

## **Data sheet for SINAMICS G120C**

Article No.: 6SL3210-1KE31-7AF1

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





Figure similar

Rated data	
3 AC	
380 480 V +10	0 % -20 %
47 63 Hz	
156.00 A	
144.00 A	
3 AC	
400V IEC	480V NEC 1)
90.00 kW	100.00 hp
75.00 kW	75.00 hp
164.00 A	
136.00 A	
164.00 A	
272.00 A	
2 kHz	
0 240 Hz	
0 550 Hz	
	3 AC 380 480 V +11 47 63 Hz 156.00 A 144.00 A  3 AC 400V IEC 90.00 kW 75.00 kW 164.00 A 136.00 A 272.00 A 2 kHz 0 240 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	0.90 0.95
Offset factor $\cos\phi$	0.99
Efficiency η	0.99
Sound pressure level (1m)	68 dB
Power loss	1,980.0 W
Filter class (integrated)	Class A
Communication	

PROFINET, Eth	erNet/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)
DTC/ KTV :ntoufooo	

## 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



## **Data sheet for SINAMICS G120C**

Article No.: 6SL3210-1KE31-7AF1

Ambi	ient conditions
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.153 m <sup>3</sup> /s (5.403 ft <sup>3</sup> /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
C	onnections
Signal cable	
Conductor cross-section	0.15 1.50 mm <sup>2</sup> (AWG 24 AWG 16)
Line side	
Version	screw-type terminal
Conductor cross-section	35.00 120.00 mm <sup>2</sup> (AWG 2 AWG -3)
Motor end	
Version	Screw-type terminals
Conductor cross-section	35.00 120.00 mm <sup>2</sup> (AWG 2 AWG -3)
DC link (for braking resistor)	
Version	Screw-type terminals
Conductor cross-section	35.00 120.00 mm <sup>2</sup> (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)

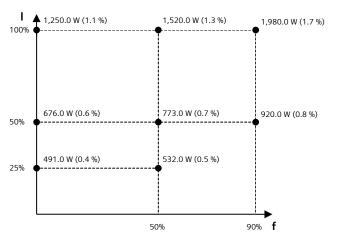
Mechanical data	
Degree of protection	IP20 / UL open type
Frame size	FSF
Net weight	63.50 kg (139.99 lb)
Dimensions	
Width	305 mm (12.01 in)
Height	708 mm (27.87 in)
Depth	357 mm (14.06 in)

450 m (1,476.38 ft)

Unshielded

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

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	42.4 %



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.

<sup>\*</sup>converted values

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