# SIEMENS

Data sheet for SINAMICS G120X

#### Article No. :

#### 6SL3230-2YC34-0UF0



Figure similar

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

Rated data		
Input		
Number of phases	3 AC	
Line voltage	200 240 V +10	0 % -20 %
Line frequency	47 63 Hz	
Rated voltage	200V IEC	240V NEC
Rated current (LO)	98.00 A	98.00 A
Rated current (HO)	76.00 A	76.00 A
Output		
Number of phases	3 AC	
Rated voltage	200V IEC	240V NEC 1)
Rated power (LO)	30.00 kW	40.00 hp
Rated power (HO)	22.00 kW	30.00 hp
Rated current (LO)	104.00 A	104.00 A
Rated current (HO)	80.00 A	80.00 A
Rated current (IN)	107.00 A	
Max. output current	141.00 A	
Pulse 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)

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

General tech. specifications		
Power factor $\lambda$	0.90 0.95	
Offset factor $\cos \phi$	0.99	
Efficiency η	0.96	
Sound pressure level (1m)	70 dB	
Power loss <sup>3)</sup>	1.310 kW	
Filter class (integrated)	Unfiltered	
EMC category (with accessories)	without	
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)	
Communication		

Communication

PROFINET, EtherNet/IP

ltem 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	
$1 \rightarrow 0$	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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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	0.083 m³/s (2.931 ft³/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 mm² (AWG 24 AWG 16)	
Line side		
Version	screw-type terminal	
Conductor cross-section	25.00 70.00 mm² (AWG 6 AWG 3/0)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	25.00 70.00 mm² (AWG 6 AWG 3/0)	
DC link (for braking resistor)		
PE connection	Screw-type terminals	
Max. motor cable length		
Shielded	200 m (656.17 ft)	
Unshielded	300 m (984.25 ft)	

	Me	chanical data	
Degree	e of protection	IP20 / UL open type	
Frame	size	FSE	
Net we	eight	16.6 kg (36.60 lb)	
Dimen	sions		
Widt	h	275 mm (10.83 in)	
Heig	ht	551 mm (21.69 in)	
Dept	h	248 mm (9.76 in)	
		Standards	
Compliance with standards UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH		KCC,	
CE mar	king	EMC Directive 2004/108/EC, Lov Voltage Directive 2006/95/EC	N-
	Converter lo	sses to IEC61800-9-2*	
Efficier	ncy class	IE2	
	rison with the reference ter (90% / 100%)	63.3 %	
100%	877.0 W (2.0 %)	1,040.0 W (2.4 %) 1,310.0 W (3.4	0 %)
	494.0 W (1.1 %)	555.0 W (1.3 %) 643.0 W (1.5 °	%)
50%		•	
	368.0 W (0.9 %)	395.0 W (0.9 %)	
	368.0 W (0.9 %)	395.0 W (0.9 %)	

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

90% **f** 

50%

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 220V-240V

<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 panel: Basic Operator Panel (BOP-2)

Screen		
LCD, monochrome		
Mechanical data		
IP55 / UL type 12		
0.140 kg (0.31 lb)		
70.00 mm (2.76 in)		
106.85 mm (4.21 in)		
19.60 mm (0.77 in)		

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	3	
Max. operation	95 %	
Approvals		
Certificate of suitability	CE, cULus, EAC, KCC, RCM	

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Siemens: 6SL32302YC340UF0