

SINAMICS G130

Drive converter chassis units

Line-side power components > Line filters

Overview

Line-side power components protect the connected components against transient or continuous overvoltages and ensure that specified limit values are maintained.



To limit the emitted interference, the converters are equipped as standard with a radio interference suppression filter that conforms to the limits defined in Category C3. SINAMICS G130 converters equipped with a line filter also meet the limits for use in the first environment (Category C2) according to EN 61800-3 ¹⁾.

SINAMICS G130 converters comply with the noise immunity requirements defined in this standard for the first and second environments.

In conjunction with line reactors, line filters also limit the conducted interference emitted by the Power Modules to the limit values of Category C2 defined in product standard EN 61800-3. Provided that the system has been set up in accordance with the EMC installation guidelines, the limit values at the installation location will be in accordance with the requirements for the first environment.

The line filters are suitable for grounded systems (TN or TT systems with grounded neutral point).

Selection and ordering data

Suitable for Power Module	Type rating of the Power Module at 400 V, 500 V or 690 V kW	Line filter Article No.
380 ... 480 V 3 AC		
6SL3310-1GE32-1AA3	110	6SL3000-0BE32-5AA0
6SL3310-1GE32-6AA3	132	6SL3000-0BE34-4AA0
6SL3310-1GE33-1AA3	160	
6SL3310-1GE33-8AA3	200	
6SL3310-1GE35-0AA3	250	6SL3000-0BE36-0AA0
6SL3310-1GE36-1AA3	315	6SL3000-0BE41-2AA0
6SL3310-1GE37-5AA3	400	
6SL3310-1GE38-4AA3	450	
6SL3310-1GE41-0AA3	560	
500 ... 600 V 3 AC		
6SL3310-1GF31-8AA3	110	6SL3000-0BG32-5AA0
6SL3310-1GF32-2AA3	132	
6SL3310-1GF32-6AA3	160	6SL3000-0BG34-4AA0
6SL3310-1GF33-3AA3	200	
6SL3310-1GF34-1AA3	250	
6SL3310-1GF34-7AA3	315	6SL3000-0BG36-0AA0
6SL3310-1GF35-8AA3	400	6SL3000-0BG41-2AA0
6SL3310-1GF37-4AA3	500	
6SL3310-1GF38-1AA3	560	
660 ... 690 V 3 AC		
6SL3310-1GH28-5AA3	75	6SL3000-0BG32-5AA0
6SL3310-1GH31-0AA3	90	
6SL3310-1GH31-2AA3	110	
6SL3310-1GH31-5AA3	132	
6SL3310-1GH31-8AA3	160	
6SL3310-1GH32-2AA3	200	
6SL3310-1GH32-6AA3	250	6SL3000-0BG34-4AA0
6SL3310-1GH33-3AA3	315	
6SL3310-1GH34-1AA3	400	
6SL3310-1GH34-7AA3	450	6SL3000-0BG36-0AA0
6SL3310-1GH35-8AA3	560	6SL3000-0BG41-2AA0
6SL3310-1GH37-4AA3	710	
6SL3310-1GH38-1AA3	800	

For further information about EMC-compliant plant construction, please refer to the SINAMICS Low Voltage Engineering Manual.

¹⁾ Applies to motor cable lengths < 100 m.

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Overview



Line Harmonics Filters reduce the low-frequency harmonic effects of converters to a level that can otherwise only be achieved using 12-pulse rectifiers.

The stringent limit values of IEEE 519-1992 are fully complied with.

Design

Line Harmonics Filters are supplied as stand-alone components in a rugged housing. They are installed between the customer's low-voltage distribution panel and the converter. The voltage is disconnected and fused in the customer's low-voltage switchgear, as is the power supply cable.

The Line Harmonics Filters have no fans (natural convection cooling). This means that no external auxiliary power supply is required.

The Line Harmonics Filters are equipped with a floating thermostat switch, which can be monitored externally, for the monitoring thermal overloads, e.g. as a result of insufficient cooling air being supplied.

Note:

The converter must have a line reactor in order to use a Line Harmonics Filter.

Selection and ordering data

Suitable for Power Module	Type rating of the Power Module at 400 V, 500 V or 690 V kW	Line Harmonics Filter Article No.
380 ... 480 V 3 AC		
6SL3310-1GE33-1AA3	160	6SL3000-0JE36-1AA0
6SL3310-1GE33-8AA3	200	
6SL3310-1GE35-0AA3	250	
6SL3310-1GE36-1AA3	315	
6SL3310-1GE37-5AA3	400	6SL3000-0JE38-4AA0
6SL3310-1GE38-4AA3	450	
6SL3310-1GE41-0AA3	560	6SL3000-0JE41-0AA0
500 ... 600 V 3 AC		
6SL3310-1GF31-8AA3	110	6SL3000-0JH33-3AA0
6SL3310-1GF32-2AA3	132	
6SL3310-1GF32-6AA3	160	
6SL3310-1GF33-3AA3	200	
6SL3310-1GF34-1AA3	250	6SL3000-0JH34-7AA0
6SL3310-1GF34-7AA3	315	
6SL3310-1GF35-8AA3	400	6SL3000-0JH35-8AA0
6SL3310-1GF37-4AA3	500	6SL3000-0JH38-1AA0
6SL3310-1GF38-1AA3	560	
660 ... 690 V 3 AC		
6SL3310-1GH31-8AA3	160	6SL3000-0JH33-3AA0
6SL3310-1GH32-2AA3	200	
6SL3310-1GH32-6AA3	250	
6SL3310-1GH33-3AA3	315	
6SL3310-1GH34-1AA3	400	6SL3000-0JH34-7AA0
6SL3310-1GH34-7AA3	450	
6SL3310-1GH35-8AA3	560	6SL3000-0JH35-8AA0
6SL3310-1GH37-4AA3	710	6SL3000-0JH38-1AA0
6SL3310-1GH38-1AA3	800	

For further information on Line Harmonics Filters, please refer to the SINAMICS Low Voltage Engineering Manual.

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Technical specifications

Line voltage 380 ... 415 V 3 AC (50 Hz) 440 ... 480 V 3 AC (60 Hz)		Line Harmonics Filter		
		6SL3000-OJE36-1AA0	6SL3000-OJE38-4AA0	6SL3000-OJE41-0AA0
Rated current ¹⁾	A	500	700	900
Power loss	kW	3.09	4.54	5.6
Line/load connection				
• Conductor cross section, max. (IEC)		mm ²	4 × 240	4 × 240
PE connection			3 × M12 studs	3 × M12 studs
Degree of protection			IP21	IP21
Dimensions				
• Width		mm	600	800
• Height		mm	1700	1700
• Depth		mm	540	540
Weight, approx.	kg	460	600	900
Paint finish			RAL 7035	RAL 7035
Standards			IEEE 519-1992	IEEE 519-1992
Suitable for Power Module		6SL3310-1GE33-1AA3 (160 kW) 6SL3310-1GE33-8AA3 (200 kW) 6SL3310-1GE35-0AA3 (250 kW) 6SL3310-1GE36-1AA3 (315 kW)	6SL3310-1GE37-5AA3 (400 kW) 6SL3310-1GE38-4AA3 (450 kW)	6SL3310-1GE41-0AA3 (560 kW)

Line voltage 500 ... 600 V 3 AC 660 ... 690 V 3 AC		Line Harmonics Filter			
		6SL3000-OJH33-3AA0	6SL3000-OJH34-7AA0	6SL3000-OJH35-8AA0	6SL3000-OJH38-1AA0
Rated current ¹⁾	A	290	400	520	710
Power loss	kW	3.11	4.62	5.69	7.97
Line/load connection					
• Conductor cross section, max. (IEC)		mm ²	4 × 240	4 × 240	4 × 240
PE connection			3 × M12 studs	3 × M12 studs	3 × M12 studs
Degree of protection			IP21	IP21	IP21
Dimensions					
• Width		mm	600	800	1000
• Height		mm	1700	1700	1700
• Depth		mm	540	540	540
Weight, approx.	kg	450	600	830	830
Paint finish			RAL 7035	RAL 7035	RAL 7035
Standards			IEEE 519-1992	IEEE 519-1992	IEEE 519-1992
Suitable for Power Module		6SL3310-1GF31-8AA3 (110 kW) 6SL3310-1GF32-2AA3 (132 kW) 6SL3310-1GF32-6AA3 (160 kW) 6SL3310-1GH31-8AA3 (160 kW) 6SL3310-1GF33-3AA3 (200 kW) 6SL3310-1GH32-2AA3 (200 kW) 6SL3310-1GF32-6AA3 (250 kW) 6SL3310-1GH33-3AA3 (315 kW)	6SL3310-1GF34-1AA3 (250 kW) 6SL3310-1GF34-7AA3 (315 kW) 6SL3310-1GH34-1AA3 (400 kW) 6SL3310-1GH34-7AA3 (450 kW)	6SL3310-1GF35-8AA3 (400 kW) 6SL3310-1GH35-8AA3 (560 kW)	6SL3310-1GF37-4AA3 (500 kW) 6SL3310-1GF38-1AA3 (560 kW) 6SL3310-1GH37-4AA3 (710 kW) 6SL3310-1GH38-1AA3 (800 kW)

¹⁾ The rated current of the Line Harmonics Filters is defined according to the active power. It can therefore be lower than the rated input current of the associated Power Module.