

### MLFB-Ordering data

6SL3210-1KE23-2UB1



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor $\lambda$ 0.70 ... 0.85	
Number of phases	3 AC	Offset factor $\cos \varphi$ 0.95	
Line voltage	380 ... 480 V +10 % -20 %	Efficiency $\eta$ 0.97	
Line frequency	47 ... 63 Hz	Sound pressure level (1m)66 dB	
Rated current (LO)	40.60 A	Power loss0.43 kW	
Rated current (HO)	36.40 A	Filter class (integrated)Unfiltered	
Output		Ambient conditions	
Number of phases	3 AC	CoolingAir cooling using an integrated fan	
Rated voltage	400 V	Cooling air requirement0.018 m³/s (0.636 ft³/s)	
Rated power IEC 400V (LO)	15.00 kW	Installation altitude1000 m (3280.84 ft)	
Rated power NEC 480V (LO)	20.00 hp	Ambient temperature	
Rated power IEC 400V (HO)	11.00 kW	Operation-10 ... 40 °C (14 ... 104 °F)	
Rated power NEC 480V (HO)	15.00 hp	Transport-40 ... 70 °C (-40 ... 158 °F)	
Rated current (IN)	32.00 A	Storage-40 ... 70 °C (-40 ... 158 °F)	
Rated current (LO)	31.00 A	Relative humidity	
Rated current (HO)	25.00 A	Max. operation95 % At 40 °C (104 °F), condensation and icing not permissible	
Max. output current	50.00 A	Closed-loop control techniques	
Pulse frequency	4 kHz	V/f linear / square-law / parameterizableYes	
Output frequency for vector control	0 ... 240 Hz	V/f with flux current control (FCC)Yes	
Output frequency for V/f control	0 ... 550 Hz	V/f ECO linear / square-lawYes	
Overload capability		Sensorless vector controlYes	
Low Overload (LO)		Vector control, with sensorNo	
150 % base load current IL for 3 s, followed by 110 % base load current IL for 57 s in a 300 s cycle time		Encoderless torque controlNo	
High Overload (HO)		Torque control, with encoderNo	
200 % base load current IH for 3 s, followed by 150 % base load current IH for 57 s in a 300 s cycle time			



Figure similar

### Mechanical data

Degree of protection	IP20 / UL open type
Size	FSC
Net weight	4.40 kg (9.70 lb)
Width	140 mm (5.51 in)
Height	295 mm (11.61 in)
Depth	203 mm (7.99 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	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)
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

Communication	USS/MODBUS RTU
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### Connections

#### Signal cable

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

Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)

#### Motor end

Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)

#### DC link (for braking resistor)

Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)
Line length, max.	15 m (49.21 ft)
PE connection	On housing with M4 screw

#### Max. motor cable length

Shielded	50 m (164.04 ft)
Unshielded	150 m (492.13 ft)

### Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM)
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CE marking	EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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MLFB-Ordering data

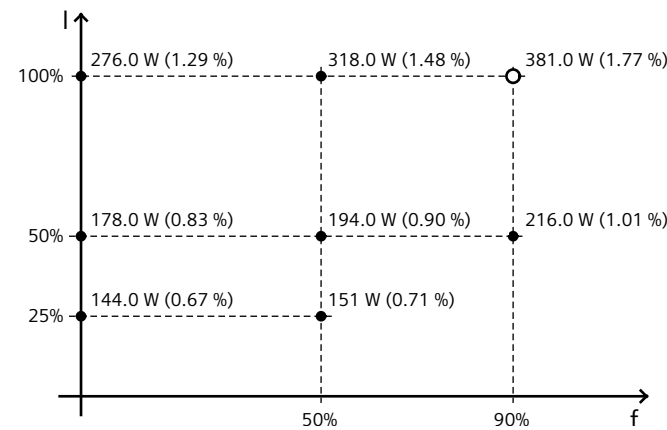
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Figure similar

Converter losses to EN 50598-2\*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-65.83 %



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