

Product announcement

SINAMICS G120X

cUL_{us} listed 1 AC Input/3 AC Output Ratings

February 2020

Siemens is extremely pleased to announce that UL certification of the unfiltered version of SINAMICS G120X for the use on 1 AC (L-L) 240V input supply (G120X 240V variants, FSA-FSF) and 1 AC (L-L) 480V input supply (G120X 480V variant, FSA-FSG) has finally been achieved.

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Please see the derated 3 AC outputs for 240V and 480V variants of SINAMICS G120X in the rating tables on subsequent pages of this document for use with 1 AC (L-L) input.

- **FAQs and product information are being prepared** and will be released soon.

Important Notes

- G120X is being delivered with the internal phase loss detection activated from the factory. Therefore, for the operation on a 1 AC (L-L) application, this detection **MUST** be deactivated. This is done by setting the parameter p1822=540000 (maximum value).
- Circuit breakers and MSP shall be suitable and UL-listed for the use on 1 AC (L-L) application and wired as specified in the circuit breakers and MSP manual.
- Please refer to the Overcurrent Protection section found on page 4.

Table 1: Derated 3 AC output ratings of 240V unfiltered SINAMICS G120X with 1 AC 240V (L-L) input

Frame size	3 AC LO (VT) output ratings with 1 AC 240V (L-L) input ¹⁾		3 AC HO (CT) output ratings with 1 AC 240V (L-L) input ²⁾		Rated Input Current, A @ 1 AC 240V (L-L)	Order number																										
	hp (240V)	Rated Output Current I _L , A (240V)	hp (240V)	Rated Output Current I _H , A (240V)		6	S	L	3	2	0	-	Y	C	1	0	-	U	0													
FSA	-	1.9	-	1.4	3.8	6	S	L	3	2	0	-	Y	C	1	0	-	U	0													
	0.5	2.7	-	1.9	5.2	6	S	L	3	2	0	-	Y	C	1	2	-	U	0													
	0.75	3.4	0.5	2.8	6.5	6	S	L	3	2	0	-	Y	C	1	4	-	U	0													
FSB	1	4.7	0.75	3.3	9.2	6	S	L	3	2	0	-	Y	C	1	6	-	U	0													
	1.5	6.2	1	4.7	12.1	6	S	L	3	2	0	-	Y	C	1	8	-	U	0													
	2	8.0	1.5	6.2	15.5	6	S	L	3	2	0	-	Y	C	2	0	-	U	0													
FSC	3	10	2	8.0	20	6	S	L	3	2	0	-	Y	C	2	2	-	U	0													
	3	13	3	10.2	25	6	S	L	3	2	0	-	Y	C	2	4	-	U	0													
FSD	5	17	3	11.3	40	6	S	L	3	2	0	-	Y	C	2	6	-	U	0													
	7.5	22	5	17.1	51	6	S	L	3	2	0	-	Y	C	2	8	-	U	0													
	10	28	7.5	22.2	52	6	S	L	3	2	0	-	Y	C	3	0	-	U	0													
FSE	10	32	7.5	27.2	74	6	S	L	3	2	0	-	Y	C	3	2	-	U	0													
	15	42	10	32.3	94	6	S	L	3	2	0	-	Y	C	3	4	-	U	0													
FSF	20	54	15	43.2	121	6	S	L	3	2	0	-	Y	C	3	6	-	U	0													
	25	68	20	57.4	141	6	S	L	3	2	0	-	Y	C	3	8	-	U	0													
	30	80	20	64.2	170	6	S	L	3	2	0	-	Y	C	4	0	-	U	0													
Special coating according to IEC/EN 60721-3-3																																
Class 3C2 (Standard)											2																					
Class 3C3*											3																					
User interface																																
Blank (No operator panel / keypad)											1																					
BOP-2 (Basic keypad)											2																					
IOP-2 (Standard—high-resolution graphical color keypad)											3																					
I/O extension																																
without I/O extension module																															0	
with I/O extension module																															1	
Communication interface																																
PROFINET, EtherNet / IP™ (Standard)																															F	
USS, Modbus, RTU, BACnet MS / TP																															B	
PROFIBUS DP																																P

*Optional coating for operation of a drive in harsh /corrosive environments

¹⁾ Rated power and output current based on the base-load current I_L. The base-load current I_L is based on the duty cycle for low overload (LO) or Variable Torque (VT) i.e. 110% x I_L for 60s every 300s

²⁾ Rated power and output current based on the base-load current I_H. The base-load current I_H is based on the duty cycle for high overload (HO) or Constant Torque (CT) i.e. 150% x I_H for 60s every 600s

Table 2: Derated 3 AC output ratings of 480V unfiltered SINAMICS G120X with 1 AC 480V (L-L) input

Frame size	3 AC LO (VT) output ratings with 1 AC 480V (L-L) input ¹⁾		3 AC HO (CT) output ratings with 1 AC 480V (L-L) input ²⁾		Rated Input Current, A @ 1 AC 480V (L-L)	Order number													
	hp (480V)	Rated Output Current I _L , A (480V)	hp (480V)	Rated Output Current I _H , A (480V)		6	S	L	3	2	0	-	Y	E	1	0	-	U	0
FSA	-	0.8	-	0.6	2.0	6	S	L	3	2	0	-	Y	E	1	0	-	U	0
	0.5	1.2	-	0.8	2.7	6	S	L	3	2	0	-	Y	E	1	2	-	U	0
	0.5	1.4	0.5	1.2	3.0	6	S	L	3	2	0	-	Y	E	1	4	-	U	0
	0.75	1.9	0.5	1.3	4.6	6	S	L	3	2	0	-	Y	E	1	6	-	U	0
FSB	1	2.5	0.75	1.9	5.8	6	S	L	3	2	0	-	Y	E	1	8	-	U	0
	1.5	3.0	1.0	2.4	9.75	6	S	L	3	2	0	-	Y	E	2	0	-	U	0
	2	4.4	1.5	3.0	12	6	S	L	3	2	0	-	Y	E	2	2	-	U	0
FSC	3	5.6	2	4.4	17	6	S	L	3	2	0	-	Y	E	2	4	-	U	0
	5	8.4	3	5.6	24.5	6	S	L	3	2	0	-	Y	E	2	6	-	U	0
FSD	5	10.8	5	8.4	29.5	6	S	L	3	2	0	-	Y	E	2	8	-	U	0
	7.5	11	5	8.7	28	6	S	L	3	2	0	-	Y	E	3	0	-	U	0
	7.5	12	5	10.2	30	6	S	L	3	2	0	-	Y	E	3	2	-	U	0
	10	16	7.5	12.3	41	6	S	L	3	2	0	-	Y	E	3	4	-	U	0
FSE	15	21	10	16.8	55	6	S	L	3	2	0	-	Y	E	3	6	-	U	0
	15	23.5	10	19.8	61	6	S	L	3	2	0	-	Y	E	3	8	-	U	0
FSF	20	29	15	23.3	74	6	S	L	3	2	0	-	Y	E	4	0	-	U	0
	30	40	20	31.0	104	6	S	L	3	2	0	-	Y	E	4	2	-	U	0
	40	52	30	41.3	132	6	S	L	3	2	0	-	Y	E	4	4	-	U	0
	50	65	40	56.3	160	6	S	L	3	2	0	-	Y	E	4	6	-	U	0
FSG	60	77	40	57.8	174	6	S	L	3	2	0	-	Y	E	4	8	-	U	0
	75	96	50	76.3	210	6	S	L	3	2	0	-	Y	E	5	0	-	U	0
	100	124	75	103.7	276	6	S	L	3	2	0	-	Y	E	5	2	-	U	0
	125	156	75	118.1	339	6	S	L	3	2	0	-	Y	E	5	4	-	U	0
Special coating according to IEC/EN 60721-3-3																			
Class 3C2 (Standard)												2							
Class 3C3*												3							
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*Optional coating for operation of a drive in harsh / corrosive environments

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²⁾ Rated power and output current based on the base-load current I_H. The base-load current I_H is based on the duty cycle for high overload (HO) or Constant Torque (CT) i.e. 150% x I_H for 60s every 600s

Overcurrent protection

- Please use the overcurrent protective devices (OCPD) from the SINAMICS G120X overcurrent protective devices and SCCR product information sheet available on SIOS. [Click here.](#)
- An OCPD must be dimensioned to the appropriate SINAMICS G120X 1 AC input current as specified in the rating tables included in this document.
 - Recommended current rating of OCPD = smaller of the TWO ratings described in item **a** and **b** as follows:
 - a. No more than 125% of SINAMICS G120X 1 AC input current as specified in the rating tables included in this document.
 - or
 - b. Max. OCPD current rating specified in the SINAMICS G120X overcurrent protective devices and SCCR product information sheet.
- Circuit breakers and MSP types selected from the above-mentioned SINAMICS G120X overcurrent protective devices and SCCR product information sheet **MUST BE** suitable and UL-listed for the use on 1 AC (L-L) application and wired as specified in the circuit breakers and MSP manual.

Call to action

- Please identify opportunities requiring 200–240V for pump, fan and compressor applications to promote this NEW variant of SINAMICS G120X.
- Please take advantage of SINAMICS G120X Stock Up program to support the G120X business in your respective local areas. For program information, [click here.](#)

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