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Data sheet for SINAMICS G120X

Article No. :

6SL3220-2YE66-0CF0



Figure similar

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

| Rated data | | |
|-------------------------------------|---------------|------------------------|
| Input | | |
| Number of phases | 3 AC | |
| Line voltage | 380 480 V +10 | 0 % -10 % |
| Line frequency | 47 63 Hz | |
| Rated voltage | 400V IEC | 480V NEC |
| Rated current (LO) | 1,038.00 A | 862.00 A |
| Rated current (HO) | 816.00 A | 677.00 A |
| Output | | |
| Number of phases | 3 AC | |
| Rated voltage | 400V IEC | 480V NEC ¹⁾ |
| Rated power (LO) | 560.00 kW | 700.00 hp |
| Rated power (HO) | 450.00 kW | 500.00 hp |
| Rated current (LO) | 1,000.00 A | 830.00 A |
| Rated current (HO) | 786.00 A | 652.00 A |
| Rated current (IN) | 1,021.00 A | |
| Max. output current | 1,350.00 A | |
| Pulse frequency | 4 kHz | |
| Output frequency for vector control | 0 100 Hz | |
| Output frequency for V/f control | 0 100 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 300 s cycle time

| General tech. specifications | | |
|-----------------------------------|---|--|
| Power factor λ | 0.75 0.93 | |
| Offset factor $\cos \phi$ | 0.96 | |
| Efficiency η | 0.98 | |
| Sound pressure level (1m) | 74 dB | |
| Power loss 3) | 12.200 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 | | |

Communication

PROFINET, EtherNet/IP

ltem 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 | | |
| $0 \rightarrow 1$ | 4 V | |
| $1 \rightarrow 0$ | 1.6 V | |
| Analog outputs | | |
| Number | 1 (Non-isolated output) | |
| PTC/ KTY interface | | |
| 1 motor temperature sensor input, set Thermo-Click, accuracy $\pm 5~^\circ\text{C}$ | nsors that can be connected PTC, KTY and | |

| 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 | | | |
|--------------------------------|--|--|--|
| Standard board coating type | Class 3C2, according to IEC 60721-3-3: 2002 | | |
| Cooling | Air cooling using an integrated fan | | |
| Cooling air requirement | 0.450 m ³ /s (15.892 ft ³ /s) | | |
| Installation altitude | 1,000 m (3,280.84 ft) | | |
| Ambient temperature | | | |
| Operation | 0 45 °C (32 113 °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 | | |
| Co | onnections | | |
| Signal cable | | | |
| Conductor cross-section | 0.15 1.50 mm² (AWG 24 AWG 16) | | |
| Line side | | | |
| Version | M12 screw | | |
| Conductor cross-section | 6 x 240.00 mm² (MCM 4 x 500 MCM 6 x 500) | | |
| Motor end | | | |
| Version | M12 screw | | |
| Conductor cross-section | 6 x 240.00 mm² (MCM 4 x 500 MCM 8 x 500) | | |
| DC link (for braking resistor) | | | |
| PE connection | M12 screw | | |
| Max. motor cable length | | | |
| Shielded | 150 m (492.13 ft) | | |
| | | | |

| Mechanical data | | | |
|--|--|--------------------|--|
| Degree of protection | IP20 / UL open typ | pe | |
| Frame size | FSJ | | |
| Net weight | 250 kg (551.16 lk |)) | |
| Dimensions | | | |
| Width | 801 mm (31.54 ir | ר) | |
| Height | 1,621 mm (63.82 | in) | |
| Depth | 393 mm (15.47 ir | ר) | |
| 9 | Standards | | |
| Compliance with standards | UL, cUL, CE, C-Tic SEMI F47, REACH | k (RCM), EAC, KCC, | |
| CE marking | EMC Directive 200 Voltage Directive | | |
| Converter lo | sses to IEC61800-9-2 | 2* | |
| Efficiency class | IE2 | | |
| Comparison with the reference converter (90% / 100%) | 42.4 % | | |
| I ▲ 9,450.0 W (1.3 %) 100% ● | 10,700.0 W (1.5 %) | 12,200.0 W (1.7 %) | |
| 4,390.0 W (0.6 %) 50% 2,850.0 W (0.4 %) | 4,920.0 W (0.7 %) 3,100.0 W (0.4 %) | 5,530.0 W (0.8 %) | |
| 5 | 0% 9i | 0% f | |

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.

*calculated values

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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Article No. :

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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 | 0.140 kg (0.31 lb) | | |
| Dimensions | | | |
| Width | 70.00 mm (2.76 in) | | |
| Height | 106.85 mm (4.21 in) | | |
| Depth | 19.60 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 | 9 | |
| Max. operation | 95 % | |
| Approvals | | |
| Certificate of suitability | CE, cULus, EAC, KCC, RCM | |



MLFB-Ordering data

6SL3000-0CE41-0AA0



Figure similar

| Client order no. : | | Item no. : | | | |
|----------------------|--------------------|-------------------|------------------|--|--|
| Order no. : | | Consignment no. : | | | |
| Offer no. : | | Project : | | | |
| Remarks : | | | | | |
| | | | | | |
| Rated data | | | Connections | | |
| Input | | | | | |
| Number of phases | 3 AC | | | | |
| Line voltage | 380 480 V | | | | |
| Output | | Load side | | | |
| Rated current | 1060.0 A | Version | 1 x hole for M12 | | |
| Mechanical data | | | | | |
| Dimensions | | | | | |
| Width | 350.0 mm (13.8 in) | PE connection | | | |
| Height | 321.0 mm (12.6 in) | Version | M6 screw | | |
| Depth | 211.5 mm (8.3 in) | | | | |
| Degree of protection | IPOO | | | | |
| Net weight | 69.6 kg (153.0 lb) | | | | |