

Article No. : 6SL3220-2YH22-0UB0



Figure similar

Client order no. :  
Order no. :  
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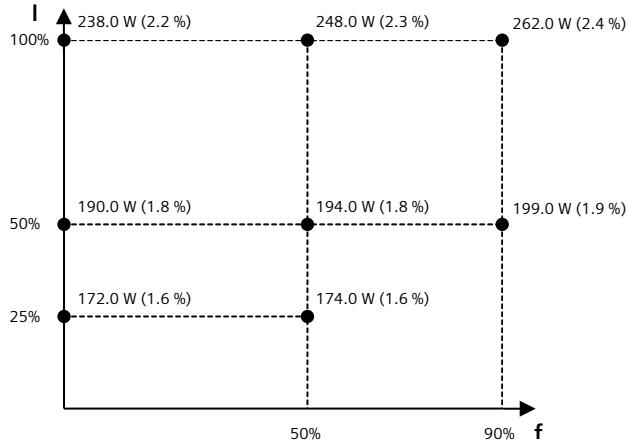
Rated data		
<b>Input</b>		
Number of phases	3 AC	
Line voltage	500 ... 690 V +10 % -20 %	
Line frequency	47 ... 63 Hz	
<b>Rated voltage</b>	<b>690V IEC</b>	<b>600V NEC</b>
Rated current (LO)	9.00 A	9.00 A
Rated current (HO)	6.90 A	6.90 A
<b>Output</b>		
Number of phases	3 AC	
<b>Rated voltage</b>	<b>690V IEC</b>	<b>600V NEC<sup>1)</sup></b>
Rated power (LO)	5.50 kW	7.50 hp
Rated power (HO)	4.00 kW	5.00 hp
Rated current (LO)	9.00 A	9.00 A
Rated current (HO)	6.30 A	6.30 A
Rated current (IN)	10.00 A	
Max. output current	13.00 A	
Pulse frequency	2 kHz	
Output frequency for vector control	0 ... 200 Hz	
Output frequency for V/f control	0 ... 550 Hz	
<b>Overload capability</b>		
Low Overload (LO)	110% base load current IL for 60 s in a 300 s cycle time	
High Overload (HO)	150% x base load current IH for 60 s within a 600 s cycle time	
General tech. specifications		
Power factor $\lambda$	0.90 ... 0.95	
Offset factor $\cos \phi$	0.99	
Efficiency $\eta$	0.97	
Sound pressure level (1m)	70 dB	
Power loss <sup>3)</sup>	0.262 kW	
Filter class (integrated)	Unfiltered	
EMC category (with accessories)	without	
Safety function "Safe Torque Off"	without SIRIUS device (e.g. via S7-1500F)	
Communication		
Communication	USS, Modbus RTU, BACnet MS/TP	

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	2			
Output (resistive load)	DC 30 V, 5.0 A			
Number as transistor	0			
<b>Analog / digital inputs</b>				
Number	2 (Differential input)			
Resolution	10 bit			
<b>Switching threshold as digital input</b>				
0 → 1	4 V			
1 → 0	1.6 V			
<b>Analog outputs</b>				
Number	1 (Non-isolated output)			
<b>PTC/ KTY interface</b>				
1 motor temperature sensor input, sensors that can be connected PTC, KTY and Thermo-Click, accuracy $\pm 5^\circ\text{C}$				

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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Ambient conditions		Mechanical data	
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002	Degree of protection	IP20 / UL open type
Cooling	Air cooling using an integrated fan	Frame size	FSD
Cooling air requirement	0.055 m <sup>3</sup> /s (1.942 ft <sup>3</sup> /s)	Net weight	16.6 kg (36.60 lb)
Installation altitude	1,000 m (3,280.84 ft)	Dimensions	
Ambient temperature		Width	200 mm (7.87 in)
Operation	-20 ... 45 °C (-4 ... 113 °F)	Height	472 mm (18.58 in)
Transport	-40 ... 70 °C (-40 ... 158 °F)	Depth	248 mm (9.76 in)
Storage	-25 ... 55 °C (-13 ... 131 °F)	Standards	
Relative humidity		Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH
Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible	CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
Connections			
Signal cable		Converter losses to IEC61800-9-2*	
Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (AWG 24 ... AWG 16)	Efficiency class	IE2
Line side		Comparison with the reference converter (90% / 100%)	44.8 %
Version	screw-type terminal		
Conductor cross-section	10.00 ... 35.00 mm <sup>2</sup> (AWG 8 ... AWG 2)		
Motor end			
Version	Screw-type terminals		
Conductor cross-section	10.00 ... 35.00 mm <sup>2</sup> (AWG 8 ... AWG 2)		
DC link (for braking resistor)			
PE connection	Screw-type terminals		
Max. motor cable length			
Shielded	200 m (656.17 ft)		
Unshielded	300 m (984.25 ft)		



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.

\*calculated values

<sup>1)</sup>The output current and HP ratings are valid for the voltage range 550V-600V

<sup>2)</sup>Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.

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### Operator panel: Basic Operator Panel (BOP-2)

Screen		Ambient conditions	
Display design	LCD, monochrome	Ambient temperature	
Mechanical data			
Degree of protection	IP55 / UL type 12	Operation	0 ... 50 °C (32 ... 122 °F)
Net weight	0.140 kg (0.31 lb)	Storage	-40 ... 70 °C (-40 ... 158 °F)
Dimensions			
Width	70.00 mm (2.76 in)	Transport	-40 ... 70 °C (-40 ... 158 °F)
Height	106.85 mm (4.21 in)	Relative humidity at 25°C during	
Depth	19.60 mm (0.77 in)	Max. operation	95 %
Approvals			
Certificate of suitability	CE, cULus, EAC, KCC, RCM		