

Data sheet for SINAMICS G120C

Article No.: 6SL3210-1KE11-8AB1

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



PTC/ KTY interface



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)	2.30 A	
Rated current (HO)	1.90 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	0.55 kW	0.75 hp
Rated power (HO)	0.37 kW	0.50 hp
Rated current (LO)	1.70 A	
Rated current (HO)	1.30 A	
Rated current (IN)	1.80 A	
Max. output current	2.60 A	
Pulse frequency	4 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)

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)	52 dB	
Power loss	32.9 W	
Filter class (integrated)	Class A	
Communication		

Communication	USS/MODBUS RTU

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)

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 m ³ /s (0.177 ft ³ /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	-40 70 °C (-40 158 °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		

Conductor cross-section
Motor end

Version

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

Plug-in screw terminals

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 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

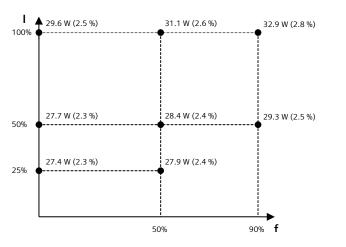
Compliance with standards

CE marking

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

Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSA	
Net weight	1.70 kg (3.75 lb)	
Dimensions		
Width	73 mm (2.87 in)	
Height	196 mm (7.72 in)	
Depth	203 mm (7.99 in)	
	Standards	

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	25.3 %



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.

UL, cUL, CE, C-Tick (RCM)

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