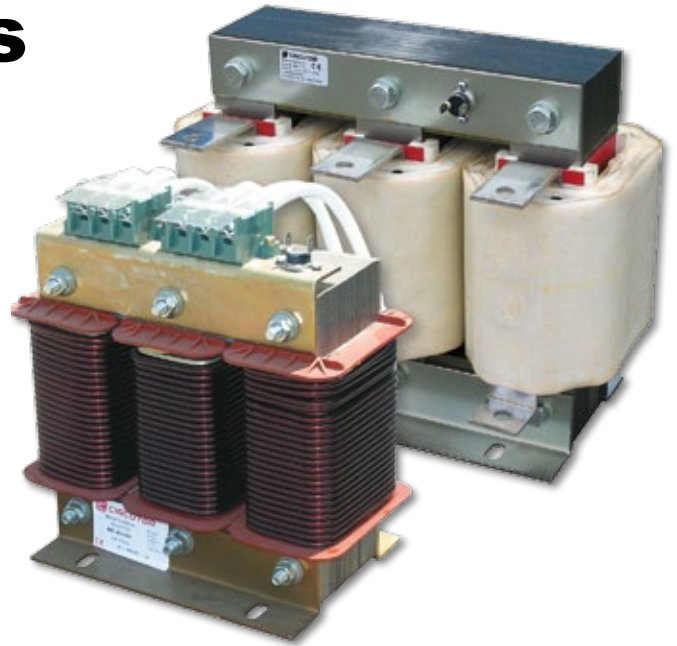


LR / LRB Reactors

Reactors for filtering for power converters
(network side)



Description

The motor speed regulation equipment, frequency variators, UPS units, etc. generate alterations in the network, which affect other loads in the installation of the operation of the equipment.

The **LR / LRB** reactors connected to the input on the network side of the equipment can attenuate voltage peaks and reduce the harmonic distortion generated by the power electronics. The **LR / LRB** Reactors for filtering can reduce the current harmonics in any converter from 40... 50 % to values around 20 %. In addition, they reduce the short-circuit current and increase the safety of the converter's semi-conductors. When installed on the motor side, they can attenuate harmonic frequencies caused during switching operations.

- Low-powered reactors, **LR** type, are built with plates with low losses and are coiled with copper wire. The connection is achieved with the adequate terminals.
- In the case of higher currents, **LRB** reactors are used, with a magnetic plate nucleus and multiple steel cores, which offer excellent characteristics and a low loss ratio. Copper band coils (or aluminium band, on demand). The connections run through a plate.
- Both **LR** and **LRB** type reactors have a vacuum varnish sealing to increase the insulation, providing a greater mechanical resistance and reduce the level of noise.

Features

Features	
Voltage drop U_k % (LR 04: 400 V or Lr 02: 230 V)	4 % network at 50 Hz (4.8 % network at 60 Hz) Other values on demand
Voltage	Up to 1000 Vac
Value of L (mH)	In accordance with the table Other values on demand
Nominal current	In accordance with the table Other values on demand
Type of conductor	LR : copper wire LRB : copper band (or aluminium, on demand)
Tolerance L	± 5 %
Linearity (5 % L)	$1.5 I_n$
Isolation voltage	4 kV
Maximum room temperature	-10 °C ... +45 °C
Internal isolation	Class F (155 °C) On demand: class H (180 °C)
Maximum overload	
Permanent	$1.17 I_n$
Temporary (1 min)	$2 I_n$
Safety	
Protection thermostat	On demand
Degree of protection	IP 00
Indoor	Installation
Standards	
UNE-EN-60289, IEC 60076	

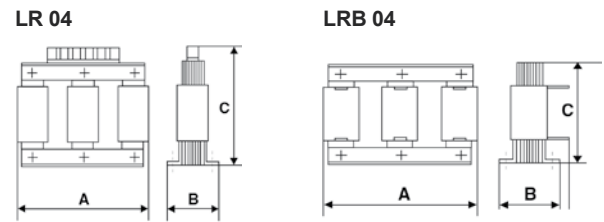
Application

The reactors of the **LR / LRB** series are prepared and can be used on the network and motor sides. They attenuate micro-drops and peaks during the initial connection and switching operations, and they reduce the rate of harmonics from the network current.

LR / LRB Reactors

Reactors for filtering for power converters
(network side)

Dimensions



Type	a	b	c	Type	a	b	c
LR 04-003	120	60	125	LRB 04-080	180	135	160
LR 04-004	120	60	125	LRB 04-095	237	120	195
LR 04-006	120	60	125	LRB 04-115	237	131	195
LR 04-008	120	60	125	LRB 04-150	237	131	215
LR 04-010	120	70	125	LRB 04-185	242	154	256
LR 04-013	120	70	125	LRB 04-200	245	154	256
LR 04-017	150	75	150	LRB 04-250	285	154	300
LR 04-022	150	90	152	LRB 04-300	280	164	300
LR 04-033	150	90	152	LRB 04-400	320	208	350
LR 04-041	180	100	193	LRB 04-500	320	228	350
LR 04-050	180	110	197	LRB 04-600	385	320	505
LR 04-058	180	110	197				
LR 04-066	180	120	197				



References

Type of three-phase network at:	Motor power (kW)	I_n (A)	L (mH)	Losses (W)	Weight (kg)	Type	Code
380 / 415 V	0,75	2,5	14,8	6	1,8	LR 04-003	P70301
380 / 415 V	1,5	4	7,90	8	1,8	LR 04-004	P70302
380 / 415 V	2,2	5,5	5,90	10	2	LR 04-006	P70303
380 / 415 V	3	7,5	4,30	12	2	LR 04-008	P70304
380 / 415 V	4	10	3,20	15	2,3	LR 04-010	P70305
380 / 415 V	5,5	13	2,50	18	2,3	LR 04-013	P70306
380 / 415 V	7,5	17	1,85	25	3,5	LR 04-017	P70307
380 / 415 V	11	22	1,47	30	4,6	LR 04-022	P70308
380 / 415 V	15	32	0,98	45	5	LR 04-033	P70309
380 / 415 V	18,5	40	0,80	55	7,5	LR 04-041	P7030A
380 / 415 V	22	47	0,67	64	9	LR 04-050	P7030B
380 / 415 V	25	53	0,59	77	9,5	LR 04-058	P7030C
380 / 415 V	30	64	0,49	88	11	LR 04-066	P7030D
380 / 415 V	37	76	0,40	110	13	LRB 04-080	P7030E
380 / 415 V	45	90	0,34	120	18	LRB 04-095	P7030F
380 / 415 V	55	110	0,28	145	21	LRB 04-115	P7030G
380 / 415 V	75	148	0,20	190	26	LRB 04-150	P7030H
380 / 415 V	90	180	0,17	230	32	LRB 04-185	P7030J
380 / 415 V	110	200	0,15	245	36	LRB 04-200	P7030K
380 / 415 V	132	250	0,12	285	44	LRB 04-250	P7030L
380 / 415 V	160	300	0,10	355	48	LRB 04-300	P7030M
380 / 415 V	200	400	0,07	475	72	LRB 04-400	P7030N
380 / 415 V	250	500	0,06	550	80	LRB 04-500	P7030P
380 / 415 V	315	600	0,05	634	105	LRB 04-600	P7030Q

Voltage drop U_v : 4 % for 400 V - 50 Hz / 4.8 % for 400 V - 60 Hz)

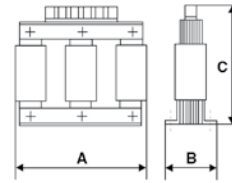
LR / LRB Reactors

Reactors for filtering for power converters
(network side)

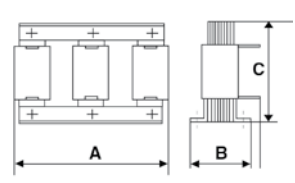


Dimensions

LR 02



LRB 02



Type	a	b	c	Type	a	b	c
LR 02-004	120	60	125	LRB 02-058	180	110	197
LR 02-007	120	60	125	LRB 02-071	180	135	160
LR 02-010	120	70	125	LRB 02-083	180	135	160
LR 02-013	120	70	125	LRB 02-094	237	120	195
LR 02-016	150	75	150	LRB 02-100	237	131	195
LR 02-023	150	90	152	LRB 02-130	237	131	215
LR 02-030	150	90	152				
LR 02-039	180	100	193				

References

Type of three-phase network at:	Motor power (kW)	I_n (A)	L (mH)	Losses (W)	Weight (kg)	Type	Code
220 / 240 V	0,75	4	4,90	8	1,8	LR 02-004	P70311
220 / 240 V	1,5	7	2,60	10	2	LR 02-007	P70312
220 / 240 V	2,2	10	1,96	14	2,3	LR 02-010	P70313
220 / 240 V	3	13	1,43	17	2,3	LR 02-013	P70314
220 / 240 V	4	16	1,07	20	3,5	LR 02-016	P70315
220 / 240 V	5,5	22	0,84	26	4,6	LR 02-023	P70316
220 / 240 V	7,5	30	0,61	35	5	LR 02-030	P70317
220 / 240 V	10	38	0,49	44	7,5	LR 02-039	P70318
220 / 240 V	15	58	0,32	66	9,5	LRB 02-058	P70319
220 / 240 V	18,5	70	0,26	80	11	LRB 02-071	P7031A
220 / 240 V	22	82	0,22	94	12	LRB 02-083	P7031B
220 / 240 V	25	92	0,19	105	17	LRB 02-094	P7031C
220 / 240 V	30	112	0,16	115	20	LRB 02-100	P7031D
220 / 240 V	37	138	0,13	148	25	LRB 02-130	P7031E

Voltage drop U_k : 4 % for 230 V - 50 Hz / 4.8 % for 230 V - 60 Hz)

Connections

