

MLFB-Ordering data

6SL3210-1KE23-2UP1



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

ltem no. :
Consignment no. :
Project :

Rated data		General tec	General tech. specifications	
Input		Power factor λ	0.70 0.85	
Number of phases	3 AC	Offset factor cos φ	0.95	
Line voltage	380 480 V +10 % -20 %	Efficiency η	0.97	
Line frequency	47 63 Hz	Sound pressure level (1m)	66 dB	
Rated current (LO)	40.60 A	Power loss	0.43 kW	
Rated current (HO)	36.40 A	Filter class (integrated)	Unfiltered	
Output		Ambior	nt conditions	
Number of phases	3 AC	Alliblei		
Rated voltage	400 V	Cooling	Air cooling using an integrated fan	
Rated power IEC 400V (LO)	15.00 kW		0.010 31 (0.020 (321))	
Rated power NEC 480V (LO)	20.00 hp	Cooling air requirement	0.018 m ³ /s (0.636 ft ³ /s)	
Rated power IEC 400V (HO)	11.00 kW	Installation altitude	1000 m (3280.84 ft)	
Rated power NEC 480V (HO)	15.00 hp	Ambient temperature		
Rated current (IN)	32.00 A	Operation	-10 40 °C (14 104 °F)	
Rated current (LO)	31.00 A	Transport	-40 70 °C (-40 158 °F)	
Rated current (HO)	25.00 A	Storage	-40 70 °C (-40 158 °F)	
Max. output current	50.00 A	Relative humidity		
Pulse frequency	4 kHz	Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible	
Output frequency for vector control	0 240 Hz			
		Closed-loop o	control techniques	
Output frequency for V/f control	0 550 Hz	V/f linear / square-law / parame	terizable Yes	
		V/f with flux current control (FC	CC) Yes	
Overload capability		V/f ECO linear / square-law	Yes	
Low Overload (LO)		Sensorless vector control	Yes	
150 % base load current IL for 3 s, followed by 300 s cycle time	110 % base load current IL for 57 s in a	Vector control, with sensor	No	

150 % base load current IL for 3 s, followed by 110 % base load current IL for 57 s in 300 s cycle time

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





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Figure similar

Degree of protectionIP20 / UL open typeCommunicationPROFIBUS DPSizeFSCConnectionsNet weight4.40 kg (9.70 lb)Signal cableWidth140 mm (5.51 in)Conductor cross-section0.15 1.50 mm² (AWG 24 AWHeight295 mm (11.61 in)Line sideDepth203 mm (7.99 in)VersionPlug-in screw terminalsInputs / outputsConductor cross-section6.00 16.00 mm² (AWG 10 A)Standard digital inputsMotor endVersionPlug-in screw terminalsNumber6VersionPlug-in screw terminalsSwitching level: 0 ~ 111 VConductor cross-section6.00 16.00 mm² (AWG 10 A)Switching level: 1 ~ 05 VDC link (for braking resistor)Max. inrush current15 mAConductor cross-section6.00 16.00 mm² (AWG 10 A)Switching level: 1 ~ 05 VDC link (for braking resistor)Mumber1Site (for braking resistor)DMumber1Site (for braking resistor)PE connectionNumber1Unstielded50 m (164.04 ft)Number as relay changeover contact1Unstielded50 m (164.04 ft)Number1 (Differential input)Sheided50 m (164.04 ft)Number1 (Differential input)Compliance with standardsUL, CUL, CE, C-Tick (RCM)Number1 (Differential input)CernerkingEMC Directive 2006/95/RCSwitching threshold as digital input1.6 VCernerkingNumber </th <th colspan="2">Machanical data</th> <th>Com</th> <th colspan="2">Figur</th>	Machanical data		Com	Figur	
Size FSC Connections 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 AW Height 295 mm (11.61 in) Line side Depth 203 mm (7.99 in) Version Plug-in screw terminals Conductor cross-section 6.00 16.00 mm² (AWG 14 AW Standard digital inputs Conductor cross-section 6.00 16.00 mm² (AWG 10 AV Number 6 Version Plug-in screw terminals Switching level: 0 - 1 11 V Conductor cross-section 6.00 16.00 mm² (AWG 10 AV Switching level: 1 - 0 5 V DC link (for braking resistor) 6.00 16.00 mm² (AWG 10 AV Switching level: 1 - 0 5 V DC link (for braking resistor) 6.00 16.00 mm² (AWG 10 AV Switching level: 1 - 0 5 V Max. motor cable length, max. 15 m (49.21 ft) Digital outputs PE connection 0 n housing with M4 screw Number as relay changeover contact 1 Unshelded 50 m (164.04 ft) Number as relay changeover contact 1 Unshelded 50 m (164.04 ft) Number as relay changeover contact 1 Compliance with standards UL cUL, CE, CTick (RCM) Number As relay chan	Mechanical data		Con	Communication	
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Width140 mm (5.51 in)Conductor cross-section0.15 1.50 mm² (AWG 24 AWHeight295 mm (11.61 in)Line sideDepth203 mm (7.99 in)VersionPlug-in screw terminalsInputs / outputs / outputsConductor cross-section6.00 16.00 mm² (AWG 10 AWStandard digital inputsMotor endVersionPlug-in screw terminalsNumber6Version6.00 16.00 mm² (AWG 10 AWSwitching level: 0 - 111 VConductor cross-section6.00 16.00 mm² (AWG 10 AWSwitching level: 1 - 05 VDC link (for braking resistor)Motor endMax. inrush current15 mAVersionPlug-in screw terminalsSail-safe digital inputsVersionPlug-in screw terminalsNumber11VersionPlug-in screw terminalsDigital outputsVersionPlug-in screw terminalsNumber as relay changeover contact1VersionNonising with M4 screwNumber as transistor1Unshielded15 m (49.21 ft)Output (resistive load)DC 30 V, 0.5 AShielded50 m (164.04 ft)Number1 (0ifferential input)EMC Directive 2006/95/ECEMC Directive 2006/95/ECNumber1 (0ifferential input)EMC Directive 2006/95/ECEMC Directive 2006/95/ECNumber1 (bitStandardsUL, CUL, CE, CTick (RCM)Number1 (bitEMC Directive 2006/95/ECEMC Directive 2006/95/ECNumber1 (bitEMC Directive 2006/95/ECNumber	Size	FSC	Connections		
Height295 mm (11.61 in)Line sideDepth203 mm (7.99 in)Line sideInputs / outputs / output / ou	Net weight	4.40 kg (9.70 lb)	Signal cable		
Depth 203 mm (7.99 in) Version Plug-in screw terminals Inputs / output conductor cross-section 6.00 16.00 mm² (AWG 10 AI Number 6 Version 6.00 16.00 mm² (AWG 10 AI Switching level: 0 -1 11 V Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Switching level: 1 -0 5 V Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Switching level: 1 -0 5 V Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Switching level: 1 -0 5 V Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Max. inrush current 15 mA Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Sail-safe digital inputs Conductor cross-section 6.00 16.00 mm² (AWG 10 AI Number as relay changeover contact 1 Persion 0.00 16.00 mm² (AWG 10 AI Number as transistor 1 Shielded Som (164.04 ft) Max. Number 10 Differential input) Shielded Som (164.04 ft) Max. Number 10 Differential input) Emarking EMC Directive 2000/05/EC Convertive 2000/05/EC Convertive 2000/05/EC Convertive 2000/05/EC Convertive 2000	Width	140 mm (5.51 in)	Conductor cross-section	0.15 1.50 mm² (AWG 24 AW	
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Number6VersionPlug-in screw terminalsSwitching level: 0-111 VConductor cross-section6.00 16.00 mm² (AWG 10 A)Switching level: 1-05 VDC link (for braking resistor)DC link (for braking resistor)Max. inrush current15 mAVersionPlug-in screw terminalsail-safe digital inputsConductor cross-section6.00 16.00 mm² (AWG 10 A)Number1Line length, max.15 m (49.21 ft)PE connectionOn housing with M4 screwMax. motor cable lengthNumber as relay changeover contact1Shielded50 m (164.04 ft)Number as transistor1Unshielded150 m (492.13 ft)Output (resistive load)DC 30 V, 0.5 AShielded50 m (164.04 ft)Number1 (Differential input)Compliance with standardsUL, cUL, CE, C-Tick (RCM)Number1 (Differential input)Compliance with standardsUL, cUL, CE, C-Tick (RCM)Number10 bitCompliance with standardsUL, cUL, CE, C-Tick (RCM)witching threshold as digital inputsCompliance with standardsUL, cUL, CE, C-Tick (RCM)witching threshold as digital inputsCompliance with standardsUL, cUL, CE, C-Tick (RCM)witching threshold as digital inputsCompliance with standardsUL, cUL, CE, C-Tick (RCM)witching threshold as digital inputsCompliance with standardsUL, cUL, cE, C-Tick (RCM)witching threshold as digital inputsCompliance with standardsUL, cUL, cE, C-Tick (RCM)witching threshold as digital input	Inputs / out	tputs	Conductor cross-section	6.00 16.00 mm² (AWG 10 AV	
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Digital outputs Line length, max. 15 m (49.21 ft) Number as relay changeover contact 1 PE connection On housing with M4 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 Image: Compliance with standards UL, CUL, CE, C-Tick (RCM) Number 1 (Differential input) Compliance with standards UL, CUL, CE, C-Tick (RCM) Number 1 (Differential input) EMC Directive 2004/108/EC, Low-Directive 2006/95/EC Switching threshold as digital inputs EMC Directive 2006/95/EC EMC Directive 2006/95/EC Number 1.6 V 1.6 V Image: Compliance with standards UL, CUL, CE, C-Tick (RCM) Number 1 (Non-isolated output) Image: CE marking EMC Directive 2006/95/EC	ail-safe digital inputs		Conductor cross-section	6.00 16.00 mm² (AWG 10 AW	
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Number as transistor1Unshielded150 m (492.13 ft)Output (resistive load)DC 30 V, 0.5 AStandardsNumber10 Differential input)Compliance with standardsUL, CUL, CE, C-Tick (RCM)Number10 bitCE markingEMC Directive 2004/108/EC, Low- Directive 2006/95/ECNumber4 VStandardsEMC Directive 2004/108/EC, Low- Directive 2006/95/EC0-14 VStandardsEMC Directive 2006/95/EC1-01.6 VStandardsStandardsNumber1 (Non-isolated output)StandardsStandards	Number as relay changeover contact	1			
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) EMC Directive 2004/108/EC, Low-Directive 2006/95/EC Switching threshold as digital inputs EMC Directive 2006/95/EC 0-1 4 V 1-0 1.6 V Analog outputs 1 (Non-isolated output)	Output (resistive load)	DC 30 V, 0.5 A	Shielded	50 m (164.04 ft)	
Number 1 (Differential input) Resolution 1 (Differential input) 0→1 4 ∨ 1→0 1.6 ∨ Number 1 (Non-isolated output)	Number as transistor	1	Unshielded	150 m (492.13 ft)	
Number1 (Differential input)Resolution10 bitSwitching threshold as digital input0→14 ∨1→01.6 ∨Number1 (Non-isolated output)	Output (resistive load)	DC 30 V, 0.5 A	S	tandards	
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0→1 4 V 1→0 1.6 V Analog outputs Number 1 (Non-isolated output)	Resolution	10 bit	CE marking		
1→01.6 VAnalog outputs1 (Non-isolated output)	witching threshold as digital in	put			
Number 1 (Non-isolated output)	0→1	4 V			
Number 1 (Non-isolated output)	1→0	1.6 V			
	Analog outputs				
'TC/ KTY interface	Number	1 (Non-isolated output)			
	PTC/ KTY interface				

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



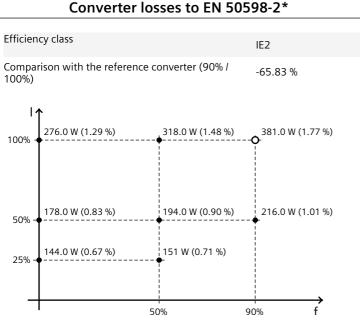


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Figure similar



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

