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

								de components (see right pag
Rated pow	er ¹⁾	Rated outp	out current ²⁾	Base-load / _H ³⁾	current	Rated input current ⁴⁾	Frame size	SINAMICS G120X Degree of protection IP20/UL Open Type without integrated line filte
200 V	240 V	200 V	240 V	200 V	240 V	200 V		A C L NI
kW	hp	A	Α	Α	A	А		Article No.
	V 3 AC · Rated pu	-	-				504	
0.75	1	4.2	4.2	3.2	3.2	3.8	FSA	6SL32 ■ 0- ■ YC10- ■ U ■
1.1	1.5	6	6	4.2	4.2	5.4	FSA	6SL32 ■ 0- ■ YC12- ■ U ■
1.5	2	7.4	7.4	6	6	6.7	FSA	6SL32 ■ 0- ■ YC14- ■ U ■
2.2	3	10.4	10.4	7.4	7.4	9.6	FSB	6SL32 ■ 0-■ YC16-■ U ■
3	4	13.6	13.6	10.4	10.4	12.7	FSB	6SL32 ■ 0-■ YC18-■ U ■
4	5	17.5	17.5	13.6	13.6	16.3	FSB	6SL32 ■ 0-■ YC20-■ U ■
5.5	7.5	22	22	17.5	17.5	20.8	FSC	6SL32 ■ 0-■ YC22-■ U ■
7.5	10	28	28	22	22	26.3	FSC	6SL32 ■ 0- ■ YC24- ■ U ■
11	15	42	42	28	28	40	FSD	6SL32 ■ 0-■ YC26-■ U ■
15	20	54	54	42	42	51	FSD	6SL32 ■ 0-■ YC28-■ U ■
18.5	25	68	68	54	54	64	FSD	6SL32 ■ 0-■ YC30-■ U ■
22	30	80	80	68	68	76	FSE	6SL32 ■ 0- ■ YC32- ■ U ■
30	40	104	104	80	80	98	FSE	6SL32 ■ 0- ■ YC34- ■ U ■
37	50	130	130	104	104	126	FSF	6SL32 ■ 0- ■ YC36- ■ U ■
45	60	154	154	130	130	149	FSF	6SL32 ■ 0- ■ YC38- ■ U ■
55	75	192	192	154	154	172	FSF	6SL32 ■ 0- ■ YC40- ■ U ■
Article No.	. supplements							
Environme	ental class/harmfu	ul chemical s	ubstances acc.	to IEC 60721-3-	3: 2002			
Class 3C2								2
Class 3C3								2 3
Operator F	Panel							
-	erator Panel							1
With BOP-2	2 Basic Operator P	anel (numerio	2-line display)					2
	Intelligent Operato	,)				3
	with SINAMICS G	(0 1		,				
Without ext	tension							0
	MICS G120X I/O Ex	xtension Mod	ule					1
Line filter	VIIOO G 120/(1/0 E/	KIONOION WIOG	uio					
	egrated line filter (f	or IT systems	⁽⁵⁾)					U
Communic	cation							
	ous RTU, BACnet N	MS/TP						R
USS. Modt								
· · · · · · · · · · · · · · · · · · ·	EtherNet/IP							B F P

 $^{^{1)}}$ Rated power based on the base-load current $\it I_L$. The base-load current $\it I_L$ 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 200 V or 240 V.

 $^{^{\}rm 3)}$ The base-load current $\it l_{\rm H}$ is based on the duty cycle for high overload (HO). These current values are valid for 200 V or 240 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 $I_{\rm L}$) for a line impedance corresponding to $u_{\rm K}$ = 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 filters		Line harmonics filters	Line reactors	Recommended line-side								
Category C2	Category C1			overcu	rrent protec	tion devices 1)						
				Fuses IEC-cor	npliant	Fuses UL/cUL-compliant Rated voltage 600 V AC ²⁾						
				Current		Fuse type	Curren					
Article No.	Article No.		Article No.	А	Article No.	Class/Article No.	Α					
-	-	-	A DC line reactor	16	3NA3805	J	15					
_	-	_	is integrated for	16	3NA3805	J	15					
_	-	_	frame sizes FSA to FSF –	16	3NA3805	J	15					
_	_	_	therefore no	32	3NA3812	J	35					
_	-	_	line reactor	32	3NA3812	J	35					
_	-	_	is required.	32	3NA3812	J	35					
_	_	_		50	3NA3820	J	50					
_	=	_		50	3NA3820	J	50					
_	-	_		63	3NA3822	J	60					
_	=	_		80	3NA3824	J	70					
_	-	-		100	3NA3830	J	90					
_	_	-		100	3NA3830	J	110					
_	-	-		160	3NA3836	J	150					
_	-	-		200	3NA3140	J	175					
_	_	-		200	3NA3140	J	200					
_	_	_		224	3NA3142	J	250					

Further information at https://support.industry.siemens.com/cs/document/109762895

²⁾ 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.

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SINAMICS G120X infrastructure converters for HVAC/Water/Wastewater

Selection and ordering data

200 240 V 3 AC - Rated pulse frequency 4 kHz · Input frequency 47 63 Hz 1.75	Rated powe			out current ²⁾	Base-load I _H ³⁾		Rated input current ⁴⁾	Frame size	side power components (see rig SINAMICS G120X Degree of protection IP20/UL Open Type without integrated line filter
Article No. A A A A A A A A A A A A A A A A A A A	200 V	240 V	200 V	240 V	200 V	240 V	200 V		
1.75									Article No.
1.1 1.5 6 6 4.2 4.2 5.4 FSA 6SL32 0- YC12- U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	200 240	V 3 AC · Rated	pulse frequenc	y 4 kHz · Input f	requency 47	. 63 Hz			
1.5 2 7.4 7.4 6 6 6 6.7 FSA 6SL32 0- YC14- U 0 0 1 1.2 3 10.4 10.4 7.4 7.4 9.6 FSB 6SL32 0- YC16- U 0 0 1 1.3 6 13.6 10.4 10.4 12.7 FSB 6SL32 0- YC16- U 0 0 1 1.5 17.5 17.5 17.5 13.6 13.6 16.3 FSB 6SL32 0- YC20- U 0 0 1 1.5 10 28 28 22 22 17.5 17.5 17.5 20.8 FSC 6SL32 0- YC20- U 0 0 1 1 15 42 42 28 28 40 FSD 6SL32 0- YC20- U 0 0 1 1 15 42 42 28 28 40 FSD 6SL32 0- YC20- U 0 0 1 1 15 42 42 42 151 FSD 6SL32 0- YC20- U 0 0 1 1 15 42 42 42 151 FSD 6SL32 0- YC20- U 0 0 1 1 15 42 42 42 151 FSD 6SL32 0- YC20- U 0 0 1 1 1 15 42 42 42 151 FSD 6SL32 0- YC20- U 0 0 1 1 1 15 42 42 42 151 FSD 6SL32 0- YC20- U 0 0 1 1 1 15 42 42 15 1 FSD 6SL32 0- YC20- U 0 0 1 1 1 15 42 42 15 1 FSD 6SL32 0- YC20- U 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.75	1	4.2	4.2	3.2	3.2	3.8	FSA	6SL32 ■ 0-■ YC10-■ U ■ 0
10.4 10.4 7.4 7.4 9.6 FSB 6SL32 0- YC16- U 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1	1.5	6	6	4.2	4.2	5.4	FSA	6SL32 ■ 0-■ YC12-■ U ■ 0
13.6	.5	2	7.4	7.4	6	6	6.7	FSA	6SL32 ■ 0-■ YC14-■ U ■ 0
17.5	2.2	3	10.4	10.4	7.4	7.4	9.6	FSB	6SL32 ■ 0- ■ YC16- ■ U ■ 0
7.5 7.5 22 22 17.5 17.5 20.8 FSC 6SL32 0-WC22-WU 0 0 7.5 10 28 28 28 22 22 26.3 FSC 6SL32 0-WC22-WU 0 0 7.5 10 28 28 28 22 22 26.3 FSC 6SL32 0-WC22-WU 0 0 7.5 10 28 28 28 22 25 26.3 FSC 6SL32 0-WC22-WU 0 0 7.5 10 28 28 28 28 40 FSD 6SL32 0-WC22-WU 0 0 7.5 20 54 54 42 42 51 FSD 6SL32 0-WC22-WU 0 0 7.5 20 54 54 42 42 51 FSD 6SL32 0-WC22-WU 0 0 7.5 25 68 68 68 54 54 64 FSD 6SL32 0-WC23-WU 0 0 7.5 25 68 68 68 54 54 64 FSD 6SL32 0-WC32-WU 0 0 7.5 25 68 68 68 54 54 64 FSD 6SL32 0-WC32-WU 0 0 7.5 25 68 68 68 54 54 64 FSD 6SL32 0-WC33-WU 0 0 7.5 25 68 68 68 54 54 54 64 FSD 6SL32 0-WC33-WU 0 0 7.5 25 68 68 68 76 FSE 6SL32 0-WC33-WU 0 0 7.5 26 68 68 76 FSE 6SL32 0 0 7.5 26 68 68 76 FSE 6		4	13.6	13.6	10.4	10.4	12.7	FSB	6SL32 ■ 0- ■ YC18- ■ U ■ 0
28 28 22 22 26.3 FSC 6SL32 0- YC24- U 0 0 11 15 42 42 42 28 28 40 FSD 6SL32 0- YC26- U 0 0 15 20 54 54 42 42 51 FSD 6SL32 0- YC26- U 0 0 18.5 25 68 68 68 54 54 64 FSD 6SL32 0- YC30- U 0 0 18.5 25 68 68 68 54 54 64 FSD 6SL32 0- YC30- U 0 0 18.5 25 68 68 68 54 54 64 FSD 6SL32 0- YC30- U 0 0 18.5 25 68 86 876 FSE 6SL32 0- YC30- U 0 0 18.5 25 68 10 10 10 10 10 10 10 10 10 10 10 10 10		5			13.6	13.6	16.3	-	6SL32 ■ 0- ■ YC20- ■ U ■ 0
11	j.5	7.5	22	22	17.5	17.5	20.8	FSC	6SL32 ■ 0- ■ YC22- ■ U ■ 0
15		10	28	28	22	22	26.3	FSC	6SL32 ■ 0- ■ YC24- ■ U ■ 0
18.5									
30 80 80 80 68 68 76 FSE 6SL32 0- YC32- U 0 0 30 40 104 104 80 80 98 FSE 6SL32 0- YC34- U 0 0 37 50 130 130 104 104 126 FSF 6SL32 0- YC34- U 0 0 45 60 154 154 154 130 130 149 FSF 6SL32 0- YC36- U 0 0 47ticle No. supplements Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002 Class 3C2 Class 3C2 Class 3C3 Deperator Panel Without Operator Panel (numeric 2-line display) With IOP-2 Intelligent Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module With SINAMICS G120X I/O Extension Module Intelliger Without integrated line filter (for IT systems 5)) Communication	-								
100 40 104 104 80 80 98 FSE 6\$\text{SL32} \cdot 0- \cdot YC34- \cdot U \cdot 0 \cdot 0 \cdot 0 \cdot 0 \cdot 130 130 104 104 126 FSF 6\$\text{SL32} \cdot 0- \cdot YC36- \cdot U \cdot 0 \cdot 0 \cdot 0 \cdot 0 \cdot 5 \cdot 6 \cdot 154 154 130 130 149 FSF 6\$\text{SL32} \cdot 0- \cdot YC36- \cdot U \cdot 0 \cdot 0 \cdot 5 \cdot 75 192 192 154 154 172 FSF 6\$\text{SL32} \cdot 0- \cdot YC40- \cdot U \cdot 0 \cdot 0 \cdot Article No. supplements Article No. supplements									
1								-	
15									
Article No. supplements Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002 Class 3C2 Class 3C3 Operator Panel Without Operator Panel (numeric 2-line display) With IOP-2 Intelligent Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module With SINAMICS G120X I/O Extension Module Without integrated line filter (for IT systems 5)) Communication									
Article No. supplements Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002 Class 3C2 Class 3C3 Degrator Panel Without Operator Panel (numeric 2-line display) With BOP-2 Basic Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module With SINAMICS G120X I/O Extension Module With SINAMICS G120X I/O Extension Module With sinamics of the filter (for IT systems 5)) Communication									
Vithout Operator Panel Vith BOP-2 Basic Operator Panel (numeric 2-line display) Vith IOP-2 Intelligent Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module Vithout extension Vith SINAMICS G120X I/O Extension Module I Line filter Vithout integrated line filter (for IT systems 5)) Communication	Environme Class 3C2		nful chemical s	ubstances acc. 1	to IEC 60721-3-	3: 2002			2 3
With IOP-2 Intelligent Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module Without extension With SINAMICS G120X I/O Extension Module Line filter Without integrated line filter (for IT systems 5)) Communication	Operator P	anel							
With IOP-2 Intelligent Operator Panel (graphic color display) Extension with SINAMICS G120X I/O Extension Module Without extension With SINAMICS G120X I/O Extension Module Line filter Without integrated line filter (for IT systems 5)) Communication	Without Op	erator Panel							1
Extension with SINAMICS G120X I/O Extension Module Without extension With SINAMICS G120X I/O Extension Module Line filter Without integrated line filter (for IT systems 5)) Communication			,	,					
Without extension With SINAMICS G120X I/O Extension Module Line filter Without integrated line filter (for IT systems 5)) U Communication		0 1	(0 1	' ')				3
With SINAMICS G120X I/O Extension Module Line filter Without integrated line filter (for IT systems 5)) Communication			6 G120X I/O Ext	ension Module					
Line filter Without integrated line filter (for IT systems ⁵⁾) Communication									
Without integrated line filter (for IT systems ⁵⁾)) Communication		/IICS G120X I/O	Extension Mod	ule					1
Communication			<i>"</i>	5),)					
		-	r (for 11 systems	·')'					U
			+ MO/TD						
	HOFINE I,	EtherNet/IP							B F

PROFIBUS DP

¹⁾ Rated power based on the base-load current $I_{\rm L}$. The base-load current $I_{\rm L}$ 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 200 V or 240 V.

 $^{^{\}rm 3)}$ The base-load current $\it l_{\rm H}$ is based on the duty cycle for high overload (HO). These current values are valid for 200 V or 240 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 component	s (Configuration with line-side co	omponents see double page before)
Output reactors	Sine-wave filters	dv/dt filters plus VPL
Article No.	Article No.	Article No.
		
-	_	
_	-	-
_	_	-
_	_	-
_	_	-
_	-	-
_	_	-
_	_	-
_	_	-
-	_	-
_	-	-
-	-	-
_	-	-
_	-	-
-	-	-
_	_	_

Ordering examples

Basic selection	Examp	ole 1	1				Examp	le 2			
SINAMICS G120X converters \cdot degree of protection IP20/UL Open Type \cdot 200 240 V 3 AC, 15 kW \cdot without integrated line filter	6SL32	2 = 0	0- =	YC28-	U		6SL32	0 -	■ YC28	- 🔳 (J
Article No. supplements											
Environmental class/harmful chemical substances acc. to IEC 60721-3-3: 2002											
Class 3C2		2									
Class 3C3								3			
Operator Panel											
With BOP-2 Basic Operator Panel (numeric 2-line display)									2		
With IOP-2 Intelligent Operator Panel (graphic color display)			3								
Extension with SINAMICS G120X I/O Extension Module											
Without extension					0					0	
With SINAMICS G120X I/O Extension Module											
Line filter											
Without integrated line filter (for IT systems 1)					U	,				ı	U
Communication											
USS, Modbus RTU, BACnet MS/TP											
PROFINET, EtherNet/IP						F					F
PROFIBUS DP											
Complete Article No.	6SL32	2 2 (D- 3	YC28-	0 U	JF(6SL32	3 0-	2 YC28	- O I	IJF

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.