

LINE REACTOR LR3 480 V

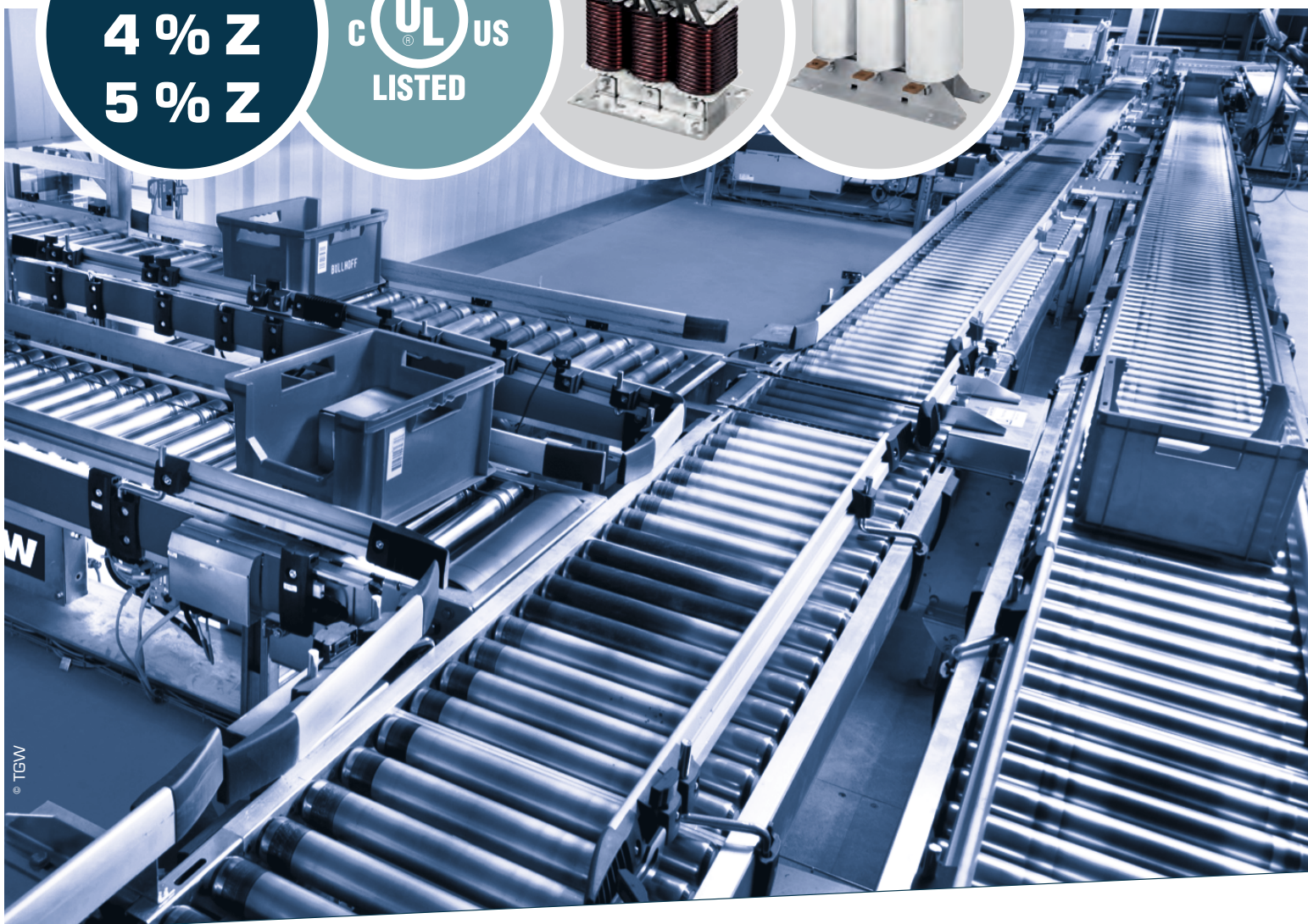
Versions / Technical data

3 % Z

4 % Z

5 % Z

c  US
LISTED





For fail-safe operation

BLOCK line reactors can be found throughout the world in many sectors of industry - including mechanical engineering, machine building, electronics, materials handling technology, in servo drives and wherever frequency converters are used. The highly technical and complex automation of industrial systems means that the mains network has to be handled very sensitively. The LR3 line reactors reduce harmonics and thereby protect your systems against costly downtimes. The well thought-out, completely redesigned structure of the LR3 allows fast and easy installation in even the tightest of spaces. And like all BLOCK products, the reactor range meets the high safety and quality requirements for tough industrial use.

Impedance selection

Low impedance (Low Z) is a most common selection to absorb power line and motor current spikes. Based in its frequency depending impedance, slight harmonic mitigation is also a benefit of this impedance range.

Mid impedance (Mid Z) is an excellent choice if higher power line and motor current spikes absorption is needed. Also a better harmonic reduction can be achieved by choosing Mid Z reactors.

High impedance (Hi Z) is the optimized solution for harmonic suppression. Even commutation drops, power line spike and flicker, based on pulsed power loads, will be reduced as much as possible with a line reactor.

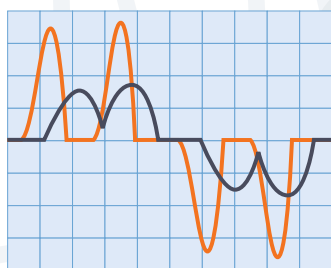
$$\text{Impedance [\%]} = \frac{I * 2\pi * f * L * \sqrt{3}}{V_{LL}}$$



Highlights

- ✓ Power harmonic mitigation
- ✓ Starting current limitation
- ✓ Integrated lifting rings
- ✓ Bridging voltage dips
- ✓ Low ripple
- ✓ Peak current limitation
- ✓ Multifunctional fixing rails
- ✓ Excellent corrosion protection and low noise thanks to BLOCKIMPEX vacuum impregnation
- ✓ Increases the service life of consumers

Harmonic mitigation



Line current

— with LR3
— without three-phase reactor

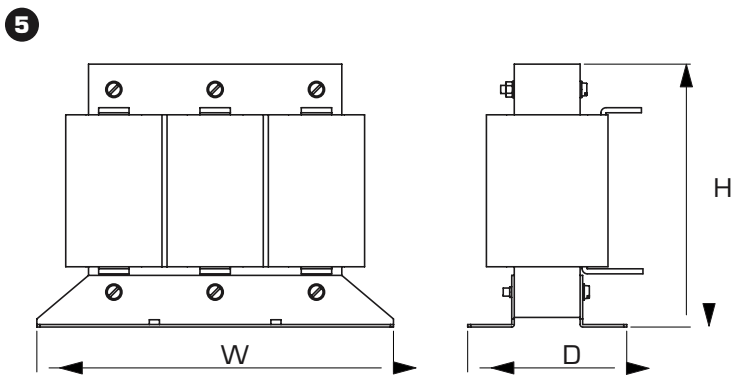
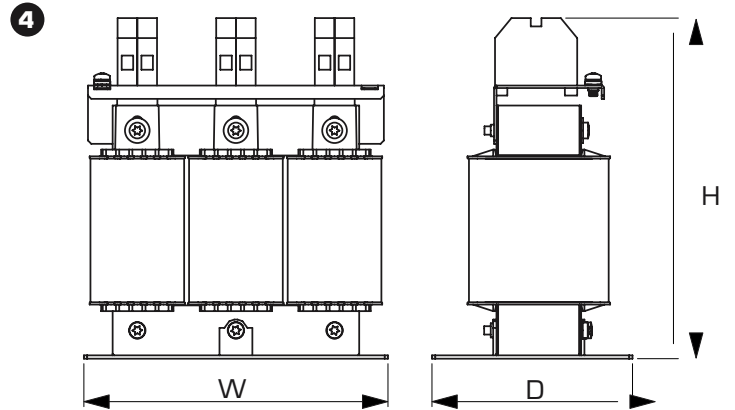
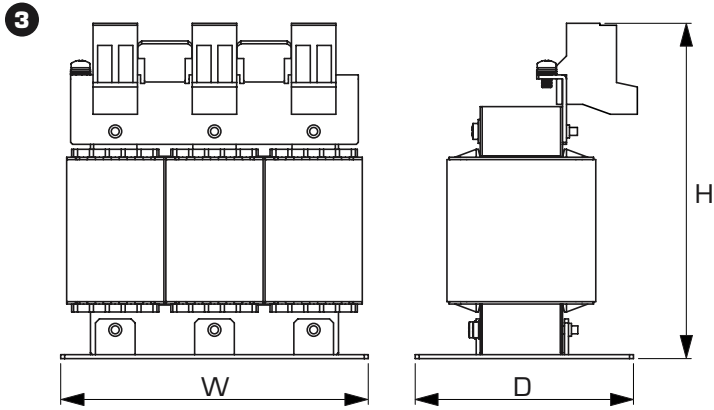
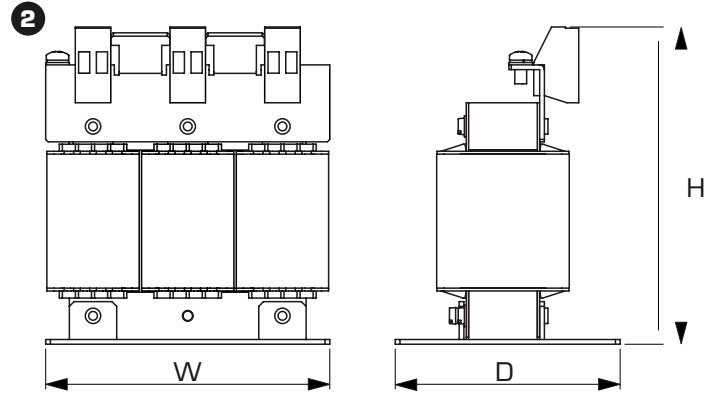
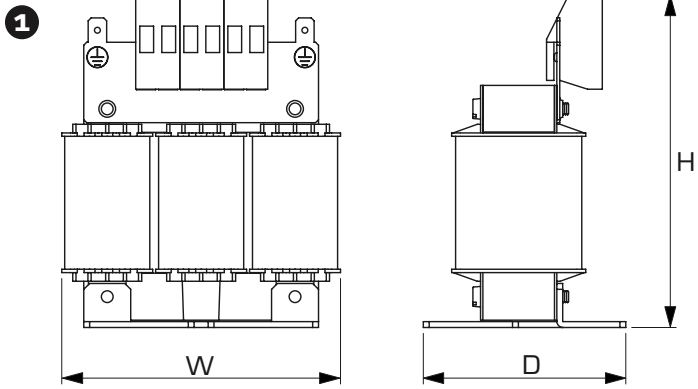
Specifications

Rated voltage	480 V
Impedance	3 %, 4 % or 5 %
Rated frequency	50 - 60 Hz
Inductivity	0.014 - 18.500 mH
Insulation class	B, F or H
Ambient temperature	-10 °C to +40 °C
Degree of protection	IP 00
Safety class (prepared)	I

Approvals



Dimension pictures



480 V - 3 % Low Z

Please click on the item number to get full details from the data sheet.

Item number	HP Rating	Inductance (mH)	Rated current (A)	Isolation class	Weight (lbs)	Dimension picture	Dimensions (H x W x D in inch)	Mounting (in inch)
LR3 48-3/2	1	11.000	2	B, class 130	1.1	①	4.6 x 2.9 x 2.2	2.0 x 1.4; 2.6 x 1.6
LR3 48-3/4	2	5.500	4	B, class 130	1.7	①	3.9 x 2.9 x 2.5	2.0 x 1.7; 2.6 x 1.9
LR3 48-3/6	3	3.700	6	B, class 130	1.6	①	4.6 x 3.1 x 2.4	2.2 x 1.5; 2.8 x 1.8
LR3 48-3/8	5	2.750	8	F, class 155	2.2	①	4.6 x 3.1 x 2.7	2.2 x 1.9; 2.8 x 2.1
LR3 48-3/10	5 - 10	2.200	10	F, class 155	4.2	②	5.3 x 4.7 x 3.3	3.5 x 1.5; 4.1 x 2.8
LR3 48-3/16	10	1.380	16	F, class 155	5.8	②	5.3 x 4.7 x 3.7	2.5 x 1.9; 4.1 x 3.1
LR3 48-3/20	15	1.100	20	F, class 155	8.2	②	6.4 x 6.1 x 3.7	4.4 x 2.0; 5.3 x 3.1
LR3 48-3/25	15	0.880	25	F, class 155	8.7	②	6.5 x 6.1 x 3.7	4.4 x 2.0; 5.3 x 3.1
LR3 48-3/30	20 - 25	0.740	30	F, class 155	12.6	③	6.6 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-3/35	20 - 25	0.630	35	F, class 155	12.9	③	6.6 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-3/40	30	0.550	40	F, class 155	14.1	③	7.7 x 7.3 x 4.0	3.5 x 3.3; 5.4 x 2.8; 6.7 x 2.2
LR3 48-3/45	30	0.490	45	F, class 155	14.9	③	7.7 x 7.3 x 4.0	3.5 x 3.3; 5.4 x 2.8; 6.7 x 2.2
LR3 48-3/50	30 - 40	0.440	50	F, class 155	15.2	④	8.2 x 7.3 x 4.0	3.5 x 3.3; 5.4 x 2.8; 6.7 x 2.2
LR3 48-3/63	40	0.350	63	F, class 155	17.8	④	8.1 x 7.3 x 4.4	3.5 x 3.7; 5.4 x 3.1; 6.7 x 2.6
LR3 48-3/70	50	0.315	70	F, class 155	21.9	④	8.1 x 7.3 x 4.8	3.5 x 4.1; 5.4 x 3.5; 6.7 x 3.0
LR3 48-3/80	50 - 60	0.270	80	F, class 155	23.0	④	9.5 x 8.3 x 4.6	4.1 x 3.9; 6.1 x 3.3; 6.9 x 3.0
LR3 48-3/90	60 - 75	0.245	90	F, class 155	28.9	⑤	7.1 x 8.3 x 4.1	6.9 x 0.1
LR3 48-3/100	75	0.220	100	F, class 155	30.5	⑤	7.9 x 10.5 x 4.5	6.9 x 2.9; 7.1 x 3.9; 9.8 x 3.2
LR3 48-3/115	75	0.193	115	F, class 155	47.1	⑤	7.9 x 10.5 x 5.5	6.9 x 3.9; 7.1 x 4.8; 9.8 x 4.2
LR3 48-3/125	100	0.177	125	F, class 155	46.9	⑤	8.0 x 10.5 x 5.5	6.9 x 3.9; 7.1 x 4.8; 9.8 x 4.2
LR3 48-3/160	125	0.138	160	H, class 180	46.0	⑤	8.3 x 11.5 x 5.1	7.3 x 3.0; 10.7 x 3.0
LR3 48-3/180	125 - 150	0.123	180	H, class 180	61.1	⑤	8.3 x 11.5 x 5.9	7.3 x 3.0; 10.7 x 3.0
LR3 48-3/200	150	0.110	200	H, class 180	65.9	⑤	9.1 x 12.4 x 6.5	7.9 x 4.1; 8.5 x 4.0; 11.5 x 4.0
LR3 48-3/250	200	0.088	250	F, class 155	71.3	⑤	10.4 x 13.9 x 5.7	8.8 x 3.8; 9.4 x 3.2; 12.9 x 4.2
LR3 48-3/300	250	0.074	300	F, class 155	74.2	⑤	10.4 x 13.9 x 5.7	8.8 x 3.8; 9.4 x 3.2; 12.9 x 4.2
LR3 48-3/400	350	0.055	400	H, class 180	93.7	⑤	10.4 x 13.9 x 6.2	8.8 x 4.3; 9.4 x 4.1; 12.9 x 4.7
LR3 48-3/500	400	0.044	500	F, class 155	119.9	⑤	10.5 x 13.9 x 7.2	8.8 x 5.4; 9.4 x 4.7; 12.9 x 5.7
LR3 48-3/630	450	0.035	630	H, class 180	154.8	⑤	12.5 x 16.2 x 6.8	10.4 x 5.4; 15.3 x 5.4
LR3 48-3/710	500	0.031	710	H, class 180	168.9	⑤	12.5 x 16.2 x 7.4	10.4 x 5.9; 15.3 x 5.9
LR3 48-3/800	750	0.028	800	H, class 180	140.6	⑤	14.8 x 18.9 x 7.3	12.4 x 5.9; 14.6 x 6.2; 17.7 x 5.5
LR3 48-3/1000	800	0.022	1000	H, class 180	152.0	⑤	14.8 x 18.9 x 7.9	12.4 x 6.5; 14.6 x 6.8; 17.7 x 5.7
LR3 48-3/1200	1000	0.018	1200	H, class 180	267.3	⑤	16.5 x 21.7 x 8.5	14.0 x 6.7; 16.9 x 7.7; 20.3 x 6.6
LR3 48-3/1400	1200	0.016	1400	H, class 180	335.5	⑤	16.5 x 21.7 x 9.6	14.0 x 7.7; 16.9 x 8.7; 20.3 x 7.6
LR3 48-3/1600	1400	0.014	1600	H, class 180	395.9	⑤	16.5 x 21.7 x 10.8	14.0 x 8.9; 16.9 x 9.9; 20.3 x 8.8

480 V - 4 % Mid Z

Please click on the item number to get full details from the data sheet.

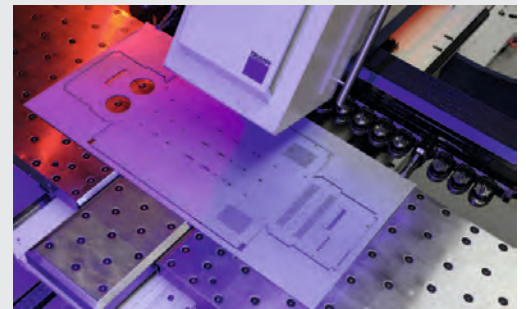
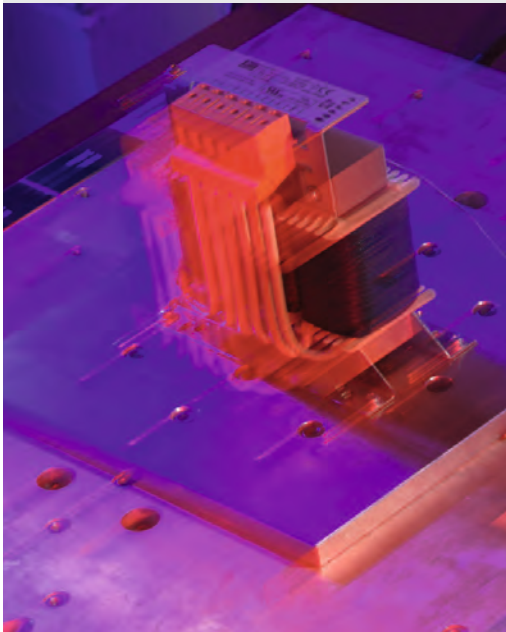
Item number	HP Rating	Inductance (mH)	Rated current (A)	Isolation class	Weight (lbs)	Dimension picture	Dimensions (H x W x D in inch)	Mounting (in inch)
LR3 48-4/2	1	14.700	2	B, class 130	1.2	①	4.6 x 2.9 x 2.2	2.0 x 1.4; 2.6 x 1.6
LR3 48-4/4	2	7.350	4	B, class 130	2.9	①	4.6 x 3.1 x 2.4	2.2 x 1.5; 2.8 x 1.8
LR3 48-4/6	3	4.900	6	F, class 155	3.2	①	4.6 x 3.1 x 2.7	2.2 x 1.9; 4.1 x 2.8
LR3 48-4/8	5	3.680	8	F, class 155	4.2	②	5.3 x 4.7 x 3.3	3.5 x 1.5; 4.1 x 2.8
LR3 48-4/10	5 - 10	2.940	10	F, class 155	4.4	②	5.3 x 4.7 x 3.3	3.5 x 1.5; 4.1 x 2.8
LR3 48-4/16	10	1.840	16	F, class 155	6.0	②	5.3 x 4.7 x 3.7	3.5 x 1.9; 4.1 x 3.1
LR3 48-4/20	15	1.470	20	F, class 155	8.4	③	6.4 x 6.1 x 3.7	4.4 x 2.0; 5.3 x 3.1
LR3 48-4/25	15	1.180	25	F, class 155	12.8	③	6.6 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-4/30	20 - 25	0.980	30	F, class 155	12.9	③	6.6 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-4/35	20 - 25	0.840	35	F, class 155	13.1	③	6.5 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-4/40	30	0.740	40	F, class 155	15.0	③	7.7 x 7.3 x 4.0	3.5 x 3.3; 5.4 x 2.8; 6.7 x 2.2
LR3 48-4/45	30	0.650	45	F, class 155	18.2	③	7.7 x 7.3 x 4.4	3.5 x 3.7; 5.4 x 3.1; 6.7 x 2.6
LR3 48-4/50	30 - 40	0.590	50	F, class 155	18.4	④	8.1 x 7.3 x 4.4	3.5 x 3.7; 5.4 x 3.1; 6.7 x 2.6
LR3 48-4/63	40	0.470	63	F, class 155	21.3	④	8.1 x 7.3 x 4.8	3.5 x 4.1; 5.4 x 3.5; 6.7 x 3.0
LR3 48-4/70	50	0.420	70	F, class 155	23.8	④	9.5 x 8.3 x 4.6	4.1 x 3.9; 6.1 x 3.3; 6.9 x 3.0
LR3 48-4/80	50 - 60	0.370	80	F, class 155	27.6	④	9.4 x 8.3 x 4.9	4.1 x 4.2; 6.1 x 3.7; 6.9 x 3.3
LR3 48-4/90	60 - 75	0.330	90	F, class 155	35.3	⑤	7.9 x 10.5 x 4.5	6.9 x 2.9; 7.1 x 4.0; 9.8 x 3.2
LR3 48-4/100	75	0.300	100	F, class 155	41.9	⑤	7.9 x 10.5 x 5.5	6.9 x 3.8; 7.1 x 4.9; 9.8 x 4.2
LR3 48-4/115	75	0.260	115	H, class 180	46.3	⑤	8.3 x 11.5 x 5.5	10.7 x 4.7; 7.3 x 4.7
LR3 48-4/125	100	0.240	125	H, class 180	48.5	⑤	8.3 x 11.5 x 5.5	10.7 x 4.7; 7.3 x 4.7
LR3 48-4/160	125	0.190	160	H, class 180	56.2	⑤	8.3 x 11.5 x 5.9	10.7 x 5.1; 7.3 x 5.1
LR3 48-4/180	125 - 150	0.170	180	H, class 180	61.7	⑤	8.3 x 11.5 x 6.0	10.7 x 5.3; 7.3 x 5.3
LR3 48-4/200	150	0.150	200	F, class 155	70.5	⑤	10.4 x 13.9 x 5.7	8.8 x 3.8; 9.4 x 4.8; 12.9 x 4.2
LR3 48-4/250	200	0.120	250	F, class 155	90.4	⑤	10.4 x 13.9 x 6.2	8.8 x 4.3; 9.4 x 5.4; 12.9 x 4.7
LR3 48-4/300	250	0.098	300	H, class 180	105.8	⑤	10.4 x 13.9 x 6.6	8.8 x 5.2; 9.4 x 5.8; 12.9 x 5.2
LR3 48-4/400	350	0.074	400	F, class 155	123.5	⑤	10.5 x 13.9 x 7.2	8.8 x 5.4; 9.4 x 6.4; 12.9 x 5.7
LR3 48-4/500	400	0.059	500	H, class 180	136.7	⑤	10.5 x 13.9 x 7.7	8.8 x 5.8; 9.4 x 6.8; 12.9 x 6.2
LR3 48-4/630	450	0.047	630	H, class 180	166.4	⑤	12.5 x 16.2 x 7.4	10.4 x 6.3; 12.2 x 6.3; 15.3 x 5.9
LR3 48-4/710	500	0.042	710	H, class 180	224.9	⑤	14.6 x 18.9 x 7.3	12.4 x 5.9; 14.6 x 6.2; 17.7 x 5.5
LR3 48-4/800	750	0.037	800	H, class 180	253.5	⑤	14.6 x 18.9 x 7.9	12.4 x 6.5; 14.6 x 6.8; 17.7 x 6.1
LR3 48-4/1000	800	0.030	1000	H, class 180	319.7	⑤	14.8 x 18.9 x 9.6	12.4 x 8.2; 14.6 x 8.5; 17.7 x 7.8
LR3 48-4/1200	1000	0.025	1200	H, class 180	352.7	⑤	16.5 x 21.7 x 9.6	14.0 x 7.5; 16.9 x 8.5; 20.3 x 6.9
LR3 48-4/1400	1200	0.021	1400	H, class 180	410.1	⑤	16.5 x 21.7 x 10.8	14.0 x 8.7; 16.9 x 9.7; 20.3 x 8.1
LR3 48-4/1600	1400	0.019	1600	H, class 180	443.1	⑤	16.4 x 21.7 x 11.6	14.0 x 9.4; 16.9 x 10.5; 20.3 x 8.9

480 V - 5 % High Z

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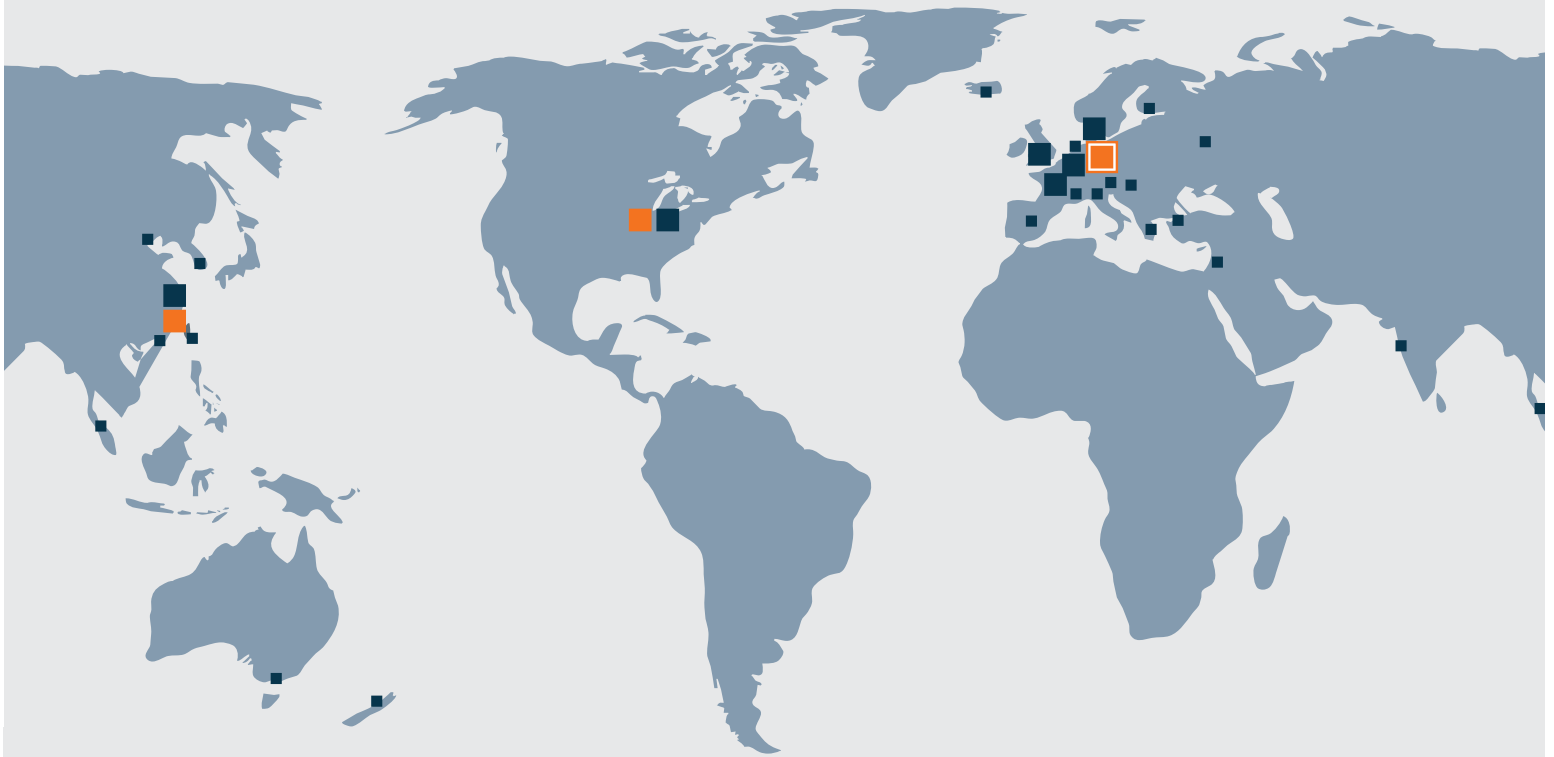
Item number	HP Rating	Inductance (mH)	Rated current (A)	Isolation class	Weight (lbs)	Dimension picture	Dimensions (H x W x D in inch)	Mounting (in inch)
LR3 48-5/2	1	18.500	2	B, class 130	1.2	①	3.9 x 2.9 x 2.2	2.0 x 1.4; 2.6 x 1.6
LR3 48-5/4	2	9.200	4	B, class 130	1.7	①	4.5 x 3.1 x 2.4	2.2 x 1.5; 2.8 x 1.8
LR3 48-5/6	3	6.200	6	F, class 155	2.4	①	4.6 x 3.1 x 2.7	2.2 x 1.9; 2.8 x 2.1
LR3 48-5/8	5	4.600	8	F, class 155	4.6	①	5.4 x 4.7 x 3.3	3.5 x 1.5; 4.1 x 2.8
LR3 48-5/10	5 - 10	3.680	10	F, class 155	6.3	②	5.4 x 4.7 x 3.7	3.5 x 1.9; 4.1 x 3.1
LR3 48-5/16	10	2.300	16	F, class 155	8.3	②	6.4 x 6.1 x 3.7	4.4 x 2.0; 5.3 x 3.1
LR3 48-5/20	15	1.840	20	F, class 155	12.3	②	6.4 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-5/25	15	1.470	25	F, class 155	12.6	②	6.5 x 6.1 x 4.3	4.4 x 2.6; 5.3 x 3.7
LR3 48-5/30	20 - 25	1.230	30	F, class 155	14.4	③	7.8 x 7.3 x 4.0	3.5 x 3.3; 5.4 x 2.8; 6.7 x 2.2
LR3 48-5/35	20 - 25	1.050	35	F, class 155	19.0	③	7.8 x 7.3 x 4.4	3.5 x 3.7; 5.4 x 3.1; 6.7 x 2.6
LR3 48-5/40	30	0.920	40	F, class 155	19.1	③	7.8 x 7.3 x 4.4	3.5 x 3.7; 5.4 x 3.1; 6.7 x 2.6
LR3 48-5/45	30	0.817	45	F, class 155	23.6	③	8.1 x 7.3 x 4.8	3.5 x 4.1; 5.4 x 3.5; 6.7 x 3.0
LR3 48-5/50	30 - 40	0.735	50	F, class 155	24.0	④	9.4 x 8.3 x 4.6	4.1 x 3.9; 6.1 x 3.3; 6.9 x 3.0
LR3 48-5/63	40	0.584	63	F, class 155	28.2	④	9.3 x 8.3 x 4.9	4.1 x 4.2; 6.1 x 3.7; 6.9 x 3.3
LR3 48-5/70	50	0.525	70	F, class 155	33.2	④	9.4 x 8.3 x 5.3	7.1 x 3.6
LR3 48-5/80	50 - 60	0.460	80	F, class 155	43.1	④	10.2 x 9.1 x 5.9	6.9 x 3.7; 7.1 x 4.8; 8.3 x 5.0
LR3 48-5/90	60 - 75	0.408	90	F, class 155	50.0	⑤	7.9 x 10.5 x 5.5	7.0 x 3.9; 7.1 x 4.9; 9.8 x 4.2
LR3 48-5/100	75	0.368	100	F, class 155	53.6	⑤	8.3 x 11.5 x 5.5	7.3 x 4.3; 10.7 x 4.3
LR3 48-5/115	75	0.320	115	F, class 155	71.0	⑤	9.2 x 8.6 x 5.2	7.9 x 4.1
LR3 48-5/125	100	0.294	125	H, class 180	71.7	⑤	9.2 x 8.6 x 5.2	7.9 x 4.1
LR3 48-5/160	125	0.230	160	H, class 180	79.8	⑤	10.4 x 13.9 x 5.7	8.8 x 3.8; 9.4 x 4.8; 12.9 x 4.2
LR3 48-5/180	125 - 150	0.204	180	H, class 180	111.5	⑤	10.4 x 13.9 x 6.6	8.8 x 4.8; 9.4 x 5.8; 12.9 x 5.2
LR3 48-5/200	150	0.184	200	F, class 155	113.0	⑤	10.4 x 13.9 x 6.6	8.8 x 4.8; 9.4 x 5.8; 12.9 x 5.2
LR3 48-5/250	200	0.147	250	F, class 155	127.9	⑤	10.5 x 13.9 x 7.2	8.8 x 5.4; 9.4 x 6.4; 12.9 x 5.8
LR3 48-5/300	250	0.123	300	F, class 155	136.8	⑤	10.5 x 13.9 x 7.7	8.8 x 5.8; 9.4 x 6.9; 12.9 x 6.2
LR3 48-5/400	350	0.092	400	F, class 155	165.7	⑤	12.5 x 16.2 x 6.8	10.4 x 5.7; 12.2 x 5.7; 15.3 x 5.4
LR3 48-5/500	400	0.074	500	H, class 180	171.7	⑤	12.5 x 16.2 x 6.8	10.4 x 5.7; 12.2 x 5.7; 15.3 x 5.4
LR3 48-5/630	450	0.059	630	H, class 180	198.1	⑤	14.6 x 18.9 x 6.1	12.4 x 5.5; 14.6 x 5.8; 17.7 x 5.1
LR3 48-5/710	500	0.052	710	H, class 180	227.9	⑤	14.6 x 18.9 x 6.5	12.4 x 5.9; 14.6 x 6.2; 17.7 x 5.5
LR3 48-5/800	750	0.046	800	H, class 180	332.7	⑤	16.5 x 21.7 x 8.5	14.0 x 6.4; 16.9 x 7.4; 20.3 x 6.3
LR3 48-5/1000	800	0.037	1000	H, class 180	296.4	⑤	16.5 x 21.7 x 8.5	14.0 x 6.4; 16.9 x 7.4; 20.3 x 6.3
LR3 48-5/1200	1000	0.031	1200	H, class 180	430.1	⑤	16.5 x 21.7 x 10.8	14.0 x 8.7; 16.9 x 9.7; 20.3 x 8.6
LR3 48-5/1400	1200	0.026	1400	H, class 180	466.8	⑤	18.3 x 21.3 x 10.6	19.3 x 9.3
LR3 48-5/1600	1400	0.023	1600	H, class 180	759.5	⑤	18.3 x 21.3 x 10.6	19.3 x 13.2

RESEARCH, DEVELOPMENT, PRODUCTION, TEST SYSTEMS, LOGISTICS –
EVERYTHING UNDER ONE ROOF, MADE BY BLOCK



VACUUM PRESSURE IMPREGNATION
SHOCK AND VIBRATION TEST
3D CONSTRUCTION
METAL PROCESSING
SIMULATION TECHNOLOGY
WINDING TECHNOLOGY
LOADING BAY

A GLOBAL COMPANY



- Headquarter and production sites
- Production sites
- Subsidiaries
- International agencies



Production site, USA



Production site 1, Germany



Production site 2, Germany

BLOCK USA, Inc.

10632 W. Grand Avenue
Franklin Park, IL 60131 • USA
Phone +1 847 260 9050
Fax +1 847 628 0606
info@blockusa.com
www.blockusa.com

