SIEMENS

Data sheet for SINAMICS G120X

Article No. :

6SL3230-1YE30-0AP0



Figure similar

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

Rated data		
Input		
Number of phases	3 AC	
Line voltage	380 480 V +10 % -20 %	
Line frequency	47 63 Hz	
Rated voltage	400V IEC	480V NEC
Rated current (LO)	36.00 A	32.00 A
Rated current (HO)	33.00 A	28.00 A
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC ¹⁾
Rated power (LO)	18.50 kW	25.00 hp
Rated power (HO)	15.00 kW	20.00 hp
Rated current (LO)	38.00 A	34.00 A
Rated current (HO)	32.00 A	27.00 A
Rated current (IN)	39.00 A	
Max. output current	51.30 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 200 Hz	
Output frequency for V/f control	0 550 Hz	
Quarland conshility		

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 λ	0.90 0.95	
Offset factor $\cos \phi$	0.99	
Efficiency η	0.97	
Sound pressure level (1m)	70 dB	
Power loss 3)	0.598 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	PROFIBUS DP	

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, sen Thermo-Click, accuracy ± 5 °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 3C3, according to IEC 60721-3-3: 2002		
Cooling	Air cooling using an integrated fan		
Cooling air requirement	0.055 m³/s (1.942 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		
Cor	nections		
Signal cable			
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)		
Line side			
Version	screw-type terminal		
Conductor cross-section	10.00 35.00 mm² (AWG 8 AWG 2)		
Motor end			
Version	Screw-type terminals		
Conductor cross-section	10.00 35.00 mm ² (AWG 8 AWG 2)		
DC link (for braking resistor)			
PE connection	Screw-type terminals		
Max. motor cable length			

	Me	echanical data	
Degre	e of protection	IP20 / UL open type	
Frame	e size	FSD	
Net w	eight	18 kg (39.68 l	b)
Dime	nsions		
Wid	th	200 mm (7.87 in)	
Height		472 mm (18.58 in)	
Dep	oth	248 mm (9.76 in)	
		Standards	
Compliance with standards		UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH	
CE ma	ırking	EMC Directive 2004/108/EC, Low- Voltage Directive 2006/95/EC	
	Converter lo	osses to IEC61800-	9-2*
Efficie	ncy class	IE2	
	arison with the reference rter (90% / 100%)	45.7 %	
 100% (407.0 W (1.6 %)	477.0 W (1.8 %)	598.0 W (2.3 %)
	258.0 W (1.0 %)	282.0 W (1.1 %)	320.0 W (1.2 %)
50%		Ť	Ţ

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

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.