

Article No. : 6SL3210-1KE23-2UF1



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 ... 480 V +10 % -20 % |
| Line frequency     | 47 ... 63 Hz              |
| Rated current (LO) | 40.60 A                   |
| Rated current (HO) | 36.40 A                   |

#### Output

|                                     |                 |                              |
|-------------------------------------|-----------------|------------------------------|
| Number of phases                    | 3 AC            |                              |
| <b>Rated voltage</b>                | <b>400V IEC</b> | <b>480V NEC<sup>1)</sup></b> |
| Rated power (LO)                    | 15.00 kW        | 20.00 hp                     |
| Rated power (HO)                    | 11.00 kW        | 15.00 hp                     |
| Rated current (LO)                  | 31.00 A         |                              |
| Rated current (HO)                  | 25.00 A         |                              |
| Rated current (IN)                  | 32.00 A         |                              |
| Max. output current                 | 50.00 A         |                              |
| Pulse frequency                     | 4 kHz           |                              |
| Output frequency for vector control | 0 ... 240 Hz    |                              |
| Output frequency for V/f control    | 0 ... 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 $\lambda$       | 0.70 ... 0.85 |
| Offset factor $\cos \varphi$ | 0.95          |
| Efficiency $\eta$            | 0.97          |
| Sound pressure level (1m)    | 66 dB         |
| Power loss                   | 361.0 W       |
| Filter class (integrated)    | Unfiltered    |

### Communication

|               |                       |
|---------------|-----------------------|
| Communication | PROFINET, EtherNet/IP |
|---------------|-----------------------|

### 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, 0.5 A |
| Number as transistor               | 1              |
| Output (resistive load)            | DC 30 V, 0.5 A |

#### Analog / digital inputs

|            |                        |
|------------|------------------------|
| Number     | 1 (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  $\pm 5^\circ\text{C}$

### 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 G120C

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### Ambient conditions

Cooling Air cooling using an integrated fan

Cooling air requirement 0.018 m<sup>3</sup>/s (0.636 ft<sup>3</sup>/s)

Installation altitude 1,000 m (3,280.84 ft)

#### 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

### Connections

#### Signal cable

Conductor cross-section 0.15 ... 1.50 mm<sup>2</sup>  
(AWG 24 ... AWG 16)

#### Line side

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup>  
(AWG 10 ... AWG 6)

#### Motor end

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup>  
(AWG 10 ... AWG 6)

#### DC link (for braking resistor)

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup>  
(AWG 10 ... AWG 6)

Line length, max. 15 m (49.21 ft)

PE connection On housing with M4 screw

#### Max. motor cable length

Shielded 150 m (492.13 ft)

Unshielded 150 m (492.13 ft)

### Mechanical data

Degree of protection IP20 / UL open type

Frame size F5C

Net weight 4.40 kg (9.70 lb)

#### Dimensions

Width 140 mm (5.51 in)

Height 295 mm (11.61 in)

Depth 208 mm (8.19 in)

### Standards

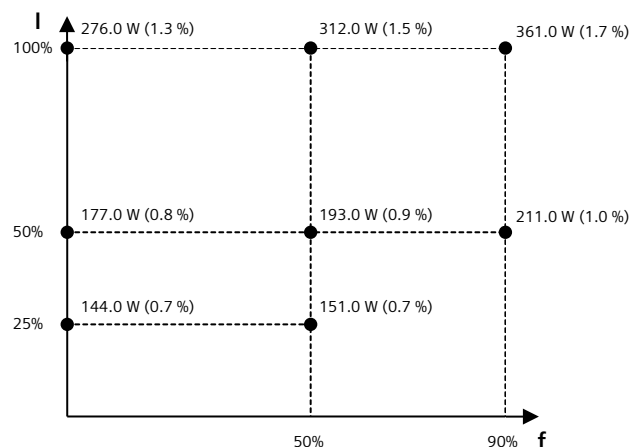
Compliance with standards UL, cUL, CE, C-Tick (RCM)

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%) 33.3 %



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

<sup>1)</sup>The output current and HP ratings are valid for the voltage range 440V-480V