



Figure similar

MLFB-Ordering data

6SL3220-2YE20-0AF0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data			General tech. specifications	
Input			Power factor λ	0.70 ... 0.85
Number of phases	3 AC		Offset factor $\cos \varphi$	0.96
Line voltage	380 ... 480 V +10 % -20 %		Efficiency η	0.98
Line frequency	47 ... 63 Hz		Sound pressure level (1m)	63 dB
Rated voltage	400V IEC	480V NEC	Power loss	0.138 kW
Rated current (LO)	9.75 A	9.75 A	Filter class (integrated)	RFI suppression filter for Category C2
Rated current (HO)	7.36 A	7.75 A	Ambient conditions	
Output			Cooling	Air cooling using an integrated fan
Number of phases	3 AC		Cooling air requirement	0.005 m³/s (0.177 ft³/s)
Rated voltage	400V IEC	480V NEC	Installation altitude	1000 m (3280.84 ft)
Rated power (LO)	4.00 kW	5.00 hp	Ambient temperature	
Rated power (HO)	3.00 kW	4.00 hp	Operation	-20 ... 45 °C (-4 ... 113 °F)
Rated current (LO)	10.20 A	7.60 A	Transport	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	7.70 A	6.20 A	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated current (IN)	10.50 A		Relative humidity	
Max. output current	14.00 A		Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
Pulse frequency	4 kHz		Closed-loop control techniques	
Output frequency for vector control	0 ... 200 Hz		V/f linear / square-law / parameterizable	Yes
Output frequency for V/f control	0 ... 550 Hz		V/f with flux current control (FCC)	Yes
Overload capability			V/f ECO linear / square-law	Yes
Low Overload (LO)			Sensorless vector control	Yes
110% base load current IL for 60 s in a 300 s cycle time			Vector control, with sensor	No
High Overload (HO)			Encoderless torque control	Yes
150% x base load current IH for 60 s within a 600 s cycle time			Torque control, with encoder	No



Figure similar

Mechanical data

Degree of protection	IP20 / UL open type
Size	FSB
Net weight	6 kg (13.58 lb)
Width	100 mm (3.94 in)
Height	275 mm (10.83 in)
Depth	209 mm (8.23 in)

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 ±5 °C
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Communication

Communication	PROFINET / EtherNet/IP
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Connections

Signal cable

Conductor cross-section	0.15 ... 1.50 mm² (AWG 24 ... AWG 16)
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Line side

Version	screw-type terminal
Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)

Motor end

Version	Screw-type terminals
Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)

DC link (for braking resistor)

PE connection	On housing with M4 screw
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Max. motor cable length

Shielded	200 m (656.17 ft)
Unshielded	300 m (984.25 ft)

Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH
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CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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SIEMENS

Data sheet for SINAMICS G120X

MLFB-Ordering data

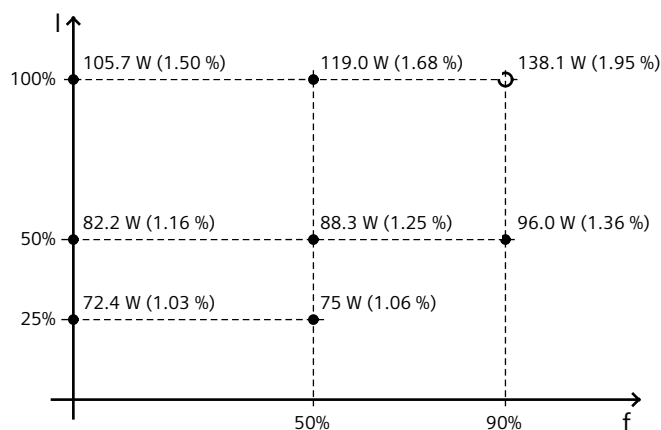
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Figure similar

Converter losses to EN 50598-2*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-32.50 %



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

Operator panel: Basic Operator Panel (BOP-2)

Screen

Display design	LCD, monochrome
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Mechanical data

Degree of protection	IP55 / UL type 12
Net weight	0.14 kg (0.31 lb)
Width	70.0 mm (2.76 in)
Height	106.85 mm (4.21 in)
Depth	19.60 mm (0.77 in)

Ambient conditions

Ambient temperature during

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 %
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Approvals

Certificate of suitability	CE, cULus, EAC, KCC, RCM
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