

SIEMENS

Data sheet for SINAMICS G120C



Ordering data

6SL3210-1KE12-3AF1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.70 ... 0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V +10 % -20 %	Efficiency η	0.97
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	52 dB
Rated current (LO)	2.90 A	Power loss	0.05 kW
Rated current (HO)	2.50 A	Ambient conditions	
Output		Cooling	Air cooling using an integrated fan
Number of phases	3 AC	Cooling air requirement	0.005 m³/s
Rated voltage	400 V	Installation altitude	1000 m
Rated power (LO)	0.75 kW	Ambient temperature	
Rated power (HO)	0.55 kW	Operation	-10 ... 40 °C (14 ... 104 °F)
Rated current (IN)	2.50 A	Transport	-40 ... 70 °C (-40 ... 158 °F)
Rated current (LO)	2.20 A	Storage	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	1.70 A	Relative humidity	
Max. output current	3.40 A	Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
Pulse frequency	4 kHz	Closed-loop control techniques	
Output frequency for vector control	0 ... 240 Hz	V/f linear / square-law / parameterizable	Yes
Output frequency for V/f control	0 ... 650 Hz	V/f with flux current control (FCC)	Yes
In firmware V4.7 and higher, due to legal requirements, the maximum output frequency is restricted to 550 Hz.		V/f ECO linear / square-law	Yes
Overload capability		Sensorless vector control	Yes
Low Overload (LO)		Vector control, with sensor	No
150 % base load current IL for 3 s, followed by 110 % base load current IL for 57 s in a 300 s cycle time		Encoderless torque control	No
High Overload (HO)		Torque control, with encoder	No
200 % base load current IH for 3 s, followed by 150 % base load current IH for 57 s in a 300 s cycle time		Communication	
		Communication	PROFINET



Ordering data

6SL3210-1KE12-3AF1

Mechanical data

Degree of protection	IP20 / UL open type
Size	FSA
Net weight	1.70 kg
Width	73.0 mm
Height	196.0 mm
Depth	225.0 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
--------	---

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)
--------	------------------------

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 ± 5 °C

Standards

Compliance with standards CE, cULus, c-tick

CE marking EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC

Connections

Signal cable

Conductor cross-section 0.15 ... 1.50 mm² (28 ... 16 AWG)

Line side

Version Plug-in screw-type terminals

Conductor cross-section 1.00 ... 2.50 mm² (16 ... 14 AWG)

Motor end

Version Plug-in screw terminals

Conductor cross-section 1.00 ... 2.50 mm² (16 ... 14 AWG)

DC link (for braking resistor)

Version Plug-in screw terminals

Conductor cross-section 1.00 ... 2.50 mm² (16 ... 14 AWG)

PE connection On housing with M4 screw

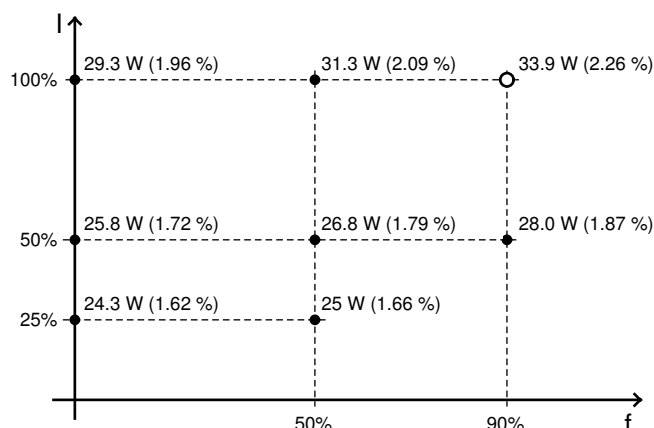
Max. motor cable length

Shielded 50 m

Unshielded 100 m

Converter losses to EN 50598-2*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-79.51 %



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 EN 50598) 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.

*calculated values; increased by 10% according to the standard