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 | |

SIEMENS Data sheet for SINAMICS G120X

Article No. :

6SL3220-2YE34-0UF0

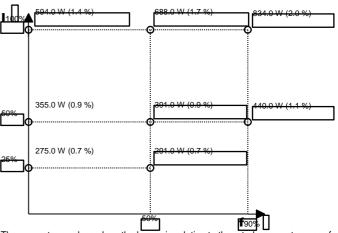
| Inb | outs / outputs |
|--|---|
| Standard digital inputs | |
| Number | 6 |
| Switching level: $0 \rightarrow 1$ | 11 V |
| Switching level: $1 \rightarrow 0$ | 5 V |
| Max. inrush current | 15 mA |
| Fail-safe digital inputs | |
| Number 1 Digital outputs | |
| | |
| Number as relay changeover con 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.

SIEMENS Data sheet for SINAMICS G120X

Article No. :

6SL3220-2YE34-0UF0

| 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.