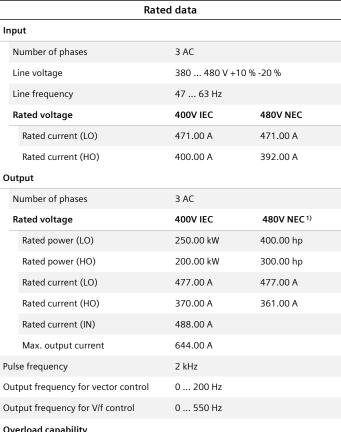


Data sheet for SINAMICS G120X

6SL3220-1YE54-0CP0 Article No.:

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



Overload	capabi	lity
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Low Overload (LO)

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

High Overload (HO)

Communication

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 C3	
EMC category (with accessories)	Category C3	
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7- 1500F)	
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)
DTC/VTV intenfere	

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	

PROFIBUS DP



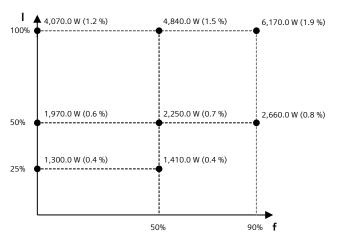
Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YE54-0CP0

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		
Connections			
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		
PE connection Max. motor cable length	M10 screw		
	M10 screw 200 m (656.17 ft)		

Mechanical data		
IP20 / UL open type		
FSG		
120 kg (264.56 lb)		
305 mm (12.01 in)		
999 mm (39.33 in)		
369 mm (14.53 in)		
Standards		
UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH		
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

 $^{^{1)}\}mbox{The}$ 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.