

Three-phase harmonic filters

Technical data

Compliance standard	IEC-60289;IEC-076
Tolerance "L"	3%
Permissible overload	1,07 x I _n
Linearity Inductance	1,60 x I _n
Heat insulation	F (155°C)
Thermal protection	90°C
Room temperature	45°C
Proof stress	4KV
Protection degree	IP00
Detuning factor (p%)	7% - 14%

Constructive Characteristics - Three phase harmonic filters are made of low losses magnetic plates, permanent regime class F (155°C) copper conductor and thermal protection relay.

With the purpose of increasing filters ventilation, windings are separated among them, improving thermal dissipation.

Available factor p is 7% and 14% with resonance frequency 189 Hz and 134 Hz for 50 Hz networks.

With this standard values in three phase networks and balanced loads, the 5th (250 Hz) harmonic and higher resonant phenomenons are eliminated avoiding resonance between inductive impedance and three phase capacitors for power factor correction and preventing network capacitors and capacitor banks for overloads, caused by harmonics.

Table selection of three-phase harmonic filters for capacitor banks

400V-50Hz-7%-189Hz Copper

Type	Reactive power (kVAr)	Code No.	Inductivity (mH)	Suggested Capacitance μ F	Rated current (A) I _{eff}	Weight (kg)	Capacitors
HFL 7/5 Cu	5	004656800	7,66	3x 30,84	7,2	7,5	2x LPC 3 kVAr, 460V, 50HZ
HFL 7/10 Cu	10	004656801	3,83	3x 61,67	14,4	8,5	LPC 12.5 kVAr, 460V, 50HZ
HFL 7/12,5 Cu	12,5	004656802	3,07	3x 77,09	18	9	LPC 15 kVAr, 460V, 50HZ
HFL 7/15 Cu	15	004656803	2,56	3x 92,51	21,7	9,5	LPC 20 kVAr, 480V, 50HZ
HFL 7/20 Cu	20	004656804	1,92	3x 123,35	28,9	16	LPC 25 kVAr, 460V, 50HZ
HFL 7/25 Cu	25	004656805	1,53	3x 154,18	36,1	16,5	LPC 30 kVAr, 460V, 50HZ
HFL 7/30 Cu	30	004656806	1,28	3x 185,02	43,3	17,5	LPC 40 kVAr, 480V, 50HZ
HFL 7/40 Cu	40	004656807	0,96	3x 246,69	57,7	28,5	LPC 50 kVAr, 460V, 50HZ
HFL 7/50 Cu	50	004656808	0,77	3x 308,36	72,2	30	2x LPC 30.8 kVAr, 460V, 50HZ
HFL 7/100 Cu	100	004656809	0,38	3x 616,73	144	43	4x LPC 30.8 kVAr, 460V, 50HZ

400V-50Hz-14%-134Hz Copper

Type	Reactive power (kVAr)	Code No.	Inductivity (mH)	Suggested Capacitance μ F	Rated current (A) I _{eff}	Weight (kg)	Capacitors
HFL 14/5 Cu	5	004656810	16,58	3x 28,52	7,2	15	2x LPC 3 kVAr, 480V, 50HZ
HFL 14/10 Cu	10	004656811	8,29	3x 57,03	14,4	15	LPC 15 kVAr, 525V, 50HZ
HFL 14/12,5 Cu	12,5	004656812	6,63	3x 71,29	18	16	LPC 15 kVAr, 480V, 50HZ
HFL 14/15 Cu	15	004656813	5,53	3x 85,55	21,7	16	LPC 20 kVAr, 480V, 50HZ
HFL 14/20 Cu	20	004656814	4,15	3x 114,06	28,9	19,5	LPC 25 kVAr, 480V, 50HZ
HFL 14/25 Cu	25	004656815	3,32	3x 142,58	36,1	20,5	LPC 30 kVAr, 480V, 50HZ
HFL 14/30 Cu	30	004656816	2,76	3x 171,09	43,3	31	LPC 40 kVAr, 480V, 50HZ
HFL 14/40 Cu	40	004656817	2,07	3x 228,12	57,7	34,5	LPC 50 kVAr, 480V, 50HZ
HFL 14/50 Cu	50	004656818	1,66	3x 285,15	72,2	37	2x LPC 30 kVAr, 480V, 50HZ

400V-50Hz-7%-189Hz Aluminium

Type	Reactive power (kVAr)	Code No.	Inductivity (mH)	Suggested Capacitance μ F	Rated current (A) I _{eff}	Weight (kg)	Capacitors
HFL 7/20 Al	20	004656820	1,92	3x 123,35	14,5	14,5	LPC 25 kVAr, 460V, 50HZ
HFL 7/25 Al	25	004656821	1,53	3x 154,18	17	17	LPC 30 kVAr, 460V, 50HZ
HFL 7/30 Al	30	004656822	1,28	3x 185,02	26	26	LPC 40 kVAr, 480V, 50HZ
HFL 7/40 Al	40	004656823	0,96	3x 246,69	26,5	26,5	LPC 50 kVAr, 460V, 50HZ
HFL 7/50 Al	50	004656824	0,77	3x 308,36	27	27	2x LPC 30.8 kVAr, 460V, 50HZ

400V-50Hz-14%-134Hz Aluminium

Type	Reactive power (kVA _r)	Code No.	Inductivity (mH)	Suggested Capacitance μF	Rated current (A) I _{eff}	Weight (kg)	Capacitors
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Copper Wire Reactors – Mechanical Dimensions

Type	Dimensions mm
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Copper Wire Reactors – Mechanical Dimensions

Type	Dimensions mm
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Aluminum Wire Reactors – Mechanical Dimensions

Type	Dimensions mm
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Aluminum Wire Reactors – Mechanical Dimensions

Type	Dimensions mm
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