

Data sheet for SINAMICS G120X

Article No.: 6SL3230-3YE36-0AP0

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

Rated data			
In	put		
	Number of phases	3 AC	
	Line voltage	380 480 V +10 %	5 -20 %
	Line frequency	47 63 Hz	
	Rated voltage	400V IEC	480V NEC
	Rated current (LO)	70.00 A	61.00 A
	Rated current (HO)	62.00 A	54.00 A
0	utput		
	Number of phases	3 AC	
	Rated voltage	400V IEC	480V NEC 1)
	Rated power (LO)	37.00 kW	50.00 hp
	Rated power (HO)	30.00 kW	40.00 hp
	Rated current (LO)	75.00 A	65.00 A
	Rated current (HO)	60.00 A	52.00 A
	Rated current (IN)	77.00 A	
	Max. output current	102.00 A	
Pι	ulse frequency	4 kHz	
0	utput frequency for vector control	0 200 Hz	
0	utput frequency for V/f control	0 550 Hz	
0	verload capability		

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

0.90 0.95
0.99
0.97
70 dB
1.110 kW
RFI suppression filter for Category C2
Category C2
without SIRIUS device (e.g. via S7- 1500F)

Communication

PROFIBUS DP



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 $\pm 5\,^{\circ}\text{C}$

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

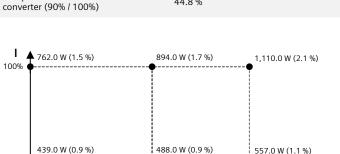


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Ambient conditions		
Ambient		
Standard board coating type	Class 3C3, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.055 m ³ /s (1.942 ft ³ /s)	
Installation altitude	1,000 m (3,280.84 ft)	
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	
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	10.00 35.00 mm ² (AWG 8 AWG 2)	
Motor end		
Version	Screw-type terminals	
Conductor cross-section	10.00 35.00 mm ² (AWG 8 AWG 2)	
DC link (for braking resistor)		
PE connection	Screw-type terminals	
PE connection Max. motor cable length	Screw-type terminals	

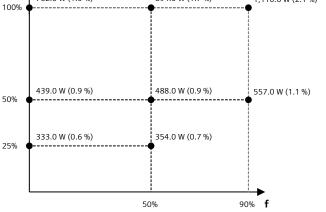
Mechanical data			
Degree of protection		IP20 / UL open type	
Frame size		FSD	
Net weight		20 kg (44.09 lb)	
Dimensions			
	Width	200 mm (7.87 in)	
	Height	472 mm (18.58 in)	
	Depth	248 mm (9.76 in)	
	Stand	dards	
C	ompliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH	
CE marking		EMC Directive 2004/108/EC, Low- Voltage Directive 2006/95/EC	



Converter losses to IEC61800-9-2*

IE2

44.8 %



The percentage values show the losses in relation to the rated apparent power of

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

Efficiency class

Comparison with the reference

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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	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		
	55 $^{\circ}\text{C}$ only with door installation kit	
Storage	-40 70 °C (-40 158 °F)	
Transport	-40 70 °C (-40 158 °F)	
elative humidity at 25°C durii	ng	
Max. operation	95 %	
	Approvals	
ertificate of suitability	CE, cULus, EAC, KCC, RCM	