

Data sheet for SINAMICS G120C

Article No.: 6SL3210-1KE15-8UF2

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





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)	7.40 A	
Rated current (HO)	6.00 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	2.20 kW	3.00 hp
Rated power (HO)	1.50 kW	2.00 hp
Rated current (LO)	5.60 A	
Rated current (HO)	4.10 A	
Rated current (IN)	5.80 A	
Max. output current	8.20 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)

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	0.70 0.85
Offset factor $\cos\phi$	0.95
Efficiency η	0.97
Sound pressure level (1m)	49 dB
Power loss	73.4 W
Filter class (integrated)	Unfiltered
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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Amb	pient 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
(Connections
Signal cable	
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.00 2.50 mm ² (AWG 18 AWG 14)

Motor e	enc
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Version	Plug-in screw terminals
Conductor cross-section	1.00 2.50 mm ² (AWG 18 AWG 14)

DC link (for braking resistor)

Version	Plug-in screw terminals
Conductor cross-section	1.00 2.50 mm ² (AWG 18 AWG 14)
Line length, max.	15 m (49.21 ft)
PE connection	On housing with M4 screw

Max. motor cable length

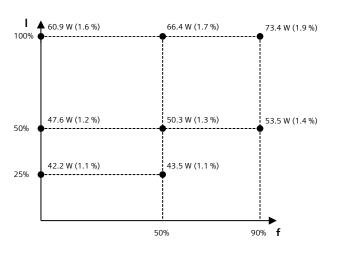
CE marking

Shielded	150 m (492.13 ft)
Unshielded	150 m (492.13 ft)

IP20 / UL open type
20 / 02 opa type
FSAA
1.40 kg (3.09 lb)
73 mm (2.87 in)
173 mm (6.81 in)
160 mm (7.01 in)
7

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

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	28.2 %



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.

Voltage Directive 2006/95/EC

^{*}calculated values

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