SIEMENS

Data sheet for SINAMICS G120X

Article No. :

6SL3220-1YE64-0CF0



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)	924.00 A	751.00 A
Rated current (HO)	756.00 A	614.00 A
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	500.00 kW	600.00 hp
Rated power (HO)	400.00 kW	500.00 hp
Rated current (LO)	890.00 A	724.00 A
Rated current (HO)	728.00 A	591.00 A
Rated current (IN)	910.00 A	
Max. output current	1,202.00 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 100 Hz	
Output frequency for V/f control	0 100 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 300 s cycle time

General tech. specifications		
Power factor λ	0.75 0.93	
Offset factor $\cos \phi$	0.96	
Efficiency η	0.98	
Sound pressure level (1m)	74 dB	
Power loss ³⁾	10.500 kW	
Filter class (integrated)	RFI suppression filter for Category C3	
EMC category (with accessories)	Category C3	
Safety function "Safe Torque Off"	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, see Thermo-Click, accuracy $\pm 5 \ ^\circ C$	nsors that can be connected PTC, KTY and	

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	0.450 m ³ /s (15.892 ft ³ /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	
Co	onnections	
Signal cable		
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)	
Line side		
Version	M12 screw	
Conductor cross-section	6 x 240.00 mm² (MCM 4 x 500 MCM 6 x 500)	
Motor end		
Version	M12 screw	
Conductor cross-section	6 x 240.00 mm² (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)	

I	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), E SEMI F47, REACH	EAC, KCC,
CE marking	EMC Directive 2004/108/EC Voltage Directive 2006/95/	
Converte	r losses to IEC61800-9-2*	
Efficiency class	IE2	
Comparison with the reference converter (90% / 100%)	40.7 %	
I ♣ 8,050.0 W (1.3 %)	9,130.0 W (1.4 %) 10,500.0	D W (1.7 %)
3,820.0 W (0.6 %)	4,280.0 W (0.7 %) 4,810.0	W (0.8 %)
2,520.0 W (0.4 %)	2,730.0 W (0.4 %)	
	50% 90% f	

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.

*calculated values

¹⁾The output current and HP ratings are valid for the voltage range 440V-480V

³⁾Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.



MLFB-Ordering data

6SL3000-0CE41-0AA0



Figure similar

Client order no. :		Item no. :		
Order no. :		Consignment no. :		
Offer no. :		Project :		
Remarks :				
Rat	ed data	Connections		
Input				
Number of phases	3 AC			
Line voltage	380 480 V			
Output		Load side		
Rated current	1060.0 A	Version	1 x hole for M12	
Mechanical data				
Dimensions				
Width	350.0 mm (13.8 in)	PE connection		
Height	321.0 mm (12.6 in)	Version	M6 screw	
Depth	211.5 mm (8.3 in)			
Degree of protection	IPOO			
Net weight	69.6 kg (153.0 lb)			