12	35	RM0035N17	35
50	RM0055P85	55	Consult Factory	55
60	RM0055P85	55	Consult Factory	55
75	RM0080P70	80	Consult Factory	80
100	RM0080P40	80	RM0080P70	80
125	RM0110P45	110	Consult Factory	110
150	RM0130P30	130	Consult Factory	130
200	RM0160P23	160	Consult Factory	160
250	RM0200P19	200	Consult Factory	200
300	RM0250P15	250	Consult Factory	250
350	RM0320P13	320	Consult Factory	320
400	RM0320P13	320	Consult Factory	320
500	RM0400U82	400	RM0400P14	400
600	RM0500U85	500	Consult Factory	500
700	RM0600U65	600	Consult Factory	600
800	RM0700U68	700	Consult Factory	700
900	RM0750U60	750	Consult Factory	750
1000	RM0900U43	900	Consult Factory	900
1200	RM1000U38	1000	Consult Factory	1000

HP Rating	690 Volt - 50 Hz			
	3% Impedance		5% Impedance	
	P/N	Amps	P/N	Amps
1	RM0002M32	2	Consult Factory	2
1.5	RM0002M20	2	Consult Factory	2
2	RM0002M20	2	RM0002M32	2
3	RM0004M12	4	RM0004M22	4
5	RM0008N75	8	Consult Factory	8
7.5	RM0008N50	8	Consult Factory	8
10	RM0012N42	12	Consult Factory	12
15	RM0018N25	18	Consult Factory	18
20	RM0018N25	18	Consult Factory	18
25	RM0025N20	25	Consult Factory	25
30	RM0035N17	35	Consult Factory	35
40	RM0035N12	35	Consult Factory	35
50	RM0045N12	45	Consult Factory	45
60	RM0055P85	55	Consult Factory	55
75	RM0080P70	80	Consult Factory	80
100	RM0080P40	80	Consult Factory	80
125	RM0110P45	110	Consult Factory	110
150	RM0130P30	130	Consult Factory	130
200	RM0160P23	160	Consult Factory	160
250	RM0200P19	200	Consult Factory	200
300	RM0250P19	250	Consult Factory	250
350	RM0320P16	320	Consult Factory	320
400	RM0320P13	320	Consult Factory	320
500	RM0400P11	400	Consult Factory	400
600	RM0500U85	500	Consult Factory	500
700	RM0600U65	600	Consult Factory	600
800	RM0600U65	600	Consult Factory	600
900	RM0700U68	700	Consult Factory	700
1000	RM0750U60	750	Consult Factory	750
1200	RM0900U43	900	Consult Factory	900

Standard Three Phase Line Reactor Core & Coil Specification Charts

Current (Amps)	Part Number	Inductance (mH)	Watts Loss	Dimensions					Mtg Slot/ Hole Size	Dim. Fig. # (Page 117)	Weight (Lbs.)
				W	D	H	Mtg. W	Mtg. D			
2	**RM0002M12**	12.0	7	4.40	2.83	3.33	1.44/2.56	1.77	.281 x .625	1	2
2	**RM0002M20**	20.0	9	4.40	2.83	3.33	1.44/2.56	1.77	.281 x .625	1	3
2	**RM0002M32**	32.0	13	4.40	2.83	3.33	1.44/2.56	1.77	.281 x .625	1	3
4	**RM0004M12**	12.0	21	4.40	3.33	3.33	1.44/2.56	2.37	.281 x .625	1	4
4	**RM0004M22**	22.0	25	6.00	3.30	4.80	2.00/3.00	2.09	.281 x .625	3	8
4	**RM0004N30**	3.00	7	4.40	2.83	3.33	1.44/2.56	1.77	.281 x .625	1	2
4	**RM0004N65**	6.50	13	4.40	2.83	3.33	1.44/2.56	1.77	.281 x .625	1	3
4	**RM0004N91**	9.10	15	4.40	3.33	3.33	1.44/2.56	2.37	.281 x .625	1	3
8	**RM0008N15**	1.50	11	4.40	2.83	3.33	2.00	1.77	.281 x .625	1	3
8	**RM0008N30**	3.00	25	4.40	2.83	3.33	2.00	1.77	.281 x .625	1	3
8	**RM0008N50**	5.00	31	4.40	3.33	3.33	2.00	2.37	.281 x .625	1	4
8	**RM0008N75**	7.50	31	6.00	3.55	4.80	2.00/3.00	2.34	.281 x .625	3	9
12	**RM0012N13**	1.30	23	4.40	2.83	3.33	2.00	1.77	.281 x .625	1	3
12	**RM0012N25**	2.50	26	6.00	3.30	4.80	2.00/3.00	2.09	.281 x .625	3	8
12	**RM0012N31**	3.10	30	6.00	3.55	4.80	2.00/3.00	2.34	.281 x .625	3	9
12	**RM0012N42**	4.20	34	6.00	3.80	4.80	2.00/3.00	2.59	.281 x .625	3	10
12	**RM0012N51**	5.10	39	6.05	3.80	4.80	2.00/3.00	2.59	.281 x .625	3	13
18	**RM0018N15**	1.50	29	6.00	3.55	4.80	2.00/3.00	2.34	.281 x .625	3	9
18	**RM0018N25**	2.50	40	6.00	3.84	4.80	2.00/3.00	2.84	.281 x .625	2	13
18	**RM0018P80**	0.80	19	6.00	3.30	4.80	2.00/3.00	2.09	.281 x .625	3	7
25	**RM0025N12**	1.20	44	6.10	3.84	5.70	2.00/3.00	2.34	.281 x .625	2	10
25	**RM0025N20**	2.00	59	7.15	3.75	5.60	3.00	2.87	.38 x .63	3	18
25	**RM0025P50**	0.50	23	6.00	3.84	5.70	2.00/3.00	2.09	.281 x .625	2	7
35	**RM0035N12**	1.20	75	8.50	4.37	6.88	3.00/4.20	3.12	.44 X 1.00	3	26
35	**RM0035N17**	1.70	90	8.60	4.87	6.93	3.00/4.20	3.62	.44 X 1.00	3	35
35	**RM0035P40**	0.40	36	6.00	3.34	5.70	2.00/3.00	2.34	.281 x .625	2	9
35	**RM0035P80**	0.80	51	7.00	3.75	5.61	3.00	2.87	.38 x .63	3	17
45	**RM0045N12**	1.20	100	8.50	4.37	6.88	3.00/4.20	3.62	.44 X 1.00	3	35
45	**RM0045P30**	0.30	33	6.00	3.84	5.70	2.00/3.00	2.84	.281 x .625	2	13
45	**RM0045P70**	0.70	64	6.90	4.45	5.60	3.00	3.37	.38 x .63	3	22
55	**RM0055P25**	0.25	39	6.05	3.84	5.70	2.00/3.00	2.84	.281 x .625	2	12
55	**RM0055P50**	0.50	75	8.50	4.37	6.88	3.00/4.20	3.12	.44 X 1.00	3	26
55	**RM0055P85**	0.85	110	8.50	4.87	6.95	3.00/4.20	3.62	.44 X 1.00	3	35
80	**RM0080P20**	0.20	88	8.50	4.37	6.88	3.00/4.20	3.12	.44 X 1.00	4	26
80	**RM0080P23**	0.23	70	8.50	4.87	6.88	3.00/4.20	3.62	.44 X 1.00	4	33
80	**RM0080P40**	0.40	138	9.40	5.94	6.95	3.00/4.20	3.62	.44 X 1.00	4	36
80	**RM0080P70**	0.70	140	10.50	5.85	8.35	3.60/4.80	4.23	.44 X 1.25	4	63
110	**RM0110P15**	0.15	86	8.50	5.44	6.88	3.00/4.20	3.12	.44 X 1.00	4	27
110	**RM0110P18**	0.18	95	8.50	4.87	6.88	3.00/4.20	3.62	.44 X 1.00	4	35
110	**RM0110P30**	0.30	123	10.70	5.85	8.35	3.60/4.80	4.23	.44 X 1.25	4	52
110	**RM0110P45**	0.45	130	10.50	5.85	8.29	3.60/4.80	4.23	.44 X 1.25	4	63
130	**RM0130P10**	0.10	95	8.50	5.44	6.88	3.00/4.20	3.12	.44 X 1.00	4	27
130	**RM0130P20**	0.20	115	10.70	6.20	8.35	3.60/4.80	3.73	.44 X 1.25	4	41
130	**RM0130P30**	0.30	142	10.70	5.85	8.29	3.60/4.80	4.23	.44 X 1.25	4	53
130	**RM0130P37**	0.37	143	10.70	6.35	8.32	3.60/4.80	4.73	.44 X 1.25	4	75
160	**RM0160P15**	0.15	129	10.50	6.20	8.31	3.60/4.80	3.73	.44 X 1.25	4	46
160	**RM0160P23**	0.23	142	10.90	6.35	8.29	3.60/4.80	4.73	.44 X 1.25	4	66
160	**RM0160P32**	0.32	141	10.50	8.35	8.29	3.60/4.80	6.73	.44 X 1.25	4	104
160	**RM0160U75**	0.08	100	8.50	5.44	6.91	3.00/4.20	3.12	.44 X 1.00	4	29

All dimensions in inches

Standard Three Phase Line Reactor Core & Coil Specification Charts

Current (Amps)	Part Number	Inductance (mH)	Watts Loss	Dimensions					Mtg Slot/ Hole Size	Dim. Fig. # (Page 117)	Weight (Lbs.)
				W	D	H	Mtg. W	Mtg. D			
200	**RM0200P11**	0.11	114	10.50	7.53	8.35	3.60/4.80	4.48	.44 X 1.25	4	52
200	**RM0200P19**	0.190	138	10.50	9.53	8.29	3.60/4.80	6.23	.44 X 1.25	4	93
200	**RM0200P24**	0.240	164	10.50	8.35	8.29	3.60/4.80	6.73	.44 X 1.25	4	105
200	**RM0200U55**	0.055	89	8.50	5.94	7.05	3.00/4.20	3.62	.44 X 1.00	4	37
250	**RM0250P15**	0.150	188	13.75	9.00	11.43	4.80	5.44	.44 X 1.00	5	119
250	**RM0250P19**	0.190	203	13.75	7.25	11.43	4.80	5.94	.44 X 1.00	5	137
250	**RM0250U45**	0.045	90	10.50	5.35	8.31	3.60/4.80	3.73	.44 X 1.25	4	40
250	**RM0250U90**	0.090	131	10.50	8.75	8.35	3.60/4.80	4.73	.44 X 1.25	4	65
320	**RM0320P13**	0.13	245	13.75	7.75	11.43	4.80	6.44	.44 X 1.00	5	127
320	**RM0320P16**	0.160	270	13.75	8.25	11.43	4.80	6.44	.44 X 1.00	5	146
320	**RM0320U40**	0.040	94	10.50	6.85	8.29	3.60/4.80	5.23	.44 X 1.25	4	69
320	**RM0320U75**	0.075	184	13.75	8.44	11.43	4.80	5.94	.44 X 1.00	5	87
320	**RM0320U96**	0.096	214	13.75	6.25	11.43	4.80	4.93	.44 X 1.00	5	107
400	**RM0400P11**	0.11	278	13.75	7.75	11.43	4.80	6.44	.44 X 1.00	5	156
400	**RM0400P14**	0.14	305	18.00	11.00	14.00	6.00	8.25	0.563	6	253
400	**RM0400U30**	0.030	130	10.50	6.35	8.29	3.60/4.80	4.73	.44 X 1.25	4	61
400	**RM0400U61**	0.061	177	13.75	8.69	11.43	4.80	5.44	.44 X 1.00	5	115
400	**RM0400U82**	0.082	210	13.75	7.75	11.43	4.80	6.44	.44 X 1.00	5	148
500	**RM0500U25**	0.025	152	13.75	7.75	11.43	4.80	6.44	.44 X 1.00	5	100
500	**RM0500U50**	0.05	196	13.75	9.69	11.43	4.80	6.44	.44 X 1.00	5	151
500	**RM0500U57**	0.057	217	13.75	9.63	11.43	4.80	6.94	.44 X 1.00	5	168
500	**RM0500U85**	0.085	280	13.75	9.75	11.43	4.80	8.44	.44 X 1.00	5	225
500	**RM0500U96**	0.096	317	22.00	10.75	20.50	6.00	8.75	0.75	6	282
600	**RM0600U20**	0.020	147	13.75	8.25	11.43	4.80	6.56	.44 X 1.00	5	115
600	**RM0600U40**	0.040	223	13.75	8.25	11.43	4.80	6.94	.44 X 1.00	5	177
600	**RM0600U65**	0.065	290	13.75	9.75	11.43	4.80	8.44	.44 X 1.00	5	230
600	**RM0600U80**	0.080	340	22.50	12.63	20.50	7.50	8.75	0.75	6	310
700	**RM0700U41**	0.041	276	22.50	13.00	20.25	6.00	8.25	0.56	6	240
700	**RM0700U68**	0.068	400	22.50	14.25	22.00	7.50	9.75	0.75	6	403
750	**RM0750U15**	0.015	209	18.00	8.25	14.00	6.00	6.25	0.563	6	159
750	**RM0750U25**	0.025	250	18.00	9.25	14.00	6.00	7.25	0.563	6	184
750	**RM0750U36**	0.036	293	18.00	9.75	14.00	6.00	7.75	0.563	6	236
750	**RM0750U60**	0.060	415	22.50	13.50	20.75	7.50	8.25	0.75	6	403
900	**RM0900U13**	0.013	216	18.00	12.00	14.00	6.00	7.25	0.56	6	159
900	**RM0900U26**	0.026	286	18.00	13.00	14.00	6.00	8.25	0.56	6	259
900	**RM0900U32**	0.032	400	18.00	13.63	14.00	6.00	10.25	0.75	6	340
900	**RM0900U43**	0.043	441	22.50	14.00	20.50	7.50	8.75	0.75	6	434
900	**RM0900U53**	0.053	490	22.50	13.00	21.50	7.50	10.25	0.75	6	546
1000	**RM1000U11**	0.011	179	18.00	12.50	18.00	6.00	9.25	0.75	6	200
1000	**RM1000U18**	0.018	232	22.50	13.75	20.50	7.50	11	0.75	6	282
1000	**RM1000U29**	0.029	377	22.50	13.75	20.50	7.50	7.25	0.75	6	394
1000	**RM1000U38**	0.038	416	22.50	14.00	20.50	7.50	10.25	0.56	6	450
1000	**RM1000U48**	0.048	490	22.50	15.00	20.50	7.50	11.25	0.75	6	642
1200	**RM1200U10**	0.010	228	18.00	13.50	14.00	6.00	8.25	0.563	6	205
1200	**RM1200U15**	0.015	287	18.00	14.00	18.50	6.00	10.75	0.75	6	300
1200	**RM1200U18**	0.018	395	18.00	14.25	18.38	7.50	8.25	0.75	6	343
1200	**RM1200U24**	0.024	440	22.50	14.00	20.50	7.50	9.25	0.75	6	444
1200	**RM1200U30**	0.030	490	22.50	14.00	17.00	7.50	10.25	0.75	6	534
1200	**RM1200U40**	0.040	576	22.50	17.00	19.50	7.50	11.75	0.563	6	600

All dimensions in inches

Standard Three Phase Line Reactor Enclosed Specification Charts

Current (Amps)	Part Number	Inductance (mH)	Watts Loss	Dimensions					Mtg Slot/ Hole Size	Dim. Fig. # (Page 117)	Case Style	Enclosed Weight (Lbs.)
				W	D	H	Mtg. W	Mtg. D				
2	**RM0002M12E**	12.0	7	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	9
2	**RM0002M20E**	20.0	9	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
2	**RM0002M32E**	32.0	13	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
4	**RM0004M12E**	12.0	21	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	11
4	**RM0004M22E**	22.0	25	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	15
4	**RM0004N30E**	3.00	7	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	9
4	**RM0004N65E**	6.50	13	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
4	**RM0004N91E**	9.10	15	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
8	**RM0008N15E**	1.50	11	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
8	**RM0008N30E**	3.00	25	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
8	**RM0008N50E**	5.00	31	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	11
8	**RM0008N75E**	7.50	31	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	16
12	**RM0012N13E**	1.30	23	10.00	8.00	8.00	7.00	6.50	0.188	1	N1	10
12	**RM0012N25E**	2.50	26	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	15
12	**RM0012N31E**	3.10	30	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	16
12	**RM0012N42E**	4.20	34	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	17
12	**RM0012N51E**	5.10	39	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	20
18	**RM0018N15E**	1.50	29	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	16
18	**RM0018N25E**	2.50	40	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	20
18	**RM0018P80E**	0.80	19	10.00	8.00	8.00	7.00	6.50	0.188	3	N1	14
25	**RM0025N12E**	1.20	44	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	17
25	**RM0025N20E**	2.00	59	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	35
25	**RM0025P50E**	0.50	23	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	14
35	**RM0035N12E**	1.20	75	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	43
35	**RM0035N17E**	1.70	90	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	52
35	**RM0035P40E**	0.40	36	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	16
35	**RM0035P80E**	0.80	51	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	24
45	**RM0045N12E**	1.20	100	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	52
45	**RM0045P30E**	0.30	33	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	20
45	**RM0045P70E**	0.70	64	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	39
55	**RM0055P25E**	0.25	39	10.00	8.00	8.00	7.00	6.50	0.188	2	N1	19
55	**RM0055P50E**	0.50	75	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	43
55	**RM0055P85E**	0.85	110	14.00	14.00	12.00	10.00	10.50	0.188	3	N2	52
80	**RM0080P20E**	0.20	88	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	43
80	**RM0080P23E**	0.23	70	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	50
80	**RM0080P40E**	0.40	138	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	53
80	**RM0080P70E**	0.70	140	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	80
110	**RM0110P15E**	0.15	86	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	44
110	**RM0110P18E**	0.18	95	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	52
110	**RM0110P30E**	0.30	123	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	69
110	**RM0110P45E**	0.45	130	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	80
130	**RM0130P10E**	0.10	95	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	44
130	**RM0130P20E**	0.20	115	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	58
130	**RM0130P30E**	0.30	142	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	70
130	**RM0130P37E**	0.37	143	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	92
160	**RM0160P15E**	0.15	129	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	63
160	**RM0160P23E**	0.23	142	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	83
160	**RM0160P32E**	0.32	141	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	164
160	**RM0160U75E**	0.08	100	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	46

Note: **Please refer to Pages 260 to 264 for enclosure dimensional specifications**

All dimensions in inches

Standard Three Phase Line Reactor Enclosed Specification Charts

Current (Amps)	Part Number	Inductance (mH)	Watts Loss	Dimensions					Mtg Slot/ Hole Size	Dim. Fig. # (Page 117)	Case Style	Enclosed Weight (Lbs.)
				W	D	H	Mtg. W	Mtg. D				
200	**RM0200P11E**	0.11	114	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	112
200	**RM0200P19E**	0.190	138	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	153
200	**RM0200P24E**	0.240	164	19.40	20.20	21.50	18.00	9.00	0.56	4	NH5	165
200	**RM0200U55E**	0.055	89	14.00	14.00	12.00	10.00	10.50	0.188	4	N2	154
250	**RM0250P15E**	0.150	188	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	179
250	**RM0250P19E**	0.190	203	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	197
250	**RM0250U45E**	0.045	90	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	100
250	**RM0250U90E**	0.090	131	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	125
320	**RM0320P13E**	0.13	245	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	187
320	**RM0320P16E**	0.160	270	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	206
320	**RM0320U40E**	0.040	94	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	129
320	**RM0320U75E**	0.075	184	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	147
320	**RM0320U96E**	0.096	214	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	167
400	**RM0400P11E**	0.11	278	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	216
400	**RM0400P14E**	0.14	305	23.90	25.00	28.75	22.75	9.00	0.56	6	NH6	313
400	**RM0400U30E**	0.030	130	23.90	25.00	28.75	22.75	9.00	0.56	4	NH6	121
400	**RM0400U61E**	0.061	177	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	175
400	**RM0400U82E**	0.082	210	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	208
500	**RM0500U25E**	0.025	152	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	160
500	**RM0500U50E**	0.05	196	23.90	25.00	28.75	22.75	9.00	0.56	5	NH6	211
500	**RM0500U57E**	0.057	217	26.00	25.00	38.00	21.50	19.00	0.56	5	NH3	245
500	**RM0500U85E**	0.085	280	26.00	25.00	38.00	21.50	19.00	0.56	5	NH3	302
500	**RM0500U96E**	0.096	317	26.00	25.00	38.00	21.50	19.00	0.56	6	NH3	359
600	**RM0600U20E**	0.020	147	26.00	25.00	38.00	21.50	19.00	0.56	5	NH3	192
600	**RM0600U40E**	0.040	223	26.00	25.00	38.00	21.50	19.00	0.56	5	NH3	254
600	**RM0600U65E**	0.065	290	26.00	25.00	38.00	21.50	19.00	0.56	5	NH3	307
600	**RM0600U80E**	0.080	340	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	417
700	**RM0700U41E**	0.041	276	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	347
700	**RM0700U68E**	0.068	400	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	510
750	**RM0750U15E**	0.015	209	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	266
750	**RM0750U25E**	0.025	250	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	291
750	**RM0750U36E**	0.036	293	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	343
750	**RM0750U60E**	0.060	415	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	510
900	**RM0900U13E**	0.013	216	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	266
900	**RM0900U26E**	0.026	286	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	366
900	**RM0900U32E**	0.032	400	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	447
900	**RM0900U43E**	0.043	441	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	541
900	**RM0900U53E**	0.053	490	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	653
1000	**RM1000U11E**	0.011	179	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	277
1000	**RM1000U18E**	0.018	232	32.00	29.50	41.00	23.50	23.50	0.56	6	NH4	432
1000	**RM1000U29E**	0.029	377	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	544
1000	**RM1000U38E**	0.038	416	26.00	25.00	38.00	21.50	19.00	0.56	6	NH3	684
1000	**RM1000U48E**	0.048	490	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	792
1200	**RM1200U10E**	0.010	228	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	355
1200	**RM1200U15E**	0.015	287	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	432
1200	**RM1200U18E**	0.018	395	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	493
1200	**RM1200U24E**	0.024	440	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	594
1200	**RM1200U30E**	0.030	490	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	684
1200	**RM1200U40E**	0.040	576	39.50	34.00	51.50	24.00	32.00	0.69	6	NJ1	850

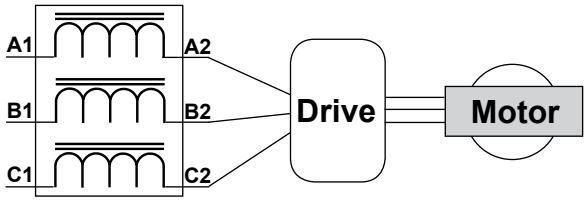
Note: **Please refer to Pages 260 to 264 for enclosure dimensional specifications**

All dimensions in inches

Application and Connection Diagrams

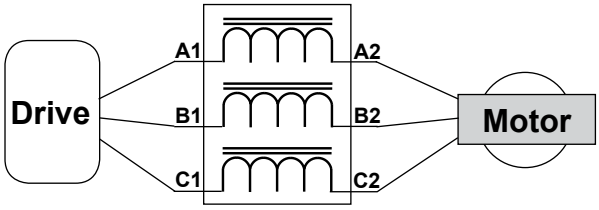
INPUT SIDE OF DRIVE

Installed on the input side of drives, reactors will reduce line notching, limit current and voltage spikes and surges from the incoming line and will reduce harmonic distortion from the drive onto the line. Units are installed in front of the drive or inverter as shown.



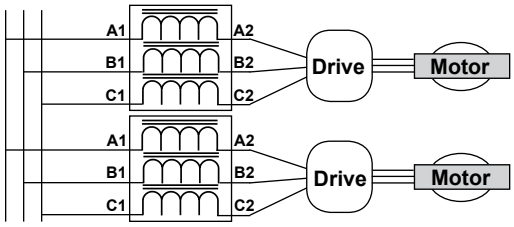
OUTPUT SIDE OF DRIVE

On the output side between the motor and the controller, reactors protect the controller from short circuits at the load. Motor performance improves. Voltage and current waveforms from the supply are enhanced reducing motor overheating and noise emissions.



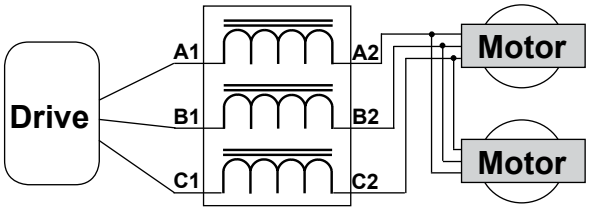
MULTIPLE DRIVES

Individual line reactors are recommended when multiple drives are installed on the same power line. Individual reactors eliminates cross talk between multiple drives and provides isolated protection for each controller for its own specific load.



MULTIPLE MOTORS

A single reactor can be installed when the application calls for multiple motors on the same drive. The reactor is sized based on the total horsepower of all the motors. Recommended for simultaneous operating motors only.



Termination Details

CONNECTOR DETAIL		
Open Style Ref.	**Type**	**Range/Dia.**
Figure #1	Terminal Block	#12 - #22
Figure #2	Terminal Block	#4 - #18
Figure #3	Terminal Block	#4 - #18
<u>All Others:</u>		
80 to 200 amps	Terminal Pad	.313” dia. (diagram 1A)
Above 200 amps	Terminal Pad	.5” dia.(diagram 1B)

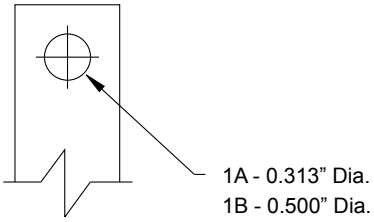


DIAGRAM 1

RM Line Reactor Cross-Reference Table

MTE Part Number	Current (Amps)	HPS Part Number	Induct. (mH)	TCI Part Number
RL-00201	2	**RM0002M12**	12.000	KLR2A
RL-00202	2	**RM0002M20**	20.000	KLR2C
RL-00203	2	**RM0002M32**	32.000	*
RL-00404	4	**RM0004M12**	12.000	*
RL-00401	4	**RM0004N30**	3.000	KLR4B
RL-00402	4	**RM0004N65**	6.500	KLR4A
RL-00403	4	**RM0004N91**	9.100	KLR4C
RL-00801	8	**RM0008N15**	1.500	KLR8B
RL-00802	8	**RM0008N30**	3.000	KLR8A
RL-00803	8	**RM0008N50**	5.000	KLR8C
RL-00804	8	**RM0008N75**	7.500	*
RL-01201	12	**RM0012N13**	1.300	KLR12B
RL-01202	12	**RM0012N25**	2.500	KLR12A
RL-01203	12	**RM0012N42**	4.200	KLR12C
RL-01802	18	**RM0018N15**	1.500	KLR16A
RL-01803	18	**RM0018N25**	2.500	KLR16C
RL-01801	18	**RM0018P80**	0.800	KLR16B
RL-02502	25	**RM0025N12**	1.200	KLR25A
RL-02503	25	**RM0025N20**	2.000	KLR25C
RL-02501	25	**RM0025P50**	0.500	KLR25B
RL-03503	35	**RM0035N12**	1.200	KLR35C
RL-03501	35	**RM0035P40**	0.400	KLR35B
RL-03502	35	**RM0035P80**	0.800	KLR35A
RL-04503	45	**RM0045N12**	1.200	KLR45C
RL-04501	45	**RM0045P30**	0.300	KLR45B
RL-04502	45	**RM0045P70**	0.700	KLR45A
RL-05501	55	**RM0055P25**	0.250	KLR55B
RL-05502	55	**RM0055P50**	0.500	KLR55A
RL-05503	55	**RM0055P85**	0.850	KLR55C

MTE Part Number	Current (Amps)	HPS Part Number	Induct. (mH)	TCI Part Number
RL-08001	80	**RM0080P20**	0.200	KLR80B
RL-08002	80	**RM0080P40**	0.400	KLR80A
RL-08003	80	**RM0080P70**	0.700	KLR80C
RL-10001	100	**RM0110P15**	0.150	KLR110B
RL-10002	100	**RM0110P30**	0.300	KLR110A
RL-10003	100	**RM0110P45**	0.450	KLR110C
RL-13001	130	**RM0130P10**	0.100	KLR130B
RL-13002	130	**RM0130P20**	0.200	KLR130A
RL-13003	130	**RM0130P30**	0.300	KLR130C
RL-16002	160	**RM0160P15**	0.150	KLR160A
RL-16003	160	**RM0160P23**	0.230	KLR160C
RL-16001	160	**RM0160U75**	0.075	KLR160B
RL-20002	200	**RM0200P11**	0.110	KLR200A
RL-20003	200	**RM0200P19**	0.190	KLR200C
RL-20001	200	**RM0200U55**	0.055	KLR200B
RL-25003	250	**RM0250P15**	0.150	KLR250C
RL-25001	250	**RM0250U45**	0.045	KLR250B
RL-25002	250	**RM0250U90**	0.090	KLR250A
RL-32003	320	**RM0320P13**	0.130	KLR300C
RL-32001	320	**RM0320U40**	0.040	KLR300B
RL-32002	320	**RM0320U75**	0.075	KLR300A
RL-40003	400	**RM0400P11**	0.110	KLR360C
RL-40001	400	**RM0400U30**	0.030	KLR360B
RL-40002	400	**RM0400U61**	0.061	KLR360A
RL-50001	500	**RM0500U25**	0.025	KLR480B
RL-50002	500	**RM0500U50**	0.050	KLR480A
RL-50003	500	**RM0500U85**	0.085	KLR480C
RL-60001	600	**RM0600U20**	0.020	KLR600B
RL-60002	600	**RM0600U40**	0.040	KLR600A
RL-60003	600	**RM0600U65**	0.065	KLR600C