



Figure similar

### MLFB-Ordering data

6SL3210-1KE17-5UP1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data                          |   | General tech. specifications                     |  |
|-------------------------------------|---|--|--|
| <b>Input</b>                        |   | <b>Power factor <math>\lambda</math></b>         | 0.70 ... 0.85  |
| Number of phases                    | 3 AC  | <b>Offset factor <math>\cos \varphi</math></b>   | 0.95   |
| Line voltage                        | 380 ... 480 V +10 % -20 %   | <b>Efficiency <math>\eta</math></b>              | 0.97   |
| Line frequency                      | 47 ... 63 Hz  | <b>Sound pressure level (1m)</b>                 | 52 dB  |
| Rated current (LO)                  | 9.50 A  | <b>Power loss</b>                                | 0.14 kW  |
| Rated current (HO)                  | 8.20 A  | <b>Ambient conditions</b>                        |  |
| <b>Output</b>                       |   | <b>Cooling</b>                                   | Air cooling using an integrated fan                            |
| Number of phases                    | 3 AC  | <b>Cooling air requirement</b>                   | 0.005 m <sup>3</sup> /s  |
| Rated voltage                       | 400 V   | <b>Installation altitude</b>                     | 1000 m   |
| Rated power (LO)                    | 3.00 kW   | <b>Ambient temperature</b>                       |  |
| Rated power (HO)                    | 2.20 kW   | <b>Operation</b>                                 | -10 ... 40 °C (14 ... 104 °F)                                  |
| Rated current (IN)                  | 7.50 A  | <b>Transport</b>                                 | -40 ... 70 °C (-40 ... 158 °F)                                 |
| Rated current (LO)                  | 7.30 A  | <b>Storage</b>                                   | -40 ... 70 °C (-40 ... 158 °F)                                 |
| Rated current (HO)                  | 5.60 A  | <b>Relative humidity</b>                         |  |
| Max. output current                 | 11.20 A   | <b>Max. operation</b>                            | 95 % At 40 °C (104 °F), condensation and icing not permissible |
| Pulse frequency                     | 4.000 kHz   | <b>Closed-loop control techniques</b>            |  |
| Output frequency for vector control | 0 ... 240 Hz  | <b>V/f linear / square-law / parameterizable</b> | Yes  |
| Output frequency for V/f control    | 0 ... 550 Hz  | <b>V/f with flux current control (FCC)</b>       | Yes  |
| <b>Overload capability</b>          |   | <b>V/f ECO linear / square-law</b>               | Yes  |
| <b>Low Overload (LO)</b>            | 150 % base load current IL for 3 s, followed by 110 % base load current IL for 57 s in a 300 s cycle time | <b>Sensorless vector control</b>                 | Yes  |
| <b>High Overload (HO)</b>           | 200 % base load current IH for 3 s, followed by 150 % base load current IH for 57 s in a 300 s cycle time | <b>Vector control, with sensor</b>               | No   |
|                                     |   | <b>Encoderless torque control</b>                | No   |
|                                     |   | <b>Torque control, with encoder</b>              | No   |
|                                     |   | <b>Communication</b>                             |  |
|                                     |   | <b>Communication</b>                             | PROFIBUS DP  |



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### Mechanical data

|                      |                     |
|----------------------|---------------------|
| Degree of protection | IP20 / UL open type |
| Size                 | FSA                 |
| Net weight           | 1.70 kg             |
| Width                | 73.0 mm             |
| Height               | 196.0 mm            |
| Depth                | 203.0 mm            |

### 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) |
|--------|------------------------|

#### 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  $\pm 5$  °C

### Standards

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

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

### Connections

#### Signal cable

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

#### Line side

Version Plug-in screw terminals

Conductor cross-section 1.00 ... 2.50 mm<sup>2</sup> (18 ... 14 AWG)

#### Motor end

Version Plug-in screw terminals

Conductor cross-section 1.00 ... 2.50 mm<sup>2</sup> (18 ... 14 AWG)

#### DC link (for braking resistor)

Version Plug-in screw terminals

Conductor cross-section 1.00 ... 2.50 mm<sup>2</sup> (18 ... 14 AWG)

PE connection On housing with M4 screw

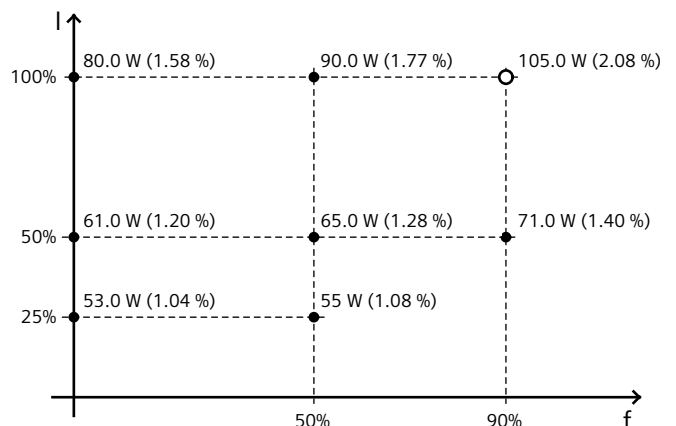
#### Max. motor cable length

Shielded 50 m

Unshielded 100 m

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

|  |          |
|--|----------|
| Efficiency class                                     | IE2      |
| Comparison with the reference converter (90% / 100%) | -69.05 % |



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