



Figure similar

### MLFB-Ordering data

6SL3210-1KE23-2AP1

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 \phi</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)	40.60 A	<b>Power loss</b>	0.43 kW
Rated current (HO)	36.40 A	<b>Filter class (integrated)</b>	Class A
<b>Output</b>		<b>Ambient conditions</b>	
Number of phases	3 AC	<b>Cooling</b>	Air cooling using an integrated fan
Rated voltage	400 V	<b>Cooling air requirement</b>	0.018 m <sup>3</sup> /s (0.636 ft <sup>3</sup> /s)
Rated power IEC 400V (LO)	15.00 kW	<b>Installation altitude</b>	1000 m (3280.84 ft)
Rated power NEC 480V (LO)	20.00 hp	<b>Ambient temperature</b>	
Rated power IEC 400V (HO)	11.00 kW	<b>Operation</b>	-10 ... 40 °C (14 ... 104 °F)
Rated power NEC 480V (HO)	15.00 hp	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (LO)	31.00 A	<b>Storage</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	25.00 A	<b>Relative humidity</b>	
Rated current (IN)	32.00 A	<b>Max. operation</b>	95 % At 40 °C (104 °F), condensation and icing not permissible
Max. output current	50.00 A	<b>Closed-loop control techniques</b>	
Pulse frequency	4 kHz	<b>V/f linear / square-law / parameterizable</b>	Yes
Output frequency for vector control	0 ... 240 Hz	<b>V/f with flux current control (FCC)</b>	Yes
Output frequency for V/f control	0 ... 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			



Figure similar

### MLFB-Ordering data

6SL3210-1KE23-2AP1

#### Mechanical data

Degree of protection	IP20 / UL open type
Size	FSC
Net weight	4.40 kg (9.70 lb)
Width	140 mm (5.51 in)
Height	295 mm (11.61 in)
Depth	203 mm (7.99 in)

#### 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
--------	---

##### 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)
Resolution	10 bit

##### Switching threshold as digital input

0→1	4 V
1→0	1.6 V

##### Analog outputs

Number	1 (Non-isolated output)
--------	-------------------------

##### PTC/ KTY interface

1 motor temperature sensor input, sensors that can be connected: PTC, KTY and Thermo-Click, accuracy  $\pm 5$  °C

#### Communication

Communication	PROFIBUS DP
---------------	-------------

#### Connections

##### Signal cable

Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (AWG 24 ... AWG 16)
-------------------------	---

##### Line side

Version	Plug-in screw terminals
---------	-------------------------

Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (AWG 10 ... AWG 6)
-------------------------	---

##### Motor end

Version	Plug-in screw terminals
---------	-------------------------

Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (AWG 10 ... AWG 6)
-------------------------	---

##### DC link (for braking resistor)

Version	Plug-in screw terminals
---------	-------------------------

Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (AWG 10 ... AWG 6)
-------------------------	---

Line length, max.	15 m (49.21 ft)
-------------------	-----------------

PE connection	On housing with M4 screw
---------------	--------------------------

##### Max. motor cable length

Shielded	50 m (164.04 ft)
----------	------------------

Unshielded	150 m (492.13 ft)
------------	-------------------

#### Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM)
---------------------------	---------------------------

CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
------------	---

MLFB-Ordering data

6SL3210-1KE23-2AP1

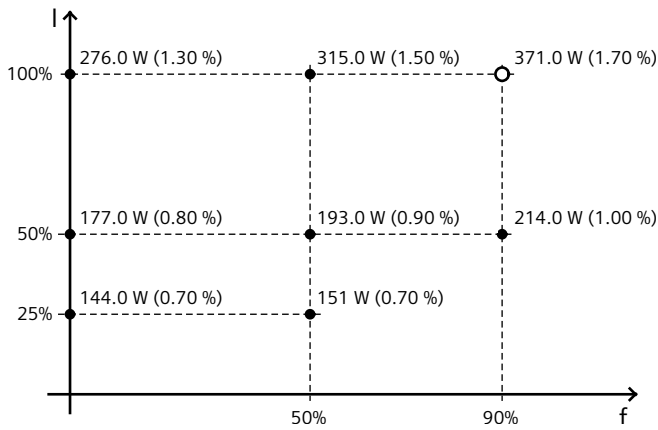


Figure similar

### Converter losses to IEC61800-9-2\*

Efficiency class IE2

Comparison with the reference converter (90% / 100%) 34.20 %



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 IEC61800-9-2) 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.

\*converted values