

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

Article No.: 6SL3230-2YE28-0AP0

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

Rated data			
Input			
1	Number of phases	3 AC	
l	ine voltage	380 480 V +10 %	-20 %
l	ine frequency	47 63 Hz	
F	Rated voltage	400V IEC	480V NEC
	Rated current (LO)	29.50 A	26.00 A
	Rated current (HO)	24.50 A	21.30 A
Ou	tput		
1	Number of phases	3 AC	
F	Rated voltage	400V IEC	480V NEC 1)
	Rated power (LO)	15.00 kW	20.00 hp
	Rated power (HO)	11.00 kW	15.00 hp
	Rated current (LO)	32.00 A	27.00 A
	Rated current (HO)	26.00 A	21.00 A
	Rated current (IN)	33.00 A	
	Max. output current	43.00 A	
Pul	se frequency	4 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)

Communication

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

General tech. specifications		
Power factor $\lambda$	0.70 0.85	
Offset factor $\cos\phi$	0.96	
Efficiency η	0.98	
Sound pressure level (1m)	67 dB	
Power loss 3)	0.438 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

Item no. : Consignment no. : Project :



Figure simila

Inputs i	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/ KTV interface		

#### 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

PROFIBUS DP

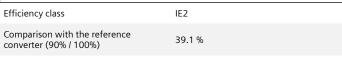


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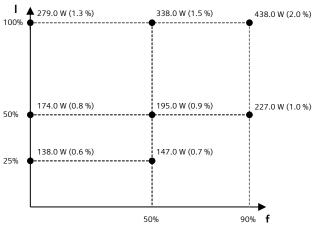
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Ambient conditions		
Standard board coating type	Class 3C3, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.018 m <sup>3</sup> /s (0.653 ft <sup>3</sup> /s)	
Installation altitude	1,000 m (3,280.84 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	
Conr	nections	
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	1.50 16.00 mm <sup>2</sup> (AWG 16 AWG 6)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	1.50 16.00 mm <sup>2</sup> (AWG 16 AWG 6)	
DC link (for braking resistor)		
DC link (for braking resistor) PE connection	On housing with M4 screw	
<u> </u>	On housing with M4 screw	

Mechanical data			
Degree of protection		IP20 / UL open type	
Frame size		FSC	
Net weight		7.66 kg (16.89 lb)	
Dimensions			
	Width	140 mm (5.51 in)	
	Height	295 mm (11.61 in)	
	Depth	218 mm (8.58 in)	
	Stand	dards	
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\*



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	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
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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