SIEMENS

Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YE26-0AF0

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

Rated data					
Input					
	Number of phases	3 AC			
	Line voltage	380 480 V +10 %	o -20 %		
	Line frequency	47 63 Hz			
	Rated voltage	400V IEC	480V NEC		
	Rated current (LO)	24.50 A	21.30 A		
	Rated current (HO)	18.25 A	14.00 A		
Output					
	Number of phases	3 AC			
	Rated voltage	400V IEC	480V NEC 1)		
	Rated power (LO)	11.00 kW	15.00 hp		
	Rated power (HO)	7.50 kW	10.00 hp		
	Rated current (LO)	26.00 A	21.00 A		
	Rated current (HO)	18.00 A	14.00 A		
	Rated current (IN)	27.00 A			
	Max. output current	35.00 A			
Pι	Ilse frequency	4 kHz			
0	utput frequency for vector control	0 200 Hz			
0	utput frequency for V/f control	0 550 Hz			
Overload capability					
\neg					

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	0.70 0.85	
Offset factor $\cos\phi$	0.96	
Efficiency η	0.98	
Sound pressure level (1m)	67 dB	
Power loss 3)	0.344 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 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	



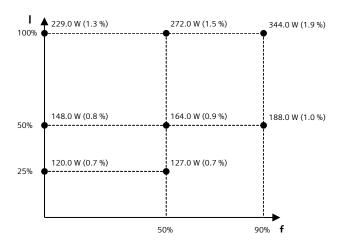
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Ambient conditions		
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.018 m ³ /s (0.653 ft ³ /s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
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 ² (AWG 24 AWG 16)	
Line side		
Version	screw-type terminal	
Version Conductor cross-section	screw-type terminal 1.50 16.00 mm² (AWG 16 AWG 6)	
1 - 1 - 1 - 1 - 1	1.50 16.00 mm²	
Conductor cross-section	1.50 16.00 mm²	
Conductor cross-section Motor end	1.50 16.00 mm ² (AWG 16 AWG 6)	
Conductor cross-section Motor end Version	1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ²	
Conductor cross-section Motor end Version Conductor cross-section	1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ²	
Conductor cross-section Motor end Version Conductor cross-section DC link (for braking resistor)	1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ² (AWG 16 AWG 6)	
Conductor cross-section Motor end Version Conductor cross-section DC link (for braking resistor) PE connection	1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ² (AWG 16 AWG 6)	

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)		
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%)	36.8 %



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

 $^{^{1)}\}mbox{The}$ 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.