

#### **MLFB-Ordering data**

6SL3210-1KE23-8UF1



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

Remarks:

Item no. : Consignment no. : Project :

Power factor λ

# Rated data

Input	
Number of phases	3 AC
Line voltage	380 480 V +10 % -20 %
Line frequency	47 63 Hz
Rated current (LO)	48.20 A
Rated current (HO)	45.20 A
Output	
Number of phases	3 AC
Rated voltage	400 V
Rated power IEC 400V (LO)	18.50 kW
Rated power NEC 480V (LO)	25.00 hp
Rated power IEC 400V (HO)	15.00 kW
Rated power NEC 480V (HO)	20.00 hp
Rated current (IN)	38.00 A
Rated current (LO)	37.00 A
Rated current (HO)	31.00 A
Max. output current	62.00 A
Pulse frequency	4 kHz
Output frequency for vector control	0 240 Hz

## Overload capability

Output frequency for V/f control

### 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

0 ... 550 Hz

#### 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

Offset factor cos φ	0.95
Efficiency η	0.97
Sound pressure level (1m)	66 dB
Power loss	0.50 kW

General tech. specifications

0.70 ... 0.85

Filter class (integrated) Unfiltered

### Ambient conditions

Cooling	Air cooling using an integrated fan
Cooling air requirement	0.018 m³/s (0.636 ft³/s)
Installation altitude	1000 m (3280.84 ft)

## **Ambient temperature**

Operation	-10 40 °C (14 104 °F)
Transport	-40 70 °C (-40 158 °F)
Storage	-40 70 °C (-40 158 °F)

## Relative humidity

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

# 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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			Figure simi
Mechanica	l data	Com	nmunication
Degree of protection	IP20 / UL open type	Communication	PROFINET, EtherNet/IP
Size	FSC	Со	nnections
Net weight	4.40 kg (9.70 lb)	Signal cable	
Width	140 mm (5.51 in)	Conductor cross-section	0.15 1.50 mm² (AWG 24 AWG 16)
Height	295 mm (11.61 in)	Line side	
Depth	208 mm (8.19 in)	Version	Plug-in screw terminals
Inputs / ou	tputs	Conductor cross-section	6.00 16.00 mm² (AWG 10 AWG 6)
Standard digital inputs		Motor end	
Number	6	Version	Plug-in screw terminals
Switching level: 0→1	11 V	Conductor cross-section	6.00 16.00 mm² (AWG 10 AWG 6)
Switching level: 1→0	5 V	DC link (for braking resistor)	)
Max. inrush current	15 mA	Version	Plug-in screw terminals
Fail-safe digital inputs		Conductor cross-section	6.00 16.00 mm <sup>2</sup> (AWG 10 AWG 6)
Number	1	Line length, max.	15 m (49.21 ft)
Digital outputs		PE connection	On housing with M4 screw
Number as relay changeover contact	1	Max. motor cable length	on nousing warm screw
Output (resistive load)	DC 30 V, 0.5 A	Shielded	50 m (164.04 ft)
Number as transistor	1	Unshielded	150 m (492.13 ft)
Output (resistive load)	DC 30 V, 0.5 A	Standards	
Analog / digital inputs		Compliance with standards	UL, cUL, CE, C-Tick (RCM)
Number	1 (Differential input)		
Resolution	10 bit	CE marking	EMC Directive 2004/108/EC, Low-Voltag Directive 2006/95/EC
Switching threshold as digital in	put		
0 → 1	4 V		

0→1	4 V
1→0	1.6 V

# Analog outputs

Number	1 (Non-isolated output)

# PTC/ KTY interface

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





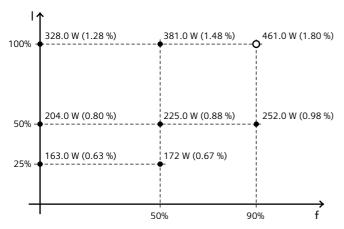
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Figure similar

## Converter losses to EN 50598-2\*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-64.36 %



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

