

## **Data sheet for SINAMICS G120C**

Article No.: 6SL3210-1KE32-4UF1

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 %	% -20 <b>%</b>
Line frequency	47 63 Hz	
Rated current (LO)	221.00 A	
Rated current (HO)	207.00 A	
Output		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC 1)
Rated power (LO)	132.00 kW	150.00 hp
Rated power (HO)	110.00 kW	125.00 hp
Rated current (LO)	237.00 A	
Rated current (HO)	201.00 A	
Rated current (IN)	237.00 A	
Max. output current	402.00 A	
Pulse frequency	2 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)

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	2,890.0 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)

## 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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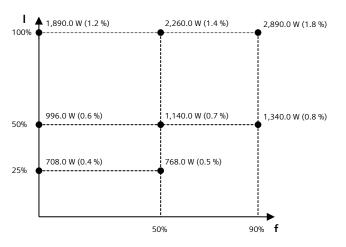
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Ambie	ent conditions
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.153 m³/s (5.403 ft³/s)
Installation altitude	1,000 m (3,280.84 ft)
Ambient temperature	
Operation	-20 40 °C (-4 104 °F)
Transport	-40 70 °C (-40 158 °F)
Storage	-40 70 °C (-40 158 °F)
Relative humidity	
Max. operation	95 % RH, condensation not permitted
Со	nnections
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)
Unshielded	450 m (1,476.38 ft)

Mechanical data	
Degree of protection	IP20 / UL open type
Frame size	FSF
Net weight	61.50 kg (135.58 lb)
Dimensions	
Width	305 mm (12.01 in)
Height	708 mm (27.87 in)
Depth	357 mm (14.06 in)

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%)	43.1 %



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>calculated values

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