

SINAMICS G120 standard inverters

0.37 kW to 250 kW (0.5 hp to 400 hp)

Line-side components
Line reactors

Overview



Line reactors for Power Modules, frame sizes FSA to FSE



Line reactor for PM240-2 Power Modules, frame size FSA



Line reactor for PM240 Power Modules, frame size FSGX



Power Module frame size FSB, with base line reactor and shield connection plate

Line reactors are used to smooth voltage peaks or to bridge commutating dips. Line reactors also reduce the effects of harmonics on the inverter and the line supply.

Note:

A line reactor must not be used in combination with a PM230, PM250 or PM260 Power Module.

Benefits

Only AC reactors are available as reactors for the inverter.

- Only an AC reactor provides protection for the input rectifier of the inverter.
- The capacitor lifetime of the inverter increases by a factor of 2 when using an AC reactor instead of a DC reactor.
- The harmonic behavior of AC reactors remains almost constant over the complete lifetime. The harmonic behavior of DC reactors changes over time (months).
- An AC reactor reduces possible asymmetries between the current phases. In this case, a DC reactor would not be effective.

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Selection and ordering data

Rated power		SINAMICS G120 PM240-2 Power Module Standard variant		Line reactor
kW	hp	Type 6SL3210-...	Frame size	Order No.
380 ... 480 V 3 AC				
0.55	0.75	1PE11-8..0	FSA	6SL3203-0CE13-2AA0
0.75	1.0	1PE12-3..0		
1.1	1.5	1PE13-2..0		
1.5	2	1PE14-3..0	FSA	
2.2	3	1PE16-1..0		6SL3203-0CE21-0AA0
3.0	4	1PE18-0..0		

Rated power		SINAMICS G120 PM240-2 Power Module Push-through variant		Line reactor
kW	hp	Type 6SL3211-...	Frame size	Order No.
380 ... 480 V 3 AC				
2.2	3	1PE16-1AL0	FSA	6SL3203-0CE21-0AA0
3.0	4	1PE18-0UL0		

Rated power		SINAMICS G120 PM240 Power Module		Line reactor
kW	hp	Type 6SL3224-...	Frame size	Order No.
380 ... 480 V 3 AC				
0.37	0.50	0BE13-7UA0	FSA	6SE6400-3CC00-2AD3
0.55	0.75	0BE15-5UA0		
0.75	1.0	0BE17-5UA0	FSA	6SE6400-3CC00-4AD3
1.1	1.5	0BE21-1UA0		
1.5	2	0BE21-5UA0	FSA	6SE6400-3CC00-6AD3
2.2	3	0BE22-2 . A0	FSB	6SL3203-0CD21-0AA0
3.0	4	0BE23-0 . A0		
4.0	5	0BE24-0 . A0	FSB	6SL3203-0CD21-4AA0
7.5	10	0BE25-5 . A0	FSC	6SL3203-0CD22-2AA0
11.0	15	0BE27-5 . A0		6SL3203-0CD23-5AA0
15.0	20	0BE31-1 . A0	FSC	
18.5	25	0BE31-5 . A0	FSD	6SL3203-0CJ24-5AA0
22	30	0BE31-8 . A0		
30	40	0BE32-2 . A0	FSD	6SL3203-0CD25-3AA0
37	50	0BE33-0 . A0	FSE	6SL3203-0CJ28-6AA0
45	60	0BE33-7 . A0		
55	75	0BE34-5 . A0	FSF	6SE6400-3CC11-2FD0
75	100	0BE35-5 . A0		
90	125	0BE37-5 . A0	FSF	6SE6400-3CC11-7FD0
110	150	0BE38-8UA0	FSF	6SL3000-0CE32-3AA0
132	200	0BE41-1UA0	FSF	6SL3000-0CE32-8AA0
160	250	0XE41-3UA0	FSGX	6SL3000-0CE33-3AA0
200	300	0XE41-6UA0	FSGX	6SL3000-0CE35-1AA0
250	400	0XE42-0UA0		

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Technical specifications

Line voltage 380 ... 480 V 3 AC		Line reactor	
		6SL3203-0CE13-2AA0	6SL3203-0CE21-0AA0
Rated current	A	4	11.3
Power loss at 50/60 Hz	W	23/26	36/40
Line supply/load connection 1L1, 1L2, 1L3/ 2L1, 2L2, 2L3		Screw terminals	Screw terminals
• Conductor cross-section	mm ²	4	4
PE connection		M4 × 8; U washer; spring lock washer	M4 × 8; U washer; spring lock washer
Degree of protection		Control cabinet built-in unit IP20	Control cabinet built-in unit IP20
Dimensions			
• Width	mm (in)	125 (4.92)	125 (4.92)
• Height	mm (in)	120 (4.72)	140 (4.72)
• Depth	mm (in)	71 (2.80)	71 (2.80)
Weight, approx.	kg (lb)	1.1 (2.43)	2.1 (4.63)
Suitable for PM240-2 Power Module standard variant	Type	6SL3210-1PE11-8..0 6SL3210-1PE12-3..0 6SL3210-1PE13-2..0	6SL3210-1PE14-3..0 6SL3210-1PE16-1..0 6SL3210-1PE18-0..0
Suitable for PM240-2 Power Module push-through variant	Type	–	6SL3211-1PE16-1AL0 6SL3211-1PE18-0UL0
• Frame size		FSA	FSA

Line voltage 380 ... 480 V 3 AC		Line reactor			
		6SE6400-3CC00-2AD3	6SE6400-3CC00-4AD3	6SE6400-3CC00-6AD3	6SL3203-0CD21-0AA0
Rated current	A	1.9	3.5	4.8	9
Power loss at 50/60 Hz, approx.	W	6/7	12.5/15	7.5/9	9/11
Line supply connection U1, V1, W1		Screw terminals	Screw terminals	Screw terminals	Screw terminals
• Conductor cross-section	mm ²	6	6	6	6
Load connection		Cable	Cable	Cable	Cable
• Conductor cross-section		4 × AWG16 (1.5 mm ²)	4 × AWG16 (1.5 mm ²)	4 × AWG16 (1.5 mm ²)	4 × AWG16 (1.5 mm ²)
• Length, approx.	m (ft)	0.38 (1.25)	0.38 (1.25)	0.38 (1.25)	0.46 (1.51)
PE connection		On housing with M5 screw stud	On housing with M5 screw stud	On housing with M5 screw stud	On housing with M5 screw stud
Degree of protection		IP20	IP20	IP20	IP20
Dimensions					
• Width	mm (in)	75.5 (2.97)	75.5 (2.97)	75.5 (2.97)	153 (6.02)
• Height	mm (in)	200 (7.87)	200 (7.87)	200 (7.87)	270 (10.63)
• Depth	mm (in)	50 (1.97)	50 (1.97)	50 (1.97)	50 (1.97)
Possible as base component		Yes	Yes	Yes	Yes
Weight, approx.	kg (lb)	0.6 (1.32)	0.8 (1.76)	0.6 (1.32)	3.4 (7.5)
Suitable for PM240 Power Module	Type	6SL3224-0BE13-7UA0 6SL3224-0BE15-5UA0	6SL3224-0BE17-5UA0 6SL3224-0BE21-1UA0	6SL3224-0BE21-5UA0	6SL3224-0BE22-2 . A0 6SL3224-0BE23-0 . A0
• Frame size		FSA	FSA	FSA	FSB