

Article No. : 6SL3230-2YE42-0AP0



Figure similar

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

Item no. :
Consignment no. :
Project :

Rated data			Ambient conditions	
Input			Standard board coating type	Class 3C3, according to IEC 60721-3-3: 2002
Number of phases	3 AC		Cooling	Air cooling using an integrated fan
Line voltage	380 ... 480 V +10 % -20 %		Cooling air requirement	0.153 m³/s (5.403 ft³/s)
Line frequency	47 ... 63 Hz		Installation altitude	1,000 m (3,280.84 ft)
Rated voltage	400V IEC	480V NEC	Ambient temperature	
Rated current (LO)	140.00 A	120.00 A	Operation	-20 ... 45 °C (-4 ... 113 °F)
Rated current (HO)	117.00 A	102.00 A	Transport	-40 ... 70 °C (-40 ... 158 °F)
Output			Storage	-25 ... 55 °C (-13 ... 131 °F)
Number of phases	3 AC		Relative humidity	
Rated voltage	400V IEC	480V NEC	Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
Rated power (LO)	75.00 kW	100.00 hp	Mechanical data	
Rated power (HO)	55.00 kW	75.00 hp	Degree of protection	IP20 / UL open type
Rated current (LO)	145.00 A	124.00 A	Size	FSF
Rated current (HO)	110.00 A	96.00 A	Net weight	68 kg (149.91 lb)
Rated current (IN)	149.00 A		Width	305 mm (12.01 in)
Max. output current	196.00 A		Height	709 mm (27.91 in)
Pulse frequency	4 kHz		Depth	369 mm (14.53 in)
Output frequency for vector control	0 ... 200 Hz			
Output frequency for V/f control	0 ... 550 Hz			
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 tech. specifications				
Power factor λ	0.90 ... 0.95			
Offset factor cos φ	0.99			
Efficiency η	0.98			
Sound pressure level (1m)	72 dB			
Power loss	1.230 kW			
Filter class (integrated)	RFI suppression filter for Category C2			
EMC category (with accessories)	Category C2			

Data sheet for SINAMICS G120X

Article No. : 6SL3230-2YE42-0AP0

Inputs / outputs

Standard digital inputs

Number	6
Switching level: 0 → 1	11 V
Switching level: 1 → 0	5 V
Max. inrush current	15 mA

Fail-safe digital inputs

Number	1
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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)
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PTC/ KTY interface

1 motor temperature sensor input, sensors that can be connected: PTC, KTY and Thermo-Click, accuracy $\pm 5^\circ\text{C}$
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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	Yes
Torque control, with encoder	No

Communication

Communication	PROFIBUS DP
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Connections

Signal cable

Conductor cross-section	0.15 ... 1.50 mm ² (AWG 24 ... AWG 16)
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Line side

Version	M10 screw
Conductor cross-section	35.00 ... 120.00 mm ² (AWG 1 ... AWG 4/0)

Motor end

Version	M10 screw
Conductor cross-section	35.00 ... 120.00 mm ² (AWG 1 ... AWG 4/0)

DC link (for braking resistor)

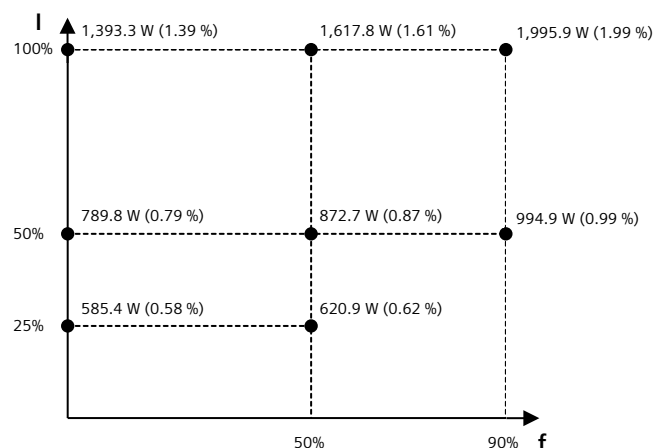
PE connection	M10 screw
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Max. motor cable length

Shielded	150 m (492.13 ft)
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Converter losses to EN 50598-2*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-42.6 %



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 EN 50598) 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

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



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Operator panel: Basic Operator Panel (BOP-2)	
Screen	
Display design	LCD, monochrome
Mechanical data	
Degree of protection	IP55 / UL type 12
Net weight	0.14 kg (0.31 lb)
Width	70.00 mm (2.76 in)
Height	106.85 mm (4.21 in)
Depth	19.6 mm (0.77 in)
Ambient conditions	
Ambient temperature	
Operation	0 ... 50 °C (32 ... 122 °F)
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