

SINAMICS G120X infrastructure converters for HVAC/Water/Wastewater

0.75 kW to 630 kW (1 hp to 700 hp)

Clicking to SiePortal

6SL3255-0AA00-5AA0

SINAMICS G120X infrastructure converters for HVAC/Water/Wastewater

Selection and ordering data

SINAMICS G120X converters · Degree of protection IP20/UL Open Type · 380 ... 480 V 3 AC → Configuration with line-side components (see right page)

Rated power ¹⁾		Rated output current ²⁾		Base-load current I_L ³⁾		Rated input current ⁴⁾	Frame size	SINAMICS G120X Degree of protection IP20/UL Open Type without integrated line filter Converters up to 132 kW delivery ex stock	SINAMICS G120X Degree of protection IP20/UL Open Type with integrated line filter Converters up to 132 kW delivery ex stock
400 V kW	480 V hp	400 V A	480 V A	400 V A	480 V A	400 V A		Article No. 10 ... 48 ↓↓	Article No. 10 ... 48 ↓↓
380 ... 480 V 3 AC · Rated pulse frequency 4 kHz ≤ 90 kW, 2 kHz for 110 kW to 250 kW and 4 kHz > 250 kW · Input frequency 47 ... 63 Hz									
0.75	1	2.2	2.1	1.7	1.6	2.1	FSA	6SL32 0- YE10- U 0	6SL32 0- YE10- A 0
1.1	1.5	3.1	3	2.2	2.1	2.8	FSA	6SL32 0- YE12- U 0	6SL32 0- YE12- A 0
1.5	2	4.1	3.4	3.1	3	3.6	FSA	6SL32 0- YE14- U 0	6SL32 0- YE14- A 0
2.2	3	5.9	4.8	4.1	3.4	5.5	FSA	6SL32 0- YE16- U 0	6SL32 0- YE16- A 0
3	4	7.7	6.2	5.9	4.8	6.9	FSA	6SL32 0- YE18- U 0	6SL32 0- YE18- A 0
4	5	10.2	7.6	7.7	6.2	9.8	FSB	6SL32 0- YE20- U 0	6SL32 0- YE20- A 0
5.5	7.5	13.2	11	10.2	7.6	12	FSB	6SL32 0- YE22- U 0	6SL32 0- YE22- A 0
7.5	10	18	14	13.2	11	17	FSB	6SL32 0- YE24- U 0	6SL32 0- YE24- A 0
11	15	26	21	18	14	24.5	FSC	6SL32 0- YE26- U 0	6SL32 0- YE26- A 0
15	20	32	27	26	21	29.5	FSC	6SL32 0- YE28- U 0	6SL32 0- YE28- A 0
18.5	25	38	34	32	27	36	FSD	6SL32 0- YE30- U 0	6SL32 0- YE30- A 0
22	30	45	40	38	34	42	FSD	6SL32 0- YE32- U 0	6SL32 0- YE32- A 0
30	40	60	52	45	40	57	FSD	6SL32 0- YE34- U 0	6SL32 0- YE34- A 0
37	50	75	65	60	52	70	FSD	6SL32 0- YE36- U 0	6SL32 0- YE36- A 0
45	60	90	77	75	65	86	FSE	6SL32 0- YE38- U 0	6SL32 0- YE38- A 0
55	75	110	96	90	77	104	FSE	6SL32 0- YE40- U 0	6SL32 0- YE40- A 0
75	100	145	124	110	96	140	FSF	6SL32 0- YE42- U 0	6SL32 0- YE42- A 0
90	125	178	156	145	124	172	FSF	6SL32 0- YE44- U 0	6SL32 0- YE44- A 0
110	150	205	180	178	156	198	FSF	6SL32 0- YE46- U 0	6SL32 0- YE46- A 0
132	200	250	240	205	180	242	FSF	6SL32 0- YE48- U 0	6SL32 0- YE48- A 0
160	250	302	302	250	240	301	FSG	–	6SL32 0- YE50- A 0
200	300	370	361	302	302	365	FSG	–	6SL32 0- YE52- A 0
250	400	477	477	370	361	471	FSG	–	6SL32 0- YE54- A 0
315	400	570	477	468	390	585	FSH	–	6SL32 2 0- YE56- C 0
355	450	640	515	491	394	654	FSH	–	6SL32 2 0- YE58- C 0
400	500	720	590	551	452	735	FSH	–	6SL32 2 0- YE60- C 0
450	500	820	663	672	542	850	FSJ	–	6SL32 2 0- YE62- C 0
500	600	890	724	728	591	924	FSJ	–	6SL32 2 0- YE64- C 0
560	700	1000	830	786	652	1038	FSJ	–	6SL32 2 0- YE66- C 0

Article No. supplements

Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002

Class 3C2 – **delivery ex stock**

Class 3C3 *

Operator Panel

Without Operator Panel *

With BOP-2 Basic Operator Panel (numeric 2-line display) *

With IOP-2 Intelligent Operator Panel (graphic color display) – **delivery ex stock**

Extension with SINAMICS G120X I/O Extension Module

Without extension – **delivery ex stock**

With SINAMICS G120X I/O Extension Module *

Line filter

Without integrated line filter (for IT systems ⁵⁾) – **delivery ex stock**

With integrated line filter Category C2 – **delivery ex stock**

With integrated line filter Category C3 *

Communication

USS, Modbus RTU, BACnet MS/TP *

PROFINET, EtherNet/IP – **delivery ex stock**

PROFIBUS DP *

* If you select one of these supplements, the delivery time for converters up to 132 kW will change from "delivery ex stock" to "standard delivery time".

¹⁾ Rated power based on the base-load current I_L . The base-load current I_L is based on the duty cycle for low overload (LO).

²⁾ The rated output current is based on the duty cycle for low overload (LO). These current values are valid for 400 V or 480 V.

³⁾ The base-load current I_L is based on the duty cycle for high overload (HO). These current values are valid for 400 V or 480 V.

⁴⁾ The input current depends on the motor load and line impedance. The input currents apply for a load at rated power (based on I_L) for a line impedance corresponding to $u_k = 1\%$. The current values are specified on the rating plate of the converter.

⁵⁾ Non-filtered devices are designed for operation in IT systems or in conjunction with an RCD. The customer must provide suitable RI suppression equipment to ensure that these devices comply with the limits defined for Category C3.

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Line-side components (Configuration with load-side power components see next double page)

Line filters Category C2	Category C1 Mandatory for • FSA to FSF ≤ 90 kW: Converter without integrated line filter • FSF 110 kW: Converter with integrated line filter	Line harmonics filters ¹⁾ (THD(I) < 5 %) The prefix "UAC:" is part of a Siemens internal order code that does not belong to the product number of the original manufacturer Schaffner EMV AG.	Line reactors For frame sizes FSH and FSJ mandatory when using an external line filter Category C2	Recommended line-side overcurrent protection devices ⁴⁾			
				Fuses IEC-compliant	Fuses UL/cUL-compliant Rated voltage 600 V AC ⁵⁾		
Article No.	Article No.		Article No.	Current A	Article No.	Fuse type Class/Article No.	Current A
SINAMICS G120X available with integrated line filter Category C2	6SL3203-0BE17-7BA1 ⁶⁾	–	A DC line reactor is integrated for frame sizes FSA to FSG – therefore no line reactor is required.	16	3NA3805	J	15
	–	–		16	3NA3805	J	15
	–	–		16	3NA3805	J	15
	–	–		16	3NA3805	J	15
	–	–		16	3NA3805	J	15
	6SL3203-0BE21-8BA0 ⁶⁾	–		32	3NA3812	J	35
	–	UAC:FN34406112E2XXJRX		32	3NA3812	J	35
	–	UAC:FN34408112E2XXJRX		32	3NA3812	J	35
	6SL3203-0BE23-8BA0 ⁶⁾	UAC:FN344011113E2FAJRX		50	3NA3820	J	50
	–	UAC:FN344015113E2FAJRX		50	3NA3820	J	50
	6SL3203-0BE23-8BA0	UAC:FN344019113E2FAJRX		63	3NA3822	J	60
	–	UAC:FN344022115E2FAJRX		80	3NA3824	J	70
	6SL3203-0BE27-5BA0	UAC:FN344030115E2FAJRX		100	3NA3830	J	90
	–	UAC:FN344037115E2FAJRX		100	3NA3830	J	100
	6SL3203-0BE31-1BA0	UAC:FN344045115E2FAJRX		125	3NA3832	J	125
	–	UAC:FN344055115E2FAJRX		160	3NA3836	J	150
	6SL3000-0BE31-2DA0	UAC:FN344075116E2FAJRX		200	3NA3140	J	200
	–	UAC:FN344090116E2FAJRX		224	3NA3142	J	250
	6SL3203-0BE31-8BA0	UAC:FN3440110118E2FAJRX		300	3NA3250	J	300
	–	UAC:FN3440132118E2FAJXX		315	3NA3252	J	350
	–	UAC:FN3440160118E2FAJXX ²⁾		355	3NA3254	J	400
	–	UAC:FN3440200118E2FAJXX ²⁾		400	3NA3260	J	500
	–	UAC:FN3440132118E2FAJXX (2x) ^{2) 3)}		630	3NA3372	J	600
	6SL3760-0MR00-0AA0	–	6SL3000-0CE36-3AA0	710	3NE1437-2		710
	–	–	6SL3000-0CE37-7AA0	800	3NE1438-2		800
	–	–	–	850	3NE1448-2		850
	–	–	6SL3000-0CE38-7AA0	1000	3NB3350-1KK26		1000
	–	–	6SL3000-0CE41-0AA0	1100	3NB3351-1KK26		1100
	–	–	–	1250	3NB3352-1KK26		1250

¹⁾ Voltage 380 V to 415 V, frequency 50 Hz.

²⁾ For 160 kW, 200 kW and 250 kW, only operation in Vector Control is permitted. V/f must not be used.

³⁾ 250 kW with parallel connection of 2x 132 kW.

⁴⁾ Further information at <https://support.industry.siemens.com/cs/document/109762895>

⁵⁾ The Short Circuit Current Rating (SCCR) according to UL for industrial control panel installations to NEC Article 409 or UL 508A/508C or UL 61800-5-1 is 100 kA for SINAMICS G120X.

⁶⁾ The line filters are suitable for base mounting for SINAMICS G120X frame sizes FSA to FSC. Further information especially to achieve EMC Category C1 is available in the documentation on the internet at: www.siemens.com/sinamics-g120x/documentation

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Rated power ¹⁾		Rated output current ²⁾		Base-load current I_L ³⁾		Rated input current ⁴⁾	Frame size	SINAMICS G120X Degree of protection IP20/UL Open Type without integrated line filter Converters up to 132 kW delivery ex stock	SINAMICS G120X Degree of protection IP20/UL Open Type with integrated line filter Converters up to 132 kW delivery ex stock
400 V kW	480 V hp	400 V A	480 V A	400 V A	480 V A	400 V A		10 ... 48 Article No. ↓↓	10 ... 48 Article No. ↓↓
380 ... 480 V 3 AC · Rated pulse frequency 4 kHz ≤ 90 kW, 2 kHz for 110 kW to 250 kW and 4 kHz > 250 kW · Input frequency 47 ... 63 Hz									
0.75	1	2.2	2.1	1.7	1.6	2.1	FSA	6SL32 0- YE10- U 0	6SL32 0- YE10- A 0
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1.5	2	4.1	3.4	3.1	3	3.6	FSA	6SL32 0- YE14- U 0	6SL32 0- YE14- A 0
2.2	3	5.9	4.8	4.1	3.4	5.5	FSA	6SL32 0- YE16- U 0	6SL32 0- YE16- A 0
3	4	7.7	6.2	5.9	4.8	6.9	FSA	6SL32 0- YE18- U 0	6SL32 0- YE18- A 0
4	5	10.2	7.6	7.7	6.2	9.8	FSB	6SL32 0- YE20- U 0	6SL32 0- YE20- A 0
5.5	7.5	13.2	11	10.2	7.6	12	FSB	6SL32 0- YE22- U 0	6SL32 0- YE22- A 0
7.5	10	18	14	13.2	11	17	FSB	6SL32 0- YE24- U 0	6SL32 0- YE24- A 0
11	15	26	21	18	14	24.5	FSC	6SL32 0- YE26- U 0	6SL32 0- YE26- A 0
15	20	32	27	26	21	29.5	FSC	6SL32 0- YE28- U 0	6SL32 0- YE28- A 0
18.5	25	38	34	32	27	36	FSD	6SL32 0- YE30- U 0	6SL32 0- YE30- A 0
22	30	45	40	38	34	42	FSD	6SL32 0- YE32- U 0	6SL32 0- YE32- A 0
30	40	60	52	45	40	57	FSD	6SL32 0- YE34- U 0	6SL32 0- YE34- A 0
37	50	75	65	60	52	70	FSD	6SL32 0- YE36- U 0	6SL32 0- YE36- A 0
45	60	90	77	75	65	86	FSE	6SL32 0- YE38- U 0	6SL32 0- YE38- A 0
55	75	110	96	90	77	104	FSE	6SL32 0- YE40- U 0	6SL32 0- YE40- A 0
75	100	145	124	110	96	140	FSF	6SL32 0- YE42- U 0	6SL32 0- YE42- A 0
90	125	178	156	145	124	172	FSF	6SL32 0- YE44- U 0	6SL32 0- YE44- A 0
110	150	205	180	178	156	198	FSF	6SL32 0- YE46- U 0	6SL32 0- YE46- A 0
132	200	250	240	205	180	242	FSF	6SL32 0- YE48- U 0	6SL32 0- YE48- A 0
160	250	302	302	250	240	301	FSG	–	6SL32 0- YE50- A 0
200	300	370	361	302	302	365	FSG	–	6SL32 0- YE52- A 0
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315	400	570	477	468	390	585	FSH	–	6SL32 2 0- YE56- C 0
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450	500	820	663	672	542	850	FSJ	–	6SL32 2 0- YE62- C 0
500	600	890	724	728	591	924	FSJ	–	6SL32 2 0- YE64- C 0
560	700	1000	830	786	652	1038	FSJ	–	6SL32 2 0- YE66- C 0

Article No. supplements

Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002

Class 3C2 – **delivery ex stock**

Class 3C3 *

Operator Panel

Without Operator Panel *

With BOP-2 Basic Operator Panel (numeric 2-line display) *

With IOP-2 Intelligent Operator Panel (graphic color display) – **delivery ex stock**

Extension with SINAMICS G120X I/O Extension Module

Without extension – **delivery ex stock**

With SINAMICS G120X I/O Extension Module *

Line filter

Without integrated line filter (for IT systems ⁵⁾) – **delivery ex stock**

With integrated line filter Category C2 – **delivery ex stock**

With integrated line filter Category C3 *

Communication

USS, Modbus RTU, BACnet MS/TP *

PROFINET, EtherNet/IP – **delivery ex stock**

PROFIBUS DP *

* If you select one of these supplements, the delivery time for converters up to 132 kW will change from "delivery ex stock" to "standard delivery time".

¹⁾ Rated power based on the base-load current I_L . The base-load current I_L is based on the duty cycle for low overload (LO).

²⁾ The rated output current is based on the duty cycle for low overload (LO). These current values are valid for 400 V or 480 V.

³⁾ The base-load current I_L is based on the duty cycle for high overload (HO). These current values are valid for 400 V or 480 V.

⁴⁾ The input current depends on the motor load and line impedance. The input currents apply for a load at rated power (based on I_L) for a line impedance corresponding to $u_k = 1\%$. The current values are specified on the rating plate of the converter.

⁵⁾ Non-filtered devices are designed for operation in IT systems or in conjunction with an RCD. The customer must provide suitable RI suppression equipment to ensure that these devices comply with the limits defined for Category C3.

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Load-side power components (Configuration with line-side components see double page before)

Output reactors	Sine-wave filters When using sine-wave filters, please note for the pulse frequency of the converter: • ≤ 90 kW: 4 kHz up to 8 kHz • ≥ 110 kW: 4 kHz	dv/dt filters plus VPL The prefix "JTA:" is part of a Siemens internal order code that does not belong to the product number of the original manufacturer Mdexx Magnetronic Devices s. r. o..
Article No.	Article No.	Article No.
–	6SL3202-0AE20-3SA0	–
–	6SL3202-0AE20-6SA0	–
–	–	–
–	6SL3202-0AE21-1SA0	–
–	–	–
–	6SL3202-0AE21-4SA0	–
–	6SL3202-0AE22-0SA0	–
–	–	–
–	6SL3202-0AE23-3SA0	–
–	–	–
6SL3202-0AE23-8CA0	6SL3202-0AE24-6SA0	JTA:TEF1203-0HB
6SE6400-3TC07-5ED0	–	JTA:TEF1203-0JB
–	6SL3202-0AE26-2SA0	–
–	6SL3202-0AE28-8SA0	JTA:TEF1203-0KB
6SE6400-3TC14-5FD0	6SL3202-0AE31-5SA0	JTA:TEF1203-0LB
–	6SL3202-0AE31-8SA0	JTA:TEF1203-0MB
6SL3000-2BE32-1AA0	6SL3000-2CE32-3AA0 ¹⁾	–
6SL3000-2BE32-6AA0	–	–
6SL3000-2BE33-2AA0	6SL3000-2CE32-8AA0 ¹⁾²⁾	6SL3000-2DE35-0AA0
6SL3000-2BE33-8AA0	6SL3000-2CE33-3AA0 ¹⁾²⁾	–
6SL3000-2BE35-0AA0	6SL3000-2CE34-1AA0 ¹⁾²⁾	–
6SL3000-2AE36-1AA0	–	6SL3000-2DE38-4AA0
6SL3000-2AE38-4AA0	–	–
–	–	–
6SL3000-2AE41-0AA0	–	6SL3000-2DE41-4AA0
–	–	–
6SL3000-2AE41-4AA0	–	–

Ordering examples

Basic selection

SINAMICS G120X converters · degree of protection IP20/UL Open Type · 380 ... 480 V 3 AC, 15 kW · with integrated line filter – **converters up to 132 kW delivery ex stock**

Article No. supplements

Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002

Class 3C2 – **delivery ex stock**

Class 3C3 *

Operator Panel

With BOP-2 Basic Operator Panel (numeric 2-line display) *

With IOP-2 Intelligent Operator Panel (graphic color display) – **delivery ex stock**

Extension with SINAMICS G120X I/O Extension Module

Without extension – **delivery ex stock**

With SINAMICS G120X I/O Extension Module *

Line filter

With integrated line filter Category C2 – **delivery ex stock**

Communication

USS, Modbus RTU, BACnet MS/TP *

PROFINET, EtherNet/IP – **delivery ex stock**

PROFIBUS DP *

Complete Article No.

Example 1

6SL32 2 0-3 YE28- 0 A F 0

Example 2

6SL32 3 0-2 YE28- 0 A F 0

6SL32	2	0-3	YE28-	0	A	F	6SL32	3	0-2	YE28-	0	A	F
Delivery ex stock							Standard delivery time						

* If you select one of these supplements, the delivery time for converters up to 132 kW will change from "delivery ex stock" to "standard delivery time".

¹⁾ For converters with a rated power ≥ 110 kW, around 70 % of the current and power is still available when using sine-wave filters due to current derating of the converter.

²⁾ For 160 kW, 200 kW and 250 kW, only operation in Vector Control is permitted. V/f must not be used.