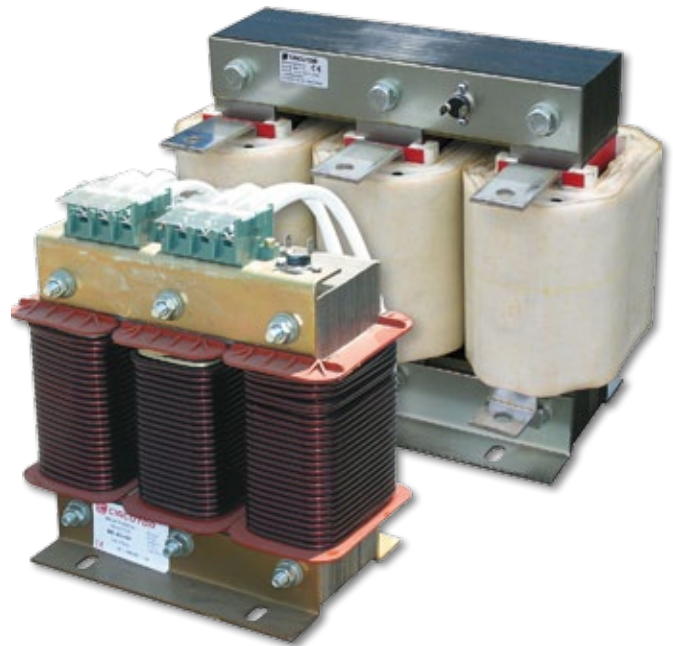


R / RX Reactors

Reactors III for harmonic rejection filters



Description

CIRCUTOR has a standard range of rejection reactors $p = 7\%$, with a resonance frequency of 189 Hz for 50 Hz networks (or on demand 227 Hz for 60 Hz networks). This is the most frequent tuning value to avoid any resonance of the 5th harmonic and above. The set of capacitors-reactors absorbs part of the current of the 5th harmonic and acts as a rejection filter for higher frequencies. In some installations, other values of $p\%$ are required, for example 5.6% (210 Hz), 6% (204 Hz), 14% (134 Hz), etc.

CIRCUTOR can build reactors on demand, which will be adapted to any power rating, $p\%$, voltage and frequency.

Low-powered reactors, **R** type, are built with plates with low losses and are coiled with a copper conductor. The connection is achieved with the adequate terminals. In the case of higher power ratings, **RB** reactors are used, with a magnetic plate nucleus and multiple steel cores, which offer excellent characteristics and a low loss ratio. Aluminum band coils are used (or copper band, on demand) and the input and output connections run through a plate.

Both **R** and **RB** 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	400 V On demand: up to 1000 V
Network frequency	50 Hz On demand: 60 Hz
Power rating	In accordance with the table Other values on demand
Value of $p\%$	7% (189 Hz) Other values on demand
Type of conductor	R : copper wire RB : aluminum band
Tolerance L	$\pm 5\%$
Linearity (5% L)	$1.8 I_n$
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	Opening at 90 °C
Degree of protection	IP 00
Indoor	Installation
Standards	
UNE-EN-60289, IEC 60076	

Application

The rejection reactors of the **R / RB** series have been specially designed for their use in capacitor banks in installations with a high harmonic content. The reactors must be connected in series to each capacitor for the adequate protection of capacitors and to avoid the resonance effects in the installation.

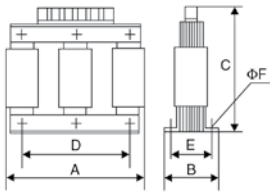
R / RX / RB / RBX Reactors

Reactors III for harmonic rejection filters

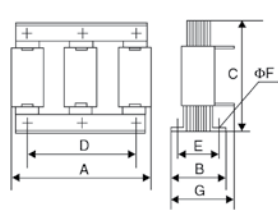


Dimensions

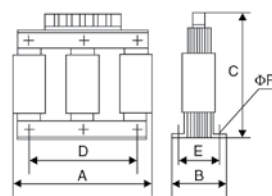
R - 7%



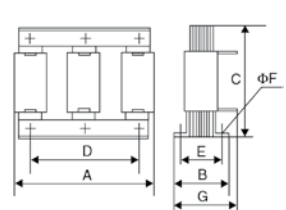
RB - 7%



RX - 7%



RBX - 7%



Type	a	b	c	d	e	f	g
R-5-400	155	112	165	75	85	7	--
R-10-400	180	102	190	90	75	7	--
R-15-400	180	112	190	90	85	7	--
R-20-400	260	124	174	150	90	7	150
R-25-400	260	124	174	150	90	7	150
R-30-400	290	124	231	160	90	9	150
R-40-400	293	124	231	160	90	9	150
R-50-400	310	144	233	160	110	9	175
R-60-400	305	146	260	160	110	11	180
R-80-400	335	155	280	180	120	11	185
R-100-400	338	170	300	180	135	11	215
R-120-400	355	170	350	200	135	13	220

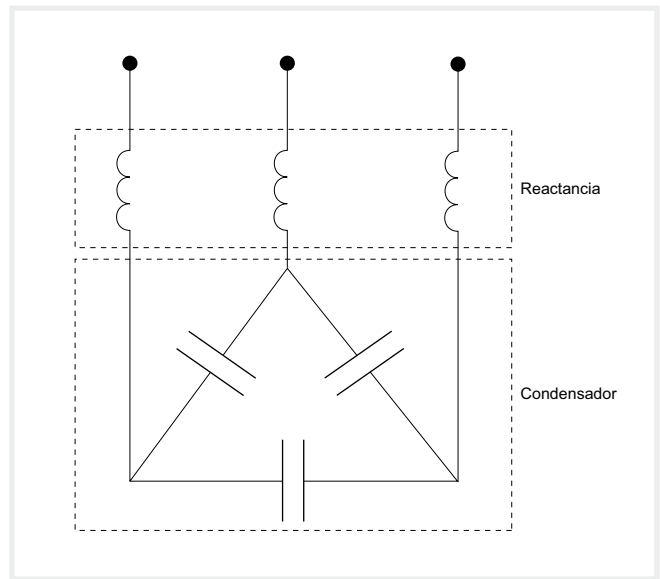
Type	a	b	c	d	e	f	g
RX-6,25-400	180	102	190	90	75	7	--
RX-12,5-400	180	112	192	90	85	7	--
RX-20-400	180	122	190	90	95	7	--
RX-25-400	180	137	196	90	110	7	--
RBX-20-400	230	125	160				
RBX-25-400	230	125	160				
RBX-30-400	245	125	195				
RBX-40-400	250	125	195	160	110	9	175
RBX-50-400	245	145	215	160	110	9	175
RBX-60-400	263	145	235				
RBX-80-400	305	153	254				

R / RX / RB / RBX Reactors

Reactors III for harmonic rejection filters



Connections



References

Reactors III series R / RB at 400 Vac, 50 Hz, $\rho = 7\%$ (189 HZ)

For capacitors:	kvar	I_n (A)	L (mH)	Losses	Weight (kg)	Type	Code
CF 46 / 6	5	7,5	7,66	25 W	6	R-5-400 / R-6-460	P70110
CF 46 / 12,5	10	15	3,83	50 W	8	R-10-400 / R-12,5-460	P70115
CF 46 / 19	15	22	2,55	57 W	9,5	R-15-400 / R-19-460	P70117
CF 46 / 25	20	30	1,92	76 W	14	RB-20-400 / RB-25-460	P70125
CF 46 / 30	25	37	1,53	90 W	14	RB-25-400 / RB-30-460	P70130
CF 46 / 37	30	45	1,27	120 W	19	RB-30-400 / RB-37-460	P70135
CF 46 / 50	40	60	0,95	145 W	20	RB-40-400 / RB-50-460	P70140
CF 46 / 62	50	75	0,76	185 W	27	RB-50-400 / RB-62-460	P70145
CF 46 / 74	60	90	0,63	205 W	31	RB-60-400 / RB-74-460	P70150
CF 46 / 100	80	120	0,47	235 W	38	RB-80-400 / RB-100-460	P70155
CF 46 / 62 x 2	100	145	0,38	250 W	50	RB-100-400 / RB-120-460	P70160
CF 46 / 74 x 2	120	175	0,32	295 W	58	RB-120-400 / RB-148-460	P70165

Reactors III series R / RB at 400 Vac, 50 Hz, $\rho = 7\%$ (189 HZ)

For capacitors:	kvar	I_n (A)	L (mH)	Losses	Weight (kg)	Type	Code
CFB 46 / 7,5	6,25	9	6,12	36	8	RX-6,25-400	P7101F
CFB 46 / 15	12,5	18	3,06	53	9,2	RX-12,5-400	P71013
CFB 46 / 25	20	30	1,92	76	11,5	RX-20-400	P71015
CFB 46 / 30	25	37	1,53	92	15	RX-25-400	P71016
CFB 46 / 25	20	30	1,92	69	12	RBX-20-400	P72125
CFB 46 / 30	25	37	1,53	106	12	RBX-25-400	P72130
CFB 46 / 37	30	45	1,27	102	16,5	RBX-30-400	P72135
CFB 46 / 50	40	60	0,95	137	17,5	RBX-40-400	P72140
CFB 46 / 62	50	75	0,76	153	21,5	RBX-50-400	P72145
CFB 46 / 74	60	90	0,63	168	24,7	RBX-60-400	P72150
CFB 46 / 100	80	120	0,47	246	33	RBX-80-400	P72155