EME **Data sheet for SINAMICS G120X**

Article No. :

6SL3220-2YE34-0UF0

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

Item no. :

Rated data

put		
Number of phases	3 AC	
Line voltage	380 480 V +10 % -20 %	
Line frequency	47 63 Hz	
Rated voltage	400V IEC	480V NEC
Rated current (LO)	57.00 A	49.00 A
Rated current (HO)	47.00 A	41.00 A
utput		
Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC
Rated power (LO)	30.00 kW	40.00 hp
Rated power (HO)	22.00 kW	30.00 hp
Rated current (LO)	60.00 A	52.00 A
Rated current (HO)	45.00 A	40.00 A
Rated current (IN)	62.00 A	
Max. output current	81.00 A	
ulse frequency	4 kHz	
utput frequency for vector control	0 200 Hz	
utput frequency for V/f control	0 550 Hz	



Consignment no. : Project :

Amb	ient conditions
Standard board coating type	Class 3C2, according to IEC 60721-3-3. 2002
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.055 m³/s (1.942 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
Me	chanical data
Degree of protection	IP20 / UL open type
Size	FSD
Net weight	17 kg (37.48 lb)
Dimensions	
Width	200 mm (7.87 in)
Height	472 mm (18.58 in)
Depth	248 mm (9.76 in)

Overload capability

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 te	General tech. specifications	
Power factor λ	0.90 0.95	
Offset factor cos φ	0.99	
Efficiency η	0.97	
Sound pressure level (1m)	70 dB	
Power loss ₃₎	0.841 kW	
Filter class (integrated)	Unfiltered	
EMC category (with accessories)	without	

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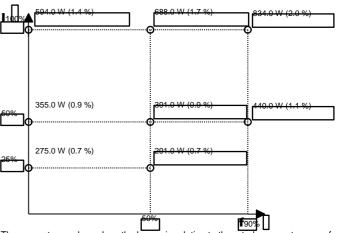
Inb	outs / outputs
Standard digital inputs	
Number	6
Switching level: $0 \rightarrow 1$	11 V
Switching level: $1 \rightarrow 0$	5 V
Max. inrush current	15 mA
Fail-safe digital inputs	
Number 1 Digital outputs	
Number as relay changeover con 2Output (resistive load)	tact
	DC 30 V, 5.0 A
Number as transistor	
OAnalog / digital inputs	
Number	2 (Differential input)
Resolution	10 bit
Switching threshold as digital in	iput
0 → 1	4-V
1 → 0	1.6 V
Analog outputs	1 (Non-isolated output)
PTC/ KTY interface 1 motor temperature sensor input and Thermo-Click, accuracy ±5 %	t, sensors that can be connected: PTC, KTY C
Closed-loc	op control techniques
√/f linear / square-law / parameteri z	able Yes
	Yes
//f with flux current control (FCC)	
, , , , , , , , , , , , , , , , , , ,	Yes
//f ECO linear / square-law	Yes
V/f ECO linear / square-law Sensorless vector control	
V/f with flux current control (FCC) V/f ECO linear / square-law Sensorless vector control Vector control, with sensor Encoderless torque control	Yes

Communication

PROFINET, EtherNet/IF

	Connections
Signal cable	
Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)
Line side	
Version	screw-type terminal
Conductor cross-section	10.00 35.00 mm² (AWG 8 AWG 2)
Motor end	
Version	Screw-type terminals
Conductor cross-section	10.00 35.00 mm² (AWG 8 AWG 2)
DC link (for braking resistor))
PE connection	Screw-type terminals
Max. motor cable length	
Shielded	200 m (656.17 ft)
Unshielded	300 m (984.25 ft)
Converte	r losses to IEC61800-9-2*
Efficiency class	IE2

Comparison with the reference converter (90% / 100%) 41.9 %



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

Stan	dards
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

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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Screen			Ambient conditions	
Display design	LCD, monochrome	Ambient temperature		
		Operation	0 50 °C (32 122 °F)	
	Mechanical data	Storage	-40 70 °C (-40 158 °F)	
Degree of protection	IP55 / UL type 12	Transport	-40 70 °C (-40 158 °F)	
Net weight	0.140 kg (0.31 lb)	Relative humidity at 25°0	during	
Dimensions		Max. operation	95 %	
Width	70.00 mm (2.76 in)		33 /0	
Height	106.85 mm (4.21 in)		Approvals	
Depth	19.60 mm (0.77 in)	Certificate of suitability	CE, cULus, EAC, KCC, RCM	

Technical data are subject to change! There may be discrepancies between calculated and rating plate values.