

LCL

Harmonic filter for power converters



Description

LCL filters have been specially designed to eliminate the harmonics from the current absorbed by 6-pulse power converters, such as frequency variators for motors, **UPS**, etc.

These are essentially passive filters based on a series-parallel combination of inductances and capacitors, adapted to filter the input of power converters.

Application

- Reduction of the current wave's distortion towards the network and the rest of the installation
- Compliance with the **IEC 61000-3-4, IEC 61000-3-12, IEC 61800-3** and **IEEE-519**
- Energy savings with the reduction of the root mean square current (RMS), thus reducing the kV·A demand.
- Increase of the working life of units above this location with the corresponding reduction of thermal losses generated.
- Limits current transients, preventing damages caused to the converter and overvoltage trips that affect production processes.

Features

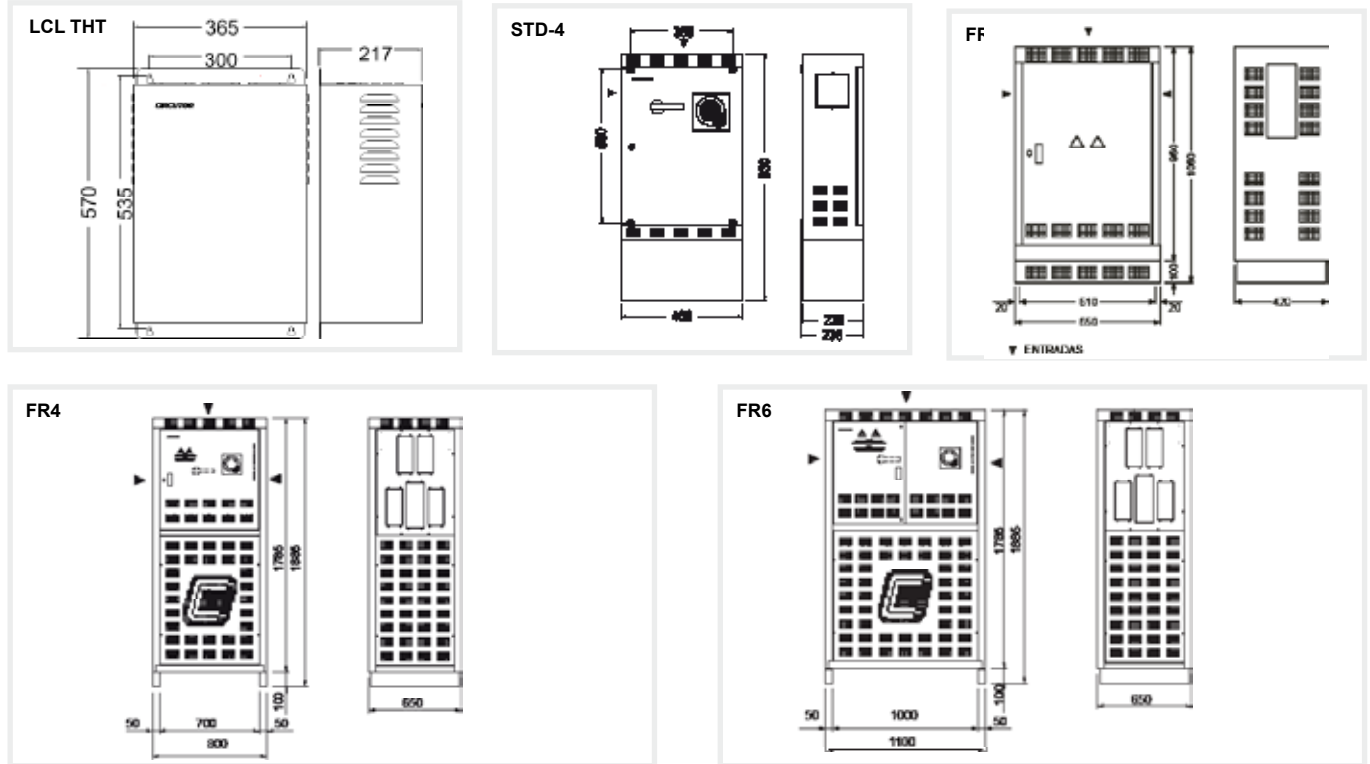
Features	
Standard voltage (ph-ph)	400 V a.c. / 480 V a.c. (Others on request)
Frecuency	50 Hz: LCL-35-xx types 60 Hz: LCL-36-xx types
Rated load current (I_c)	See table
Overload	1,5 I_c 1 min more 5 min with I_c (max. operating temperature)
Rated filtering current (I_f) residual THD	See table Aprox. 8 %
Voltage drop at rated current	< 2 %
Build features	
Cabinet material	Treated and painted steel Racks RAL 1013 Door RAL 3005
Degree of protection	IP 20
Locking system	Lock and key
Ventilation	Natural
Mounting	On the floor
Installation	Indoor
Environmental conditions	
Operating temperature	35 °C
Relative humidity	80 %
Standards	
EN 60439, EN 60831, EN 50081-1, EN 50081-2, class A	

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Dimensions



References

LCL 400 - 415 V / 50 Hz

Load current I_c (A)	Q (kvar)	Dimensions (mm) width x height x depth	Cabinet	Type	Code
9	1,76	365 x 570 x 217	LCL TH	LCL 35-9A-400	R73105
12	2,51	365 x 570 x 217	LCL TH	LC L35-12A-400	R73106
16	3,27	365 x 570 x 217	LCL TH	LCL 35-16A-400	R73107
22	4,42	460 x 930 x 230	STD-4	LCL 35-22A-400	R73108
32	6,63	460 x 930 x 230	STD-4	LCL 35-32A-400	R73109
40	8,29	460 x 930 x 230	STD-4	LCL 35-40A-400	R73110
47	9,14	650 x 1060 x 420	FRF	LCL 35-47A-400	R73111
54	10,8	650 x 1060 x 420	FRF	LCL 35-54A-400	R73112
64	13,26	650 x 1060 x 420	FRF	LCL 35-64A-400	R73113
76	14,92	650 x 1060 x 420	FRF	LCL 35-76A-400	R73114
90	18,24	800 x 1900 x 650	FR4	LCL 35-90A-400	R73115
110	23,21	800 x 1900 x 650	FR4	LCL 35-110A-400	R73116
150	29,84	800 x 1900 x 650	FR4	LCL 35-150A-400	R73117
180	36,48	800 x 1900 x 650	FR4	LCL 35-180A-400	R73118
220	46,42	1100 x 1900 x 650	FR6	LCL 35-220A-400	R73119
260	53,06	1100 x 1900 x 650	FR6	LCL 35-260A-400	R73120
320	66,32	1100 x 1900 x 650	FR6	LCL 35-320A-400	R73121
400	79,58	1100 x 1900 x 650	FR6	LCL 35-400A-400	R73122

Other optional voltages, frequencies and currents, on demand.

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References

LCL 460 - 480 V / 60 Hz

Load current I_c (A)	Q (kvar)	Dimensions (mm) width x height x depth	Cabinet	Type	Code
9	2,73	365 x 570 x 217	LCL TH	LCL 36-9A-480	R732050070000
16	4,55	365 x 570 x 217	LCL TH	LCL 36-16A-480	R732070070000
22	6,21	460 x 930 x 230	STD-4	LCL 36-22A-480	R732080070000
32	7,59	460 x 930 x 230	STD-4	LCL 36-32A-480	R732090070000
40	11,38	460 x 930 x 230	STD-4	LCL 36-40A-480	R732100070000
47	15,18	650 x 1060 x 420	FRF	LCL 36-47A-480	R732110070000
54	15,18	650 x 1060 x 420	FRF	LCL 36-54A-480	R732120070000
64	18,97	650 x 1060 x 420	FRF	LCL 36-64A-480	R732130070000
76	22,77	650 x 1060 x 420	FRF	LCL 36-76A-480	R732140070000
90	26,56	800 x 1900 x 650	FR4	LCL 36-90A-480	R732150070000
110	30,36	800 x 1900 x 650	FR4	LCL 36-110A-480	R732160070000
150	45,53	800 x 1900 x 650	FR4	LCL 36-150A-480	R732170070000
180	53,12	800 x 1900 x 650	FR4	LCL 36-180A-480	R732180070000
220	60,71	1100 x 1900 x 650	FR6	LCL 36-220A-480	R732190070000
260	68,3	1100 x 1900 x 650	FR6	LCL 36-260A-480	R732200070000
320	91,07	1100 x 1900 x 650	FR6	LCL 36-320A-480	R732210070000
400	121,42	1100 x 1900 x 650	FR6	LCL 36-400A-480	R732220070000

Connections

