



Figure similar

MLFB-Ordering data

6SL3210-1KE32-1UF1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data | | General tech. specifications | |
|-------------------------------------|---|--|--|
| Input | | Power factor λ | 0.90 ... 0.95 |
| Number of phases | 3 AC | Offset factor $\cos \phi$ | 0.99 |
| Line voltage | 380 ... 480 V +10 % -20 % | Efficiency η | 0.99 |
| Line frequency | 47 ... 63 Hz | Sound pressure level (1m) | 68 dB |
| Rated current (LO) | 187.00 A | Power loss | 1.82 kW |
| Rated current (HO) | 169.00 A | Filter class (integrated) | Unfiltered |
| Output | | Ambient conditions | |
| Number of phases | 3 AC | Cooling | Air cooling using an integrated fan |
| Rated voltage | 400 V | Cooling air requirement | 0.153 m ³ /s (5.403 ft ³ /s) |
| Rated power IEC 400V (LO) | 110.00 kW | Installation altitude | 1000 m (3280.84 ft) |
| Rated power NEC 480V (LO) | 125.00 hp | Ambient temperature | |
| Rated power IEC 400V (HO) | 90.00 kW | Operation | -20 ... 40 °C (-4 ... 104 °F) |
| Rated power NEC 480V (HO) | 100.00 hp | Transport | -40 ... 70 °C (-40 ... 158 °F) |
| Rated current (LO) | 201.00 A | Storage | -40 ... 70 °C (-40 ... 158 °F) |
| Rated current (HO) | 164.00 A | Relative humidity | |
| Rated current (IN) | 201.00 A | Max. operation | 95 % RH, condensation not permitted |
| Max. output current | 328.00 A | Closed-loop control techniques | |
| Pulse frequency | 2 kHz | V/f linear / square-law / parameterizable | Yes |
| Output frequency for vector control | 0 ... 240 Hz | V/f with flux current control (FCC) | Yes |
| Output frequency for V/f control | 0 ... 550 Hz | V/f ECO linear / square-law | Yes |
| Overload capability | | Sensorless vector control | Yes |
| 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 | Vector control, with sensor | No |
| 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 | Encoderless torque control | No |
| | | Torque control, with encoder | No |



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Mechanical data

| | |
|----------------------|----------------------|
| Degree of protection | IP20 / UL open type |
| Size | FSF |
| Net weight | 61.50 kg (135.58 lb) |
| Width | 305 mm (12.01 in) |
| Height | 708 mm (27.87 in) |
| Depth | 357 mm (14.06 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 | 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 ±5 °C

Communication

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

Connections

Signal cable

| | |
|-------------------------|---|
| Conductor cross-section | 0.15 ... 1.50 mm ² (AWG 24 ... AWG 16) |
|-------------------------|---|

Line side

| | |
|---------|---------------------|
| Version | screw-type terminal |
|---------|---------------------|

| | |
|-------------------------|---|
| Conductor cross-section | 35.00 ... 120.00 mm ² (AWG 2 ... AWG -3) |
|-------------------------|---|

Motor end

| | |
|---------|----------------------|
| Version | Screw-type terminals |
|---------|----------------------|

| | |
|-------------------------|---|
| Conductor cross-section | 35.00 ... 120.00 mm ² (AWG 2 ... AWG -3) |
|-------------------------|---|

DC link (for braking resistor)

| | |
|---------|----------------------|
| Version | Screw-type terminals |
|---------|----------------------|

| | |
|-------------------------|---|
| Conductor cross-section | 35.00 ... 120.00 mm ² (AWG 2 ... AWG -3) |
|-------------------------|---|

| | |
|-------------------|-----------------|
| Line length, max. | 10 m (32.81 ft) |
|-------------------|-----------------|

| | |
|---------------|----------------------|
| PE connection | Screw-type terminals |
|---------------|----------------------|

Max. motor cable length

| | |
|----------|-------------------|
| Shielded | 300 m (984.25 ft) |
|----------|-------------------|

| | |
|------------|--------------------|
| Unshielded | 450 m (1476.38 ft) |
|------------|--------------------|

Standards

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

| | |
|------------|---|
| CE marking | EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC |
|------------|---|



Figure similar

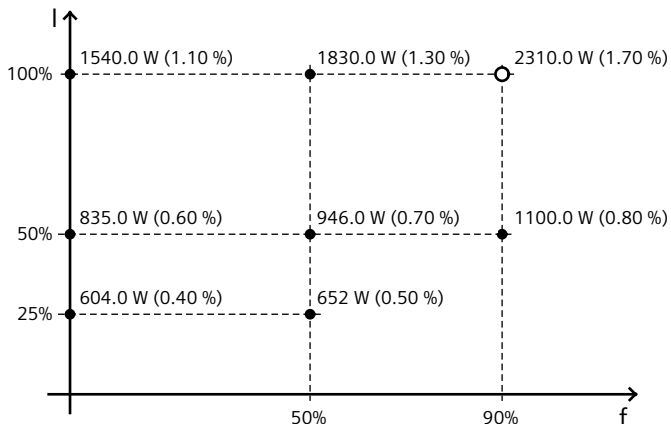
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Converter losses to IEC61800-9-2*

Efficiency class IE2

Comparison with the reference converter (90% / 100%) 40.40 %



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