

Data sheet for SINAMICS G120C

Article No. : 6SL3210-1KE14-3AF2

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

Item no. :
Consignment no. :
Project :

Figure similar



Rated data		
Input		
Number of phases	3 AC	
Line voltage	380 ... 480 V +10 % -20 %	
Line frequency	47 ... 63 Hz	
Rated current (LO)	5.50 A	
Rated current (HO)	4.50 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC ¹⁾
Rated power (LO)	1.50 kW	2.00 hp
Rated power (HO)	1.10 kW	1.50 hp
Rated current (LO)	4.10 A	
Rated current (HO)	3.10 A	
Rated current (IN)	4.30 A	
Max. output current	6.20 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 ... 240 Hz	
Output frequency for V/f control	0 ... 550 Hz	

Overload capability

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	0.70 ... 0.85
Offset factor $\cos \varphi$	0.95
Efficiency η	0.97
Sound pressure level (1m)	49 dB
Power loss	61.9 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	0.005 m³/s (0.177 ft³/s)
Installation altitude	1,000 m (3,280.84 ft)

Ambient temperature

Operation	-10 ... 40 °C (14 ... 104 °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
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Connections	
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Signal cable

Conductor cross-section	0.15 ... 1.50 mm² (AWG 24 ... AWG 16)
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Line side

Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)

Motor end

Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)

DC link (for braking resistor)

Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)
Line length, max.	15 m (49.21 ft)
PE connection	On housing with M4 screw

Max. motor cable length

Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Mechanical data	
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Degree of protection	IP20 / UL open type
Frame size	FSAA
Net weight	1.40 kg (3.09 lb)

Dimensions

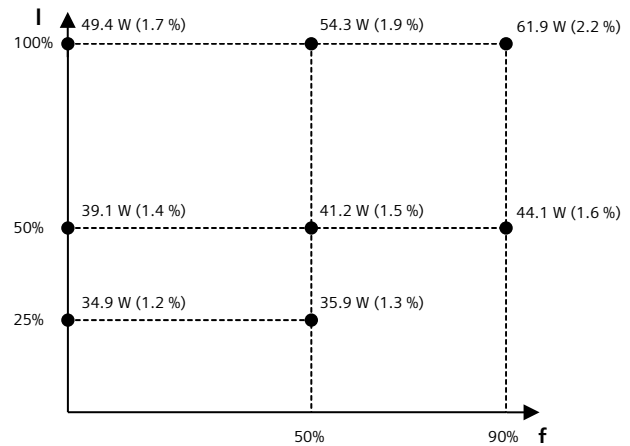
Width	73 mm (2.87 in)
Height	173 mm (6.81 in)
Depth	160 mm (7.01 in)

Standards	
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Compliance with standards	CE, cUL, UL, KC, EAC, C-Tick (RCM)
CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC

Converter losses to IEC61800-9-2*	
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Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	30.3 %



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

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