

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6SL3210-1KE14-3UB2

SINAMICS G120C 1.5 KW COMPACT CONVERTER

Used with the applicable SINAMICS G120C configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Official manufacturer documentation applicable to 6SL3210-1KE14-3UB2



Figure similar

MLFB-Ordering data

6SL3210-1KE14-3UB2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.70 ... 0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V +10 % -20 %	Efficiency η	0.97
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	49 dB
Rated current (LO)	5.50 A	Power loss	0.06 kW
Rated current (HO)	4.50 A	Ambient conditions	
Output		Cooling	Air cooling using an integrated fan
Number of phases	3 AC	Cooling air requirement	0.005 m³/s
Rated voltage	400 V	Installation altitude	1000 m
Rated power (LO)	1.50 kW	Ambient temperature	
Rated power (HO)	1.10 kW	Operation	-10 ... 40 °C (14 ... 104 °F)
Rated current (IN)	4.30 A	Transport	-40 ... 70 °C (-40 ... 158 °F)
Rated current (LO)	4.10 A	Storage	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	3.10 A	Relative humidity	
Max. output current	6.20 A	Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
Pulse frequency	4 kHz	Closed-loop control techniques	
Output frequency for vector control	0 ... 240 Hz	V/f linear / square-law / parameterizable	Yes
Output frequency for V/f control	0 ... 550 Hz	V/f with flux current control (FCC)	Yes
Overload capability		V/f ECO linear / square-law	Yes
Low Overload (LO)		Sensorless vector control	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		Vector control, with sensor	No
High Overload (HO)		Encoderless torque control	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		Torque control, with encoder	No
		Communication	
		Communication	RS485

MLFB-Ordering data

6SL3210-1KE14-3UB2



Figure similar

Mechanical data	
Degree of protection	IP20 / UL open type
Size	F5AA
Net weight	1.40 kg
Width	73.0 mm
Height	173.0 mm
Depth	155.0 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
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)
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 ±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 mm² (28 ... 16 AWG)
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (16 ... 14 AWG)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (16 ... 14 AWG)
DC link (for braking resistor)	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (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%)	-75.68 %

Relative torque generating current I	Relative motor stator frequency f	Losses (W)	Losses (%)
25%	50%	34.9 W	1.23 %
25%	90%	36 W	1.27 %
50%	50%	39.1 W	1.38 %
50%	90%	41.3 W	1.45 %
100%	50%	49.4 W	1.74 %
100%	90%	61.7 W	2.17 %

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.