

### MLFB-Ordering data

6SL3220-3YE34-0AF0



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data   |                           |          | General tech. specifications   |  |
|--|---------------------------|----------|--|--|
| Input  |                           |          | Power factor $\lambda$ 0.90 ... 0.95   |  |
| Number of phases   | 3 AC                      |          | Offset factor $\cos \varphi$ 0.99  |  |
| Line voltage   | 380 ... 480 V +10 % -20 % |          | Efficiency $\eta$ 0.98   |  |
| Line frequency   | 47 ... 63 Hz              |          | Sound pressure level (1m)70 dB   |  |
| Rated voltage  | 400V IEC                  | 480V NEC | Power loss0.770 kW   |  |
| Rated current (LO)   | 59.00 A                   | 49.00 A  | Filter class (integrated)RFI suppression filter for Category C2              |  |
| Rated current (HO)   | 47.00 A                   | 41.00 A  |  |  |
| Output   |                           |          | Ambient conditions   |  |
| Number of phases   | 3 AC                      |          | CoolingAir cooling using an integrated fan                                   |  |
| Rated voltage  | 400V IEC                  | 480V NEC | Cooling air requirement0.055 m³/s (1.942 ft³/s)                              |  |
| Rated power (LO)   | 30.00 kW                  | 40.00 hp | Installation altitude1000 m (3280.84 ft)                                     |  |
| Rated power (HO)   | 22.00 kW                  | 25.00 hp | Ambient temperature  |  |
| Rated current (LO)   | 60.00 A                   | 52.00 A  | Operation-20 ... 45 °C (-4 ... 113 °F)                                       |  |
| Rated current (HO)   | 45.00 A                   | 40.00 A  | Transport-40 ... 70 °C (-40 ... 158 °F)                                      |  |
| Rated current (IN)   | 62.00 A                   |          | Storage-25 ... 55 °C (-13 ... 131 °F)  |  |
| Max. output current  | 81.00 A                   |          | Relative humidity  |  |
| Pulse frequency  | 4 kHz                     |          | Max. operation95 % At 40 °C (104 °F), condensation and icing not permissible |  |
| Output frequency for vector control                            | 0 ... 200 Hz              |          |  |  |
| Output frequency for V/f control                               | 0 ... 550 Hz              |          | Closed-loop control techniques   |  |
| Overload capability  |                           |          | V/f linear / square-law / parameterizableYes                                 |  |
| Low Overload (LO)  |                           |          | V/f with flux current control (FCC)Yes                                       |  |
| 110% base load current IL for 60 s in a 300 s cycle time       |                           |          | V/f ECO linear / square-lawYes   |  |
| High Overload (HO)   |                           |          | Sensorless vector controlYes   |  |
| 150% x base load current IH for 60 s within a 600 s cycle time |                           |          | Vector control, with sensorNo  |  |
|  |                           |          | Encoderless torque controlYes  |  |
|  |                           |          | Torque control, with encoderNo   |  |



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### Mechanical data

|                      |                     |
|----------------------|---------------------|
| Degree of protection | IP20 / UL open type |
| Size                 | FSD                 |
| Net weight           | 18 kg (39.68 lb)    |
| Width                | 200 mm (7.87 in)    |
| Height               | 472 mm (18.58 in)   |
| Depth                | 239 mm (9.41 in)    |

### 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 | 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 |
|--|

### Communication

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

### 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) |

### 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 |
|------------|---|

# SIEMENS

## Data sheet for SINAMICS G120X

MLFB-Ordering data

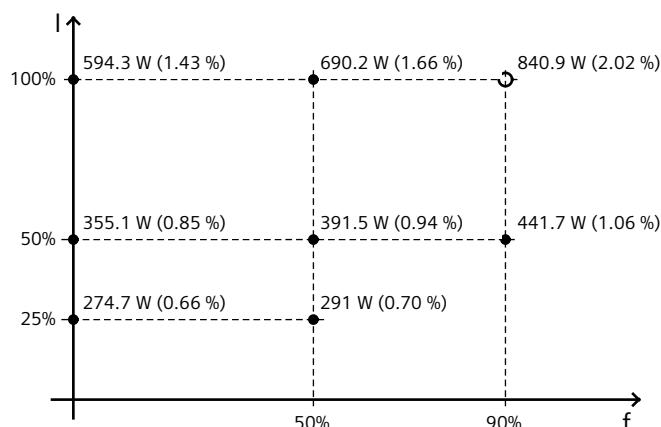
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Figure similar

### Converter losses to EN 50598-2\*

|  |          |
|--|----------|
| Efficiency class                                     | IE2      |
| Comparison with the reference converter (90% / 100%) | -42.20 % |



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 EN 50598) 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

### Operator panel: Intelligent Operator Panel (IOP-2)

#### Screen

|                   |                 |
|-------------------|-----------------|
| Display design    | LCD colors      |
| Screen resolution | 320 x 240 Pixel |

#### Mechanical data

|                      |                     |
|----------------------|---------------------|
| Degree of protection | IP55 / UL type 12   |
| Net weight           | 0.13 kg (0.30 lb)   |
| Width                | 70.0 mm (2.76 in)   |
| Height               | 106.85 mm (4.21 in) |
| Depth                | 19.65 mm (0.77 in)  |

#### Ambient conditions

##### Ambient temperature during

|           |                                   |
|-----------|-----------------------------------|
| Operation | 0 ... 50 °C (32 ... 122 °F)       |
|           | 55 °C only with door mounting kit |

|         |                                |
|---------|--------------------------------|
| Storage | -40 ... 70 °C (-40 ... 158 °F) |
|---------|--------------------------------|

|           |                                |
|-----------|--------------------------------|
| Transport | -40 ... 70 °C (-40 ... 158 °F) |
|-----------|--------------------------------|

##### Relative humidity at 25°C during

|                |      |
|----------------|------|
| Max. operation | 95 % |
|----------------|------|

### Approvals

|                            |                          |
|----------------------------|--------------------------|
| Certificate of suitability | CE, cULus, EAC, KCC, RCM |
|----------------------------|--------------------------|