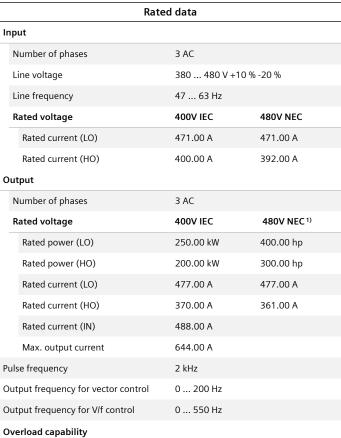


Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YE54-0AB0

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	0.90 0.95	
Offset factor $\cos\phi$	0.99	
Efficiency η	0.98	
Sound pressure level (1m)	74 dB	
Power loss 3)	6.170 kW	
Filter class (integrated)	RFI suppression filter for Category C2	
EMC category (with accessories)	Category C2	
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)	

Communication

USS, Modbus RTU, BACnet MS/TP Communication



Item no.: Consignment no. : Project :

Inputs / 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 ±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	



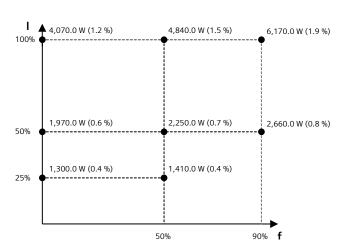
Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YE54-0AB0

Ambie	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	0.210 m ³ /s (7.416 ft ³ /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		
Со	nnections		
Signal cable			
Conductor cross-section	0.15 1.50 mm ² (AWG 24 AWG 16)		
Line side			
Version	M10 screw		
Conductor cross-section	35.00 2 x 185.00 mm ² (AWG 1 MCM 2 x 350)		
Motor end			
Version	M10 screw		
Conductor cross-section	35.00 2 x 185.00 mm ² (AWG 1 MCM 2 x 350)		
DC link (for braking resistor)			
PE connection	M10 screw		
Max. motor cable length			
-			
Shielded	150 m (492.13 ft)		

Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSG	
Net weight	120 kg (264.56 lb)	
Dimensions		
Width	305 mm (12.01 in)	
Height	999 mm (39.33 in)	
Depth	369 mm (14.53 in)	
Standards		
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	

Converter losses to IEC61800-9-2*		
Efficiency class	IE2	
Comparison with the reference converter (90% / 100%)	45.7 %	



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

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

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