

### **Data sheet for SINAMICS G120X**

Article No.: 6SL3220-2YE66-0CF0

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

Rated data		
Input		
Number of phases	3 AC	
Line voltage	380 480 V +10 %	% -10 %
Line frequency	47 63 Hz	
Rated voltage	400V IEC	480V NEC
Rated current (LO)	1,038.00 A	862.00 A
Rated current (HO)	816.00 A	677.00 A
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	560.00 kW	700.00 hp
Rated power (HO)	450.00 kW	500.00 hp
Rated current (LO)	1,000.00 A	830.00 A
Rated current (HO)	786.00 A	652.00 A
Rated current (IN)	1,021.00 A	
Max. output current	1,350.00 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 100 Hz	
Output frequency for V/f control	0 100 Hz	

Overload	capabi	lity
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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 300 s cycle time

0.75 0.93
0.96
0.98
74 dB
12.200 kW
RFI suppression filter for Category C3
Category C3
without SIRIUS device (e.g. via S7- 1500F)

Communication

Communication PROFINET, EtherNet/IP



Item no. : Consignment no. : Project :

Inputs /	outputs	
Standard digital inputs		
Number	6	
Switching level: $0 \rightarrow 1$	11 V	
Switching level: $1 \rightarrow 0$	5 V	
Max. inrush current	15 mA	
Fail-safe digital inputs		
Number	1	
Digital outputs		
Number as relay changeover contact	2	
Output (resistive load)	DC 30 V, 5.0 A	
Number as transistor	0	
Analog / digital inputs		
Number	2 (Differential input)	
Resolution	10 bit	
Switching threshold as digital input		
0 → 1	4 V	
1 → 0	1.6 V	
Analog outputs		
Number	1 (Non-isolated output)	

#### PTC/ KTY interface

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

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



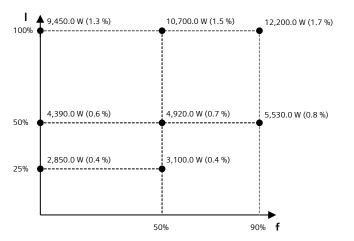
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Ambi	ent conditions	
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.450 m³/s (15.892 ft³/s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
Operation	0 45 °C (32 113 °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	M12 screw	
Conductor cross-section	6 x 240.00 mm <sup>2</sup> (MCM 4 x 500 MCM 6 x 500)	
Motor end		
Version	M12 screw	
Conductor cross-section	6 x 240.00 mm <sup>2</sup> (MCM 4 x 500 MCM 8 x 500)	
DC link (for braking resistor)		
PE connection	M12 screw	
Max. motor cable length		
Shielded	150 m (492.13 ft)	

Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSJ	
Net weight	250 kg (551.16 lb)	
Dimensions		
Width	801 mm (31.54 in)	
Height	1,621 mm (63.82 in)	
Depth	393 mm (15.47 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	





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 440V-480V

<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	el: Basic Operator Panel (BOP-2)
	Screen	
Display design	LCD, monochrome	Ambient temperature
	Manhautinal data	Operation
	Mechanical data	Storage
Degree of protection	IP55 / UL type 12	Transpart
Net weight	0.140 kg (0.31 lb)	Transport
Dimensions	-	Relative humidity at 25
Width	70.00 mm (2.76 in)	Max. 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	

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