

## 订购数据

MLFB-Ordering data

6SL3220-2YD30-0UB0

客户订单号 / Client order no.:

西门子订单号 / Order no.:

报价号 / Offer no.:

注释 / Remarks:

物品号 / Item no.:

托运号 / Consignment no.:

项目 / Project:

## 额定数据 / Rated data

## 输入 / Input

相位数 Number of phases	3 AC
电源电压 Line voltage	380 ... 440 V +10 % -20 %
电源频率 Line frequency	47 ... 63 Hz
额定电流 (LO) Rated current (LO)	41.00 A

## 输出 / Output

相位数 Number of phases	3 AC
额定电压 Rated voltage	400 V
额定功率 IEC 400V (LO) Rated power IEC 400V (LO)	18.50 kW
额定电流 400V (IN) Rated current 400V (IN)	
额定电流 380V (IN) Rated current 380V (IN)	
额定电流 (LO) Rated current (LO)	37.00 A
最大输出电流 Max. output current	41.00 A
脉冲频率 Pulse frequency	4 kHz
矢量控制时的输出频率 Output frequency for vector control	0 ... 240 Hz
V/f控制时的输出频率 Output frequency for V/f control	0 ... 550 Hz

## 过载能力 / Overload capability

低过载 (LO)  
Low Overload (LO)周期时间 300 s 中, 110%基本负载电流 IL, 持续时间 60 s  
110% base load current IL for 60 s in a 300 s cycle time

## 通用技术参数 / General tech. specifications

功率系数 $\lambda$ Power factor $\lambda$	0.75 ... 0.93
偏移角 $\cos \varphi$ Offset factor $\cos \varphi$	0.99
效率 $\eta$ Efficiency $\eta$	0.98
声压级 LpA(1m) Sound pressure level (1m)	62.20 dB
损耗功率 Power loss	0.535 kW

滤波器等级 (集成式)  
Filter class (integrated) 未滤波  
UnfilteredEMC 类别 (含附件)  
EMC category (with accessories)

## 环境条件 / Ambient conditions

喷漆标准  
Standard board coating type 符合 EN 60721-3-3 3C2 等级  
Class 3C2 to EN 60721-3-3冷却  
Cooling 通过集成的风扇进行空气冷却  
Air cooling using an integrated fan冷却空气需求  
Cooling air requirement 0.055 m<sup>3</sup>/s (1.942 ft<sup>3</sup>/s)安装高度  
Installation altitude 1000 米 (3280.84 ft)

## 环境温度 / Ambient temperature

运行  
Operation -20 ... 60 °C (-4 ... 140 °F)运输  
Transport -40 ... 70 °C (-40 ... 158 °F)轴承  
Storage -40 ... 70 °C (-40 ... 158 °F)

## 相对空气湿度 / Relative humidity

运行, 最大  
Max. operation 95 % 40 °C (104 °F) 时, 禁止发生凝  
露和结冰  
95 % At 40 °C (104 °F), condensation and icing  
not permissible

### 机械数据 / Mechanical data

防护等级 Degree of protection	IP20 / UL 开放式 IP20 / UL open type
结构尺寸 Size	FSD
净重 Net weight	16 kg (35.71 lb)
宽度 Width	200 mm (7.87 in)
高度 Height	472 mm (18.58 in)
深度 Depth	252 mm (9.92 in)

### 输入/输出 / Inputs / outputs

#### 数字量输入 - 标准 / Standard digital inputs

数量 Number	6
开关电平: 0 → 1 Switching level: 0 → 1	11 V
开关电平: 1 → 0 Switching level: 1 → 0	5 V
最大接通电流 Max. inrush current	15 mA

#### 故障安全数字量输入 / Fail-safe digital inputs

数量 Number	0
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#### 数字量输出 / Digital outputs

作为继电器转换器的数量 Number as relay changeover contact	4
输出 (欧姆负载) Output (resistive load)	DC 30 V, 1.0 A
作为晶体管的数量 Number as transistor	0

#### 模拟量/数字量输入 / Analog / digital inputs

数量 Number	2 (压差输入端) 2 (Differential input)
分辨率 Resolution	12 位

#### 作为数字量输入的接通阈值 / Switching threshold as digital input

0 → 1	4 V
1 → 0	1.6 V

#### 模拟量输出 / Analog outputs

数量 Number	2 (电位相关输出端) 2 (Non-isolated output)
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#### PTC/ KTY接口 / PTC/ KTY interface

1 个电机温度传感器输入端, 可连接的 PTC 传感器, KTY, PT1000 和 Thermo-Click. 准确度在 ±5 °C 内 1 motor temperature sensor input, sensors that can be connected: PTC, KTY, PT1000 and Thermo-Click, accuracy ±5 °C
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### 闭环控制方式 / Closed-loop control techniques

V/f 线性/平方/可参数设置 V/f linear / square-law / parameterizable	是 Yes
V/f, 带磁通电流控制 (FCC) V/f with flux current control (FCC)	是 Yes
V/f ECO 线性/平方 V/f ECO linear / square-law	是 Yes
矢量控制, 无编码器 Sensorless vector control	是 Yes
矢量控制, 带编码器 Vector control, with sensor	否 No
转矩控制, 无编码器 Encoderless torque control	是 Yes
转矩控制, 带编码器 Torque control, with encoder	否 No

### 通讯 / Communication

通讯 Communication	USS, Modbus RTU, BACnet MS/TP USS, Modbus RTU, BACnet MS/TP
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### 接口 / Connections

#### 信号电缆 / Signal cable

接口横截面 Conductor cross-section	0.15 ... 1.50 mm <sup>2</sup> (AWG 24 ... AWG 16)
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#### 电源侧 / Line side

规格 Version	螺钉型接线端子 screw-type terminal
接口横截面 Conductor cross-section	null

#### 电机侧 / Motor end

规格 Version	螺钉型端子 Screw-type terminals
接口横截面 Conductor cross-section	null

#### 直流母线 (用于制动电阻) / DC link (for braking resistor)

PE 端子 PE connection	螺钉型接线端子 Screw-type terminals
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#### 最大电机电缆长度 / Max. motor cable length

屏蔽 Shielded	200 米 (656.17 ft)
非屏蔽 Unshielded	300 米 (984.25 ft)

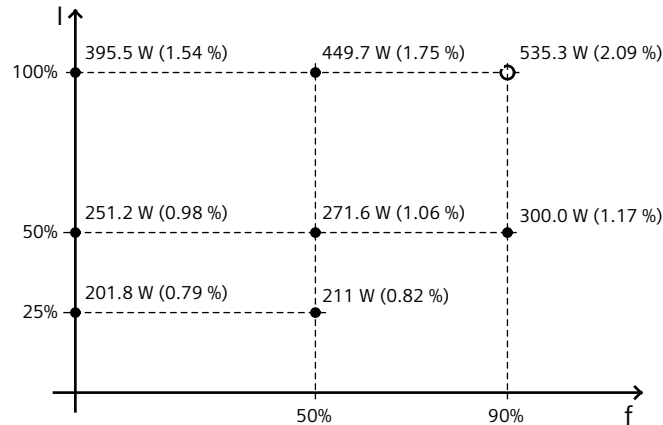
### 标准 / Standards

符合标准 Compliance with standards	CE, EAC, RCM, RoHS II CE, EAC, RCM, RoHS II
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CE 标志 CE marking	EMV 准则 2004 / 108/EG, 低压准则 2006/95/EG EMC Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC
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### 符合EN 50598-2的变频器损耗\* / Converter losses to EN 50598-2\*

效率等级 Efficiency class	IE2
对比参考变频器 (90% / 100%) Comparison with the reference converter (90% / 100%)	-42.00 %



百分比值给出了以变频器额定视在功率为基准的损耗。  
The percentage values show the losses in relation to the rated apparent power of the converter.

该图显示了相对转矩电流 (I) 超过相对电机定子频率 (f) 时间点 (根据标准 EN 50598) 上的损耗。这些值适用于不带选件/附件的基本型变频器。  
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.

\*计算值  
\*converted values

### 操作单元: 基本操作面板 (BOP-2) / Operator panel: 基本操作面板 (BOP-2)

#### 屏幕 / Screen

显示屏规格 Display design	LCD, 单色的 LCD, monochrome
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#### 环境条件 / Ambient conditions

##### 环境温度: / Ambient temperature during

运行 Operation	0 ... 50 °C (32 ... 122 °F)
存储 Storage	-40 ... 70 °C (-40 ... 158 °F)
运输 Transport	-40 ... 70 °C (-40 ... 158 °F)

#### 机械数据 / Mechanical data

防护等级 Degree of protection	IP55 / UL 类型 12 IP55 / UL type 12
净重 Net weight	0.14 kg (0.31 lb)
宽度 Width	70.0 mm (2.76 in)
高度 Height	106.85 mm (4.21 in)
深度 Depth	19.60 mm (0.77 in)

##### 相对空气湿度, 25 °C / Relative humidity at 25°C during

运行, 最大 Max. operation	95 %
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#### 认证 / Approvals

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