



Figure similar

### MLFB-Ordering data

6SL3220-3YE54-0AF0

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>	0.90 ... 0.95
Number of phases	3 AC		<b>Offset factor <math>\cos \varphi</math></b>	0.99
Line voltage	380 ... 480 V +10 % -20 %		<b>Efficiency <math>\eta</math></b>	0.98
Line frequency	47 ... 63 Hz		<b>Sound pressure level (1m)</b>	74 dB
Rated voltage	400V IEC	480V NEC	<b>Power loss</b>	6.180 kW
Rated current (LO)	482.00 A	471.00 A	<b>Filter class (integrated)</b>	RFI suppression filter for Category C2
Rated current (HO)	400.00 A	392.00 A	<b>Ambient conditions</b>	
<b>Output</b>			<b>Cooling</b>	Air cooling using an integrated fan
Number of phases	3 AC		<b>Cooling air requirement</b>	0.210 m³/s (7.416 ft³/s)
Rated voltage	400V IEC	480V NEC	<b>Installation altitude</b>	1000 m (3280.84 ft)
Rated power (LO)	250.00 kW	400.00 hp	<b>Ambient temperature</b>	
Rated power (HO)	200.00 kW	250.00 hp	<b>Operation</b>	-20 ... 45 °C (-4 ... 113 °F)
Rated current (LO)	477.00 A	477.00 A	<b>Transport</b>	-40 ... 70 °C (-40 ... 158 °F)
Rated current (HO)	370.00 A	361.00 A	<b>Storage</b>	-25 ... 55 °C (-13 ... 131 °F)
Rated current (IN)	488.00 A		<b>Relative humidity</b>	
Max. output current	644.00 A		<b>Max. operation</b>	95 % At 40 °C (104 °F), condensation and icing not permissible
Pulse frequency	4 kHz		<b>Closed-loop control techniques</b>	
Output frequency for vector control	0 ... 200 Hz		<b>V/f linear / square-law / parameterizable</b>	Yes
Output frequency for V/f control	0 ... 550 Hz		<b>V/f with flux current control (FCC)</b>	Yes
<b>Overload capability</b>			<b>V/f ECO linear / square-law</b>	Yes
<b>Low Overload (LO)</b>			<b>Sensorless vector control</b>	Yes
110% base load current IL for 60 s in a 300 s cycle time			<b>Vector control, with sensor</b>	No
<b>High Overload (HO)</b>			<b>Encoderless torque control</b>	Yes
150% x base load current IH for 60 s within a 600 s cycle time			<b>Torque control, with encoder</b>	No



Figure similar

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Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSG
Net weight	120 kg (264.56 lb)
Width	305 mm (12.01 in)
Height	999 mm (39.33 in)
Depth	360 mm (14.17 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
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### Digital outputs

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

### 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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Communication	
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Communication	PROFINET / EtherNet/IP
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Connections	
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### Signal cable

Conductor cross-section	0.15 ... 1.50 mm² (AWG 24 ... AWG 16)
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### Line side

Version	M10 screw
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Conductor cross-section	35.00 ... 185.00 mm² (AWG 2 ... AWG -3)
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### Motor end

Version	M10 screw
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Conductor cross-section	35.00 ... 185.00 mm² (AWG 2 ... AWG -3)
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### DC link (for braking resistor)

PE connection	M10 screw
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### Max. motor cable length

Shielded	300 m (984.25 ft)
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Unshielded	450 m (1476.38 ft)
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Standards	
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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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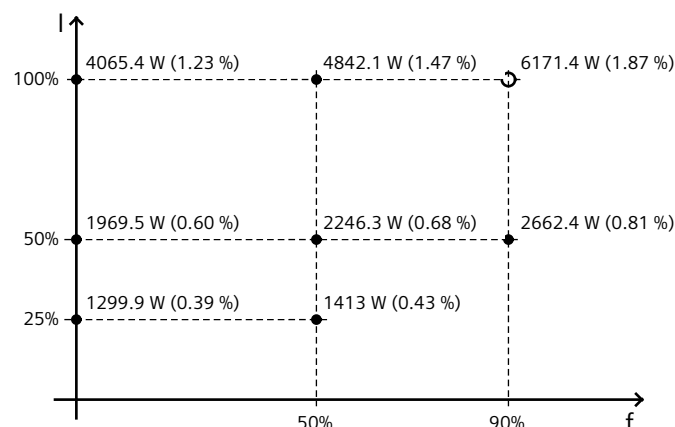


Figure similar

### Converter losses to EN 50598-2\*

Efficiency class IE2

Comparison with the reference converter (90% / 100%) -45.70 %



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

### Operator panel: Intelligent Operator Panel (IOP-2)

#### Screen

Display design LCD colors

Screen resolution 320 x 240 Pixel

#### Ambient conditions

##### Ambient temperature during

Operation 0 ... 50 °C (32 ... 122 °F)  
55 °C only with door mounting kit

Storage -40 ... 70 °C (-40 ... 158 °F)

Transport -40 ... 70 °C (-40 ... 158 °F)

#### Mechanical data

Degree of protection IP55 / UL type 12

Net weight 0.13 kg (0.30 lb)

Width 70.0 mm (2.76 in)

Height 106.85 mm (4.21 in)

Depth 19.65 mm (0.77 in)

##### Relative humidity at 25°C during

Max. operation 95 %

### Approvals

Certificate of suitability CE, cULus, EAC, KCC, RCM