



Figure similar

MLFB-Ordering data

6SL3220-2YE16-0AF0

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 | 380 ... 480 V +10 % -20 % | | Efficiency η | 0.98 |
| Line frequency | 47 ... 63 Hz | | Sound pressure level (1m) | 55 dB |
| Rated voltage | 400V IEC | 480V NEC | Power loss | 0.080 kW |
| Rated current (LO) | 5.50 A | 4.60 A | Filter class (integrated) | RFI suppression filter for Category C2 |
| Rated current (HO) | 3.82 A | 3.00 A | Ambient conditions | |
| Output | | | Cooling | Air cooling using an integrated fan |
| Number of phases | 3 AC | | Cooling air requirement | 0.005 m³/s (0.177 ft³/s) |
| Rated voltage | 400V IEC | 480V NEC | Installation altitude | 1000 m (3280.84 ft) |
| Rated power (LO) | 2.20 kW | 3.00 hp | Ambient temperature | |
| Rated power (HO) | 1.50 kW | 2.00 hp | Operation | -20 ... 45 °C (-4 ... 113 °F) |
| Rated current (LO) | 5.90 A | 4.80 A | Transport | -40 ... 70 °C (-40 ... 158 °F) |
| Rated current (HO) | 4.10 A | 3.40 A | Storage | -25 ... 55 °C (-13 ... 131 °F) |
| Rated current (IN) | 6.10 A | | Relative humidity | |
| Max. output current | 6.40 A | | Max. operation | 95 % At 40 °C (104 °F), condensation and icing not permissible |
| Pulse frequency | 4 kHz | | Closed-loop control techniques | |
| Output frequency for vector control | 0 ... 200 Hz | | V/f linear / square-law / parameterizable | Yes |
| Output frequency for V/f control | 0 ... 550 Hz | | V/f with flux current control (FCC) | Yes |
| Overload capability | | | V/f ECO linear / square-law | Yes |
| Low Overload (LO) | | | Sensorless vector control | Yes |
| 110% base load current IL for 60 s in a 300 s cycle time | | | Vector control, with sensor | No |
| High Overload (HO) | | | Encoderless torque control | Yes |
| 150% x base load current IH for 60 s within a 600 s cycle time | | | Torque control, with encoder | No |



Figure similar

Mechanical data

| | |
|----------------------|---------------------|
| Degree of protection | IP20 / UL open type |
| Size | FSA |
| Net weight | 3 kg (7.50 lb) |
| Width | 73 mm (2.87 in) |
| Height | 232 mm (9.13 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

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 | 1.50 ... 2.50 mm² (AWG 18 ... AWG 14) |

Motor end

| | |
|-------------------------|---------------------------------------|
| Version | Screw-type terminals |
| Conductor cross-section | 1.50 ... 2.50 mm² (AWG 18 ... AWG 14) |

DC link (for braking resistor)

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

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 |
|------------|---|



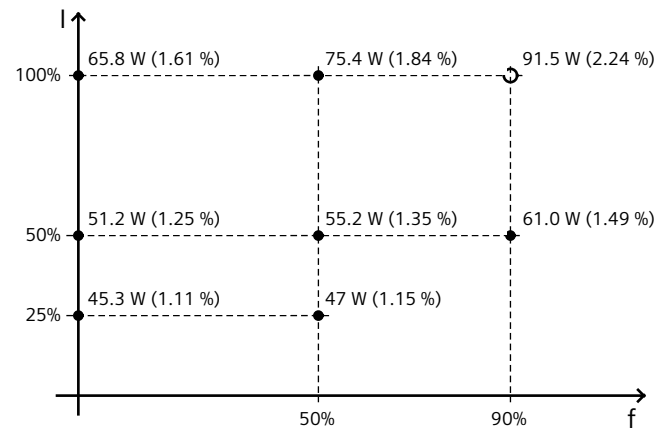
Figure similar

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Converter losses to EN 50598-2*

| | |
|--|----------|
| Efficiency class | IE2 |
| Comparison with the reference converter (90% / 100%) | -33.30 % |



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: Basic Operator Panel (BOP-2)

| Screen | |
|----------------------|---------------------|
| Display design | LCD, monochrome |
| Mechanical data | |
| Degree of protection | IP55 / UL type 12 |
| Net weight | 0.14 kg (0.31 lb) |
| Width | 70.0 mm (2.76 in) |
| Height | 106.85 mm (4.21 in) |
| Depth | 19.60 mm (0.77 in) |

| Ambient conditions | |
|----------------------------------|--------------------------------|
| Ambient temperature during | |
| Operation | 0 ... 50 °C (32 ... 122 °F) |
| 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 |