

Data sheet for SINAMICS G120C

Article No.: 6SL3210-1KE32-4AF1

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





Figure similar

Rated data		
Input		
Number of phases	3 AC	
Line voltage	380 480 V +10 %	6 -20 %
Line frequency	47 63 Hz	
Rated current (LO)	221.00 A	
Rated current (HO)	207.00 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	132.00 kW	150.00 hp
Rated power (HO)	110.00 kW	125.00 hp
Rated current (LO)	237.00 A	
Rated current (HO)	201.00 A	
Rated current (IN)	237.00 A	
Max. output current	402.00 A	
Pulse frequency	2 kHz	
Output frequency for vector control	0 240 Hz	
Output frequency for V/f control	0 550 Hz	

Low Overload (LO)

 $150\,\%$ base load current IL for 3 s, followed by $110\,\%$ base load current IL for 57 s in a 300 s cycle time

High Overload (HO)

200% base load current IH for 3 s, followed by 150% base load current IH for 57 s in a 300 s cycle time $\,$

General tech. specifications	
Power factor λ	0.90 0.95
Offset factor $\cos\phi$	0.99
Efficiency η	0.99
Sound pressure level (1m)	68 dB
Power loss	2,920.0 W
Filter class (integrated)	Class A
Communication	

Communication PROFINET, EtherNet/IP

Inputs / outputs		
Standard digital inputs		
Number	6	
Switching level: 0→1	11 V	
Switching level: 1→0	5 V	
Max. inrush current	15 mA	
Fail-safe digital inputs		
Number	1	
Digital outputs		
Number as relay changeover contact	1	
Output (resistive load)	DC 30 V, 0.5 A	
Number as transistor	1	
Output (resistive load)	DC 30 V, 0.5 A	
Analog / digital inputs		
Number	1 (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		
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.153 m³/s (5.403 ft³/s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
Operation	-20 40 °C (-4 104 °F)	
Transport	-40 70 °C (-40 158 °F)	
Storage	-40 70 °C (-40 158 °F)	
Relative humidity		
Max. operation	95 % RH, condensation not permitted	
Connections		
Signal cable		
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)	
Line side		
Version	screw-type terminal	
Conductor cross-section	35.00 120.00 mm ² (AWG 2 AWG -3)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	35.00 120.00 mm ² (AWG 2 AWG -3)	
DC link (for braking resistor)		
Version	Screw-type terminals	
Conductor cross-section	35.00 120.00 mm ² (AWG 2 AWG -3)	
Line length, max.	10 m (32.81 ft)	
PE connection	Screw-type terminals	
Max. motor cable length		
Shielded	300 m (984.25 ft)	

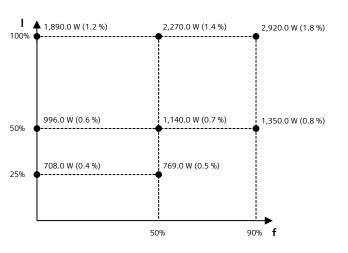
Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSF	
Net weight	65.50 kg (144.40 lb)	
Dimensions		
Width	305 mm (12.01 in)	
Height	708 mm (27.87 in)	
Depth	357 mm (14.06 in)	
5. 1.1		

450 m (1,476.38 ft)

Unshielded

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM)
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%)	43.5 %



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