

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6SL3000-0BE23-6DA1

LINE FILTER SERVICE

Used with the applicable PLC System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

Overview


Line reactor

Smart Line Modules are not warranted to operate without the specified line reactors.
 The use of other makes of line reactor can lead to malfunctions or irreparable damage to equipment.

Selection and ordering data

Suitable for Smart Line Module		SINAMICS line reactor	
Rated power Smart Line Module	Booksize format Internal air cooling External air cooling	Rated current	Article No.
kW	Type	A	
5	6SL3130-6AE15-0AB1 6SL3131-6AE15-0AA1	14	6SL3000-0CE15-0AA0
10	6SL3130-6AE21-0AB1 6SL3131-6AE21-0AA1	28	6SL3000-0CE21-0AA0
16	6SL3130-6TE21-6AA4 6SL3131-6TE21-6AA3	35	6SL3000-0CE21-6AA0
36	6SL3130-6TE23-6AA3 6SL3131-6TE23-6AA3	69	6SL3000-0CE23-6AA0
55	6SL3130-6TE25-5AA3 6SL3131-6TE25-5AA3	103	6SL3000-0CE25-5AA0

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Technical specifications

Article No.	6SL3000-0CE15-0AA0		6SL3000-0CE21-0AA0		6SL3000-0CE21-6AA0		6SL3000-0CE23-6AA0		6SL3000-0CE25-5AA0		
Product designation	Line reactor		Line reactor		Line reactor		Line reactor		Line reactor		
Line voltage 380 ... 480 V 3 AC											
Rated current	A	14	28	35	69	103					
Power loss	W	62	116	110	170	190					
Line/load connection		Screw-type terminals		Screw-type terminals		Screw-type terminals		Screw-type terminals		Screw-type terminals	
1U1, 1V1, 1W1/ 1U2, 1V2, 1W2											
• Conductor cross-section	mm ²	4	10	10	16	70					
PE connection		Screw-type terminals		Screw-type terminals		M5 screw studs according to DIN 46234		M6 screw studs according to DIN 46234		M8 screw studs according to DIN 46234	
• Conductor cross-section		mm ²	4	10	–	–	–				
Degree of protection		IP20	IP20	IP20	IP20	IP20					
Width	mm	150	177	219	228	270					
Height	mm	175	196	180	235	275					
Depth	mm	70	110	144	224	290					
Net weight	kg	3.7	7.5	9.5	17	36					
Certificate of suitability		cURus	cURus	cURus	cURus	cURus					

SINAMICS S120 drive system

SINAMICS S120

Booksize format > Line Modules > Smart Line Modules > Line filters

Overview



Line filter

In plants with strict EMC requirements, line filters work together with line reactors to restrict the conducted interference emanating from the Power Modules to the limit values of Class A1 as defined in EN 55011 and Category C2 as defined in EN 61800-3. Line filters are suited only for direct connection to TN-systems.

The use of other makes of line filter can lead to malfunctions or irreparable damage to equipment.

Selection and ordering data

Suitable for Smart Line Module		SINAMICS line filter	
Rated power Smart Line Module	Booksize format Internal air cooling External air cooling	Rated current	Article No.
kW	Type	A	
5	6SL3130-6AE15-0AB1 6SL3131-6AE15-0AA1	12	6SL3000-0HE15-0AA0
10	6SL3130-6AE21-0AB1 6SL3131-6AE21-0AA1	25	6SL3000-0HE21-0AA0
16	6SL3130-6TE21-6AA4 6SL3131-6TE21-6AA3	36	6SL3000-0BE21-6DA0
36	6SL3130-6TE23-6AA3 6SL3131-6TE23-6AA3	74	6SL3000-0BE23-6DA1
55	6SL3130-6TE25-5AA3 6SL3131-6TE25-5AA3	105	6SL3000-0BE25-5DA0

Technical specifications

Article No.	6SL3000-0HE15-0AA0	6SL3000-0HE21-0AA0	6SL3000-0BE21-6DA0	6SL3000-0BE23-6DA1	6SL3000-0BE25-5DA0
Product designation	Line filter	Line filter	Line filter	Line filter	Line filter
Line voltage 380 ... 480 V 3 AC					
Rated current	A 12	25	36	74	105
Power loss	W 20	20	16	26	43
Line/load connection L1, L2, L3/U, V, W	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
• Conductor cross-section	mm ² 10	10	10	35	50
PE connection	M6 screw studs according to DIN 46234	M6 screw studs according to DIN 46234	M6 screw studs according to DIN 46234	M6 screw studs according to DIN 46234	M8 screw studs according to DIN 46234
Degree of protection	IP20	IP20	IP20	IP20	IP20
Width	mm 60	60	50	75	100
Height	mm 285	285	429	433	466
Depth	mm 122	122	226	226	226
Net weight	kg 2.1	2.3	5.0	7.5	11.5
Certificate of suitability	cURus	cURus	cURus	cURus	cURus

Overview

Suitable line-side power components are assigned depending on the power rating of the Smart Line Module.

The tables below list recommended components.

Further information about the line contactors, switch disconnectors, circuit breakers and fuses specified in the table can be found in Catalog IC 10.

Assignment of line-side power components to Smart Line Modules in booksize and booksize compact format

Suitable for Smart Line Module		Line contactor	Circuit breaker IEC 60947	Circuit breaker UL489/CSA C22.2 No. 5-02	Main switch
Rated power	Booksize format Internal air cooling External air cooling		Article No.		
kW	Type	Type	Type	Type	Article No.
5	6SL3130-6AE15-0AB1 6SL3131-6AE15-0AA1	3RT1023-...	3RV1031-4BA10	3VL1102-2KM30-....	3LD2003-0TK51
10	6SL3130-6AE21-0AB1 6SL3131-6AE21-0AA1	3RT1026-...	3RV1031-4FA10	3VL1135-2KM30-....	3LD2203-0TK51
16	6SL3130-6TE21-6AA4 6SL3131-6TE21-6AA3	3RT1035-...	3RV1031-4FA10	3VL2505-2KN30-....	3LD2504-0TK51
36	6SL3130-6TE23-6AA3 6SL3131-6TE23-6AA3	3RT1045-...	3RV1041-4LA10	3VL2508-2KN30-....	3LD2704-0TK51
55	6SL3130-6TE25-5AA3 6SL3131-6TE25-5AA3	3RT1054-...	3VL2712-1DC33-....	3VL2112-2KN30-....	3KA5330-1GE01

Suitable for Smart Line Module		Fuse switch disconnecter	Switch disconnecter with fuse holders	LV HRC fuse (gL/gG)		UL/CSA fuse, Class J Available from: Mersen www.ep.mersen.com			
Rated power	Booksize format Internal air cooling External air cooling			Rated current	Size		Rated current	Size	
kW	Type	Article No.	Article No.	A		Article No.	A	mm	Reference No.
5	6SL3130-6AE15-0AB1 6SL3131-6AE15-0AA1	3NP1123-1CA20	3KL5030-1GB01	16	000	3NA3805	17.5	21 × 57	AJT17-1/2
10	6SL3130-6AE21-0AB1 6SL3131-6AE21-0AA1	3NP1123-1CA20	3KL5030-1GB01	35	000	3NA3814	35	27 × 60	AJT35
16	6SL3130-6TE21-6AA4 6SL3131-6TE21-6AA3	3NP1123-1CA20	3KL5030-1GB01	35	000	3NA3814	35	27 × 60	AJT35
36	6SL3130-6TE23-6AA3 6SL3131-6TE23-6AA3	3NP1123-1CA20	3KL5230-1GB01	80	000	3NA3824	80	27 × 117	AJT80
55	6SL3130-6TE25-5AA3 6SL3131-6TE25-5AA3	3NP1143-1DA20	3KL5530-1GB01	125	000	3NA3132	125	41 × 146	AJT125

SINAMICS S120 drive system

SINAMICS S120

Booksize format > Line Modules > Active Line Modules > Active Interface Modules

Technical specifications

Article No.	6SL3100-0BE21-6AB0 6SL3100-0BE23-6AB0 6SL3100-0BE25-5AB0 6SL3100-0BE28-0AB0 6SL3100-0BE31-2AB0					
Product designation	Active Interface Module with internal air cooling					
Line voltage 380 ... 480 V 3 AC						
Rated current	A	27	60	88	132	200
Current requirement 24 V DC electronics power supply, max.	A	0.25	0.5	0.6	1.2	1.2
Internal resistance Digital input "Fan off" (X21/Pin 4)	Ω	1440 ±10 %	1440 ±10 %	1440 ±10 %	1440 ±10 %	1440 ±10 %
Power loss	kW	0.3	0.39	0.45	0.575	0.8
Cooling air requirement	m³/s	0.03	0.04	0.075	0.15	0.15
Sound pressure level L _{pA} (1 m)	dB	57	60	66	68	68
Line/load connection L1, L2, L3/U2, V2, W2	mm²	Screw-type terminals	Screw-type terminals	M8 screw studs	M8 screw studs	M8 screw studs
• Conductor cross-section		16	50	2.5 ... 95 or 2 × 35	2.5 ... 120 or 2 × 50	2.5 ... 120 or 2 × 50
Thermostatic switch		NC contact	NC contact	NC contact	NC contact	NC contact
• Switching capacity AC		250 V/1.6 A	250 V/1.6 A	250 V/1.6 A	250 V/1.6 A	250 V/1.6 A
• Switching capacity DC		60 V/0.75 A	60 V/0.75 A	60 V/0.75 A	60 V/0.75 A	60 V/0.75 A
PE connection		M5 screw	M5 screw	M6 screw	M8 screw	M8 screw
Degree of protection		IP20	IP20	IP20	IP20	IP20
Width × Height × Depth	mm	100 × 380 × 270	150 × 380 × 270	200 × 380 × 270	300 × 380 × 270	300 × 380 × 270
Net weight	kg	11	18.5	21	29	36
Certificate of suitability		cURus	cURus	cURus	cURus	cURus

Selection and ordering data

Suitable for Active Line Module		SINAMICS Active Interface Module	
Rated power Active Line Module kW	Booksize format Internal air cooling External air cooling Type	Rated current A	Article No.
16	6SL3130-7TE21-6AA4 6SL3131-7TE21-6AA3	27	6SL3100-0BE21-6AB0
36	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3	60	6SL3100-0BE23-6AB0
55	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3	88	6SL3100-0BE25-5AB0
80	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3	132	6SL3100-0BE28-0AB0
120	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3	200	6SL3100-0BE31-2AB0

Description	Article No.
Accessories	
Shield connection plate For Active Interface Module	
• 16 kW	Included in scope of supply
• 36 kW	6SL3163-1AF00-0AA0
• 55 kW	6SL3163-1AH00-0AA0
• 80 kW and 120 kW	6SL3163-1AM00-0AA0

Description	Article No.
Accessories (continued)	
DRIVE-CLiQ cable, pre-assembled Degree of protection of connector IP20/IP20 For Active Interface Module	
• 16 kW, length 0.31 m	6SL3060-4AK00-0AA0
• 36 kW, length 0.41 m	6SL3060-4AP00-0AA0
• 55 kW, length 0.60 m	6SL3060-4AU00-0AA0
• 80 kW and 120 kW, length 0.95 m	6SL3060-4AA10-0AA0
SINAMICS S120 Terminal Kit Plug-in terminals, DRIVE-CLiQ jumper For Active Interface Modules	
• With a width of 100 mm	6SL3160-8CD10-0AA0
• With a width of 150 mm	6SL3160-8DF10-0AA0
• With a width of 200 mm	6SL3160-8EH10-0AA0
• With a width of 300 mm	6SL3160-8FM10-0AA0
Accessories for re-ordering	
Warning labels in 30 languages This label set can be glued over the standard German or English labels to provide warnings in other languages. One set of labels is supplied with the devices. One sign in each of the following languages is provided in each set: BG, CN, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, JP, KR, LT, LV, MT, NL, NO, PL, PT, RO, RU, SE, SI, SK, TR	6SL3166-3AB00-0AA0

Overview


Basic Line Filter

Basic Line Filters are used on machines on which conducted interference emissions in the frequency range between 150 kHz and 30 MHz need to be damped in accordance with the requirements of CE-EMC legislation.

With the Basic Line Filters in combination with the Active Interface Modules, the limits for the interference voltages can be extended to Category C2 (IEC 61800-3) or, retaining Category C3, longer total cable lengths are possible for the configuration.

Selection and ordering data

Suitable for Active Line Module		SINAMICS Basic Line Filter	
Rated power Active Line Module	Booksize format Internal air cooling External air cooling	Rated current	Article No.
kW	Type	A	
16	6SL3130-7TE21-6AA4 6SL3131-7TE21-6AA3	36	6SL3000-0BE21-6DA0
36	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3	74	6SL3000-0BE23-6DA1
55	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3	105	6SL3000-0BE25-5DA0
80	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3	132	6SL3000-0BE28-0DA0
120	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3	192	6SL3000-0BE31-2DA0

Technical specifications

Article No.		6SL3000-0BE21-6DA0	6SL3000-0BE23-6DA1	6SL3000-0BE25-5DA0	6SL3000-0BE28-0DA0	6SL3000-0BE31-2DA0
Product designation		Basic Line Filter	Basic Line Filter	Basic Line Filter	Basic Line Filter	Basic Line Filter
Line voltage 380 ... 480 V 3 AC						
Rated current	A	36	74	105	132	192
Power loss	W	16	28	41	48	86
Line/load connection L1, L2, L3 / U, V, W		Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
• Conductor cross-section	mm ²	10	35	50	95	95
PE connection		M6 screw studs according to DIN 46234	M6 screw studs according to DIN 46234	M8 screw studs according to DIN 46234	M10 screw studs according to DIN 46234	M10 screw studs according to DIN 46234
Degree of protection		IP20	IP20	IP20	IP20	IP20
Width	mm	50	75	100	150	150
Height	mm	429	433	466	479	479
Depth	mm	226	226	226	226	226
Net weight	kg	5	7.5	11.5	18.2	18.8
Certificate of suitability		cURus	cURus	cURus	cURus	cURus

SINAMICS S120 drive system

SINAMICS S120

Booksize format > Line Modules > Active Line Modules > Recommended line-side components

Overview

Suitable line-side power components are assigned depending on the power rating of the Active Line Modules.

The tables below list recommended components.

Further information about the line contactors, switch disconnectors, circuit breakers and fuses specified in the table can be found in Catalog IC 10.

Assignment of line-side power components to Active Line Modules in booksize format

Suitable for Active Line Module		Line contactor	Output coupling device for line contactor	Main switch	Leading auxiliary switch for main switch
Rated power	Booksize format				
kW	Type	Type	Article No.	Article No.	Article No.
16	6SL3130-7TE21-6AA4 6SL3131-7TE21-6AA3	3RT1035-...	3TX7004-1LB00	3LD2504-0TK51	3LD9200-5B
36	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3	3RT1045-...	3TX7004-1LB00	3LD2704-0TK51	3LD9200-5B
55	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3	3RT1054-...	3TX7004-1LB00	3KA5330-1GE01	3KX3552-3EA01
80	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3	3RT1056-...	3TX7004-1LB00	3KA5330-1GE01	3KX3552-3EA01
120	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3	3RT1065-...	3TX7004-1LB00	3KA5730-1GE01	3KX3552-3EA01

Suitable for Active Line Module		Circuit breaker IEC 60947	Circuit breaker UL489/ CSA C22.2 No. 5-02	Fuse switch disconnector	Switch disconnector with fuse holders	Leading auxiliary switch for switch disconnector with fuse holders
Rated power	Booksize format					
kW	Type	Article No.	Type	Article No.	Article No.	Article No.
16	6SL3130-7TE21-6AA4 6SL3131-7TE21-6AA3	3RV1031-4FA10	3VL2505-2KN30-....	3NP1123-1CA20	3KL5230-1GB01	3KX3552-3EA01
36	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3	3RV1041-4LA10	3VL2508-2KN30-....	3NP1123-1CA20	3KL5230-1GB01	3KX3552-3EA01
55	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3	3VL2712-1DC33-....	3VL2512-2KN30-....	3NP1143-1DA20	3KL5530-1GB01	3KX3552-3EA01
80	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3	3VL3720-1DC33-....	3VL3517-2KN30-....	3NP1143-1DA20	3KL5530-1GB01	3KX3552-3EA01
120	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3	3VL3725-1DC36-....	3VL3525-2KN30-....	3NP1153-1DA20	3KL5730-1GB01	3KX3552-3EA01

Suitable for Active Line Module		NEOZED fuse (gL/gG)			DIAZED fuse (gL/gG)			LV HRC fuse (gL/gG)			UL/CSA fuse, Class J ¹⁾ Available from: Mersen www.ep.mersen.com		
Rated power	Booksize format	Rated current	Size		Rated current	Size		Rated current	Size		Rated current	Size	
kW	Type			Article No.			Article No.			Article No.		mm	Ref. No.
16	6SL3130-7TE21-6AA4 6SL3131-7TE21-6AA3	35	D02	5SE2335	35	DIII	5SB411	35	000	3NA3814	35	27×60	AJT35
36	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3	–	–	–	80	DIV	5SC211	80	000	3NA3824	80	29×117	AJT80
55	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3	–	–	–	–	–	–	125	1	3NA3132	125	41×146	AJT125
80	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3	–	–	–	–	–	–	160	1	3NA3136	175	41×146	AJT175
120	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3	–	–	–	–	–	–	250	1	3NA3144	250	54×181	AJT250

¹⁾ Not suitable for 3NP and 3KL switch disconnectors.

Overview


20 kW and 100 kW line reactors

Line reactors limit low-frequency line harmonic effects and reduce the load on the semiconductors of the Basic Line Module.

The use of other makes of line reactor can lead to malfunctions or irreparable damage to equipment.

Selection and ordering data

Suitable for Basic Line Module		SINAMICS line reactor	
Rated power Basic Line Module	Booksize format	Rated current	
kW	Type	A	Article No.
20	6SL3130-1TE22-0AA0	37	6SL3000-0CE22-0AA0
40	6SL3130-1TE24-0AA0	74	6SL3000-0CE24-0AA0
100	6SL3130-1TE31-0AA0	185	6SL3000-0CE31-0AA0

Technical specifications

Article No.	6SL3000-0CE22-0AA0		6SL3000-0CE24-0AA0		6SL3000-0CE31-0AA0	
Product designation	Line reactor		Line reactor		Line reactor	
Line voltage 380 ... 480 V 3 AC						
Rated current	A	37	74	185		
Power loss						
• At 50 Hz	W	130	270	480		
• At 60 Hz	W	154	320	565		
Line/load connection		Screw-type terminals	Screw-type terminals	Flat connector for M8 screw		
• Conductor cross-section	mm ²	0.5 ... 16	2.5 ... 35	–		
Degree of protection		IP20	IP20	IP00		
Width	mm	178	210	261		
Height	mm	165	245	228		
Depth	mm	100	93	137		
Net weight	kg	5.2	11.2	21.7		
Certificate of suitability		cURus	cURus	cURus		

SINAMICS S120 drive system

SINAMICS S120

Booksize format > Line Modules > Basic Line Modules > Line filters

Overview



Line filter

In plants with strict EMC requirements, line filters work together with line reactors to restrict the conducted interference emanating from the Power Modules to the limit values of Class A1 as defined in EN 55011 and Category C2 as defined in EN 61800-3. Line filters are suited only for direct connection to TN systems.

The use of other makes of line filter can lead to malfunctions or irreparable damage to equipment.

Selection and ordering data

Suitable for Basic Line Module		SINAMICS line filter	
Rated power Basic Line Module	Booksize format	Rated current	
kW	Type	A	Article No.
20	6SL3130-1TE22-0AA0	36	6SL3000-0BE21-6DA0
40	6SL3130-1TE24-0AA0	74	6SL3000-0BE23-6DA1
100	6SL3130-1TE31-0AA0	192	6SL3000-0BE31-2DA0

Technical specifications

Article No.	6SL3000-0CE22-0AA0	6SL3000-0CE24-0AA0	6SL3000-0CE31-0AA0
Product designation	Line filter	Line filter	Line filter
Line voltage 380 ... 480 V 3 AC			
Rated current	A 36	74	192
Power loss	W 16	20	90
Line/load connection L1, L2, L3 / U, V, W	Screw-type terminals		
• Conductor cross-section	mm ² 10	35	95
PE connection	M6 screw stud		
Degree of protection	IP20		
Width	mm 50	75	150
Height	mm 429	433	479
Depth	mm 226	226	226
Net weight	kg 5	7.5	18.8
Certificate of suitability	cURus	cURus	cURus