



Figure similar

### MLFB-Ordering data

6SL3210-1KE13-2AF2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Rated data

#### Input

Number of phases	3 AC
Line voltage	380 ... 480 V +10 % -20 %
Line frequency	47 ... 63 Hz
Rated current (LO)	4.10 A
Rated current (HO)	3.20 A

#### Output

Number of phases	3 AC
Rated voltage	400 V
Rated power (LO)	1.10 kW
Rated power (HO)	0.75 kW
Rated current (IN)	3.20 A
Rated current (LO)	3.10 A
Rated current (HO)	2.20 A
Max. output current	4.40 A
Pulse frequency	4 kHz
Output frequency for vector control	0 ... 240 Hz
Output frequency for V/f control	0 ... 550 Hz

### Overload capability

#### 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

#### 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

### General tech. specifications

Power factor $\lambda$	0.70 ... 0.85
Offset factor $\cos \varphi$	0.95
Efficiency $\eta$	0.97
Sound pressure level (1m)	49 dB
Power loss	0.05 kW

### Ambient conditions

Cooling	Air cooling using an integrated fan
Cooling air requirement	0.005 m <sup>3</sup> /s
Installation altitude	1000 m

### Ambient temperature

Operation	-10 ... 40 °C (14 ... 104 °F)
Transport	-40 ... 70 °C (-40 ... 158 °F)
Storage	-40 ... 70 °C (-40 ... 158 °F)

### Relative humidity

Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
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### 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	No
Torque control, with encoder	No

### Communication

Communication	PROFINET
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### Mechanical data

Degree of protection	IP20 / UL open type
Size	F5AA
Net weight	1.40 kg
Width	73.0 mm
Height	173.0 mm
Depth	178.0 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
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#### 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)
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#### Analog outputs

Number	1 (Non-isolated output)
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#### 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> (28 ... 16 AWG)

#### Line side

**Version** Plug-in screw-type terminals

**Conductor cross-section** 1.00 ... 2.50 mm<sup>2</sup> (16 ... 14 AWG)

#### Motor end

**Version** Plug-in screw terminals

**Conductor cross-section** 1.00 ... 2.50 mm<sup>2</sup> (16 ... 14 AWG)

#### DC link (for braking resistor)

**Version** Plug-in screw terminals

**Conductor cross-section** 1.00 ... 2.50 mm<sup>2</sup> (16 ... 14 AWG)

**PE connection** On housing with M4 screw

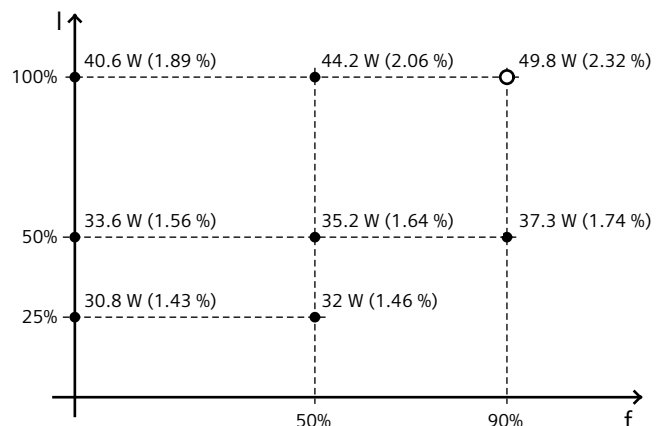
#### Max. motor cable length

**Shielded** 50 m

**Unshielded** 100 m

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

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-77.90 %



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.

\*calculated values; increased by 10% according to the standard