

Data sheet for SINAMICS G120C

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

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





Figure simila

Rated data		
Input	•	
Number of phases	3 AC	
Line voltage	380 480 V +10 %	% -20 %
Line frequency	47 63 Hz	
Rated current (LO)	187.00 A	
Rated current (HO)	169.00 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	110.00 kW	125.00 hp
Rated power (HO)	90.00 kW	100.00 hp
Rated current (LO)	201.00 A	
Rated current (HO)	164.00 A	
Rated current (IN)	201.00 A	
Max. output current	328.00 A	
Pulse frequency	2 kHz	
Output frequency for vector control	0 240 Hz	
Output frequency for V/f control	0 550 Hz	

Overload	capability
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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)

Communication

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	2,330.0 W
Filter class (integrated)	Class A
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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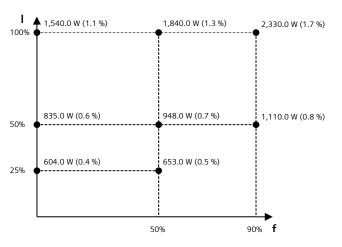
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Ambient conditions		
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.153 m³/s (5.403 ft³/s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
Operation	-20 40 °C (-4 104 °F)	
Transport	-40 70 °C (-40 158 °F)	
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 mm ² (AWG 24 AWG 16)	
Line side		
Version	screw-type terminal	
Conductor cross-section	35.00 120.00 mm² (AWG 2 AWG -3)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	35.00 120.00 mm² (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)	
Unshielded	450 m (1,476.38 ft)	
Mechanical data		

Silieided	300 111 (364.23 11)	
Unshielded	450 m (1,476.38 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)	
Standards		
Compliance with standards	UL, cUL, CE, C-Tick (RCM)	

CE marking

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	40.8 %



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.

EMC Directive 2004/108/EC, Low-

Voltage Directive 2006/95/EC

^{*}calculated values

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