SIEMENS

# Data sheet for SINAMICS G120C

## Ordering data

**6SL3210-1KE18-8AF1**

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

Item no. :
Consignment no. :
Project :

## Rated data

### Input

| | |
|---|---|
| **Number of phases** | 3 AC |
| **Line voltage** | 380 ... 480 V +10 % -20 % |
| **Line frequency** | 47 ... 63 Hz |
| **Rated current (LO)** | 11.40 A |
| **Rated current (HO)** | 10.60 A |

### Output

| | |
|---|---|
| **Number of phases** | 3 AC |
| **Rated voltage** | 400 V |
| **Rated power (LO)** | 4.00 kW |
| **Rated power (HO)** | 3.00 kW |
| **Rated current (IN)** | 10.60 A |
| **Rated current (LO)** | 8.80 A |
| **Rated current (HO)** | 7.30 A |
| **Max. output current** | 14.60 A |
| **Pulse frequency** | 4 kHz |
| **Output frequency for vector control** | 0 ... 240 Hz |
| **Output frequency for V/f control** | 0 ... 650 Hz |

In firmware V4.7 and higher, due to legal requirements, the maximum output frequency is restricted to 550 Hz.

### Overload capability

**Low Overload (LO)**

150 % base load current IL for 3 s, followed by 110 % base load current IL for 57 s in a 300 s cycle time

**High Overload (HO)**

200 % base load current IH for 3 s, followed by 150 % base load current IH for 57 s in a 300 s cycle time

## General tech. specifications

| | |
|---|---|
| **Power factor λ** | 0.70 ... 0.85 |
| **Offset factor cos φ** | 0.95 |
| **Efficiency η** | 0.97 |
| **Sound pressure level (1m)** | 52 dB |
| **Power loss** | 0.15 kW |

## Ambient conditions

| | |
|---|---|
| **Cooling** | Air cooling using an integrated fan |
| **Cooling air requirement** | 0.005 m³/s |
| **Installation altitude** | 1000 m |

### Ambient temperature

| | |
|---|---|
| **Operation** | -10 ... 40 °C (14 ... 104 °F) |
| **Transport** | -40 ... 70 °C (-40 ... 158 °F) |
| **Storage** | -40 ... 70 °C (-40 ... 158 °F) |

### Relative humidity

| | |
|---|---|
| **Max. operation** | 95 % At 40 °C (104 °F), condensation and icing not permissible |

SIEMENS

# Data sheet for SINAMICS G120C

**Ordering data** **6SL3210-1KE18-8AF1**

## Mechanical data

| | |
|---|---|
| **Degree of protection** | IP20 / UL open type |
| **Size** | FSA |
| **Net weight** | 1.70 kg |
| **Width** | 73.0 mm |
| **Height** | 196.0 mm |
| **Depth** | 225.0 mm |

## 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 |

### Digital outputs

| | |
|---|---|
| **Number as relay changeover contact** | 1 |
| **Output (resistive load)** | DC 30 V, 1 A |
| **Number as transistor** | 1 |
| **Output (resistive load)** | DC 30 V, 1 A |

### Analog/ digital inputs

| | |
|---|---|
| **Number** | 1 (Differential input) |

### Analog outputs

| | |
|---|---|
| **Number** | 1 (Non-isolated output) |

### PTC/ KTY interface

1 motor temperature sensor input, connectable PTC, KTY, and Thermo-Click sensors, accuracy ±5°C

## Connections

### Signal cable

| | |
|---|---|
| **Conductor cross-section** | 0.15 ... 1.50 mm² (28 ... 16 AWG) |

### Line side

| | |
|---|---|
| **Version** | Plug-in screw-type terminals |
| **Conductor cross-section** | 1.00 ... 2.50 mm² (16 ... 14 AWG) |

### Motor end

| | |
|---|---|
| **Version** | Plug-in screw terminals |
| **Conductor cross-section** | 1.00 ... 2.50 mm² (16 ... 14 AWG) |

### DC link (for braking resistor)

| | |
|---|---|
| **Version** | Plug-in screw terminals |
| **Conductor cross-section** | 1.00 ... 2.50 mm² (16 ... 14 AWG) |
| **PE connection** | On housing with M4 screw |

### Max. motor cable length

| | |
|---|---|
| **Shielded** | 50 m |
| **Unshielded** | 100 m |

## Communication

| | |
|---|---|
| **Communication** | PROFINET |

## 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 |

## Standards

| | |
|---|---|
| **Compliance with standards** | CE, cULus, c-tick |
| **CE marking** | EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC |