



Figure similar

### MLFB-Ordering data

6SL3210-1KE17-5AF1

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
<b>Number of phases</b>	3 AC	<b>Offset factor <math>\cos \varphi</math></b>	0.95
<b>Line voltage</b>	380 ... 480 V +10 % -20 %	<b>Efficiency <math>\eta</math></b>	0.97
<b>Line frequency</b>	47 ... 63 Hz	<b>Sound pressure level (1m)</b>	52 dB
<b>Rated current (LO)</b>	9.50 A	<b>Power loss</b>	0.14 kW
<b>Rated current (HO)</b>	8.20 A	<b>Ambient conditions</b>	
<b>Output</b>		<b>Cooling</b>	Air cooling using an integrated fan
<b>Number of phases</b>	3 AC	<b>Cooling air requirement</b>	0.005 m³/s
<b>Rated voltage</b>	400 V	<b>Installation altitude</b>	1000 m
<b>Rated power (LO)</b>	3.00 kW	<b>Ambient temperature</b>	
<b>Rated power (HO)</b>	2.20 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
<b>Rated current (IN)</b>	7.50 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (LO)</b>	7.30 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (HO)</b>	5.60 A	<b>Relative humidity</b>	
<b>Max. output current</b>	11.20 A	<b>Max. operation</b>	95 % At 40 °C (104 °F), condensation and icing not permissible
<b>Pulse frequency</b>	4 kHz	<b>Closed-loop control techniques</b>	
<b>Output frequency for vector control</b>	0 ... 240 Hz	<b>V/f linear / square-law / parameterizable</b>	Yes
<b>Output frequency for V/f control</b>	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>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>Sensorless vector control</b>	Yes
		<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>	PROFINET



Figure similar

### 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	225.0 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  $\pm 5^\circ\text{C}$

### Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM)
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CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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### Connections

#### Signal cable

Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (28 ... 16 AWG)
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#### Line side

Version	Plug-in screw-type terminals
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Conductor cross-section	1.00 ... 2.50 mm <sup>2</sup> (16 ... 14 AWG)
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#### Motor end

Version	Plug-in screw terminals
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Conductor cross-section	1.00 ... 2.50 mm <sup>2</sup> (16 ... 14 AWG)
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#### DC link (for braking resistor)

Version	Plug-in screw terminals
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Conductor cross-section	1.00 ... 2.50 mm <sup>2</sup> (16 ... 14 AWG)
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PE connection	On housing with M4 screw
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#### Max. motor cable length

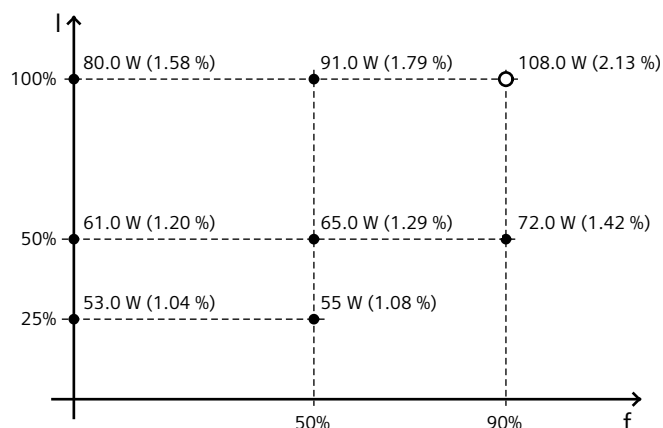
Shielded	50 m
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Unshielded	100 m
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### Converter losses to EN 50598-2\*

Efficiency class	IE2
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Comparison with the reference converter (90% / 100%)	-68.30 %
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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