

Data sheet for SINAMICS G120C

Article No.: 6SL3210-1KE28-4UF1

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





Figure simila

Rated data		
Input		
Number of phases	3 AC	
Line voltage	380 480 V +10 %	6 -20 %
Line frequency	47 63 Hz	
Rated current (LO)	76.00 A	
Rated current (HO)	69.00 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	45.00 kW	50.00 hp
Rated power (HO)	37.00 kW	40.00 hp
Rated current (LO)	82.50 A	
Rated current (HO)	68.00 A	
Rated current (IN)	82.50 A	
Max. output current	136.00 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 240 Hz	
Output frequency for V/f control	0 550 Hz	

Overioau capability	Overload	capabil	ity
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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	0.98	
Sound pressure level (1m)	72 dB	
Power loss	1,400.0 W	
Filter class (integrated)	Unfiltered	
Communication		

ΙP

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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Ambie	ent conditions
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.055 m ³ /s (1.942 ft ³ /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	-25 55 °C (-13 131 °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	10.00 35.00 mm ² (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)	
Version	Screw-type terminals
Conductor cross-section	10.00 35.00 mm ² (AWG 8 AWG 2)
Line length, max.	10 m (32.81 ft)
PE connection	Screw-type terminals
Max. motor cable length	

Mechanical data	
Degree of protection	IP20 / UL open type
Frame size	FSD
Net weight	18.80 kg (41.45 lb)
Dimensions	
Width	200 mm (7.87 in)
Height	472 mm (18.58 in)
Depth	237 mm (9.33 in)
Standards	

200 m (656.17 ft)

300 m (984.25 ft)

CE, cUL, UL, KC, EAC, C-Tick (RCM)
EMC Directive 2004/108/EC, Low-

Voltage Directive 2006/95/EC

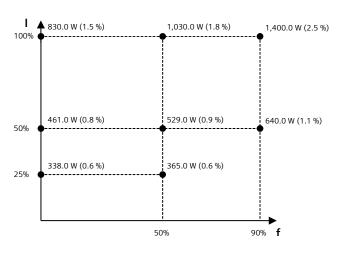
Shielded

Unshielded

Compliance with standards

CE marking

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	51.8 %



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