



Figure similar

Article No. : 6SL3220-1YE38-0AF0

Client order no. :
 Order no. :
 Offer no. :
 Remarks :

Item no. :

Consignment no. :
 Project :

Rated data

Input

Number of phases	3 AC	
Line voltage	380 ... 480 V +10 % -20 %	
Line frequency	47 ... 63 Hz	
Rated voltage	400V IEC	480V NEC
Rated current (LO)	86.00 A	74.00 A
Rated current (HO)	78.00 A	69.00 A

Output

Number of phases	3 AC	
Rated voltage	400V IEC	480V NEC₁
Rated power (LO)	45.00 kW	60.00 hp
Rated power (HO)	37.00 kW	50.00 hp
Rated current (LO)	90.00 A	77.00 A
Rated current (HO)	75.00 A	65.00 A
Rated current (IN)	93.00 A	
Max. output current	122.00 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 ... 200 Hz	
Output frequency for V/f control	0 ... 550 Hz	

Overload capability

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 λ	0.90 ... 0.95
Offset factor $\cos \phi$	0.99
Efficiency η	0.97
Sound pressure level (1m)	70 dB
Power loss ₃	1.340 kW
Filter class (integrated)	RFI suppression filter for Category C2
EMC category (with accessories)	Category C2

Ambient conditions

Standard board coating type	Class 3C2, according to IEC-60721-3-3-2002
Cooling	Air cooling using an integrated fan
Cooling air requirement	0.083 m ³ /s (2.931 ft ³ /s)
Installation altitude	1,000 m (3,280.84 ft)

Ambient temperature

Operation	-20 ... 45 °C (-4 ... 113 °F)
Transport	-40 ... 70 °C (-40 ... 158 °F)
Storage	-25 ... 55 °C (-13 ... 131 °F)

Relative humidity

Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible
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Mechanical data

Degree of protection	IP20 / UL open type
Size	FSE
Net weight	29 kg (63.93 lb)

Dimensions

Width	275 mm (10.83 in)
Height	551 mm (21.69 in)
Depth	248 mm (9.76 in)

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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
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Digital outputs

Number as relay changeover contact 2 Output (resistive load)	DC 30 V, 5.0 A
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Number as transistor	0
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Analog / digital inputs

Number	2 (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)
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PTC/ KTY interface

1 motor temperature sensor input, sensors that can be connected: PTC, KTY and Thermo-Click, accuracy ±5 °C
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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	Yes
Torque control, with encoder	No

Communication

Communication	PROFINET, EtherNet/IP
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Connections

Signal cable

Conductor cross-section	0.15 ... 1.50 mm ² (AWG 24 ... AWG 16)
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Line side

Version	screw-type terminal
Conductor cross-section	25.00 ... 70.00 mm ² (AWG 6 ... AWG 3/0)

Motor end

Version	Screw-type terminals
Conductor cross-section	25.00 ... 70.00 mm ² (AWG 6 ... AWG 3/0)

DC link (for braking resistor)

PE connection	Screw-type terminals
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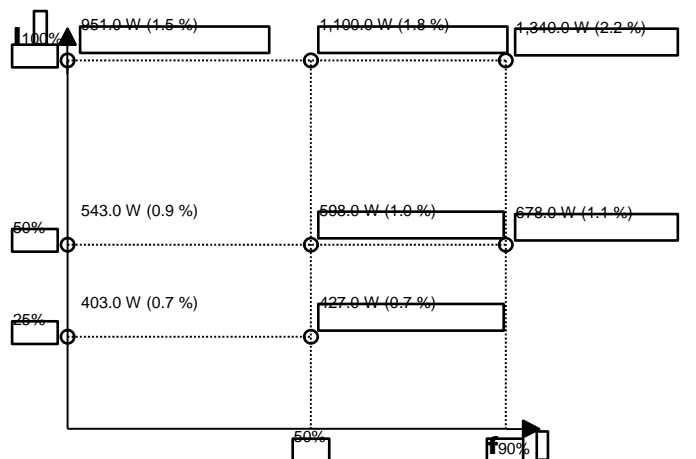
Max. motor cable length

Shielded	150 m (492.13 ft)
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Converter losses to IEC61800-9-2*

Efficiency class	IE2
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Comparison with the reference converter (90% / 100%)	45.5 %
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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

Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH
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CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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¹⁾ The output current and HP ratings are valid for the voltage range 440V-480V

³⁾ Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.