



Figure similar

MLFB-Ordering data

6SL3220-3YC18-0UF0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data | | | General tech. specifications | |
|-------------------------------------|---------------------------|----------|--|--|
| Input | | | Power factor λ | 0.70 ... 0.85 |
| Number of phases | 3 AC | | Offset factor $\cos \varphi$ | 0.96 |
| Line voltage | 200 ... 240 V +10 % -20 % | | Efficiency η | 0.96 |
| Line frequency | 47 ... 63 Hz | | Sound pressure level (1m) | 63 dB |
| Rated voltage | 200V IEC | 240V NEC | Power loss | 0.140 kW |
| Rated current (LO) | 12.70 A | 12.70 A | Filter class (integrated) | Unfiltered |
| Rated current (HO) | 9.60 A | 9.60 A | Ambient conditions | |
| Output | | | Standard board coating type | Class 3C2, according to IEC 60721-3-3: 2002 |
| Number of phases | 3 AC | | Cooling | Air cooling using an integrated fan |
| Rated voltage | 200V IEC | 240V NEC | Cooling air requirement | 0.018 m ³ /s (0.653 ft ³ /s) |
| Rated power (LO) | 3.00 kW | 4.00 hp | Installation altitude | 1000 m (3280.84 ft) |
| Rated power (HO) | 2.20 kW | 3.00 hp | Ambient temperature | |
| Rated current (LO) | 13.60 A | 13.60 A | Operation | -20 ... 45 °C (-4 ... 113 °F) |
| Rated current (HO) | 10.40 A | 10.40 A | Transport | -40 ... 70 °C (-40 ... 158 °F) |
| Rated current (IN) | 14.10 A | | Storage | -25 ... 55 °C (-13 ... 131 °F) |
| Max. output current | 18.40 A | | Relative humidity | |
| Pulse frequency | 4 kHz | | Max. operation | 95 % 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 | | | |

Overload capability

Low Overload (LO)

110% base load current IL for 60 s in a 300 s cycle time

High Overload (HO)

150% x base load current IH for 60 s within a 600 s cycle time



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Mechanical data

| | |
|----------------------|---------------------|
| Degree of protection | IP20 / UL open type |
| Size | FSB |
| Net weight | 6 kg (12.79 lb) |
| Width | 100 mm (3.94 in) |
| Height | 275 mm (10.83 in) |
| Depth | 209 mm (8.23 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

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 |

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 | 1.50 ... 16.00 mm ² (AWG 16 ... AWG 10) |

Motor end

| | |
|-------------------------|--|
| Version | Screw-type terminals |
| Conductor cross-section | 1.50 ... 6.00 mm ² (AWG 16 ... AWG 10) |

DC link (for braking resistor)

| | |
|---------------|--------------------------|
| PE connection | On housing with M4 screw |
|---------------|--------------------------|

Max. motor cable length

| | |
|------------|-------------------|
| Shielded | 150 m (492.13 ft) |
| Unshielded | 300 m (984.25 ft) |



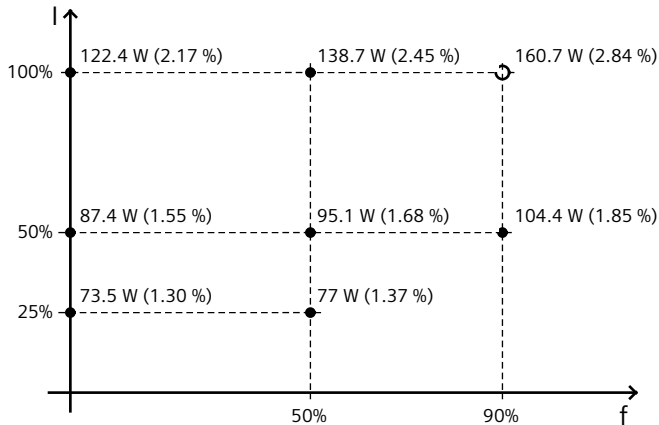
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Converter losses to EN 50598-2*

| | |
|--|----------|
| Efficiency class | IE2 |
| Comparison with the reference converter (90% / 100%) | -44.44 % |



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

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

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