



### Ordering data

6SL3210-1KE23-8AF1

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>	66 dB
<b>Rated current (LO)</b>	48.20 A	<b>Power loss</b>	0.50 kW
<b>Rated current (HO)</b>	45.20 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>	0.018 m <sup>3</sup> /s
<b>Rated voltage</b>	400 V	<b>Installation altitude</b>	1000 m
<b>Rated power (LO)</b>	18.50 kW	<b>Ambient temperature</b>	
<b>Rated power (HO)</b>	15.00 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
<b>Rated current (IN)</b>	45.20 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (LO)</b>	37.00 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
<b>Rated current (HO)</b>	31.00 A	<b>Relative humidity</b>	
<b>Max. output current</b>	62.00 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 ... 650 Hz	<b>V/f with flux current control (FCC)</b>	Yes
In firmware V4.7 and higher, due to legal requirements, the maximum output frequency is restricted to 550 Hz.		<b>V/f ECO linear / square-law</b>	Yes
<b>Overload capability</b>		<b>Sensorless vector control</b>	Yes
<b>Low Overload (LO)</b>		<b>Vector control, with sensor</b>	No
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>Encoderless torque control</b>	No
<b>High Overload (HO)</b>		<b>Torque control, with encoder</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>Communication</b>	
		<b>Communication</b>	PROFINET



### Ordering data

6SL3210-1KE23-8AF1

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	225.0 mm

Inputs/ outputs	
<b>Standard digital inputs</b>	
Number	6
Switching level: 0→1	11 V
Switching level: 1→0	5 V
Max. inrush current	15 mA
<b>Fail-safe digital inputs</b>	
Number	1
<b>Digital outputs</b>	
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

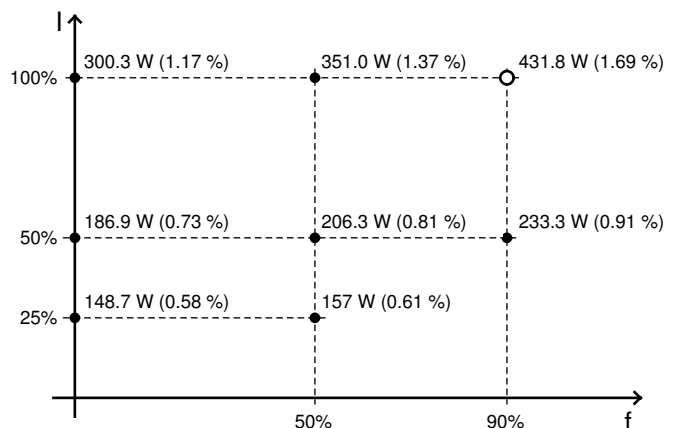
<b>Analog/ digital inputs</b>	
Number	1 (Differential input)
<b>Analog outputs</b>	
Number	1 (Non-isolated output)
<b>PTC/ KTY interface</b>	
1 motor temperature sensor input, connectable PTC, KTY, and Thermo-Click sensors, accuracy $\pm 5^\circ\text{C}$	

Standards	
Compliance with standards	CE, cULus, c-tick
CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC

Connections	
<b>Signal cable</b>	
Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (28 ... 16 AWG)
<b>Line side</b>	
Version	Plug-in screw-type terminals
Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (10 ... 5 AWG)
<b>Motor end</b>	
Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (10 ... 5 AWG)
<b>DC link (for braking resistor)</b>	
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

<b>Max. motor cable length</b>	
Shielded	50 m
Unshielded	100 m

Converter losses to EN 50598-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-66.67 %



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