

## **Data sheet for SINAMICS G120X**

Article No.: 6SL3220-2YH26-0AB0

Client order no. : Order no. : Offer no. : Remarks :

Rated data			
Input			
	Number of phases	3 AC	
ı	Line voltage	500 690 V +10 %	-20 %
1	ine frequency	47 63 Hz	
ı	Rated voltage	690V IEC	600V NEC
	Rated current (LO)	14.00 A	14.00 A
	Rated current (HO)	12.10 A	12.10 A
Ou	tput		
	Number of phases	3 AC	
-	Rated voltage	690V IEC	600V NEC 1)
	Rated power (LO)	11.00 kW	10.00 hp
	Rated power (HO)	7.50 kW	10.00 hp
	Rated current (LO)	14.00 A	14.00 A
	Rated current (HO)	11.00 A	11.00 A
	Rated current (IN)	15.00 A	
	Max. output current	19.00 A	
Pulse frequency		2 kHz	
Output frequency for vector control		0 200 Hz	
Output frequency for V/f control		0 550 Hz	
Overload capability			

Low Overload (LO)

110% base load current IL for 60 s in a 300 s cycle time

High Overload (HO)

 $150\%\,x$  base load current IH for 60 s within a 600 s cycle time

General tech. specifications		
Power factor λ	0.90 0.95	
Offset factor $\cos\phi$	0.99	
Efficiency η	0.97	
Sound pressure level (1m)	70 dB	
Power loss 3)	0.360 kW	
Filter class (integrated)	RFI suppression filter for Category C2	
EMC category (with accessories)	Category C2	
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)	
Communication		

Communication

USS, Modbus RTU, BACnet MS/TP



Item no. : Consignment no. : Project :

Inputs / outputs		
Standard digital inputs		
6		
11 V		
5 V		
15 mA		
1		
2		
DC 30 V, 5.0 A		
0		
2 (Differential input)		
10 bit		
4 V		
1.6 V		

## PTC/ KTY interface

Analog outputs

Number

1 motor temperature sensor input, sensors that can be connected PTC, KTY and Thermo-Click, accuracy  $\pm 5\,^{\circ}\text{C}$ 

1 (Non-isolated output)

Closed-loop control techniques		
V/f linear / square-law / parameterizable	Yes	
V/f with flux current control (FCC)	Yes	
V/f ECO linear / square-law	Yes	
Sensorless vector control	Yes	
Vector control, with sensor	No	
Encoderless torque control	No	
Torque control, with encoder	No	



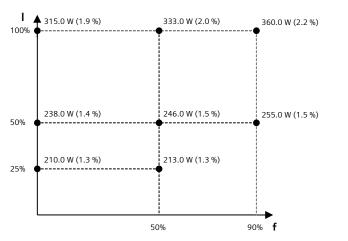
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Ambient conditions		
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.055 m <sup>3</sup> /s (1.942 ft <sup>3</sup> /s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
Operation	-20 45 °C (-4 113 °F)	
Transport	-40 70 °C (-40 158 °F)	
Storage	-25 55 °C (-13 131 °F)	
Relative humidity		
Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible	
Connections		
Signal cable		
Conductor cross-section	0.15 1.50 mm <sup>2</sup> (AWG 24 AWG 16)	
Line side		
Version	screw-type terminal	
Conductor cross-section	10.00 35.00 mm <sup>2</sup> (AWG 8 AWG 2)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	10.00 35.00 mm <sup>2</sup> (AWG 8 AWG 2)	
DC link (for braking resistor)		
PE connection	Screw-type terminals	
Max. motor cable length		
Shielded	100 m (328.08 ft)	

Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSD	
Net weight	18.3 kg (40.34 lb)	
Dimensions		
Width	200 mm (7.87 in)	
Height	472 mm (18.58 in)	
Depth	248 mm (9.76 in)	
Standards		
Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH	
CE marking	EMC Directive 2004/108/EC, Low- Voltage Directive 2006/95/EC	

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	41.6 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard IEC61800-9-2) of the relative torque generating current (I) over the relative motor stator frequency (f). The values are valid for the basic version of the converter without options/components.

\*converted values

<sup>1)</sup> The output current and HP ratings are valid for the voltage range 550V-600V

<sup>&</sup>lt;sup>3)</sup>Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.



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	Operator pane	l: Basic Operator Panel (BOP-2)
	Screen	
Display design	LCD, monochrome	Ambient temperature
	Mechanical data	Operation
Degree of protection	IP55 / UL type 12	Storage
Net weight	0.140 kg (0.31 lb)	Transport  Relative humidity at 25
Dimensions		Max. operation
Width	70.00 mm (2.76 in)	iviax. operation
Height	106.85 mm (4.21 in)	
Depth	19.60 mm (0.77 in)	Certificate of suitability

Ambient conditions		
Ambient temperature		
Operation	0 50 °C (32 122 °F)	
Storage	-40 70 °C (-40 158 °F)	
Transport	-40 70 °C (-40 158 °F)	
Relative humidity at 25°C during		
Max. operation	95 %	
Approvals		
Certificate of suitability	CE, cULus, EAC, KCC, RCM	