

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



Figure similar

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

Item no. :
Consignment no. :
Project :

Rated data

Input	
Number of phases	3 AC
Line voltage	380 ... 480 V +10 % -20 %
Line frequency	47 ... 63 Hz
Rated current (LO)	96.00 A
Rated current (HO)	85.00 A

Output	
Number of phases	3 AC
Rated voltage	400V IEC 480V NEC ¹⁾
Rated power (LO)	55.00 kW 60.00 hp
Rated power (HO)	45.00 kW 50.00 hp
Rated current (LO)	103.00 A
Rated current (HO)	83.00 A
Rated current (IN)	103.00 A
Max. output current	165.00 A
Pulse frequency	4 kHz
Output frequency for vector control	0 ... 240 Hz
Output frequency for V/f control	0 ... 550 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)	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 φ	0.99
Efficiency η	0.98
Sound pressure level (1m)	71 dB
Power loss	1,580.0 W
Filter class (integrated)	Class A

Communication	
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)

PTC/ KTY interface	
1 motor temperature sensor input, sensors that can be connected PTC, KTY and Thermo-Click, accuracy ±5 °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

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Ambient conditions

Cooling Air cooling using an integrated fan

Cooling air requirement 0.083 m³/s (2.931 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

Connections

Signal cable

Conductor cross-section 0.15 ... 1.50 mm²
(AWG 24 ... AWG 16)

Line side

Version screw-type terminal

Conductor cross-section 25.00 ... 70.00 mm²
(AWG 4 ... AWG -1)

Motor end

Version Screw-type terminals

Conductor cross-section 25.00 ... 70.00 mm²
(AWG 4 ... AWG -1)

DC link (for braking resistor)

Version Screw-type terminals

Conductor cross-section 25.00 ... 70.00 mm²
(AWG 4 ... AWG -1)

Line length, max. 10 m (32.81 ft)

PE connection Screw-type terminals

Max. motor cable length

Shielded 200 m (656.17 ft)

Unshielded 300 m (984.25 ft)

Mechanical data

Degree of protection IP20 / UL open type

Frame size FSE

Net weight 28.50 kg (62.83 lb)

Dimensions

Width 275 mm (10.83 in)

Height 551 mm (21.69 in)

Depth 237 mm (9.33 in)

Standards

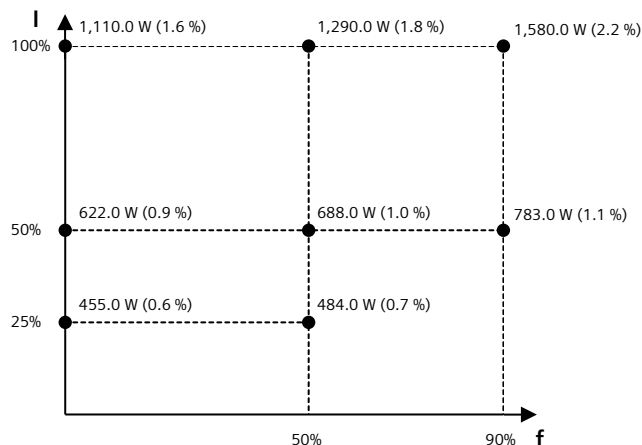
Compliance with standards UL, cUL, CE, C-Tick (RCM)

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%) 47.3 %



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.

*converted values

¹⁾The output current and HP ratings are valid for the voltage range 440V-480V