



Figure similar

### MLFB-Ordering data

6SL3210-1KE12-3AP1

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)	2.90 A	<b>Power loss</b>	0.05 kW
Rated current (HO)	2.30 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)	0.75 kW	<b>Ambient temperature</b>	
Rated power (HO)	0.55 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
Rated current (IN)	2.30 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (LO)	2.20 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	1.70 A	<b>Relative humidity</b>	
Max. output current	3.40 A	<b>Max. operation</b>	95 % At 40 °C (104 °F), condensation and icing not permissible
Pulse frequency	4 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
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#### Digital outputs

Number as relay changeover contact	1
Output (resistive load)	DC 30 V, 1 A
Number as transistor	1
Output (resistive load)	DC 30 V, 1 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

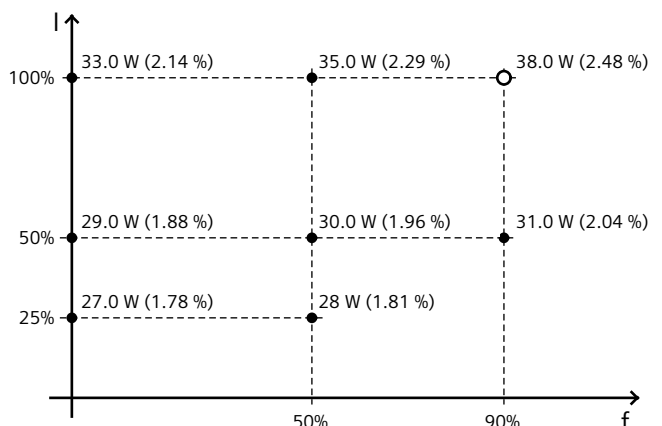
#### Max. motor cable length

**Shielded** 50 m

**Unshielded** 100 m

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

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-77.50 %



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