SIEMENS

# Data sheet for SINAMICS G120XA

## Article No. : 6SL3225-1YD64-0CB0

Figure similar

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

Item no. :
Consignment no. :
Project :

### Rated data

**Input**

| | |
|---|---|
| Number of phases | 3 AC |
| Line voltage | 380 ... 440 V +10 % -15 % |
| Line frequency | 47 ... 63 Hz |
| Rated current (LO) | 959.00 A |

**Output**

| | |
|---|---|
| Number of phases | 3 AC |
| Rated voltage | 400 V |
| Rated power IEC 400V (LO) | 500.00 kW |
| Rated current 400V (IN) | 881.53 A |
| Rated current 380V (IN) | 925.00 A |
| Rated current (LO) | 853.00 A |
| Max. output current | 1,225.00 A |
| Pulse frequency | 2 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 600 s cycle time |
| Max. output current |
| Max. output current for 60 s in a 600 s cycle time |

### General tech. specifications

| | |
|---|---|
| Power factor λ | 0.75 ... 0.93 |
| Power factor cos φ 1 | 0.99 |
| Efficiency η | 0.98 |
| Sound pressure level (1m) | 75.4 dB |
| Power loss [3] | 10.100 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 | USS, Modbus RTU, BACnet MS/TP |

### 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 | 0 |

**Digital outputs**

| | |
|---|---|
| Number as relay changeover contact | 4 |
| Output (resistive load) | DC 30 V, 1.0 A |
| Number as transistor | 0 |

**Analog / digital inputs**

| | |
|---|---|
| Number | 2 (Differential input) |
| Resolution | 12 bit |

**Switching threshold as digital input**

| | |
|---|---|
| 0 → 1 | 4 V |
| 1 → 0 | 1.6 V |

**Analog outputs**

| | |
|---|---|
| Number | 2 (Non-isolated output) |

**PTC/ KTY interface**

| |
|---|
| 1 motor temperature sensor input, sensors that can be connected: PTC, KTY, PT1000 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 | Yes |
| Torque control, with encoder | No |

SIEMENS

# Data sheet for SINAMICS G120XA

**Article No. :** **6SL3225-1YD64-0CB0**

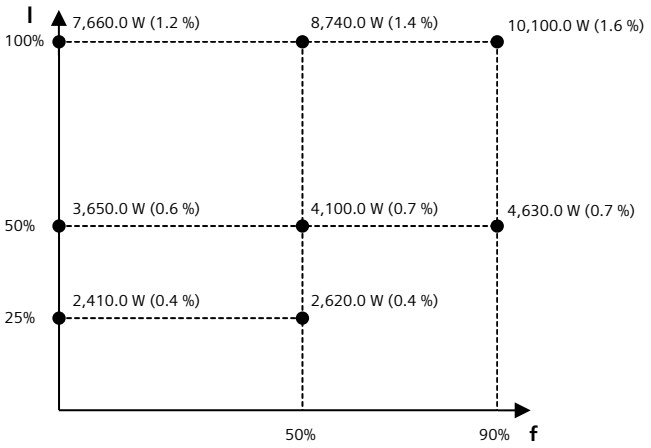
| Ambient conditions | |
|---|---|
| Standard board coating type | Class 3C2, according to IEC 60721-3-3: 2002 |
| Cooling | Air cooling using an integrated fan |
| Cooling air requirement | 0.345 m³/s (12.183 ft³/s) |
| Installation altitude | 1,000 m (3,280.84 ft) |
| **Ambient temperature** | |
| Operation | 0 ... 60 °C (32 ... 140 °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 mm² (AWG 24 ... AWG 16) |
| **Line side** | |
| Version | M12 screw |
| Conductor cross-section | 4 x 240.00 mm² (MCM 4 x 500) |
| **Motor end** | |
| Version | M12 screw |
| Conductor cross-section | 4 x 240.00 mm² (MCM 4 x 500) |
| **DC link (for braking resistor)** | |
| PE connection | M12 screw |
| **Max. motor cable length** | |
| Shielded | 100 m (328.08 ft) |

| Mechanical data | |
|---|---|
| Degree of protection | IP00 |
| Frame size | FSJ |
| Net weight | 210 kg (462.97 lb) |
| **Dimensions** | |
| Width | 801 mm (31.54 in) |
| Height | 1,438 mm (56.61 in) |
| Depth | 410 mm (16.14 in) |

| Standards | |
|---|---|
| Compliance with standards | CE, EAC, RCM, RoHS II |
| 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%) | 40.1 % |




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

[3] Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.