

# SIEMENS

## Data sheet for SINAMICS G120C



### Ordering data

6SL3210-1KE21-3UB1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
<b>Input</b>		<b>Power factor <math>\lambda</math></b>	0.70 ... 0.85
<b>Number of phases</b>	3 AC	<b>Offset factor <math>\cos \varphi</math></b>	0.95
<b>Line voltage</b>	380 ... 480 V +10 % -20 %	<b>Efficiency <math>\eta</math></b>	0.97
<b>Line frequency</b>	47 ... 63 Hz	<b>Sound pressure level (1m)</b>	63 dB
<b>Rated current (LO)</b>	16.50 A	<b>Power loss</b>	0.18 kW
<b>Rated current (HO)</b>	12.80 A	<b>Ambient conditions</b>	
<b>Output</b>		<b>Cooling</b>	Air cooling using an integrated fan
<b>Number of phases</b>	3 AC	<b>Cooling air requirement</b>	0.009 m <sup>3</sup> /s
<b>Rated voltage</b>	400 V	<b>Installation altitude</b>	1000 m
<b>Rated power (LO)</b>	5.50 kW	<b>Ambient temperature</b>	
<b>Rated power (HO)</b>	4.00 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
<b>Rated current (IN)</b>	12.80 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (LO)</b>	12.50 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (HO)</b>	8.80 A	<b>Relative humidity</b>	
<b>Max. output current</b>	17.60 A	<b>Max. operation</b>	95 % At 40 °C (104 °F), condensation and icing not permissible
<b>Pulse frequency</b>	4 kHz		
<b>Output frequency for vector control</b>	0 ... 240 Hz		
<b>Output frequency for V/f control</b>	0 ... 650 Hz		
<p>In firmware V4.7 and higher, due to legal requirements, the maximum output frequency is restricted to 550 Hz.</p>			

### 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



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### Mechanical data

Degree of protection	IP20 / UL open type
Size	FSB
Net weight	2.30 kg
Width	100.0 mm
Height	196.0 mm
Depth	203.0 mm

### 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
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#### Digital outputs

Number as relay changeover contact	1
Output (resistive load)	DC 30 V, 1 A
Number as transistor	1
Output (resistive load)	DC 30 V, 1 A

#### Analog/ digital inputs

Number	1 (Differential input)
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#### Analog outputs

Number	1 (Non-isolated output)
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#### PTC/ KTY interface

1 motor temperature sensor input, connectable PTC, KTY, and Thermo-Click sensors, accuracy ±5°C

### Connections

#### Signal cable

Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (28 ... 16 AWG)
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#### Line side

Version	Plug-in screw-type terminals
Conductor cross-section	4.00 ... 6.00 mm <sup>2</sup> (12 ... 10 AWG)

#### Motor end

Version	Plug-in screw terminals
Conductor cross-section	4.00 ... 6.00 mm <sup>2</sup> (12 ... 10 AWG)

#### DC link (for braking resistor)

Version	Plug-in screw terminals
Conductor cross-section	4.00 ... 6.00 mm <sup>2</sup> (12 ... 10 AWG)
PE connection	On housing with M4 screw

#### Max. motor cable length

Shielded	50 m
Unshielded	100 m

### Communication

Communication	RS485
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### 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

### Standards

Compliance with standards	CE, cULus, c-tick
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CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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