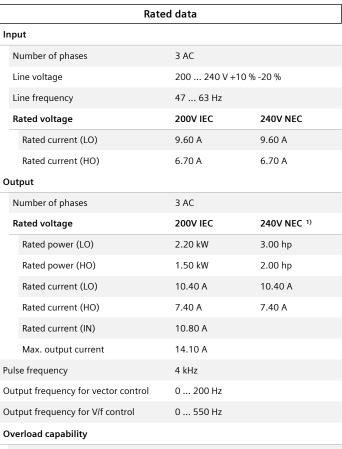


Data sheet for SINAMICS G120X

Article No.: 6SL3220-3YC16-0UP0

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



Low Overload (LO)

110% base load current IL for 60 s in a 300 s cycle time

High Overload (HO)

150% x base load current IH for 60 s within a 600 s cycle time

General tech. specifications	
Power factor λ	0.70 0.85
Offset factor $\cos\phi$	0.96
Efficiency η	0.96
Sound pressure level (1m)	63 dB
Power loss ³⁾	0.123 kW
Filter class (integrated)	Unfiltered
EMC category (with accessories)	without
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)

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Com	mun	icat	ion
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Communication PROFIBUS DP



Item no. : Consignment no. : Project :

Inputs i	outputs
Standard digital inputs	
Number	6
Switching level: $0 \rightarrow 1$	11 V
Switching level: $1 \rightarrow 0$	5 V
Max. inrush current	15 mA
Fail-safe digital inputs	
Number	1
Digital outputs	
Number as relay changeover contact	2
Output (resistive load)	DC 30 V, 5.0 A
Number as transistor	0
Analog / digital inputs	
Number	2 (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 $\pm 5\,^{\circ}\text{C}$

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



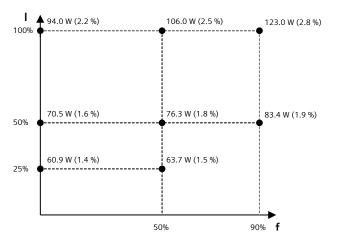
Data sheet for SINAMICS G120X

Article No.: 6SL3220-3YC16-0UP0

Ambient	conditions
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.009 m³/s (0.325 ft³/s)
Installation altitude	1,000 m (3,280.84 ft)
Ambient temperature	
Operation	-20 45 °C (-4 113 °F)
Transport	-40 70 °C (-40 158 °F)
Storage	-25 55 °C (-13 131 °F)
Relative humidity	
Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
Conn	ections
Signal cable	
Conductor cross-section	0.15 1.50 mm ² (AWG 24 AWG 16)
Line side	
Version	screw-type terminal
Conductor cross-section	1.50 6.00 mm ² (AWG 16 AWG 10)
Motor end	
Version	Screw-type terminals
Conductor cross-section	1.50 6.00 mm ² (AWG 16 AWG 10)
DC link (for braking resistor)	
PE connection	On housing with M4 screw
Max. motor cable length	
Shielded	150 m (492.13 ft)
Unshielded	300 m (984.25 ft)

Mech	anical data
Degree of protection	IP20 / UL open type
Frame size	FSB
Net weight	5.8 kg (12.79 lb)
Dimensions	
Width	100 mm (3.94 in)
Height	275 mm (10.83 in)
Depth	218 mm (8.58 in)
St	andards
Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH
CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC





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 220V-240V

³⁾ Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.



Data sheet for SINAMICS G120X

Article No.: 6SL3220-3YC16-0UP0

	Operator panel: I	ntelligent Operator Panel (IOP-2)
	Screen	
Display design	LCD color	Ambient temperature
Screen resolution	320 x 240 Pixel	Operation
	Mechanical data	Storage
Degree of protection	IP55 / UL type 12	Transport
Net weight	0.134 kg (0.30 lb)	Relative humidity at 25°C
Dimensions		Max. operation
Width	70.00 mm (2.76 in)	
Height	106.85 mm (4.21 in)	
Depth	19.65 mm (0.77 in)	Certificate of suitability

Ambient conditions	
Ambient temperature	
Operation	0 50 °C (32 122 °F)
	55 °C only with door installation kit
Storage	-40 70 °C (-40 158 °F)
Transport	-40 70 °C (-40 158 °F)
Relative humidity at 25°C during	
Max. operation	95 %
Approvals	
Certificate of suitability	CE, cULus, EAC, KCC, RCM