

Article No. : 6SL3210-1KE23-2AF1



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)	40.60 A
Rated current (HO)	36.40 A

Output

Number of phases	3 AC
Rated voltage	400V IEC 480V NEC¹⁾
Rated power (LO)	15.00 kW 20.00 hp
Rated power (HO)	11.00 kW 15.00 hp
Rated current (LO)	31.00 A
Rated current (HO)	25.00 A
Rated current (IN)	32.00 A
Max. output current	50.00 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	0.70 ... 0.85
Offset factor $\cos \varphi$	0.95
Efficiency η	0.97
Sound pressure level (1m)	66 dB
Power loss	371.0 W
Filter class (integrated)	Class A

Communication

Communication	PROFINET, EtherNet/IP
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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, 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)
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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

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Ambient conditions

Cooling Air cooling using an integrated fan

Cooling air requirement 0.018 m³/s (0.636 ft³/s)

Installation altitude 1,000 m (3,280.84 ft)

Ambient temperature

Operation -10 ... 40 °C (14 ... 104 °F)

Transport -40 ... 70 °C (-40 ... 158 °F)

Storage -40 ... 70 °C (-40 ... 158 °F)

Relative humidity

Max. operation 95 % At 40 °C (104 °F), condensation and icing not permissible

Connections

Signal cable

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

Line side

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm²
(AWG 10 ... AWG 6)

Motor end

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm²
(AWG 10 ... AWG 6)

DC link (for braking resistor)

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm²
(AWG 10 ... AWG 6)

Line length, max. 15 m (49.21 ft)

PE connection On housing with M4 screw

Max. motor cable length

Shielded 50 m (164.04 ft)

Unshielded 100 m (328.08 ft)

Mechanical data

Degree of protection IP20 / UL open type

Frame size FSC

Net weight 4.40 kg (9.70 lb)

Dimensions

Width 140 mm (5.51 in)

Height 295 mm (11.61 in)

Depth 208 mm (8.19 in)

Standards

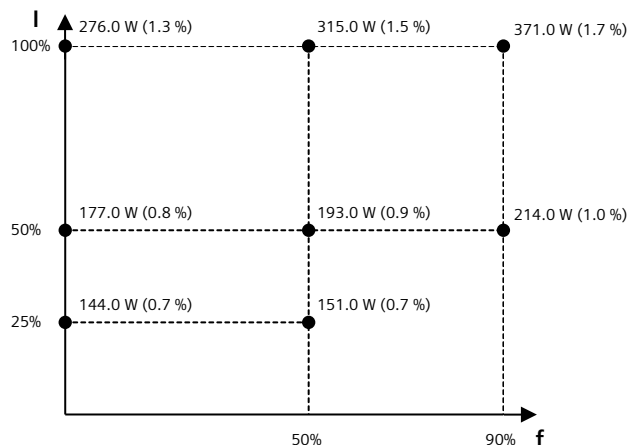
Compliance with standards UL, cUL, CE, C-Tick (RCM)

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%) 34.2 %



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