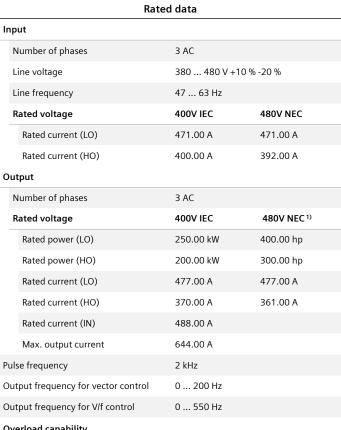


Data sheet for SINAMICS G120X

6SL3220-1YE54-0AF0 Article No.:

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



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

| specifications |
|---|
| 0.90 0.95 |
| 0.99 |
| 0.98 |
| 74 dB |
| 6.170 kW |
| RFI suppression filter for Category C2 |
| Category C2 |
| without SIRIUS device (e.g. via S7- 1500F) |
| |

Communication

PROFINET, EtherNet/IP Communication



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 ±5 °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 | |



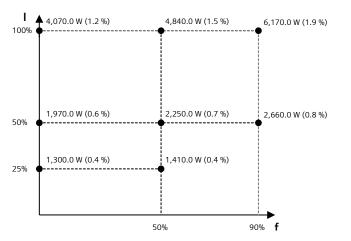
Data sheet for SINAMICS G120X

Article No.: 6SL3220-1YE54-0AF0

| Ambie | ent conditions | |
|--------------------------------|--|--|
| Standard board coating type | Class 3C2, according to IEC 60721-3-3: 2002 | |
| Cooling | Air cooling using an integrated fan | |
| Cooling air requirement | 0.210 m ³ /s (7.416 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 | |
| Connections | | |
| Signal cable | | |
| Conductor cross-section | 0.15 1.50 mm ² (AWG 24 AWG 16) | |
| Line side | | |
| Version | M10 screw | |
| Conductor cross-section | 35.00 2 x 185.00 mm ² (AWG 1 MCM 2 x 350) | |
| Motor end | | |
| Version | M10 screw | |
| Conductor cross-section | 35.00 2 x 185.00 mm ² (AWG 1 MCM 2 x 350) | |
| DC link (for braking resistor) | | |
| PE connection | M10 screw | |
| Max. motor cable length | | |
| | | |
| Shielded | 150 m (492.13 ft) | |

| Mechanical data | | |
|---------------------------|---|--|
| Degree of protection | IP20 / UL open type | |
| Frame size | FSG | |
| Net weight | 120 kg (264.56 lb) | |
| Dimensions | | |
| Width | 305 mm (12.01 in) | |
| Height | 999 mm (39.33 in) | |
| Depth | 369 mm (14.53 in) | |
| | | |
| 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 | |
| | | |

| Converter losses to IEC61800-9-2* | | | |
|--|--------|--|--|
| Efficiency class | IE2 | | |
| Comparison with the reference converter (90% / 100%) | 45.7 % | | |



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

 $^{^{1)}}$ 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.