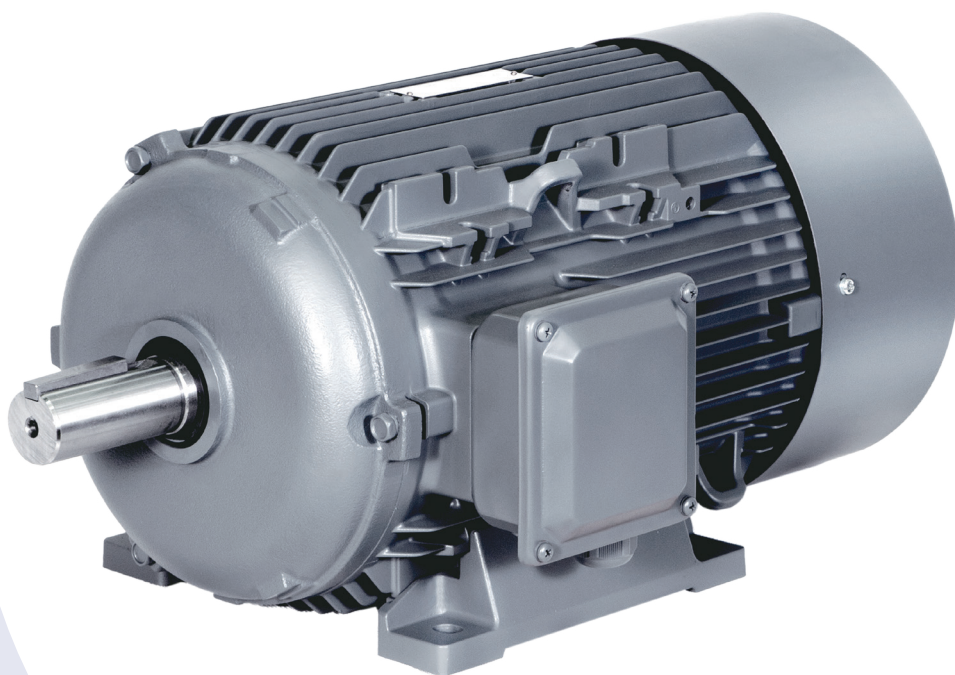
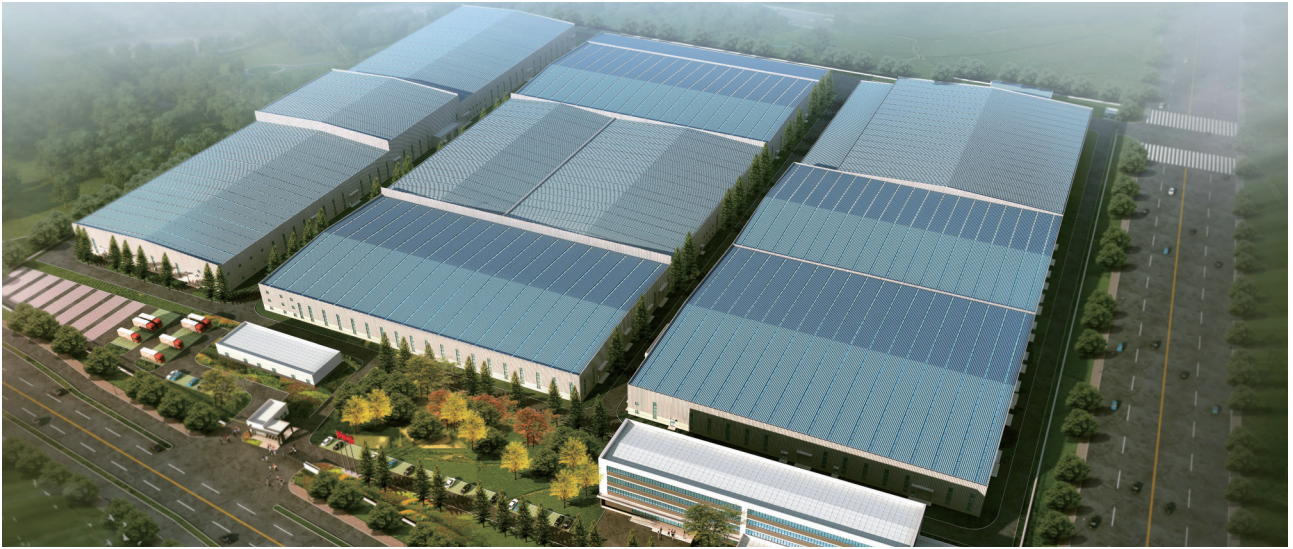


# 1TL0 铝壳系列低压三相异步电动机 1TL0 Al Frame series Low-voltage Three-phase Asynchronous Motor

产品样本 Catalog  
2023. 06



# 公司概况 Company Profile



## 西门子电机（中国）有限公司 Siemens Standard Motors Ltd. (SSML)

西门子电机（中国）有限公司是西门子在中国的独资企业，位于江苏省仪征市，公司主要致力于研发和生产中小型低压三相异步电动机。目前生产符合 IEC 标准的西门子品牌三相异步电动机、以及按中国标准设计的贝得品牌系列三相异步电动机。

作为西门子在全球中小型低压电机产品的重要生产基地之一，公司坚持秉承西门子 100 多年的电动机设计和生产经验和先进技术，拥有先进的生产设备和生产工艺，采用西门子特色的现代化管理模式，严格按照国际标准 ISO9001:2015 实施全面质量管理，竭诚为广大客户提供优质的产品和服务！

Siemens Standard Motors Ltd. (SSML) is a Siemens-owned company in China. SSML is located in Yizheng City, Jiangsu Province. The company focuses on developing and producing small and medium low-voltage motors. Currently, SSML mainly produce Siemens brand low voltage AC motors according to IEC standards, and Beide brand low voltage motors designed according to China local standards.

As one of Siemens main low-voltage motor production facilities worldwide, SSML uses the knowledge and experience of more than 100 years in motor design and manufacturing, owns the advanced manufacture equipment and process, adopts the SIEMENS modern management model, and implements comprehensive quality control according to ISO9001 2015. SSML will continuously serve customers with high quality products and good service.



## 质量方针

- 质量从我做起，第一次把事情做对。
- 鼓励员工发现问题并勇于承担责任。
- 拒不接受不合格产品。
- 持续改进我们的流程，超越客户期望。

## 环境方针

西门子电机（中国）有限公司的环境、职业健康和安全方针是：

- 我们依据 ISO14001:2015 和 ISO 45001-2018 标准的要求，有效建立、实施环境和职业健康安全管理体系，不断提高，持续改进。
- 我们承诺遵守环境、职业健康安全相关的法律法规，履行环境保护及职业健康安全防护职责。
- 我们致力于履行应负的社会责任和义务，合理使用资源，保护环境，加强职业健康安全管理，实现安全生产零伤害。

## Quality Guideline

- Quality starts with me, Do it right in the first time.
- Encourage our employee to address problem openly and take responsibility.
- Refuse to accept defective product.
- Continuously improve our process to exceed customer' s expectation.

## Environmental Guideline

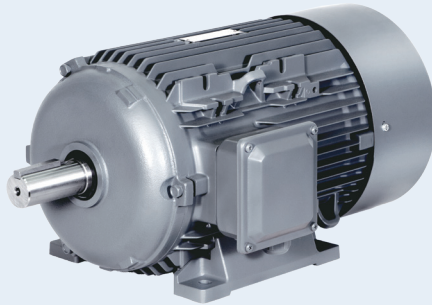
EHS Policy of Siemens Standard Motors Ltd. is as follows:

- We institute and implement a continuously improving management system addressing our environment, occupational health and safety in compliance with the requirements of ISO14001:2015 and ISO 45001-2018 criteria.
- We commit ourselves to abiding by the environmental, occupational health and safety laws and regulations, and fulfilling our duties in environmental protecting and occupational health safeguarding.
- We commit ourselves to the fulfillment of our social responsibility and obligation, properly harnessing resources, protecting our environment, enhancing occupational health and safety management with the ultimate goal of zero harm in our production process.

# 目录 Contents

|                                      |    |
|--------------------------------------|----|
| 概述 Overview .....                    | 5  |
| 变频应用 Converter fed application ..... | 11 |
| 订货号 Order No. ....                   | 13 |
| 选型技术数据表 Technical data table .....   | 16 |
| 选件 Options .....                     | 18 |
| 外形尺寸 Dimension drawings .....        | 20 |

# 概述 Overview



铝壳电机 Al housing motor

额定功率：0.55 ~ 18.5 kW

机座号：80 ~ 160

电压与频率：支持多种电压与频率

冷却方式：标配 IC411，IC416 可选

注油装置：标配为封闭式轴承，无注油装置

防护等级：IP55

绝缘等级：F

环境温度：-15 ~ 40 °C

海拔高度：不超过 1000 m

Rated output: 0.55 ~ 18.5 kW

Frame size: 80 ~ 160

Voltage and Frequency: support multiple voltage and frequency

Cooling method: IC411 as standard, IC416 is optional

Oiling device: The sealed ball bearing as standard, no re-grease device

Degree of protection: IP55

Degree of insulation: F

Coolant temperature: -15 ~ 40 °C

Site altitude above sea level: not exceed 1000 m

1TL0 系列电动机是全新设计的高效低压三相异步电动机，机壳有铸铁和铸铝两种可选<sup>1)</sup>，适用于连续工作制 (S1) 工作运行。1TL0 系列电动机具有效率高、结构新颖、造型美观、噪音低、振动小、绝缘等级高等特点，可用于风机、泵、压缩机、纺织机械等多种工业应用领域。

相对于铸铁机壳电机，铝壳电机质量更轻，外观表面质量更好。

<sup>1)</sup> 铸铁电机内容请单独见铸铁电机样本。

1TL0 series of motors is the newly designed high efficiency low voltage three phase asynchronous motor, the housing material have two options, cast iron or aluminum<sup>1)</sup>, is designed for continuous duty operation(S1). 1TL0 series of motors owns the features of high efficiency, novel structure, beautiful appearance, low noise, small vibration, high degree of insulation, etc, also can be used in the fields of fans, pump, compressors and textile machine.

Compared with cast iron frame motor, the quality of aluminum motor is lighter and the surface quality is better.

<sup>1)</sup> Please find the cast iron frame motor content in another catalog.

# 安装结构型式 Construction and mounting type

| 结构型式 Construction type | 机座带底脚，端盖无法兰 With feet and without flange on the end-shield (DE)          |                                     |                                     |                                                                      |                                     |                                     |
|------------------------|--------------------------------------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 安装型式 Mounting type     | IM B3<br>FS <sup>3)</sup> 80 ~ 160                                       | IM B6<br>FS 80 ~ 160                | IM B7<br>FS80 ~ 160                 | IM B8<br>FS 80 ~ 160                                                 | IM V5 <sup>1)</sup><br>FS 80 ~ 160  | IM V6 <sup>2)</sup><br>FS 80 ~ 160  |
| 示意图 Diagram            |                                                                          |                                     |                                     |                                                                      |                                     |                                     |
| 结构型式 Construction type | 机座不带底脚，端盖有法兰<br>Without feet and with flange on the end-shield (DE)      |                                     |                                     | 机座带底脚，端盖有法兰<br>With feet and with flange on the end-shield (DE)      |                                     |                                     |
| 安装型式 Mounting type     | IM B5<br>FS 80 ~ 160                                                     | IM V1 <sup>1)</sup><br>FS 80 ~ 160  | IM V3 <sup>2)</sup><br>FS 80 ~ 160  | IM B35<br>FS 80 ~ 160                                                | IM V15 <sup>1)</sup><br>FS 80 ~ 160 | IM V35 <sup>2)</sup><br>FS 80 ~ 160 |
| 示意图 Diagram            |                                                                          |                                     |                                     |                                                                      |                                     |                                     |
| 结构型式 Construction type | 机座不带底脚，端盖有标准小法兰<br>Without feet and with C-flange on the end-shield (DE) |                                     |                                     | 机座带底脚，端盖有标准小法兰<br>With feet and with C-flange on the end-shield (DE) |                                     |                                     |
| 安装型式 Mounting type     | IM B14<br>FS 80 ~ 112                                                    | IM V18 <sup>1)</sup><br>FS 80 ~ 112 | IM V19 <sup>2)</sup><br>FS 80 ~ 112 | IM B34<br>FS80 ~ 112                                                 |                                     |                                     |
| 示意图 Diagram            |                                                                          |                                     |                                     |                                                                      |                                     |                                     |

- <sup>1)</sup> 室外使用时推荐使用护罩（选件号 H00）；

<sup>2)</sup> 当户外安装时，推荐对电动机轴采取防护措施，避免水直接喷射到电动机轴上。
- <sup>1)</sup> At outdoor application, the using of protective cover (Option code H00) is recommended

<sup>2)</sup> At out door application the protection of shaft again jet-water is recommended.

## 铭牌样例 Nameplate

|                                                                                                                                                                         |  |                                |            |             |                           |                            |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|------------|-------------|---------------------------|----------------------------|-------------------------------------------------------------------------------------|
|   |  | THREE-PHASE ASYNCHRONOUS MOTOR |            |             |                           | EEL-Grade3<br>GB18613-2020 |                                                                                     |
| 型号 0AV3082B                                                                                                                                                             |  | 1TL0303-0DB23-3JA5-Z           |            | 80M         | LMH-2106/800003888983/001 |                            |  |
| 380VΔ /660VY                                                                                                                                                            |  | 50 Hz                          | 14.8/8.5 A | EFF. 90.4 % | IP 55                     | 135 kg                     |                                                                                     |
| 7.5 kW                                                                                                                                                                  |  | IM B35                         | 1470 r/min | COSφ 0.85   | Th.Cl.155(F)              |                            |                                                                                     |
| 驱动端: 6204 2RZ C3                                                                                                                                                        |  |                                |            |             |                           |                            |                                                                                     |
| 非驱动端: 6204 2RZ C3                                                                                                                                                       |  |                                |            |             |                           |                            |                                                                                     |
| <div>西门子电机(中国)有限公司<br/>Siemens Motor (China) Co., Ltd.</div>                                                                                                            |  |                                |            |             |                           |                            |                                                                                     |

## 轴承系统

ITL0 系列铝壳电动机标准配置密封型深沟球轴承。电动机驱动端与非驱动端轴承浮动。

标准配置的轴承可以承受一定的悬臂力，当电动机轴端承受的悬臂力较大时，可以考虑选择增强悬臂力的轴承设计（选件号：L22）。

## Bearing system

ITL0 series AL frame motors are supplied with the sealed ball bearing as standard. And the floating bearings are assembled.

The standard bearing can endure a maximum cantilever force, the increased cantilever bearing design (Option code: L22) should be considered.

## 轴承选配 Bearing Assignment

| 机座号<br>Frame size | 极数<br>Pole | 标准配置<br>Standard design |                                                          |                                                        | 增强悬臂力设计轴承（选件号：L22）<br>Increased cantilever-bearing (Option code: L22) |                                                          |                                                        |
|-------------------|------------|-------------------------|----------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
|                   |            | 驱动端轴承<br>DE bearing     | 非驱动端轴承<br>(水平安装)<br>NDE bearing<br>(Horizontal mounting) | 非驱动端轴承<br>(立式安装)<br>NDE bearing<br>(Vertical mounting) | 驱动端轴承<br>DE bearing                                                   | 非驱动端轴承<br>(水平安装)<br>NDE bearing<br>(Horizontal mounting) | 非驱动端轴承<br>(立式安装)<br>NDE bearing<br>(Vertical mounting) |
| 80                | 2, 4, 6    | 6204 2RZ C3             | 6204 2RZ C3                                              | 6204 2RZ C3                                            | —                                                                     | —                                                        | —                                                      |
| 90                | 2, 4, 6    | 6205 2RZ C3             | 6205 2RZ C3                                              | 6205 2RZ C3                                            | —                                                                     | —                                                        | —                                                      |
| 100               | 2, 4, 6    | 6206 2RZ C3             | 6206 2RZ C3                                              | 6206 2RZ C3                                            | 6306 2RZ C3                                                           | 6206 2RZ C3                                              | 6206 2RZ C3                                            |
| 112               | 2, 4, 6    | 6206 2RZ C3             | 6206 2RZ C3                                              | 6206 2RZ C3                                            | 6306 2RZ C3                                                           | 6206 2RZ C3                                              | 6206 2RZ C3                                            |
| 132               | 2, 4, 6, 8 | 6208 2RZ C3             | 6208 2RZ C3                                              | 6208 2RZ C3                                            | 6308 2RZ C3                                                           | 6208 2RZ C3                                              | 6208 2RZ C3                                            |
| 160               | 2          | 6209 2RZ C3             | 6209 2RZ C3                                              | 6209 2RZ C3                                            | 6309 2RZ C3                                                           | 6209 2RZ C3                                              | 6209 2RZ C3                                            |
|                   | 4, 6, 8    |                         |                                                          |                                                        |                                                                       |                                                          |                                                        |

注：DE 驱动端  
NDE 非驱动端  
— 不能满足  
O.R. 须要特殊询价

Note: DE Driven end  
NDE Non driven end  
— Not possible  
O.R. Possible on request

### 润滑脂寿命和再润滑周期

对于不可再润滑的轴承，其润滑脂寿命与轴承寿命相当。但是，这只能是在电机严格按照本样本中规定的技术数据运行。

对于以规定间隔再润滑的电机，轴承寿命可以延长，从而补偿不利因素，诸如温度、安装条件、转速、轴承规格和机械载荷造成的影响。

### Grease life and re-greasing interval

For permanent lubrication, the bearing grease lifetime is matched to the bearing lifetime. This can, however, only be achieved if the motor is operated in accordance with the catalog specifications.

For motors which can be regreased at defined regreasing intervals, the bearing lifetime can be extended and/or unfavorable factors such as temperature, mounting conditions, speed, bearing size and mechanical load can be compensated.

### 润滑脂寿命和再润滑周期（电动机水平安装） Grease life (Horizontal installation)

| 机座号Frame size                                       | 极数 Poles   | 润滑脂寿命Grease lifetime up to CT 40 °C <sup>1)</sup> |
|-----------------------------------------------------|------------|---------------------------------------------------|
| 持久润滑型轴承的润滑脂Grease for permanent lubrication bearing |            |                                                   |
| 80 ~ 160                                            | 2, 4, 6, 8 | 20000 或 (or) 40000 <sup>2)</sup>                  |

注：  
<sup>1)</sup> 当环境温度每升高 10 °C，润滑脂寿命以及再润滑时间缩短一半。  
<sup>2)</sup> 40000 小时适用于电动机水平安装，且轴不受额外的轴向力影响；

Note:  
<sup>1)</sup> If the coolant temperature is increased by 10 K, the grease lifetime and regreasing interval are halved.  
<sup>2)</sup> 40000 h apply to horizontally installed motors with coupling output without additional axial loads.

当电动机在非正常的条件下运行时，轴承的寿命会缩短。如下面几种情况：

- 当电动机的运行速度高于额定速度时，由于电动机的振动增大，使得轴承受到额外的径向力和轴向力，导致其寿命减少；
- 当环境或设备等因素引起电动机振动加大时，同样轴承也会因此受到额外的径向力和轴向力，而导致其寿命减少；
- 当环境温度每升高 10°C，润滑脂寿命以及再润滑时间缩短一半。

- When motor runs beyond the rated speed, the increase of motor vibration will result in the extra radial and axial force on bearing. This will reduce the life of bearing;
- When the motor vibration increase due to the environment or other equipment, the bearing also will endure more radial and axial force. This also will reduce the life of bearing;
- If the coolant temperature is increased by 10 °C, the grease lifetime and regreasing interval is halved.

# 接线盒技术参数 Connection boxes technical data

| 机座号<br>Frame size | 接线螺钉螺纹<br>Contact screw thread | 外接电缆直径 (mm)<br>Outer cable diameter (sealing range) | 进线孔尺寸<br>Cable entry size |
|-------------------|--------------------------------|-----------------------------------------------------|---------------------------|
| 80 ~ 100          | M4                             | 10 ~ 14                                             | M24 x 1.5                 |
| 112 ~ 132         | M5                             | 13 ~ 18                                             | M27 x 2 + M27 x 2         |
| 160               | M5                             | 18 ~ 25                                             | M36 x 2 + M36 x 2         |

## 振动

所有电动机转子都使用半键按照 A 级（标准）振动等级进行动态平衡。

电动机在空载时测得振动速度有效值不超过下表中的 A 级所列值。

## Vibration

1TL0 rotors are dynamically balanced to severity grade A using a half key.

Table below contains the effective vibration values for unloaded motors.

| 振动等级<br>Vibration Grade | 机座号<br>Frame size (mm)  | 56 ≤ FS ≤ 132                   |                                 | H>132                           |                                 |
|-------------------------|-------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                         | 安装方式<br>Mounting        | 位移<br>Vibration displacement/um | 速度<br>Vibration velocity/(mm/s) | 位移<br>Vibration displacement/um | 速度<br>Vibration velocity/(mm/s) |
| A                       | 自由悬置<br>Free suspension | 45                              | 2.8                             | 45                              | 2.8                             |
|                         | 刚性安装<br>Rigid mounting  | -                               | -                               | 37                              | 2.3<br>2.8 <sup>1)</sup>        |
| B                       | 自由悬置<br>Free suspension | 18                              | 1.1                             | 29                              | 1.8                             |
|                         | 刚性安装<br>Rigid mounting  | -                               | -                               | 24                              | 1.5<br>1.8 <sup>1)</sup>        |

注：

<sup>1)</sup> 该值为GB/T 10068-2020 中定义的轴中心高H>132mm的两极电机，当两倍电网频率占主导时的振动速度限值。

Note:

<sup>1)</sup> The level are vibration velocity limit when the twice line frequency vibration level is dominant defined by GB/T 10068-2020, for 2p motors that frame size bigger than 132mm.

## 防潮加热保护

当电动机处于较为恶劣的环境时，比如湿度非常大或者昼夜温差比较大，电动机的绕组很可能会出现凝露的现象，这样会带来电动机烧毁的风险。对于这种情况，建议对电动机绕组配置防潮加热带（选件号：Q04）进行保护。

电动机防潮加热带必须在电动机工作过程中处于不工作状态；当电动机停机时，防潮加热带必须启动工作，为绕组加热。防潮加热带的电气参数如下表所示。

防潮加热带电气参数Electrical data of Anti-condensation heater

| 机座号<br>Frame size | 功率<br>Power (W) | 电压<br>Voltage (V) |
|-------------------|-----------------|-------------------|
| 80 ~ 90           | 20              | 220               |
| 100 ~ 112         | 30              | 220               |
| 132 ~ 160         | 40              | 220               |

## Anti-condensation heater

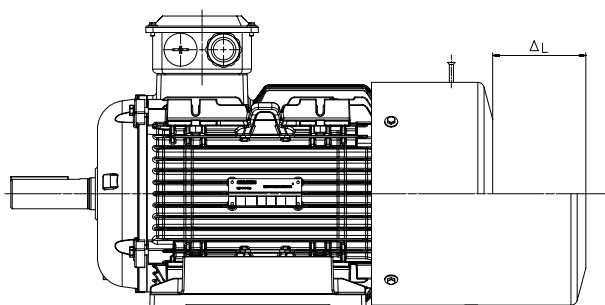
Motors whose windings are at risk of condensation due to the climatic conditions, e.g. inactive motors in humid atmospheres or motors that are subjected to widely fluctuating temperatures can be equipped with anti-condensation heaters (Option code: Q04).

2 auxiliary terminals in connection box are needed.” Anti-condensation heaters must be switched off during operation. When motor shut down, the heaters must be switched on.

## 电磁制动器 Electro-Magnetic Brake

1TL0 系列电动机可附加圆盘型直流电磁制动器，适用于一切要求快速停止、准确定位、往复运转的各种机械。

Disc type DC electro-magnetic brake can be attached to the 1TL0 series of motors, the motors are suitable for all kinds of machines which require fast stop, accurate positioning and reciprocating operation.



制动器技术数据The technical data for the brakes

| 机座号<br>Frame size | 静制动力矩 (Nm)<br>Static braking torque | 空载制动时间 (s)<br>No-load braking time | (开关在直流侧制动器电压) (V)<br>Brake voltage when switch is on the DC side | 励磁功率 (W)<br>Excitation power | $\Delta L_1$<br>(mm) |
|-------------------|-------------------------------------|------------------------------------|------------------------------------------------------------------|------------------------------|----------------------|
| 80                | 8                                   | 0.2                                | 99                                                               | 50                           | 70                   |
| 90                | 15                                  | 0.2                                | 99                                                               | 60                           | 75                   |
| 100               | 30                                  | 0.2                                | 99                                                               | 80                           | 75                   |
| 112               | 40                                  | 0.25                               | 170                                                              | 110                          | 75                   |
| 132               | 80                                  | 0.25                               | 170                                                              | 130                          | 85                   |
| 160               | 150                                 | 0.35                               | 170                                                              | 150                          | 105                  |

## 电气特性

### 额定输出

1TL0电动机的额定功率是指电动机在连续运行的情况下 S1 (IEC 60034-1)，此时周围环境温度为  $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$ ，海拔高度不超过 1000 m。

### 电压、频率

IEC 60034-1 将电压和频率的偏差分为 A 类（电压偏差  $\pm 5\%$ ，频率偏差  $\pm 2\%$ ）和 B 类（电压偏差  $\pm 10\%$ ，频率偏差  $+3\% / -5\%$ ）。电动机均能够在 A 类和 B 类提供额定转矩。在 A 类中，温度比正常运行下温度大约提升 10 K。

| 标准Standard<br>60034 - 1                                                                                    | 类别Category<br>A | 类别Category<br>B |
|------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| 电压偏差Voltage deviation                                                                                      | $\pm 5\%$       | $\pm 10\%$      |
| 频率偏差Frequency deviation                                                                                    | $\pm 2\%$       | $+3\% / -5\%$   |
| 根据标准，不推荐电动机在 B 类情况下长时间运行<br>According to the standard, longer operation is not recommended for Category B. |                 |                 |

### 电气数据公差

#### ■ 效率 $\eta$

Prated  $\leq 150$  kW:  $-0.15 \times (1 - \eta)$

Prated  $> 150$  kW:  $-0.10 \times (1 - \eta)$

效率  $\eta$  为小于 1 的值

#### ■ 功率因数: $(1 - \cos \phi) / 6$

最小绝对值: 0.02

最大绝对值: 0.07

■ 转差率:  $\pm 20\%$ （电动机的偏差  $< 1$  kW  $\pm 30\%$  时是允许的）

■ 堵转电流:  $+20\%$

■ 堵转转矩:  $-15\% \sim +25\%$

■ 最大转矩:  $-10\%$

■ 转动惯量:  $\pm 10\%$

## Electrical design

### Rated Output

1TL0 motors rated output powers means that the motor runs under continuous duty S1 (IEC 60034 - 1) operation when operated at ambient temperature from  $-15^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  and at altitudes of up to 1000 m over sea.

### Voltage and Frequency

IEC 60034-1 differentiates between Category A (combination of voltage deviation  $\pm 5\%$  and frequency deviation  $\pm 2\%$ ) and Category B (combination of voltage deviation  $\pm 10\%$  and frequency deviation  $+3\% / -5\%$ ) for voltage and frequency fluctuations. The motors can supply their rated torque in both Category A and B. In Category A, the temperature rise is approximately 10 K higher than during normal operation.

### Tolerance for electrical data

#### ■ Efficiency $\eta$ at

Prated  $\leq 150$  kW:  $-0.15 \times (1 - \eta)$

Prated  $> 150$  kW:  $-0.10 \times (1 - \eta)$

With  $\eta$  being a decimal number

#### ■ Power factor - $(1 - \cos \phi) / 6$

Minimum absolute value: 0.02

Maximum absolute value: 0.07

■ Slip  $\pm 20\%$  (for motors  $< 1$  kW  $\pm 30\%$  is admissible)

■ Locked-rotor current  $+20\%$

■ Locked-rotor torque  $-15\%$  to  $+25\%$

■ Breakdown torque  $-10\%$

■ Moment of inertia  $\pm 10\%$

# 变频应用 Converter fed application

1TL0 电动机适于变转速、恒转速的各种应用，如风机、泵、压缩机、纺织机械等。

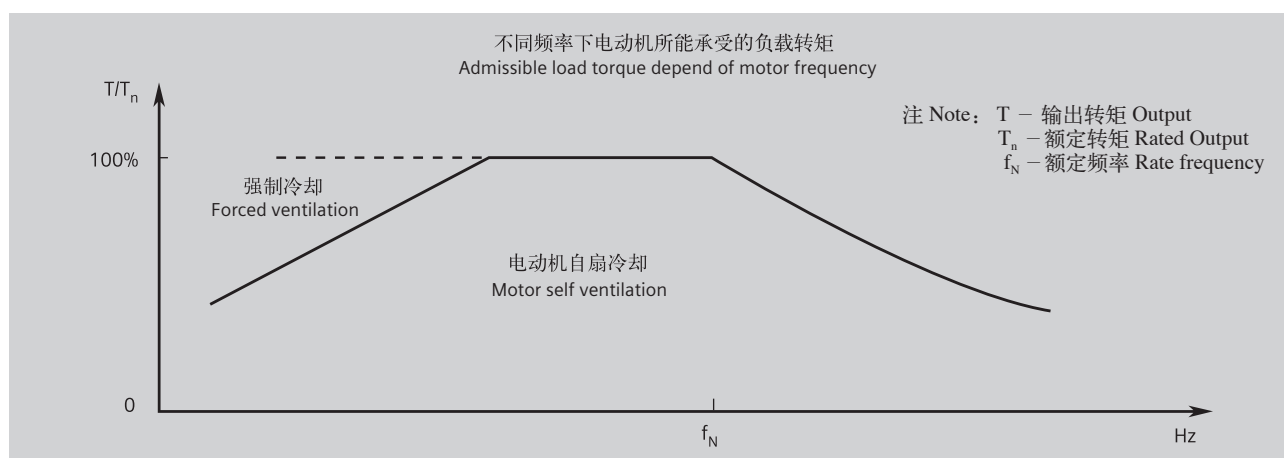
1TL0 电动机的标准绝缘系统设计要求，能够保证其在变频器供电电压不超过 460 V 时正常运行。

1TL0 电动机带有特定的负载时能够使用变频器驱动，其特定的负载扭矩如以下图表所示：

1TL0 motors are suitable for pumps, fans, compressors, textile machine and mechanical machine applications where variable or constant speed is required.

The standard insulation of the 1TL0 motors is designed such that operation is possible on the converter at mains voltage up to 460 V.

1TL0 motors are capable for converter-fed operation with certain characteristics load, of which the load torque characteristics is referred in the following diagram:



当 1TL0 电动机变频应用（变频器供电），且输出额定功率时，电动机的使用温度等级为 155 (F)。为了避免杂散电流对电动机轴承的损坏，推荐 FS250 ~ 355 电动机使用绝缘轴承。请向西门子咨询关于绝缘轴承的详细信息。

当负载扭矩在允许的扭矩范围内时，电动机能够自扇冷却；当负载扭矩超过所允许的扭矩时，电动机需要强迫冷却。

在电动机运行速度超过额定转速时，噪声和振动值将增加，并且轴承的寿命将缩短。需要注意再润滑周期和润滑脂的寿命。

At rated output with converter fed operation, the motors will be used in temperature class 155 (F). To prevent damage as a result of bearing currents, insulated bearings are recommended to be assembled for frame size 250 and above. Please inquire Siemens about the detailed information of insulated bearing.

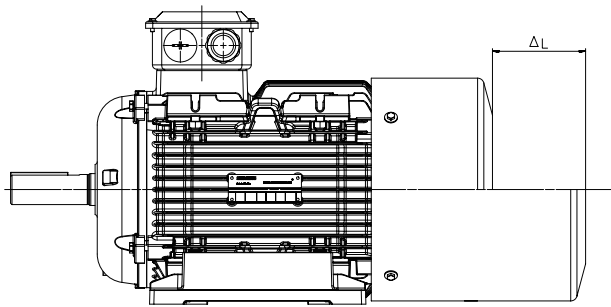
By usage with admissible torque and below, the motor can be operated with self cooling; by usage over the admissible torque line, the motor with forced ventilation is needed.

At operating speeds above rated speed the noise and vibration levels increase and the bearing life time reduce. Attention should be paid to the re-greasing intervals and the grease service life.

1TL0 电动机所允许的最大安全转速如下表  
The allowed maximum safe operating speed of 1TL0 motors shows the diagram

| 机座号<br>Frame size | 2 极 2 pole      |              | 4 极 4 pole      |              | 6 极 6 pole      |              | 8 极 8 pole      |              |
|-------------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|
|                   | 最高转速<br>Max.rpm | 最大频率<br>fmax | 最高转速<br>Max.rpm | 最大频率<br>fmax | 最高转速<br>Max.rpm | 最大频率<br>fmax | 最高转速<br>Max.rpm | 最大频率<br>fmax |
| 80                | 5200            | 87           | 3600            | 120          | 2400            | 120          | 1800            | 120          |
| 90                | 5200            | 87           | 3600            | 120          | 2400            | 120          | 1800            | 120          |
| 100               | 5200            | 87           | 3600            | 120          | 2400            | 120          | 1800            | 120          |
| 112               | 5200            | 87           | 3600            | 120          | 2400            | 120          | 1800            | 120          |
| 132               | 4500            | 75           | 2700            | 90           | 2400            | 120          | 1800            | 120          |
| 160               | 4500            | 75           | 2700            | 90           | 2400            | 120          | 1800            | 120          |

独立驱动风扇技术参数 Technical data for separately fan



独立驱动风扇技术参数 Technical data for separately fan

| 对应电动机机座号<br>Motor frame size | 额定电压 (V)<br>rated voltage | 额定频率 (Hz)<br>Rated frequency | 功率 (W)<br>Rated output | 电流 (A)<br>Current | 转速 (r/min)<br>Speed | Δ L |
|------------------------------|---------------------------|------------------------------|------------------------|-------------------|---------------------|-----|
| 80                           | 220D/380Y                 | 50                           | 30                     | 0.14/0.08         | 2800                | 60  |
| 90                           | 220D/380Y                 | 50                           | 30                     | 0.14/0.08         | 2800                | 75  |
| 100                          | 220D/380Y                 | 50                           | 52                     | 0.21/0.12         | 2800                | 65  |
| 112                          | 220D/380Y                 | 50                           | 52                     | 0.21/0.12         | 2800                | 75  |
| 132                          | 220D/380Y                 | 50                           | 45                     | 0.35/0.2          | 1400                | 75  |
| 160                          | 220D/380Y                 | 50                           | 45                     | 0.35/0.2          | 1400                | 45  |

注： 风扇可以在 210 ~ 240VD/360 ~ 420VY 50Hz 电源供电下运行，也可以在 220 ~ 260VD/380 ~ 480VY 60Hz 电源供电下运行。其他电源供电，须特殊询价。  
Note: The fan can be running with supply 210 ~ 240VD/360 ~ 420VY 50Hz, and also 220 ~ 260VD/380 ~ 480VY 60Hz. Other voltage supply, possible on request.

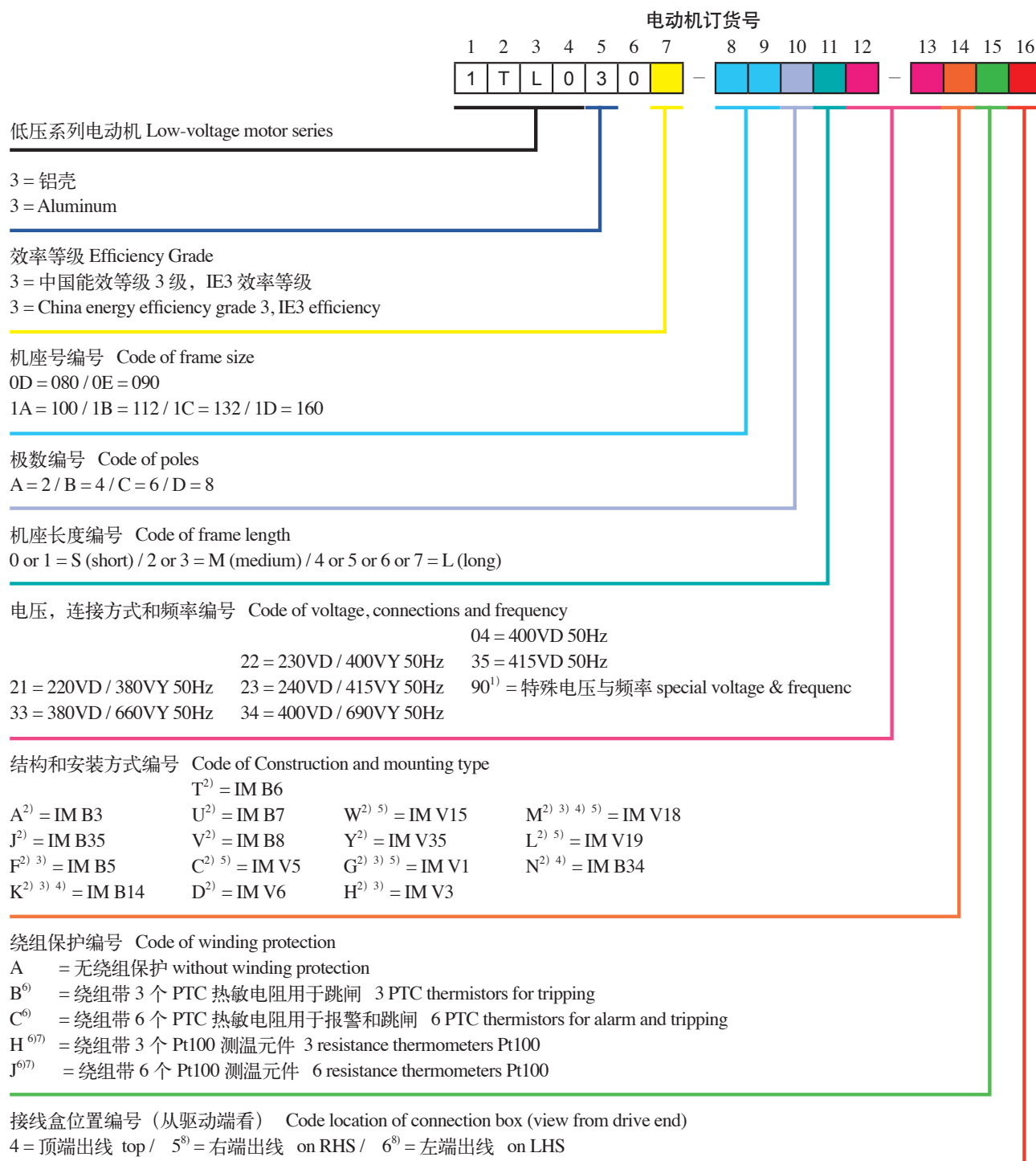
风机电机参数 Technical data for fan motor

对于某些客户现场有外部冷却设备的应用，可以提供无风扇和风扇罩的风机电机，风机电机的选件号为 F90。当电机无风扇和风扇罩时，电动机的长度将减少 Δl。

For some special application with external cooling facility, we can provide motor without fan and fan cover, the option code is F90. When motor without fan and fan cover, the length will decrease Δl.

| 对应电动机机座号<br>motor frame size | F90 电机减少长度 Δl<br>Length decrease of motor Δl |
|------------------------------|----------------------------------------------|
| 80                           | 50                                           |
| 90                           | 60                                           |
| 100                          | 70                                           |
| 112                          | 65                                           |
| 132                          | 75                                           |
| 160                          | 90                                           |

# 型号与订货号 Motor Type and Order No.



附注:

- 1) 用电压编号 90 及相应选件号来定制其它电压 (参见选件描述) ;
- 2) 铭牌上标有结构型式。若需要冷凝水排放孔 (订货号: H03) , 则必须指明电机的安装结构型式, 以便在制造过程中确定冷凝水排放孔的具体位置;
- 3) 对于 IM B5、IM V1、IM V3、IM B14、IM V18 和 IM V19 安装结构型式电动机, 须指定电动机订货号第 16 位数字为 "4" ;
- 4) 只适用于 FS80 ~ 112;
- 5) 电动机标配无防雨罩, 但如需要加带防雨罩用于防护时, 须订购选件号 H00;
- 6) 选择此选件, 接线盒将更改为铸铁壳。
- 7) 仅适用于机座号 100 ~ 160;
- 8) 当接线盒位于电机左侧或右侧时, 出线口方向默认朝底脚。

Foot note:

- 1) Order other voltages with voltage code 90 and the corresponding Option code (see under "Option") .
- 2) The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code H03), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.
- 3) For motor with IM B5, IM V1, IM V3, IM B14, IM V18 and IM V19 construction and mounting type, the 16th digit of motor order No. must be "4";
- 4) Only for FS80 ~ 112.
- 5) Without canopy, for protective cover with canopy needed Option code H00.
- 6) Choose this option, the connection box will be changed to cast iron.
- 7) Only applicable for frame size 100~160.
- 8) When connection box on the right or left side of motor, the cable entry from below as default.

订货号样例:

3 级能效低压三相异步电动机

4 极, 15 kW, IM B3, 380VD / 660VY 50 Hz, IP55, 接线盒位置处于右侧, 进线孔向下 (从驱动端看)。

电动机订货号: 1TL0303-1DB43-3AA5

Order No. example:

China Energy Efficiency Grade3 low voltage three phase asynchronous motor

4-pole, 15 kW, IM B3, 380VD/660VY 50 Hz, IP55, connection box at right side and cable entry at bottom (view from DE)

Motor order code: 1TL0303-1DB43-3AA5

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T | L | 0 | 3 | 0 | 3 | - | 1 | D | B | 4 | 3 | - | 3 | A | A | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

3 级能效铝壳低压三相异步电动机

China Energy Efficiency Grade3 Al Frame  
Low-voltage Three-phase Motor

机座号 Frame size: 160

极数 Poles: 4

铁心长度 Iron core length: 长机座 (L)

电压, 连接方式和频率 Voltage, connection method and frequency: 380VD/660VY 50Hz

结构型式 Construction: IM B3

绕组保护 Winding protection None: 无

接线盒位置 Connection box position at right side: 右侧

|                                                                                                               | 电动机型号 <sup>1)</sup> |   |   | Motor type |   |   |   |   |
|---------------------------------------------------------------------------------------------------------------|---------------------|---|---|------------|---|---|---|---|
|                                                                                                               | 1                   | 2 | 3 | 4          | 5 | 6 | 7 | 8 |
|                                                                                                               | 0                   | A | V | 3          | □ | □ | □ | □ |
| 亚太系列 Asia pacific                                                                                             |                     |   |   |            |   |   |   |   |
| 机壳材料 Housing material<br>A = 铸铝 Cast Aluminium                                                                |                     |   |   |            |   |   |   |   |
| 冷却方式 Cooling method<br>V = 空冷 ventilated                                                                      |                     |   |   |            |   |   |   |   |
| 能效等级, Energy efficiency grade<br>3 = 中国能效等级 3 级, IE3 效率等级 3 = China energy efficiency grade 3, IE3 efficiency |                     |   |   |            |   |   |   |   |
| 机座号 Frame size<br>08 = 80; 09 = 90; 10 = 100; 11 = 112; 13 = 132; 16 = 160                                    |                     |   |   |            |   |   |   |   |
| 铁心长 Core length                                                                                               |                     |   |   |            |   |   |   |   |
| 极数 Poles<br>A = 2; B = 4; C = 6; D = 8;                                                                       |                     |   |   |            |   |   |   |   |

注:

<sup>1)</sup> 电动机型号用于证书申请等。

Note:

<sup>1)</sup> Motor type used to apply certificates and etc.

# 选型技术数据表 Technical data table

## 铝壳系列电机 Al Frame Motors

### 中国能效等级3级, IE3

| 机座号<br>Frame<br>Size | 额定<br>功率<br>(50Hz)<br>Rated<br>Output<br>(50Hz) | 电动机<br>型号<br>Motor<br>Type | 订货号<br>Order No.   | 额定<br>转速<br>Rated<br>Speed | 效率—参照 GB18613-2020 效率等级 3<br>Effeciency is in accordance with the<br>effeciency level 3 of GB18613-2020 |                                                           |                             |                              | 额定<br>转矩<br>Rated<br>torque | 起动<br>电流 /<br>额定<br>电流<br>Starting<br>Current/<br>Rated<br>current | 起动<br>转矩 /<br>额定<br>转矩<br>Starting<br>torque/<br>Rated<br>torque | 最大<br>转矩 /<br>额定<br>转矩<br>Max<br>torque/<br>Reted<br>torque | 转动<br>惯量<br>Moment<br>of<br>intertia | 重量<br>Weight<br>IMB3 | 噪声<br>Noise       |
|----------------------|-------------------------------------------------|----------------------------|--------------------|----------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|----------------------|-------------------|
|                      | kW                                              |                            |                    |                            | 效率<br>(100%<br>负载)<br>Effeciency<br>at (50Hz)<br>4/4 load                                               | 效率<br>(75% 负<br>载)<br>Effeciency<br>at (50Hz)<br>3/4 load | 功率<br>因素<br>Power<br>factor | 额定<br>电流<br>Rated<br>current |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
|                      |                                                 |                            |                    | rpm                        | %                                                                                                       | %                                                         |                             | A                            | Nm                          | I <sub>LR</sub> /I <sub>rated</sub>                                | T <sub>LR</sub> /T <sub>rated</sub>                              | T <sub>max</sub> /T <sub>rated</sub>                        | kgm²                                 | kg                   | L <sub>p</sub> IA |
| 3000rpm 2- pole      |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 220VD/380VY 50HZ     |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 80M                  | 0.75                                            | 0AV3082A                   | 1TL0303-0DA22-1□□□ | 2835                       | 80.7                                                                                                    | 82.9                                                      | 0.86                        | 1.64                         | 2.5                         | 6.0                                                                | 2.4                                                              | 3.0                                                         | 0.00208                              | 11.5                 | 51                |
| 80M                  | 1.1                                             | 0AV3083A                   | 1TL0303-0DA32-1□□□ | 2850                       | 82.7                                                                                                    | 84.0                                                      | 0.83                        | 2.45                         | 3.7                         | 6.5                                                                | 2.6                                                              | 3.4                                                         | 0.00154                              | 13.5                 | 51                |
| 90S                  | 1.5                                             | 0AV3090A                   | 1TL0303-0EA02-1□□□ | 2870                       | 84.2                                                                                                    | 84.8                                                      | 0.86                        | 3.15                         | 5.0                         | 6.5                                                                | 2.0                                                              | 3.0                                                         | 0.00276                              | 17.0                 | 58                |
| 90L                  | 2.2                                             | 0AV3094A                   | 1TL0303-0EA42-1□□□ | 2890                       | 85.9                                                                                                    | 87.2                                                      | 0.88                        | 4.4                          | 7.3                         | 7.5                                                                | 2.8                                                              | 3.6                                                         | 0.00356                              | 22                   | 58                |
| 100L                 | 3                                               | 0AV3104A                   | 1TL0303-1AA42-1□□□ | 2865                       | 87.1                                                                                                    | 88.3                                                      | 0.87                        | 6                            | 10.0                        | 7.8                                                                | 3.3                                                              | 3.6                                                         | 0.00462                              | 28                   | 62                |
| 3000rpm 2- pole      |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 380VD/660VY 50HZ     |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 112M                 | 4                                               | 0AV3112A                   | 1TL0303-1BA23-3□□□ | 2915                       | 88.1                                                                                                    | 89.6                                                      | 0.90                        | 7.7                          | 13.1                        | 7.8                                                                | 2.6                                                              | 3.6                                                         | 0.0088                               | 35                   | 65                |
| 132S                 | 5.5                                             | 0AV3130A                   | 1TL0303-1CA03-3□□□ | 2930                       | 89.2                                                                                                    | 90.2                                                      | 0.89                        | 10.5                         | 17.9                        | 7.5                                                                | 2.3                                                              | 3.6                                                         | 0.0185                               | 47                   | 67                |
| 132S                 | 7.5                                             | 0AV3131A                   | 1TL0303-1CA13-3□□□ | 2930                       | 90.1                                                                                                    | 91.5                                                      | 0.90                        | 14.1                         | 24.4                        | 7.5                                                                | 2.3                                                              | 3.6                                                         | 0.0232                               | 54                   | 67                |
| 160M                 | 11                                              | 0AV3162A                   | 1TL0303-1DA23-3□□□ | 2935                       | 91.2                                                                                                    | 92.0                                                      | 0.89                        | 20.5                         | 35.8                        | 7.5                                                                | 2.3                                                              | 3.4                                                         | 0.0390                               | 79                   | 69                |
| 160M                 | 15                                              | 0AV3163A                   | 1TL0303-1DA33-3□□□ | 2935                       | 91.9                                                                                                    | 92.6                                                      | 0.89                        | 28                           | 48.8                        | 7.5                                                                | 2.4                                                              | 3.4                                                         | 0.0472                               | 89                   | 69                |
| 160L                 | 18.5                                            | 0AV3164A                   | 1TL0303-1DA43-3□□□ | 2935                       | 92.4                                                                                                    | 93.0                                                      | 0.89                        | 34                           | 60.2                        | 7.8                                                                | 2.4                                                              | 3.4                                                         | 0.0577                               | 103                  | 69                |
| 1500rpm 4- pole      |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 220VD/380VY 50HZ     |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 80M                  | 0.55                                            | 0AV3082B                   | 1TL0303-0DB22-1□□□ | 1440                       | 80.8                                                                                                    | 81.8                                                      | 0.76                        | 1.36                         | 3.6                         | 5.5                                                                | 2.2                                                              | 3.2                                                         | 0.00216                              | 12.5                 | 45                |
| 80M                  | 0.75                                            | 0AV3083B                   | 1TL0303-0DB32-1□□□ | 1440                       | 82.5                                                                                                    | 82.9                                                      | 0.75                        | 1.84                         | 5.0                         | 6.0                                                                | 2.6                                                              | 3.7                                                         | 0.00250                              | 13.5                 | 45                |
| 90S                  | 1.1                                             | 0AV3090B                   | 1TL0303-0EB02-1□□□ | 1430                       | 84.1                                                                                                    | 85.1                                                      | 0.79                        | 2.5                          | 7.3                         | 6.5                                                                | 2.7                                                              | 3.7                                                         | 0.00389                              | 17.0                 | 47                |
| 90L                  | 1.5                                             | 0AV3094B                   | 1TL0303-0EB42-1□□□ | 1440                       | 85.3                                                                                                    | 86.0                                                      | 0.79                        | 3.4                          | 9.9                         | 6.5                                                                | 2.8                                                              | 3.8                                                         | 0.00499                              | 21                   | 47                |
| 100L                 | 2.2                                             | 0AV3104B                   | 1TL0303-1AB42-1□□□ | 1440                       | 86.7                                                                                                    | 87.1                                                      | 0.81                        | 4.75                         | 14.6                        | 8.3                                                                | 3.0                                                              | 4.0                                                         | 0.01125                              | 30                   | 52                |
| 100L                 | 3                                               | 0AV3105B                   | 1TL0303-1AB52-1□□□ | 1440                       | 87.7                                                                                                    | 88.1                                                      | 0.81                        | 6.4                          | 19.9                        | 8.3                                                                | 3.0                                                              | 4.0                                                         | 0.01313                              | 34                   | 52                |
| 1500rpm 4- pole      |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 380VD/660VY 50HZ     |                                                 |                            |                    |                            |                                                                                                         |                                                           |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                   |
| 112M                 | 4                                               | 0AV3112B                   | 1TL0303-1BB23-3□□□ | 1450                       | 88.6                                                                                                    | 89.6                                                      | 0.81                        | 8.5                          | 26.3                        | 8.3                                                                | 3.7                                                              | 4.6                                                         | 0.0149                               | 39                   | 53                |
| 132S                 | 5.5                                             | 0AV3130B                   | 1TL0303-1CB03-3□□□ | 1455                       | 89.6                                                                                                    | 90.9                                                      | 0.84                        | 11.1                         | 36.1                        | 7.8                                                                | 2.4                                                              | 3.8                                                         | 0.0285                               | 53                   | 59                |
| 132M                 | 7.5                                             | 0AV3132B                   | 1TL0303-1CB23-3□□□ | 1455                       | 90.4                                                                                                    | 91.7                                                      | 0.85                        | 14.8                         | 49.2                        | 7.8                                                                | 2.4                                                              | 3.8                                                         | 0.0356                               | 64                   | 59                |
| 160M                 | 11                                              | 0AV3162B                   | 1TL0303-1DB23-3□□□ | 1465                       | 91.4                                                                                                    | 92.4                                                      | 0.86                        | 21.5                         | 71.7                        | 7.8                                                                | 2.6                                                              | 3.8                                                         | 0.0648                               | 85                   | 61                |
| 160L                 | 15                                              | 0AV3164B                   | 1TL0303-1DB43-3□□□ | 1465                       | 92.1                                                                                                    | 92.9                                                      | 0.86                        | 29                           | 97.8                        | 8.2                                                                | 2.6                                                              | 3.8                                                         | 0.0811                               | 102                  | 61                |

注：

<sup>1)</sup> 关于其他电压与频率、绕组保护及接线盒位置的编码，请见第 13 页“订货号”部分；

<sup>2)</sup> 噪声值仅适用于电动机在 50 Hz 电源直接供电且空载运行时的情况，容差为 +3 dB。

Note:

<sup>1)</sup> About the code of other voltage and frequency, winding protection and connection box position, please refer to Orde No. in page 13.

<sup>2)</sup> Noise value is only applicable to the direct power supply of the motor in 50Hz power supply and the condition of no-load operation, the tolerance is +3dB.

# 选型技术数据表 Technical data table

## 铝壳系列电机 AI Frame Motors

### 中国能效等级3级, IE3

| 机座号<br>Frame<br>Size | 额定<br>功率<br>(50Hz)<br>Rated<br>Output<br>(50Hz) | 电动机<br>型号<br>Motor<br>Type | 订货号<br>Order No.    | 额定<br>转速<br>Rated<br>Speed | 效率—参照 GB18613-2020 效率等级 3<br>Effeciency is in accordance with the<br>effeciency level 3 of GB18613-2020 |                                                          |                             |                              | 额定<br>转矩<br>Rated<br>torque | 起动<br>电流 /<br>额定<br>电流<br>Starting<br>Current/<br>Rated<br>current | 起动<br>转矩 /<br>额定<br>转矩<br>Starting<br>torque/<br>Rated<br>torque | 最大<br>转矩 /<br>额定<br>转矩<br>Max<br>torque/<br>Reted<br>torque | 转动<br>惯量<br>Moment<br>of<br>intertia | 重量<br>Weight<br>IMB3 | 噪声<br>Noise      |
|----------------------|-------------------------------------------------|----------------------------|---------------------|----------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|----------------------|------------------|
|                      | kW                                              |                            |                     |                            | 效率<br>(100%<br>负载 )<br>Effeciency<br>at (50Hz)<br>4/4 load                                              | 效率<br>(75%<br>负载)<br>Effeciency<br>at (50Hz)<br>3/4 load | 功率<br>因素<br>Power<br>factor | 额定<br>电流<br>Rated<br>current |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
|                      |                                                 |                            |                     | rpm                        | %                                                                                                       | %                                                        |                             | A                            | Nm                          | I <sub>LR</sub> /I <sub>rated</sub>                                | T <sub>LR</sub> /T <sub>rated</sub>                              | T <sub>max</sub> /T <sub>rated</sub>                        | kgm²                                 | kg                   | L <sub>plA</sub> |
| 1000rpm 6- pole      |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 220VD/380VY 50HZ     |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 80M                  | 0.55                                            | 0AV3083C                   | 1TL0303-0DC32-1 □□□ | 935                        | 77.2                                                                                                    | 77.5                                                     | 0.67                        | 1.62                         | 5.6                         | 5.0                                                                | 2.6                                                              | 3.2                                                         | 0.00310                              | 15                   | 44               |
| 90S                  | 0.75                                            | 0AV3090C                   | 1TL0303-0EC02-1 □□□ | 940                        | 78.9                                                                                                    | 80.3                                                     | 0.70                        | 2.05                         | 7.6                         | 5.0                                                                | 2.4                                                              | 3.2                                                         | 0.00436                              | 18.5                 | 45               |
| 90L                  | 1.1                                             | 0AV3094C                   | 1TL0303-0EC42-1 □□□ | 945                        | 81.0                                                                                                    | 81.6                                                     | 0.69                        | 3                            | 11.1                        | 5.5                                                                | 2.7                                                              | 3.5                                                         | 0.00513                              | 22                   | 45               |
| 100L                 | 1.5                                             | 0AV3104C                   | 1TL0303-1AC42-1 □□□ | 950                        | 82.5                                                                                                    | 84.1                                                     | 0.74                        | 3.75                         | 15.1                        | 5.5                                                                | 2.5                                                              | 3.5                                                         | 0.01136                              | 31                   | 49               |
| 112M                 | 2.2                                             | 0AV3112C                   | 1TL0303-1BC22-1 □□□ | 945                        | 84.3                                                                                                    | 86.1                                                     | 0.74                        | 5.4                          | 22.2                        | 6.0                                                                | 2.7                                                              | 3.4                                                         | 0.01451                              | 37                   | 53               |
| 132S                 | 3                                               | 0AV3130C                   | 1TL0303-1CC02-1 □□□ | 965                        | 85.6                                                                                                    | 86.6                                                     | 0.75                        | 7.1                          | 29.7                        | 6.0                                                                | 2.7                                                              | 4.0                                                         | 0.02666                              | 45                   | 57               |
| 1000rpm 6- pole      |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 380VD/660VY 50HZ     |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 132M                 | 4                                               | 0AV3132C                   | 1TL0303-1CC23-3 □□□ | 955                        | 86.8                                                                                                    | 88.5                                                     | 0.75                        | 9.3                          | 40.0                        | 6.0                                                                | 2.7                                                              | 3.4                                                         | 0.0305                               | 56                   | 57               |
| 132M                 | 5.5                                             | 0AV3133C                   | 1TL0303-1CC33-3 □□□ | 960                        | 88.0                                                                                                    | 89.2                                                     | 0.76                        | 12.5                         | 54.7                        | 6.5                                                                | 2.7                                                              | 4.0                                                         | 0.0413                               | 68                   | 57               |
| 160M                 | 7.5                                             | 0AV3162C                   | 1TL0303-1DC23-3 □□□ | 980                        | 89.1                                                                                                    | 90.4                                                     | 0.78                        | 16.4                         | 73.1                        | 6.5                                                                | 2.7                                                              | 3.6                                                         | 0.126                                | 78                   | 61               |
| 160L                 | 11                                              | 0AV3164C                   | 1TL0303-1DC43-3 □□□ | 980                        | 90.3                                                                                                    | 90.3                                                     | 0.77                        | 24                           | 107                         | 7.0                                                                | 2.7                                                              | 3.6                                                         | 0.1717                               | 95                   | 61               |
| 750rpm 8- pole       |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 220VD/380VY 50HZ     |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 132S                 | 2.2                                             | 0AV3130D                   | 1TL0303-1CD02-1 □□□ | 725                        | 81.9                                                                                                    | 82.6                                                     | 0.73                        | 5.6                          | 29                          | 5.5                                                                | 1.8                                                              | 3.0                                                         | 0.0470                               | 56                   | 51               |
| 132M                 | 3                                               | 0AV3132D                   | 1TL0303-1CD22-1 □□□ | 720                        | 83.5                                                                                                    | 84.5                                                     | 0.74                        | 7.4                          | 39.8                        | 5.5                                                                | 1.8                                                              | 3.0                                                         | 0.0615                               | 68                   | 51               |
| 750rpm 8- pole       |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 380VD/660VY 50HZ     |                                                 |                            |                     |                            |                                                                                                         |                                                          |                             |                              |                             |                                                                    |                                                                  |                                                             |                                      |                      |                  |
| 160M                 | 4                                               | 0AV3162D                   | 1TL0303-1DD23-3 □□□ | 728                        | 84.8                                                                                                    | 86.4                                                     | 0.74                        | 9.7                          | 52.5                        | 5.5                                                                | 1.7                                                              | 2.8                                                         | 0.0759                               | 60                   | 55               |
| 160M                 | 5.5                                             | 0AV3163D                   | 1TL0303-1DD33-3 □□□ | 732                        | 86.2                                                                                                    | 87.1                                                     | 0.74                        | 13.1                         | 71.8                        | 6.0                                                                | 1.7                                                              | 3.0                                                         | 0.1002                               | 71                   | 55               |
| 160L                 | 7.5                                             | 0AV3164D                   | 1TL0303-1DD43-3 □□□ | 732                        | 87.3                                                                                                    | 88.3                                                     | 0.74                        | 17.6                         | 97.8                        | 6.0                                                                | 1.8                                                              | 3.0                                                         | 0.1277                               | 109                  | 55               |

注：

<sup>1)</sup> 关于其他电压与频率、绕组保护及接线盒位置的编码，请见第 13 页“订货号”部分；

<sup>2)</sup> 噪声值仅适用于电动机在 50 Hz 电源直接供电且空载运行时的情况，容差为 +3 dB。

Note:

<sup>1)</sup> About the code of other voltage and frequency, winding protection and connection box position, please refer to Orde No. in page 13.

<sup>2)</sup> Noise value is only applicable to the direct power supply of the motor in 50Hz power supply and the condition of no-load operation, the tolerance is +3dB.

# 选件 Options

| 电动机订货号<br>Motor order code    | 选件号 <sup>1)</sup><br>Option Code | 描述<br>Description                                                                                                                 | 应用范围<br>Application Scope |
|-------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 电压与频率 Voltages and frequency  |                                  |                                                                                                                                   |                           |
| 1TL0303- □□□□ 9-0 □□□         | M2A <sup>2)14)</sup>             | 220VD/380VY 60Hz, 50Hz 功率输出 power output                                                                                          | FS80 ~ 160                |
|                               | M2B <sup>3)14)</sup>             | 380VD/660VY 60Hz, 50Hz 功率输出 power output                                                                                          | FS80 ~ 160                |
|                               | M2C <sup>2)14)</sup>             | 440VY 60Hz, 50Hz 功率输出 power output                                                                                                | FS80 ~ 160                |
|                               | M2D <sup>3)14)</sup>             | 440VD 60Hz, 50Hz 功率输出 power output                                                                                                | FS80 ~ 160                |
|                               | M2E <sup>2)14)</sup>             | 460VY 60Hz, 50Hz 功率输出 power output                                                                                                | FS80 ~ 160                |
|                               | M2F <sup>3)14)</sup>             | 460VD 60Hz, 50Hz 功率输出 power output                                                                                                | FS80 ~ 160                |
| 线圈和绝缘 Windings and insulation |                                  |                                                                                                                                   |                           |
| —                             | N01                              | 温度等级 155 (F) , 使用 155 (F) , 带有服务系数 (SF1.15)<br>Temperature class 155 (F), used according to 155 (F), with service factor (SF1.15) | FS80 ~ 160                |
| —                             | N10                              | 180 (H) 度温度等级绝缘 Temperature class 180 (H)                                                                                         | FS80 ~ 160                |
| —                             | Q04 <sup>4)</sup>                | 绕组带 220 V 防潮加热带<br>Anti-condensation heater for 220 VAC (spaces heater)                                                           | FS80 ~ 160                |
| 电动机接线盒 Motor connection box   |                                  |                                                                                                                                   |                           |
| —                             | R10 <sup>5) 15)</sup>            | 接线盒直接旋转 90°, 进线口朝向驱动端<br>Rotation of the connection box through 90°, entry from DE                                                | FS80 ~ 160                |
| —                             | R11 <sup>6) 15)</sup>            | 接线盒直接旋转 90°, 进线口朝向非驱动端<br>Rotation of the connection box through 90°, entry from NDE                                              | FS80 ~ 160                |
| —                             | R12 <sup>15)</sup>               | 接线盒直接旋转 180° Rotation of the connection box through 180°                                                                          | FS80 ~ 160                |
| —                             | H04                              | 外部接地 external earthing                                                                                                            | FS80 ~ 160                |
| —                             | X07                              | 铸铁接线盒 cast iron connection box                                                                                                    | FS80 ~ 160                |
| —                             | X47                              | 电机接线盒标配 2 个自锁葛兰<br>Connection boxes of the motors include 2 self-locking cable gland                                              | FS112 ~ 160               |
| 轴承 Bearings                   |                                  |                                                                                                                                   |                           |
| —                             | L80                              | SKF 轴承<br>SKF Bearing                                                                                                             | FS80 ~ 160                |
| —                             | L81                              | 其他进口品牌轴承<br>Other import brand bearing                                                                                            | FS80 ~ 160                |
| —                             | L82 <sup>16)</sup>               | 驱动端轴带螺纹孔<br>DE shaft with threaded hole                                                                                           | FS80 ~ 160                |
| —                             | L20                              | 驱动端轴承固定<br>Located bearing at DE                                                                                                  | FS80 ~ 160                |
| —                             | L22                              | 增强悬臂力<br>Increased cantilever forces                                                                                              | FS100 ~ 160               |

<sup>1)</sup> 订货时，电动机订货号需带“-Z”，另外附上选件号；

<sup>2)</sup> 一般适用于 3kW 及以下功率的电机；

<sup>3)</sup> 一般适用于 3kW 以上功率的电机；

<sup>4)</sup> 选择此选件，接线盒将更改为铸铁壳

<sup>5)</sup> 不适用 FS80-100 法兰安装电机；

<sup>6)</sup> 不适用于顶出线；

<sup>7)</sup> H00、F70 均不能与此选件并用；

<sup>8)</sup> 非驱动端上的第二轴伸尺寸见外形尺寸；

<sup>1)</sup> Order No. supplement Z with option code when ordering.

<sup>2)</sup> Only applicable to the motor whose power is 3kW and below.

<sup>3)</sup> Only applicable to the motor whose power is 3kW and above.

<sup>4)</sup> When choose these options, the connection boxes will be changed to cast iron shell.

<sup>5)</sup> Not applicable to the FS80~100 flange mounted motors.

<sup>6)</sup> Not applicable to the outlet on top.

<sup>7)</sup> H00、F70 can't be used with this option.

<sup>8)</sup> Second standard shaft extension on NDE is shown in the dimension drawings.

| 电动机订货号<br>Motor order code                            | 选件号 <sup>1)</sup><br>Option Code | 描述<br>Description                                                                                                                                 | 应用范围<br>Application Scope |
|-------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 机械设计和防护等级 Mechanical design and degrees of protection |                                  |                                                                                                                                                   |                           |
| —                                                     | X17 <sup>7)</sup>                | 第二标准轴伸 Second standard shaft extension                                                                                                            | FS80 ~ 160                |
| —                                                     | H00 <sup>9)</sup>                | 电动机带防护罩<br>Motor with protective cover                                                                                                            | FS80 ~ 160                |
| —                                                     | H03 <sup>10)</sup>               | 排水孔<br>Drainage holes                                                                                                                             | FS80 ~ 160                |
| —                                                     | F90 <sup>11)</sup>               | 风机电机（无风扇风罩，非驱动端全封闭）<br>Fan motor (no fan cover, NDE fully enclosed)                                                                               | FS80 ~ 160                |
| —                                                     | X50 <sup>12)</sup>               | 安装欧姆龙编码器（E6B2-CWZ6C-1024）和独立驱动风扇<br>Install OMRON encoder (E6B2-CWZ6C-1024) and independent drive fan                                             | FS80 ~ 160                |
| —                                                     | F01                              | 安装电磁制动器<br>Install the electro-magnetic brake                                                                                                     | FS80 ~ 160                |
| —                                                     | W74 <sup>13)</sup>               | 安装欧姆龙编码器（E6B2-CWZ1X-1024）和独立驱动风扇<br>Install the OMRON encoder (E6B2-CWZ1X-1024) and independent drive fan                                         | FS80 ~ 160                |
| —                                                     | F70 <sup>9)</sup>                | 电动机带独立驱动风扇<br>Motors with the independent drive fan                                                                                               | FS80 ~ 160                |
| —                                                     | H22                              | IP56 防护等级（非高海况）<br>IP56 degree of protection (non-heavy-sea)                                                                                      | FS80 ~ 160                |
| 铭牌和测试证书 Rating plate and test certificates            |                                  |                                                                                                                                                   |                           |
| —                                                     | B80                              | 出厂检验报告<br>Acceptance test certificate 3.1 in accordance with EN 10204                                                                             | FS80 ~ 160                |
| 喷漆 Paint finish                                       |                                  |                                                                                                                                                   |                           |
| —                                                     | W88                              | 适用 TH, W, F1, WF1 以及海洋性气候环境用电机<br>Design for TH, W, F1, WF1 and Sea air resistant                                                                 | FS80 ~ 160                |
| 包装 Packing                                            |                                  |                                                                                                                                                   |                           |
| —                                                     | B90                              | 包装（FS80 ~ 132 电动机采用纸箱包装，FS160 电动机采用木箱包装）<br>Packing (FS80 ~ 132 motors adopt the carton packaging, FS160 motors adopt the wooden cases packaging) | FS80 ~ 160                |

<sup>9)</sup> 无法与选件号 X17 并用；

<sup>10)</sup> 仅适用于水平安装的电动机。对于 IM B5 和 IM B14 安装结构型式的电动机，选择此选件时，必须确保接线盒处于机座顶端。对于其它安装结构型式的电机请咨询西门子；

<sup>11)</sup> 无风扇和风罩时，电动机的长度将减小  $\Delta l$ 。如需要按照铭牌上功率数值输出时电动机需要外部冷却。客户应当采用正确的冷却方式，没有或错误的冷却方式都将减少电动机的使用寿命，甚至会损坏电动机；

<sup>12)</sup> SINAMICS 变频器联结 Omron 编码器（E6B2-CWZ6C）时，变频器需要一些特殊配置。详细信息，请咨询西门子热线；

<sup>13)</sup> SINAMICS 变频器可以直接与 Omron 编码器（E6B2-CWZ1X）联结。

<sup>14)</sup> 根据国标要求，60Hz 频率下不考核能效要求；

<sup>15)</sup> 当接线盒位于电机左侧或右侧时，出线口方向默认朝底部；

<sup>16)</sup> 螺纹孔尺寸参见“外形尺寸”部分中 DB 尺寸。

<sup>9)</sup> Unable to be used with the option X17.

<sup>10)</sup> Only applicable to the vertical mounting motors. For the construction type of IM B5 and IM B14, when choose this option, it is necessary to ensure the connection box is on top of the frame. For other construction types, please specially consult with SIEMENS.

<sup>11)</sup> When without the fans or the shells, the motor length will be decreased by  $\Delta l$ . If it is necessary to output according to the nameplate power, the motor requires external cooling. Customers are supposed to adopt the right cooling method, without or wrong cooling methods will decrease the service life for the motors. even damage the motors.

<sup>12)</sup> When the SINAMICS frequency converter is coupled with the Omron encoder (E6B2-CWZ6C), the frequency converter requires some special configuration. For more information, please consult the SIEMENS hotline.

<sup>13)</sup> SINAMICS frequency converter can be directly coupled with the Omron encoder (E6B2-CWZ1X).

<sup>14)</sup> According to the requirements of the GB, the energy efficiency requirement is not evaluated under the frequency of 60Hz.

<sup>15)</sup> When connection box on the right or left side of motor, the cable entry from below as default.

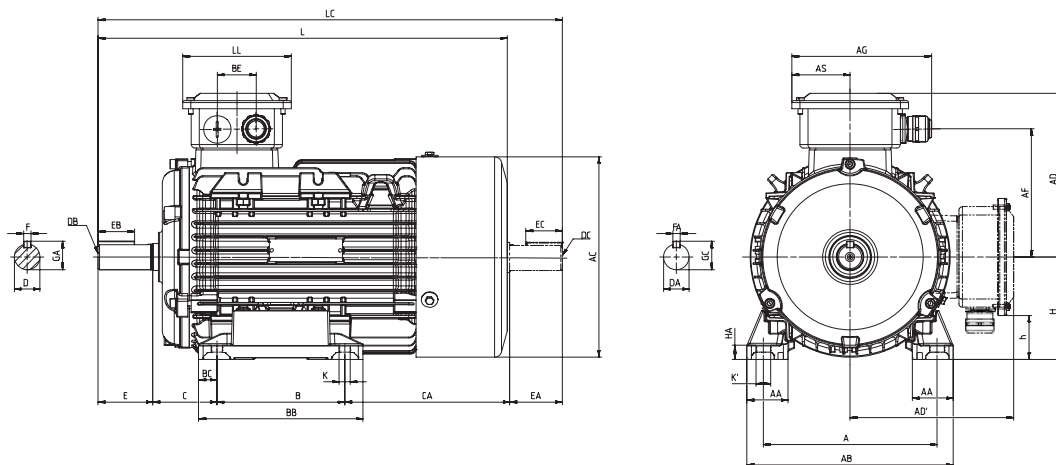
<sup>16)</sup> Threaded hole size is shown in the DB size of the section of dimension drawings.

# 外形尺寸 Dimension drawings

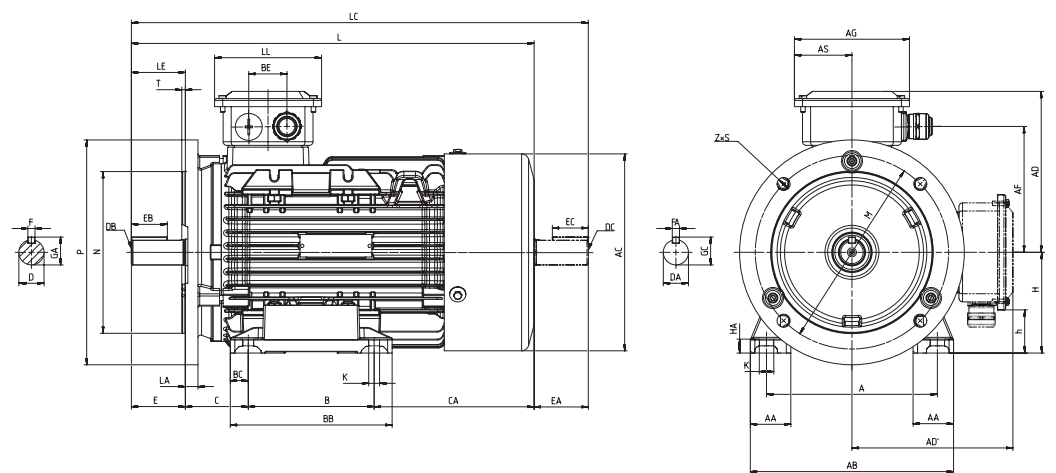
1TL0303 铝壳系列电机 AL Frame series motor 1TL0303

机座号从 80M 至 160L Frame sizes 80 M to 160 L

IM B3 安装结构型式 Type of construction IMB3



IM B35 安装结构型式 Type of construction IMB35

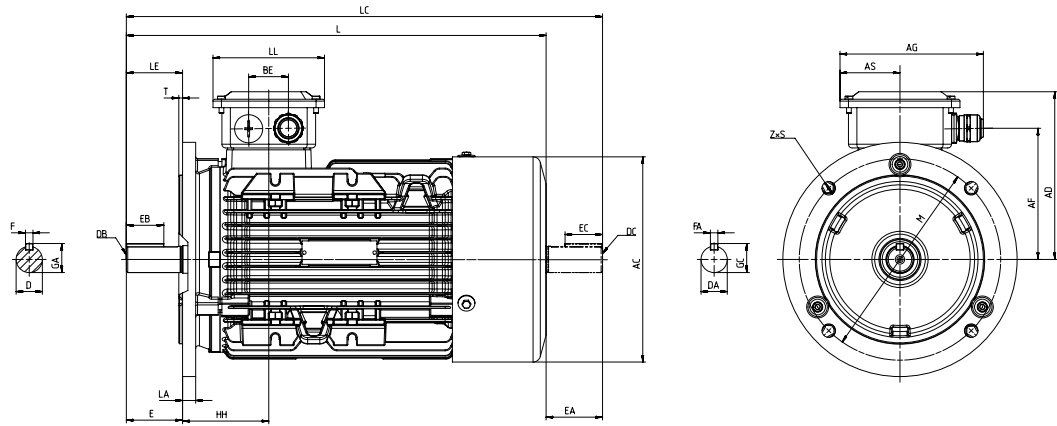


| 机座号<br>Frame size | 类型 Type<br>1TL0303 | 极数<br>Number of poles | 尺寸图依据 IEC 标准<br>Dimension designation according to IEC standards |    |     |                  |          |     |     |    |                 |     |    |    |     |  |
|-------------------|--------------------|-----------------------|------------------------------------------------------------------|----|-----|------------------|----------|-----|-----|----|-----------------|-----|----|----|-----|--|
|                   |                    |                       | A                                                                | AA | AB  | AC <sup>1)</sup> | AD / AD' | AF  | AG  | AS | B <sup>2)</sup> | BB  | BC | BE | C   |  |
| 80 M              | 0D□2               | 2, 4, 6               | 125                                                              | 36 | 160 | 160              | 135      | 102 | 120 | 52 | 100             | 135 | 18 | —  | 50  |  |
|                   | 0D□3               |                       | 125                                                              | 36 | 160 | 160              | 135      | 102 | 120 | 52 | 100             | 135 | 18 | —  | 50  |  |
| 90 S              | 0E□0               | 2, 4, 6               | 140                                                              | 36 | 176 | 180              | 145      | 109 | 135 | 55 | 100             | 140 | 20 | —  | 56  |  |
| 90 L              | 0E□4               |                       | 140                                                              | 36 | 176 | 180              | 145      | 109 | 135 | 55 | 125             | 165 | 20 | —  | 56  |  |
| 100 L             | 1A□4               | 2, 4, 6               | 160                                                              | 40 | 200 | 200              | 160      | 124 | 135 | 55 | 140             | 176 | 18 | —  | 63  |  |
|                   | 1A□5               |                       | 160                                                              | 40 | 200 | 200              | 160      | 124 | 135 | 55 | 140             | 176 | 18 | —  | 63  |  |
| 112 M             | 1B□2               | 2, 4, 6               | 190                                                              | 45 | 226 | 225              | 180      | 145 | 150 | 64 | 140             | 180 | 20 | 42 | 70  |  |
| 132 S             | 1C□0               | 2, 4, 6, 8            | 216                                                              | 50 | 256 | 265              | 200      | 170 | 150 | 64 | 140             | 186 | 23 | 42 | 89  |  |
|                   | 1C□1               |                       | 216                                                              | 50 | 256 | 265              | 200      | 170 | 150 | 64 | 140             | 186 | 23 | 42 | 89  |  |
| 132 M             | 1C□2               | 2, 4, 6, 8            | 216                                                              | 50 | 256 | 265              | 200      | 170 | 150 | 64 | 178             | 224 | 23 | 42 | 89  |  |
|                   | 1C□3               |                       | 216                                                              | 50 | 256 | 265              | 200      | 170 | 150 | 64 | 178             | 224 | 23 | 42 | 89  |  |
| 160 M             | 1D□2               | 2, 4, 6, 8            | 254                                                              | 60 | 314 | 315              | 250      | 201 | 195 | 83 | 210             | 258 | 24 | 60 | 108 |  |
|                   | 1D□3               |                       | 254                                                              | 60 | 314 | 315              | 250      | 201 | 195 | 83 | 210             | 258 | 24 | 60 | 108 |  |
| 160 L             | 1D□4               | 2, 4, 6, 8            | 254                                                              | 60 | 314 | 315              | 250      | 201 | 195 | 83 | 254             | 302 | 24 | 60 | 108 |  |

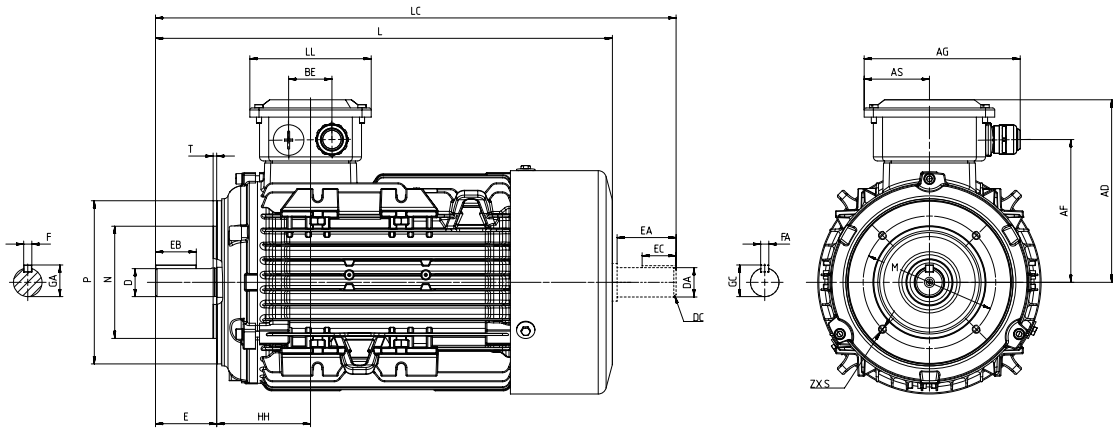
<sup>1)</sup> 含螺钉头测量尺寸 Measured across the bolt heads;

<sup>2)</sup> 该尺寸为 DIN EN 50347 标准所列机座号对应尺寸 This dimension is assigned in DIN EN 50347 to the frame size listed;

IM B5 以及 IM V1 安装结构型式 Type of construction IMB5 and IMV1



IM B14 安装结构型式 Type of construction IMB14

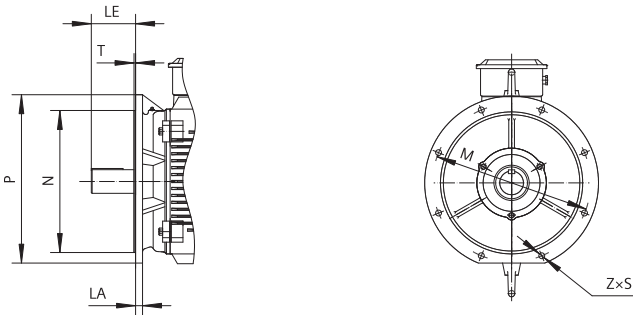


| 尺寸图依据 IEC 标准<br>Dimension designation according to IEC standards |                  |     |    |      |     |        |     |     |     | 驱动端轴伸直径<br>DE shaft extension |     |     |    |    |      | 非驱动端轴伸 (选件号为 X17)<br>NDE shaft extension (option code X17) |     |     |    |    |      |
|------------------------------------------------------------------|------------------|-----|----|------|-----|--------|-----|-----|-----|-------------------------------|-----|-----|----|----|------|------------------------------------------------------------|-----|-----|----|----|------|
|                                                                  | CA <sup>2)</sup> | H   | h  | HA   | HH  | K / K' | L   | LC  | LL  | D                             | DB  | E   | EB | F  | GA   | DA                                                         | DC  | EA  | EC | FA | GC   |
|                                                                  | 148              | 80  | 28 | 10   | 76  | 10/14  | 335 | 378 | 103 | 19                            | M6  | 40  | 22 | 6  | 21.5 | 19                                                         | M6  | 40  | 22 | 6  | 21.5 |
|                                                                  | 148              | 80  | 28 | 10   | 76  | 10/14  | 335 | 378 | 103 | 19                            | M6  | 40  | 22 | 6  | 21.5 | 19                                                         | M6  | 40  | 22 | 6  | 21.5 |
|                                                                  | 169              | 90  | 35 | 10   | 81  | 10/14  | 370 | 425 | 110 | 24                            | M8  | 50  | 32 | 8  | 27   | 24                                                         | M8  | 50  | 32 | 8  | 27   |
|                                                                  | 169              | 90  | 35 | 10   | 81  | 10/14  | 395 | 450 | 110 | 24                            | M8  | 50  | 32 | 8  | 27   | 24                                                         | M8  | 50  | 32 | 8  | 27   |
|                                                                  | 204              | 100 | 45 | 12   | 94  | 12/16  | 465 | 530 | 110 | 28                            | M10 | 60  | 40 | 8  | 31   | 28                                                         | M10 | 60  | 40 | 8  | 31   |
|                                                                  | 204              | 100 | 45 | 12   | 94  | 12/16  | 465 | 530 | 110 | 28                            | M10 | 60  | 40 | 8  | 31   | 28                                                         | M10 | 60  | 40 | 8  | 31   |
|                                                                  | 187              | 112 | 48 | 15.5 | 92  | 12/16  | 455 | 517 | 119 | 28                            | M10 | 60  | 40 | 8  | 31   | 28                                                         | M10 | 60  | 40 | 8  | 31   |
|                                                                  | 209              | 132 | 68 | 15   | 122 | 12/16  | 505 | 590 | 119 | 38                            | M12 | 80  | 56 | 10 | 41   | 38                                                         | M12 | 80  | 56 | 10 | 41   |
|                                                                  | 209              | 132 | 68 | 15   | 122 | 12/16  | 505 | 590 | 119 | 38                            | M12 | 80  | 56 | 10 | 41   | 38                                                         | M12 | 80  | 56 | 10 | 41   |
|                                                                  | 218              | 132 | 68 | 15   | 122 | 12/16  | 550 | 635 | 119 | 38                            | M12 | 80  | 56 | 10 | 41   | 38                                                         | M12 | 80  | 56 | 10 | 41   |
|                                                                  | 218              | 132 | 68 | 15   | 122 | 12/16  | 550 | 635 | 119 | 38                            | M12 | 80  | 56 | 10 | 41   | 38                                                         | M12 | 80  | 56 | 10 | 41   |
|                                                                  | 192              | 160 | 77 | 20   | 157 | 15/19  | 620 | 735 | 157 | 42                            | M16 | 110 | 80 | 12 | 45   | 42                                                         | M16 | 110 | 80 | 12 | 45   |
|                                                                  | 192              | 160 | 77 | 20   | 157 | 15/19  | 620 | 735 | 157 | 42                            | M16 | 110 | 80 | 12 | 45   | 42                                                         | M16 | 110 | 80 | 12 | 45   |
|                                                                  | 208              | 160 | 77 | 20   | 157 | 15/19  | 680 | 795 | 157 | 42                            | M16 | 110 | 80 | 12 | 45   | 42                                                         | M16 | 110 | 80 | 12 | 45   |

# 外形尺寸 Dimension drawings

## 法兰尺寸 Flange dimension

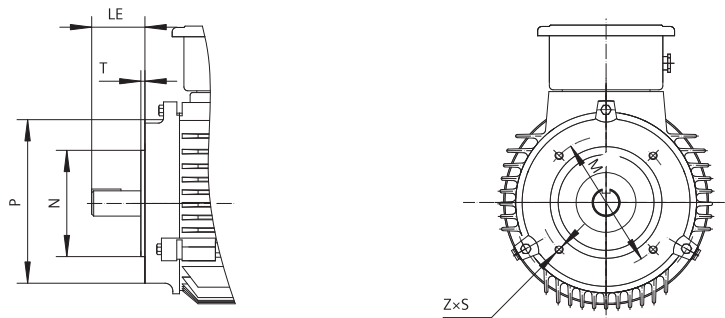
IM B5、IM B35、IM V1、IM V3 安装结构型式 Type of construction IM B5, IM B35, IM V1, IM V3



| 机座号 Frame size | 安装结构形式 Type of construction                          | 法兰带通孔 (FF / A) / 法兰带内螺纹孔 (FT / C)                      |
|----------------|------------------------------------------------------|--------------------------------------------------------|
|                |                                                      | Flange with through holes (FF/A) / tapped holes (FT/C) |
|                |                                                      | 按 DIN / EN 50 347 标准 According to DIN EN 50347         |
| 80             | IM B5, IM B35, IMV1, IM V3<br>IM B14, IM V18, IM V19 | FF 165                                                 |
|                |                                                      | FT 100                                                 |
| 90             | IM B5, IM B35, IMV1, IM V3<br>IM B14, IM V18, IM V19 | FF 165                                                 |
|                |                                                      | FT 115                                                 |
| 100            | IM B5, IM B35, IMV1, IM V3<br>IM B14, IM V18, IM V19 | FF 215                                                 |
|                |                                                      | FT 130                                                 |
| 112            | IM B5, IM B35, IMV1, IM V3<br>IM B14, IM V18, IM V19 | FF 215                                                 |
|                |                                                      | FT 130                                                 |
| 132            | IM B5, IM B35, IMV1, IM V3                           | FF 265                                                 |
| 160            | IM B5, IM B35, IMV1, IM V3                           | FF 300                                                 |

法兰尺寸 Flange dimension

IM B14、IM V18、IM V19 安装结构型式 Type of construction IM B14, IM V18, IM V19



| 尺寸图依据 Dimension designation according to IEC standards |    |     |     |     |     |      |     |   |
|--------------------------------------------------------|----|-----|-----|-----|-----|------|-----|---|
|                                                        | LA | LE  | M   | N   | P   | S    | T   | Z |
|                                                        | 12 | 40  | 165 | 130 | 200 | 12   | 3.5 | 4 |
|                                                        | —  | 40  | 100 | 80  | 120 | M 6  | 3   | 4 |
|                                                        | 12 | 50  | 165 | 130 | 200 | 12   | 3.5 | 4 |
|                                                        | —  | 50  | 115 | 95  | 140 | M 8  | 3   | 4 |
|                                                        | 13 | 60  | 215 | 180 | 250 | 14.5 | 4   | 4 |
|                                                        | —  | 60  | 130 | 110 | 160 | M 8  | 3.5 | 4 |
|                                                        | 14 | 60  | 215 | 180 | 250 | 14.5 | 4   | 4 |
|                                                        | —  | 60  | 130 | 110 | 160 | M 8  | 3.5 | 4 |
|                                                        | 14 | 80  | 265 | 230 | 300 | 14.5 | 4   | 4 |
|                                                        | 14 | 110 | 300 | 250 | 350 | 18.5 | 5   | 4 |

## 西门子电机（中国）有限公司

地址：江苏省仪征市汽车工业园众鑫路 99 号

电话：+86 514 85718108

传真：+86 514 85718083

邮编：211400

邮箱：beide-motor.ssml@siemens.com

网址：www.beide-motor.cn

775-SH902775-03182

西门子电机（中国）有限公司版权所有  
如有改动 恕不事先通知。

## Siemens Standard Motors Ltd.

Address: No.99,Zhongxin Road, Yizheng City, Jiangsu Province  
211400,P.R.China

Tel: +86 514 85718108

Fax: +86 514 85718083

Post code: 211400

E-Mail: beide-motor.ssml@siemens.com

Web site: www.beide-motor.cn