

MLFB-Ordering data

6SL3210-1KE31-7AF1



Client order no. : Order no. : Offer no. : Item no. : Consignment no. : Project :

Offer no. : Remarks :

Rated da	ta		
Input			
Number of phases	3 AC		
Line voltage	380 480 V +10 % -20 %		
Line frequency	47 63 Hz		
Rated current (LO)	156.00 A		
Rated current (HO)	144.00 A		
Output			
Number of phases	3 AC		
Rated voltage	400 V		
Rated power IEC 400V (LO)	90.00 kW		
Rated power NEC 480V (LO)	100.00 hp		
Rated power IEC 400V (HO)	75.00 kW		
Rated power NEC 480V (HO)	75.00 hp		
Rated current (IN)	164.00 A		
Rated current (LO)	164.00 A		
Rated current (HO)	136.00 A		
Max. output current	272.00 A		
Pulse frequency	2.000 kHz		
Output frequency for vector control	0 240 Hz		
Output frequency for V/f control	0 550 Hz		

Overload capability

Low Overload (LO)

 $150\ \%$ base load current IL for 3 s, followed by $110\ \%$ base load current IL for 57 s in a $300\ s$ cycle time

High Overload (HO)

 $200\,\%$ base load current IH for 3 s, followed by 150 % base load current IH for 57 s in a 300 s cycle time

General tech. specifications			
Power factor λ	0.90 0.95		
Offset factor cos φ	0.99		
Efficiency η	0.99		
Sound pressure level (1m)	68 dB		
Power loss	1.57 kW		
Filter class (integrated)	Class A		

Ambient conditions			
Cooling	Air cooling using an integrated fan		
Cooling air requirement	0.153 m³/s (5.403 ft³/s)		
Installation altitude	1000 m (3280.84 ft)		
Ambient temperature			
Operation	-20 40 °C (-4 104 °F)		
Transport	-40 70 °C (-40 158 °F)		
Storage	-40 70 °C (-40 158 °F)		
Relative humidity			

Max. operation	95 % RH, condensation not permitted

Closed-loop control techniques				
V/f linear / square-law / parameterizable	Yes			
V/f with flux current control (FCC)	Yes			
V/f ECO linear / square-law	Yes			
Sensorless vector control	Yes			
Vector control, with sensor	No			
Encoderless torque control	No			
Torque control, with encoder	No			



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Inputs / outputs tandard digital inputs Number 6 Switching level: 0→1 11 V Switching level: 1→0 5 V Max. inrush current 15 mA ail-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 Inalog / digital inputs Number 1 (Differential input) Resolution 10 bit witching threshold as digital input	Mechanical data		Cor		
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Width 305 mm (12.01 in) Conductor creed the leight 708 mm (27.87 in) Line side 700 mm (27.87 in) Line side 700 mm (27.87 in) Version 700 mm (27.87 in) 700 mm (27	Size	FSF		Connections	
Height 708 mm (27.87 in) Line side Version Conductor cross-si Andard digital inputs Number 6 Version Switching level: 0→1 11 V Conductor cross-si Switching level: 1→0 5 V DC link (for braking literation of the property of the pr	Net weight	63.50 kg (139.99 lb)	Signal cable		
Depth 357 mm (14.06 in) Version	Width	305 mm (12.01 in)	Conductor cross-sect	ion	
Inputs / outputs Motor end Number 6 Version Switching level: 0→1 11 V Conductor cross-section Switching level: 1→0 5 V DC link (for braking reconductor cross-section for braking r	Height	708 mm (27.87 in)	Line side		
tandard digital inputs Number 6 Version Switching level: 0→1 11 V Conductor cross-section Switching level: 1→0 5 V DC link (for braking re Max. inrush current 15 mA Version ail-safe digital inputs Number 1 Line length, max. PE connection Number as relay changeover contact 1 Max. motor cable leng Output (resistive load) DC 30 V, 0.5 A Shielded Number as transistor 1 Unshielded Output (resistive load) DC 30 V, 0.5 A Compliance with stand Number 1 (Differential input) Resolution 10 bit CE marking witching threshold as digital input 0→1 4 V	Depth	357 mm (14.06 in)	Version		
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Line length, max. PE connection Max. motor cable length Output (resistive load) DC 30 V, 0.5 A Shielded Unshielded Output (resistive load) DC 30 V, 0.5 A Compliance with standar Number 1 (Differential input) Resolution 10 bit CE marking witching threshold as digital input 0→1 4 V	Fail-safe digital inputs		Conductor cross-section		
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Output (resistive load) Number as transistor 1 Unshielded Output (resistive load) Compliance with standar Number 1 (Differential input) Resolution 10 bit CE marking witching threshold as digital input 0→1 4 ∨	Digital outputs		PE connection		
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Number 1 (Differential input) Resolution 10 bit CE marking witching threshold as digital input 0→1 4 V	Number as transistor	1	Unshielded		
Number 1 (Differential input) Resolution 10 bit CE marking witching threshold as digital input 0→1 4 V	Output (resistive load)	DC 30 V, 0.5 A		:	
Resolution 10 bit CE marking witching threshold as digital input 0→1 4 V	Analog / digital inputs		Compliance with standard	ls	
witching threshold as digital input 0→1	Number	1 (Differential input)			
0→1 4 V	Resolution	10 bit	CE marking		
	Switching threshold as digital in	put			
1→0 1.6 V	0→1	4 V			
	1→0	1.6 V			

PTC/ KTY interface

Analog outputs

Number

1 motor temperature sensor input, sensors that can be connected: PTC, KTY and Thermo-Click, accuracy $\pm 5~^{\circ}\text{C}$

1 (Non-isolated output)



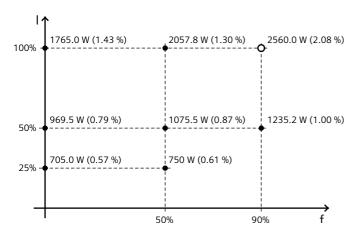
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Converter losses to EN 50598-2*

Efficiency class	IE2
Comparison with the reference converter (90% /	-0.51 %



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.

*converted values