



Figure similar

### MLFB-Ordering data

6SL3210-1KE23-8UB1

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>	66 dB
Rated current (LO)	48.20 A	<b>Power loss</b>	0.50 kW
Rated current (HO)	45.20 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>	0.018 m <sup>3</sup> /s
Rated voltage	400 V	<b>Installation altitude</b>	1000 m
Rated power (LO)	18.50 kW	<b>Ambient temperature</b>	
Rated power (HO)	15.00 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
Rated current (IN)	38.00 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (LO)	37.00 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	31.00 A	<b>Relative humidity</b>	
Max. output current	62.00 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>		<b>Sensorless vector control</b>	Yes
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>Vector control, with sensor</b>	No
<b>High Overload (HO)</b>		<b>Encoderless torque control</b>	No
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>Torque control, with encoder</b>	No
		<b>Communication</b>	
		<b>Communication</b>	RS485



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### Mechanical data

Degree of protection	IP20 / UL open type
Size	FSC
Net weight	4.40 kg
Width	140.0 mm
Height	295.0 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, 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 terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup> (10 ... 5 AWG)

#### Motor end

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup> (10 ... 5 AWG)

#### DC link (for braking resistor)

Version Plug-in screw terminals

Conductor cross-section 6.00 ... 16.00 mm<sup>2</sup> (10 ... 5 AWG)

PE connection On housing with M4 screw

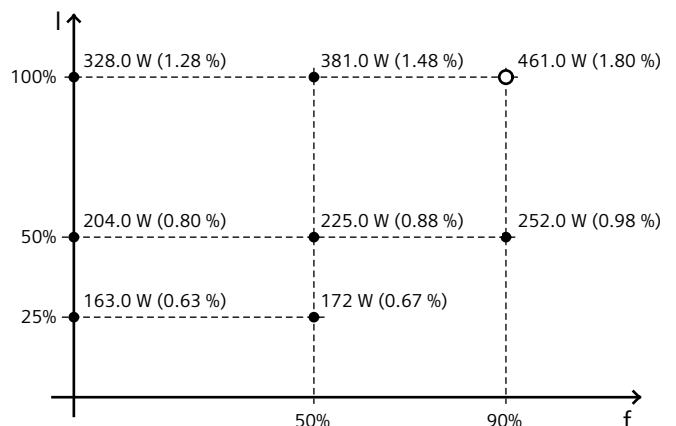
#### Max. motor cable length

Shielded 50 m

Unshielded 100 m

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

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-64.36 %



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