



1TL0 铸铁系列低压三相异步电动机

1TL0 Cast Iron series Low-voltage Three-phase Asynchronous Motor

产品样本 Catalog
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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.

公司概况 Company Profile



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。

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.

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。

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.

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概述 Overview



铸铁壳电机 Cast iron housing motor

额定功率: 0.55 ~ 315 kW

机座号: 80 ~ 355

电压与频率: 支持多种电压与频率

冷却方式: IC411

注油装置: 机座号 180 ~355 的电机标配

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 ~ 315 kW

Frame size: 80 ~ 355

Voltage and Frequency: support multiple voltage and frequency

Cooling method: IC411

Oiling device: FS180~355 motor as standard

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¹⁾, 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。

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 aluminum¹⁾, 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.

¹⁾ 铝壳电机内容请单独见铝壳电机样本。

¹⁾ Please find the Al 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 FS 80 ~ 355	IM B6 FS 80 ~ 160	IM B7 FS 80 ~ 160	IM B8 FS 80 ~ 160	IM V5 ¹⁾ FS 80 ~ 160	IM V6 ²⁾ FS 80 ~ 160
示意图 Diagram						
结构型式 Construction type	机座不带底脚，端盖有法兰 Without feet and with flange on the end-shield (DE)			机座带底脚，端盖有法兰 With feet and with flange on the end-shield (DE)		
安装型式 Mounting type	IM B5 FS 80 ~ 280	IM V1 ³⁾ FS 80 ~ 355	IM V3 ²⁾ FS 80 ~ 160	IM B35 FS 80 ~ 355	IM V15 ¹⁾ FS 80 ~ 160	IM V35 ²⁾ 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 Without feet and with C-flange on the end-shield (DE)			机座带底脚，端盖有标准小法兰 With feet and with C-flange on the end-shield (DE)		
安装型式 Mounting type	IM B14 FS 80 ~ 112	IM V18 ¹⁾ FS 80 ~ 112	IM V19 ²⁾ FS 80 ~ 112	IM B34 FS 80 ~ 112		
示意图 Diagram						

¹⁾ 室外使用时推荐使用护罩（选件号 H00）；

²⁾ 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；

³⁾ 此安装方式中，标配全圆法兰。

¹⁾ At outdoor application, the using of protective cover (Option code H00) is recommended

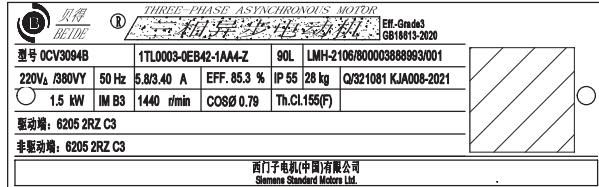
²⁾ At out door application the protection of shaft again jet-water is recommended

³⁾ Full circle flange as standard configuration in this type mounting.

铭牌样例 Nameplate

1TL0003 系列电机铭牌

1TL0003 Motor Nameplate



轴承系统

1TL0 系列电动机标准配置深沟球轴承或角接触球轴承，这些轴承是密封的或可再润滑型的。

FS80 ~ 160 范围的 1TL0 电动机驱动端与非驱动端轴承浮动；FS180 ~ 355 电动机驱动端轴承浮动，非驱动端轴承固定。

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

1TL0 series motors are supplied with the ball bearing as standard. These bearings are either of the sealed or regreasable type.

For FS80 ~ 160, the floating bearings are assembled; for FS180 ~ 355, floating bearing at DE, and fixed bearing at NDE 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 Frame size	极数 Pole	标准配置 Standard design			增强悬臂力设计轴承(选件号L22) Increased cantilever-bearing (Option code:L22)		
		驱动端轴承 DE bearing	非驱动端轴承 (水平安装) NDE bearing (Horizontal mounting)	非驱动端轴承 (立式安装) NDE bearing (Vertical mounting)	驱动端轴承 DE bearing	非驱动端轴承 (水平安装) NDE bearing (Horizontal mounting)	非驱动端轴承 (立式安装) NDE bearing (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	2,4,6,8	6309 2RZ C3	6209 2RZ C3	6209 2RZ C3	—	—	—
180	2,4,6,8	6310 C3	6210 C3	6210 C3	NU310	6210 C3	6210 C3
200	2,4,6,8	6312 C3	6212 C3	6212 C3	NU312	6212 C3	6212 C3
225	2,4,6,8	6313 C3	6213 C3	6213 C3	NU313	6213 C3	6213 C3
250	2,4,6,8	6314 C3	6215 C3	6215 C3	NU314	6215 C3	6215 C3
280	2,4,6,8	6317 C3	6217 C3	6217 C3	NU317	6217 C3	6217 C3
315	2	6316 C3	6316 C3	6316 C3	NU316	6316 C3	6316 C3
	4,6,8	6319 C3	6319 C3	6319 C3	NU319	6319 C3	6319 C3
355	2	6317 C3	6317 C3	7317	NU317	6317 C3	O.R.
	4,6,8	6322 C3	6322 C3	7322	NU322	6322 C3	O.R.

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	
		持久润滑型轴承的润滑脂 Grease for permanent lubrication bearing	可再润滑型轴承的润滑脂 Grease for regreasable bearing
80 ~ 160	2, 4, 6, 8	20000 或 (or) 40000 h	
180 ~ 250	2	4000 h	
	4, 6, 8	8000 h	
280 ~ 315	2	3000 h	
	4, 6, 8	5000 h	
355	2	3000 h	
	4, 6, 8	4000 h	

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 Frame size	接线螺钉螺纹 Contact screw thread	外接电缆直径 (mm) Outer cable diameter (sealing range)	进线孔尺寸 Cable entry size
80 ~ 100	M4	10 ~ 14	M24 x 1.5
112 ~ 132	M5	13 ~ 18	M27 x 2 + M27 x 2
160 ~ 180	M5	18 ~ 25	M36 x 2 + M36 x 2
200 ~ 225	M8	22 ~ 32	M48 x 2 + M48 x 2
250	M10		
280	M10	37 ~ 44	M64 x 2 + M64 x 2
315	M12		
355	M16	38 ~ 47	M72 x 2 + M72 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。

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

注：

¹⁾ 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。

Vibration

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

Table below contains the effective vibration values for unloaded motors.

Note:

¹⁾ 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 Frame size	功率 Power (W)	电压 Voltage (V)
80 ~ 90	20	220
100 ~ 112	30	220
132 ~ 160	40	220
180 ~ 200	50	220
225 ~ 280	60	220
315	80	220
355	100	220

Anti-condensation heater

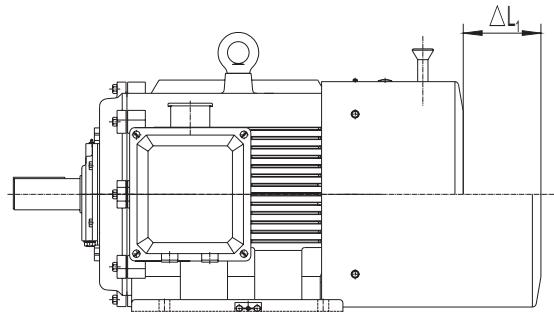
Motors whose windings are at risk of condensation due to the climatic conditions, e.g. inactive motors in humid atmospheres or motors that are subjected to widely fluctuating temperatures can be equipped with anti-condensation heaters (Option code: Q04),

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 Frame size	静制动力矩 (Nm) Static braking torque	空载制动时间 (s) No-load braking time	(开关在直流侧制动机电压) (V) Brake voltage when switch is on the DC side	励磁功率 (W) Excitation power	ΔL ₁ (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
180	200	0.35	170	150	100
200	300	0.45	170	200	125
225	450	0.45	170	200	140

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 °C ~ 40 °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。

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 °C to 40 °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.

标准Standard 60034 - 1	类别Category A	类别Category 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
According to the standard, longer operation is not recommended for Category B.

电气数据公差

■ 效率 η

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

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

效率 η 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: $\pm 10\%$

Tolerance for electrical data

■ Efficiency η at

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

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

With η 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 $-15\% \text{ to } +25\%$

■ Breakdown torque -10%

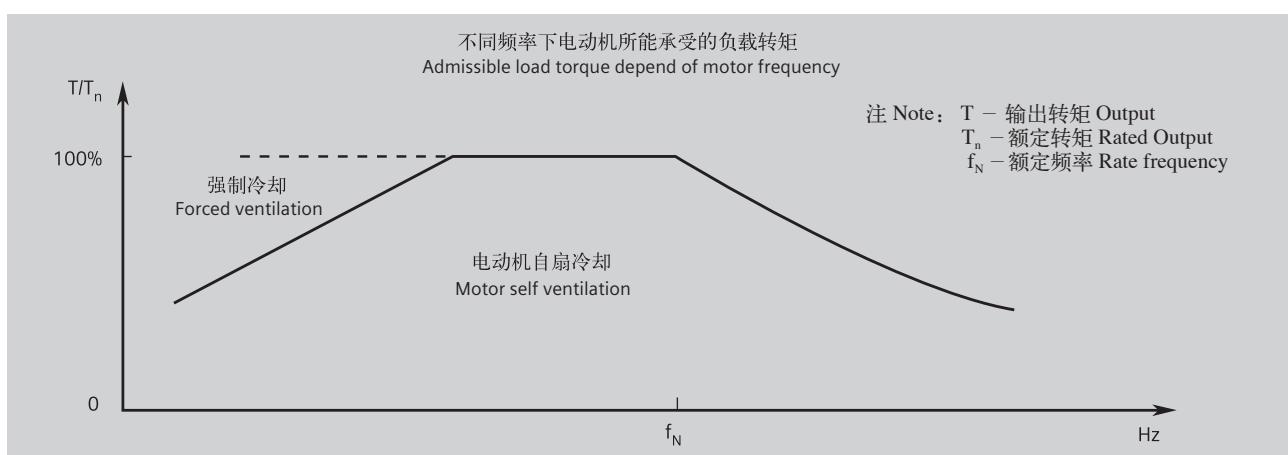
■ Moment of inertia $\pm 10\%$

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：



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。

当负载转矩在允许的转矩范围内时，电动机能够自扇冷却；当负载转矩超过所允许的转矩时，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。

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 Frame size	2 极 2 pole		4 极 4 pole		6 极 6 pole		8 极 8 pole	
	最高转速 Max.rpm	最大频率 fmax	最高转速 Max.rpm	最大频率 fmax	最高转速 Max.rpm	最大频率 fmax	最高转速 Max.rpm	最大频率 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
180	4500	75	2700	90	2400	120	1800	120
200	4500	75	2300	77	1800	90	1400	93
225	3600	60	2300	77	1800	90	1400	93
250	3600	60	2300	77	1800	90	1400	93
280	3600	60	2300	77	1800	90	1400	93
315	3600	60	2300	77	1800	90	1400	93
355	3600	60	2300	77	1800	90	1400	93

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

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

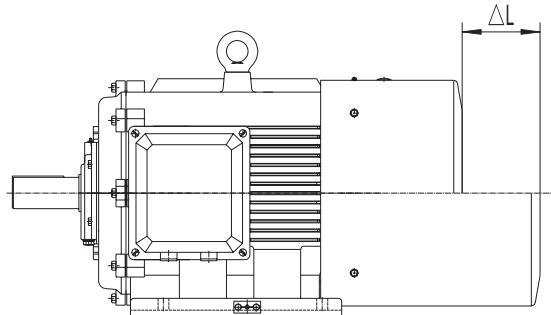
1TL0 电动机能够使用变频器驱动，其负载扭矩如以下图表所示：

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.

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 Motor frame size	额定电压 (V) Rated voltage	额定频率 (Hz) Rated frequency	功率 (W) Rated output	电流 (A) Current	Δ L
80	220D/380Y	50	30	0.14/0.08	60
90		50	30	0.14/0.08	75
100		50	52	0.21/0.12	65
112		50	52	0.21/0.12	75
132		50	45	0.35/0.2	75
160		50	45	0.35/0.2	45
180		50	120	1.04/0.6	55
200		50	120	1.04/0.6	60
225		50	120	1.04/0.6	70
250		50	230	1.73/1.0	65
280		50	230	1.73/1.0	105
315		50	370	1.91/1.1	95
355		50	550	2.18/1.26	100

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.

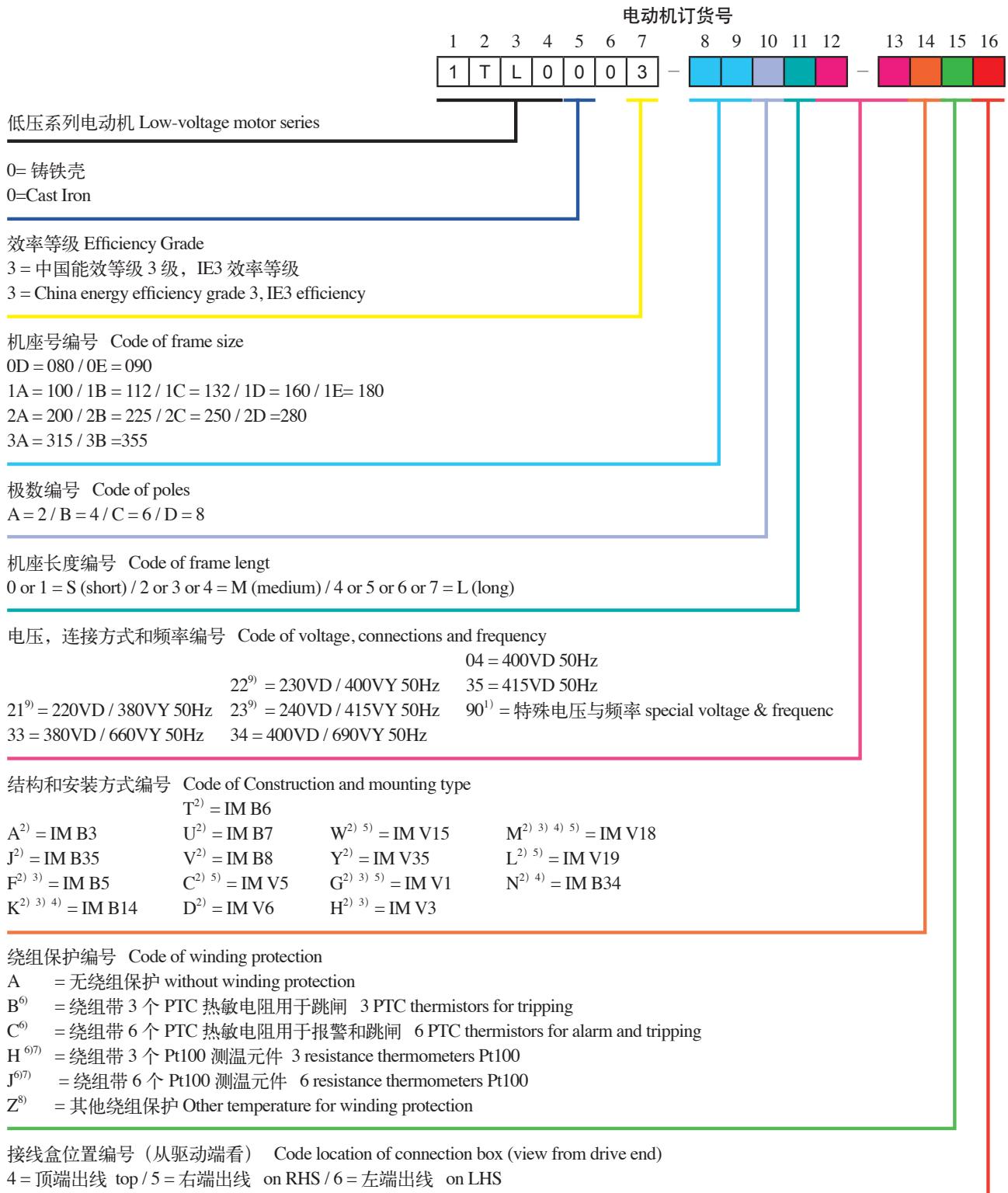
风机电机参数 Technical data for fan motor

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 motor frame size	F90 电机减少长度 Δl Length decrease of motor Δl
80	50
90	60
100	70
112	65
132	75
160	90
180	105
200	110
225	120
250	125
280	135
315	175
355	165

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 100-355；
- ⁸⁾ 请向西门子另行咨询；
- ⁹⁾ 不适用于 FS315 ~ 355 电机。

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 100-355.
- ⁸⁾ Please specially consult with Siemens.
- ⁹⁾ Not applicable for FS315 ~ 355 motors.

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: 1TL0003-1DB43-3AA5

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: 1TL0003-1DB43-3AA5

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

3 级能效铸铁低压三相异步电动机
China Energy Efficiency Grade3 Cast Iron
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 ¹⁾			Motor type				
1	2	3	4	5	6	7	8
0	C	V	3	□	□	□	□

亚太系列 Asia pacific

机壳材料 Housing material

C = 铸铁 Cast iron

冷却方式 Cooling method
V = 空冷 ventilated

能效等级, Energy efficiency grade

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

08 = 80; 09 = 90; 10 = 100; 11 = 112; 13 = 132; 16 = 160; 18 = 180;

20 = 200; 22 = 225; 25 = 250; 28 = 280; 31 = 315; 35 = 355

铁心长 Core length

极数 Poles

A = 2; B = 4; C = 6; D = 8;

¹⁾ 电机型号仅适用于 1TL0003 系列电机

¹⁾ Motor type is only applicable for 1TL0003 series motors.

选型技术数据表 Technical data table

铸铁壳系列电机 Cast Iron Motors

中国能效等级3级, IE3

机座号 Frame Size	额定功率 Rate Output 50 Hz	电动机 型号 Motor type	订货号 Order No.	额定转速 Rated Speed	效率 — 参照 GB18613-2020 效率等级 3 Efficiency is in accordance with the efficiency level 3 of GB18613-2020				额定转矩 Rated torque	起动电流 / 额定电流 Starting current / Rated current	起动转矩 / 额定转矩 Starting torque / Rated torque	最大转矩 / 额定转矩 Max torque / Rated torque	转动惯量 Moment of Inertia	重量 IMB3 Weight	噪声 Noise																
					效率 (100% 负载) Efficiency at (50 Hz) 4/4 load	效率 (75% 负载) Efficiency at (50 Hz) 3/4 load	功率 因数 Power factor	额定 电流 Rated current																							
kW					rpm	%	%	A	Nm	I_{LR}/I_{rated}	T_{LR}/T_{rated}	T_{max}/T_{rated}	kgm^2	kg	L_{pfA}																
3000rpm 2 极 2-pole																															
220VD/380VY 50Hz																															
80M	0.75	OCV3082A		1TL0003-0DA22-1□□□	2835	80.7	82.9	0.86	1.64	2.5	6.0	2.4	3.0	0.00103	16.5	51															
80M	1.1	OCV3083A		1TL0003-0DA32-1□□□	2850	82.7	84.0	0.83	2.45	3.7	6.5	2.6	3.4	0.00129	18.0	51															
90S	1.5	OCV3090A		1TL0003-0EA02-1□□□	2870	84.2	84.8	0.86	3.15	5.0	7.0	2.0	3.0	0.00229	24	57															
90L	2.2	OCV3094A		1TL0003-0EA42-1□□□	2890	85.9	87.2	0.88	4.4	7.3	7.5	2.8	3.6	0.00305	28	57															
100L	3	OCV3104A		1TL0003-1AA42-1□□□	2865	87.1	88.3	0.87	6	10.0	7.8	3.3	3.6	0.00446	36	62															
3000rpm 2 极 2-pole																															
380VD / 660VY 50Hz																															
112M	4	OCV3112A		1TL0003-1BA23-3□□□	2915	88.1	89.6	0.90	7.7	13.1	7.8	2.6	3.6	0.0085	45	65															
132S	5.5	OCV3130A		1TL0003-1CA03-3□□□	2930	89.2	90.2	0.89	10.5	17.9	7.5	2.3	3.6	0.0175	57	67															
132S	7.5	OCV3131A		1TL0003-1CA13-3□□□	2930	90.1	91.5	0.90	14.1	24.4	7.5	2.3	3.6	0.0220	67	67															
160M	11	OCV3162A		1TL0003-1DA23-3□□□	2935	91.2	92.0	0.89	20.5	35.8	7.5	2.3	3.4	0.0369	98	69															
160M	15	OCV3163A		1TL0003-1DA33-3□□□	2935	91.9	92.6	0.89	28	48.8	7.5	2.4	3.4	0.0451	109	69															
160L	18.5	OCV3164A		1TL0003-1DA43-3□□□	2935	92.4	93.0	0.89	34	60.2	7.8	2.4	3.4	0.0542	124	69															
180M	22	OCV3182A		1TL0003-1EA23-3□□□	2950	92.7	93.0	0.89	40.5	71.2	7.8	2.4	3.4	0.0835	168	70															
200L	30	OCV3204A		1TL0003-2AA43-3□□□	2955	93.3	93.4	0.89	55	97.0	7.8	2.4	3.4	0.146	229	71															
200L	37	OCV3205A		1TL0003-2AA53-3□□□	2955	93.7	93.9	0.89	67	120	7.8	2.4	3.4	0.181	262	71															
225M	45	OCV3222A		1TL0003-2BA23-3□□□	2960	94.0	94.3	0.89	82	145	7.8	2.4	3.2	0.301	313	72															
250M	55	OCV3252A		1TL0003-2CA23-3□□□	2975	94.3	94.1	0.89	100	177	7.8	2.6	3.2	0.509	375	75															
280S	75	OCV3280A		1TL0003-2DA03-3□□□	2975	94.7	94.8	0.89	135	241	7.5	2.8	3.0	0.87	485	77															
280M	90	OCV3282A		1TL0003-2DA23-3□□□	2975	95.0	95.3	0.90	160	289	7.5	2.8	3.4	1.04	555	77															
315S	110	OCV3310A		1TL0003-3AA03-3□□□	2985	95.2	95.1	0.90	195	352	7.9	2.3	2.6	1.57	780	78															
315M	132	OCV3312A		1TL0003-3AA23-3□□□	2982	95.4	95.3	0.90	235	423	7.9	2.3	2.6	1.66	820	78															
315L	160	OCV3315A		1TL0003-3AA53-3□□□	2982	95.6	95.7	0.91	280	512	7.9	2.3	2.6	1.98	950	78															
315L	185	OCV3316A		1TL0003-3AA63-3□□□	2978	95.7	95.9	0.92	320	593	8.5	2.3	2.6	2.38	1060	78															
315L	200	OCV3317A		1TL0003-3AA73-3□□□	2982	95.8	95.9	0.92	345	641	8.5	2.8	3.2	2.38	1070	81															
355M	220	OCV3352A		1TL0003-3BA23-3□□□	2986	95.8	95.4	0.90	390	704	8.5	2.2	2.8	2.63	1360	85															
355M	250	OCV3353A		1TL0003-3BA33-3□□□	2985	95.8	95.7	0.90	440	800	8.0	2.2	2.8	2.63	1370	85															
355L	280	OCV3355A		1TL0003-3BA53-3□□□	2988	95.8	95.7	0.90	495	895	8.5	2.2	2.8	3.23	1590	85															
355L	315	OCV3356A		1TL0003-3BA63-3□□□	2982	95.8	95.8	0.90	560	1009	8.0	2.2	2.8	3.23	1610	85															

注:

¹⁾ 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 14 页“订货号”部分;

²⁾ 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:

¹⁾ About the code of other voltage and frequency, winding protection and connection box position, please refer to Order No. in page 14.

²⁾ 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

铸铁壳系列电机 Cast Iron Motors 中国能效等级3级, IE3

机座号 Frame Size	额定 功率 Rate Output 50 Hz	电动机 型号 Motor type	订货号 Order No.	额定 转速 Rated Speed	效率 — 参照 GB18613-2020 效率等级 3 Efficiency is in accordance with the efficiency level 3 of GB18613-2020				额定 转矩 Rated torque	起动 电流 / 额定 电流 Starting current / Rated current	起动 转矩 / 额定 转矩 Starting torque / Rated torque	最大 转矩 / 额定 转矩 Max torque / Rated torque	转动 惯量 Moment of Inertia	重量 IMB3 Weight	噪声 Noise
					效率 (100% 负载) Efficiency at (50 Hz) 4/4 load	效率 (75% 负载) Efficiency at (50 Hz) 3/4 load	功率 因数 Power factor	额定 电流 Rated current							
	kW			rpm	%	%		A	Nm	I_{LR}/I_{rated}	T_{LR}/T_{rated}	T_{max}/T_{rated}	$k\text{g}\text{m}^2$	kg	L_{pA}
1500rpm 4 极 4-pole															
220VD/380VY 50Hz															
80M	0.55	OCV3082B	1TL0003-0DB22-1 □□□	1440	80.8	81.8	0.76	1.36	3.6	5.5	2.2	3.2	0.00207	17.0	45
80M	0.75	OCV3083B	1TL0003-0DB32-1 □□□	1440	82.5	82.9	0.75	1.84	5.0	6.0	2.6	3.7	0.00242	18.0	45
90S	1.1	OCV3090B	1TL0003-0EB02-1 □□□	1430	84.1	85.1	0.79	2.5	7.3	6.5	2.7	3.7	0.00377	24	47
90L	1.5	OCV3094B	1TL0003-0EB42-1 □□□	1440	85.3	86.0	0.79	3.4	9.9	6.5	2.8	3.8	0.00484	28	47
100L	2.2	OCV3104B	1TL0003-1AB42-1 □□□	1440	86.7	87.1	0.82	4.7	14.6	8.3	3.0	4.0	0.01030	38	52
100L	3	OCV3105B	1TL0003-1AB52-1 □□□	1440	87.7	88.1	0.82	6.3	19.9	8.3	3.0	4.0	0.01273	43	52
1500rpm 4 极 4-pole															
380VD / 660VY 50Hz															
112M	4	OCV3112B	1TL0003-1BB23-3 □□□	1450	88.6	89.6	0.82	8.4	26.3	8.3	3.7	4.6	0.0144	49	53
132S	5.5	OCV3130B	1TL0003-1CB03-3 □□□	1455	89.6	90.9	0.84	11.1	36.1	7.8	2.4	3.8	0.0276	66	59
132M	7.5	OCV3132B	1TL0003-1CB23-3 □□□	1455	90.4	91.7	0.85	14.8	49.2	7.8	2.4	3.8	0.0345	79	59
160M	11	OCV3162B	1TL0003-1DB23-3 □□□	1465	91.4	92.4	0.86	21.5	71.7	7.8	2.6	3.8	0.0626	106	61
160L	15	OCV3164B	1TL0003-1DB43-3 □□□	1465	92.1	92.9	0.86	29	97.8	8.2	2.6	3.8	0.0782	126	61
180M	18.5	OCV3182B	1TL0003-1EB23-3 □□□	1470	92.6	93.0	0.83	36.5	120	7.8	2.6	3.6	0.1339	167	63
180L	22	OCV3184B	1TL0003-1EB43-3 □□□	1470	93.0	93.7	0.83	43.5	143	7.8	2.6	3.6	0.1531	185	63
200L	30	OCV3204B	1TL0003-2AB43-3 □□□	1475	93.6	94.3	0.84	58	194	7.8	2.6	3.6	0.245	243	63
225S	37	OCV3220B	1TL0003-2BB03-3 □□□	1482	93.9	94.1	0.85	70	238	8.3	3.0	3.6	0.515	282	65
225M	45	OCV3222B	1TL0003-2BB23-3 □□□	1482	94.2	94.2	0.85	85	290	8.3	3.0	3.6	0.548	310	65
250M	55	OCV3252B	1TL0003-2CB23-3 □□□	1485	94.6	95.0	0.86	103	354	7.6	2.6	3.3	0.896	394	66
280S	75	OCV3280B	1TL0003-2DB03-3 □□□	1485	95.0	95.3	0.86	139	482	7.6	2.8	3.0	1.47	520	66
280M	90	OCV3282B	1TL0003-2DB23-3 □□□	1485	95.2	95.6	0.87	165	579	7.6	2.8	3.0	1.87	615	66
315S	110	OCV3310B	1TL0003-3AB03-3 □□□	1488	95.4	95.7	0.87	200	706	7.9	3.0	3.0	2.39	735	74
315M	132	OCV3312B	1TL0003-3AB23-3 □□□	1488	95.6	95.9	0.87	240	847	7.9	3.0	3.0	3.01	895	74
315L	160	OCV3315B	1TL0003-3AB53-3 □□□	1488	95.8	96.1	0.87	290	1027	7.9	3.0	3.0	3.33	985	74
315L	185	OCV3316B	1TL0003-3AB63-3 □□□	1488	95.9	96.2	0.87	335	1187	8.5	3.0	3.0	3.77	1050	74
315L	200	OCV3317B	1TL0003-3AB73-3 □□□	1490	96.0	96.3	0.88	360	1282	8.5	3.0	3.0	4.13	1100	74
355M	220	OCV3352B	1TL0003-3BB23-3 □□□	1490	96.0	96.0	0.88	395	1410	8.0	2.0	3.2	4.97	1520	81
355M	250	OCV3353B	1TL0003-3BB33-3 □□□	1490	96.0	96.0	0.88	450	1602	7.8	1.8	2.9	4.97	1550	81
355L	280	OCV3355B	1TL0003-3BB53-3 □□□	1490	96.0	96.1	0.88	500	1795	7.8	1.8	2.9	6.52	1670	81
355L	315	OCV3356B	1TL0003-3BB63-3 □□□	1490	96.0	96.1	0.88	570	2019	8.0	1.8	2.9	7.06	1760	81

注:

¹⁾ 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 14 页“订货号”部分;

²⁾ 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:

¹⁾ About the code of other voltage and frequency, winding protection and connection box position, please refer to Order No. in page 14.

²⁾ 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

铸铁壳系列电机 Cast Iron Motors

中国能效等级3级, IE3

机座号 Frame Size	额定 功率 Rate Output 50 Hz	电动机 型号 Motor type	订货号 Order No.	额定 转速 Rated Speed	效率 — 参照 GB18613-2020 效率等级 3 Efficiency is in accordance with the efficiency level 3 of GB18613-2020				额定 转矩 Rated torque	起动 电流 / 额定 电流 Starting current / Rated current	起动 转矩 / 额定 转矩 Starting torque / Rated torque	最大 转矩 / 额定 转矩 Max torque / Rated torque	转动 惯量 Moment of Inertia	重量 IMB3 Weight	噪声 Noise										
					效率 (100% 负载) Efficiency at (50 Hz) 4/4 load	效率 (75% 负载) Efficiency at (50 Hz) 3/4 load	功率 因数 Power factor	额定 电流 Rated current																	
kW					1000rpm 6 极																				
					220VD/380VY 50HZ																				
80M	0.55	0CV3083C		1TL0003-0DC32-1 □□□	935	77.2	77.5	0.67	1.62	5.6	5.0	2.6	3.2	0.00298	19.5	44									
90S	0.75	0CV3090C		1TL0003-0EC02-1 □□□	940	78.9	80.3	0.70	2.05	7.6	5.0	2.4	3.2	0.00422	25	45									
90L	1.1	0CV3094C		1TL0003-0EC42-1 □□□	945	81.0	81.6	0.69	3	11.1	5.5	2.7	3.5	0.00497	28	45									
100L	1.5	0CV3104C		1TL0003-1AC42-1 □□□	950	82.5	84.1	0.74	3.75	15.1	5.5	2.5	3.5	0.01107	40	49									
112M	2.2	0CV3112C		1TL0003-1BC22-1 □□□	945	84.3	86.1	0.74	5.4	22.2	6.0	2.7	3.4	0.01414	47	53									
132S	3	0CV3130C		1TL0003-1CC02-1 □□□	965	85.6	86.6	0.75	7.1	29.7	6.0	2.7	4.0	0.02333	54	57									
					1000rpm 6 极																				
					380VD / 660VY 50HZ																				
132M	4	0CV3132C		1TL0003-1CC23-3 □□□	955	86.8	88.5	0.75	9.3	40.0	6.0	2.7	3.4	0.0297	71	57									
132M	5.5	0CV3133C		1TL0003-1CC33-3 □□□	960	88.0	89.2	0.76	12.5	54.7	6.5	2.7	4.0	0.0402	85	57									
160M	7.5	0CV3162C		1TL0003-1DC23-3 □□□	980	89.1	90.4	0.78	16.4	73.1	7.0	2.7	3.6	0.1197	106	61									
160L	11	0CV3164C		1TL0003-1DC43-3 □□□	980	90.3	90.3	0.77	24	107	7.0	2.7	3.6	0.1605	131	61									
180L	15	0CV3184C		1TL0003-1EC43-3 □□□	975	91.2	92.1	0.80	31	147	7.0	2.3	3.0	0.2008	164	59									
200L	18.5	0CV3204C		1TL0003-2AC43-3 □□□	978	91.7	92.5	0.80	38.5	181	7.0	2.3	3.0	0.312	222	59									
200L	22	0CV3205C		1TL0003-2AC53-3 □□□	980	92.2	93.1	0.80	45.5	214	7.0	2.4	3.0	0.356	238	59									
225M	30	0CV3222C		1TL0003-2BC23-3 □□□	982	92.9	93.9	0.83	59	292	7.6	2.4	3.0	0.740	311	60									
250M	37	0CV3252C		1TL0003-2CC23-3 □□□	985	93.3	94.1	0.84	72	359	7.6	2.6	3.0	1.26	375	62									
280S	45	0CV3280C		1TL0003-2DC03-3 □□□	988	93.7	94.5	0.84	87	435	7.8	3.2	3.0	1.45	460	64									
280M	55	0CV3282C		1TL0003-2DC23-3 □□□	988	94.1	94.6	0.84	106	532	7.8	3.2	3.0	1.77	520	64									
315S	75	0CV3310C		1TL0003-3AC03-3 □□□	990	94.6	95.0	0.84	143	723	7.8	2.4	3.0	2.75	720	69									
315M	90	0CV3312C		1TL0003-3AC23-3 □□□	990	94.9	95.3	0.84	172	868	7.8	2.4	3.0	3.34	830	69									
315L	110	0CV3315C		1TL0003-3AC53-3 □□□	991	95.1	95.3	0.85	205	1060	7.8	2.6	3.0	4.32	1000	69									
315L	132	0CV3316C		1TL0003-3AC63-3 □□□	991	95.4	95.7	0.85	245	1272	7.8	2.6	3.0	4.62	1040	69									
355M	160	0CV3352C		1TL0003-3BC23-3 □□□	994	95.6	95.7	0.84	305	1537	8.5	3.0	2.4	10.40	1630	71									
355M	185	0CV3353C		1TL0003-3BC33-3 □□□	993	95.7	95.8	0.84	350	1779	8.5	3.0	2.4	10.40	1650	71									
355M	200	0CV3354C		1TL0003-3BC43-3 □□□	993	95.8	95.9	0.84	380	1923	8.5	3.0	2.4	10.87	1700	71									
355L	220	0CV3355C		1TL0003-3BC53-3 □□□	993	95.8	96.0	0.84	415	2116	8.5	3.0	2.4	12.86	1940	71									
355L	250	0CV3356C		1TL0003-3BC63-3 □□□	992	95.8	96.1	0.84	470	2407	8.5	3.0	2.4	12.86	1960	71									

注:

¹⁾ 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 14 页“订货号”部分;

²⁾ 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:

¹⁾ About the code of other voltage and frequency, winding protection and connection box position, please refer to Order No. in page 14.

²⁾ 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

铸铁壳系列电机 Cast Iron Motors 中国能效等级3级, IE3

机座号 Frame Size	额定 功率 Rate Output 50 Hz	电动机 型号 Motor type	订货号 Order No.	额定 转速 Rated Speed	效率 — 参照 GB18613-2020 效率等级 3 Efficiency is in accordance with the efficiency level 3 of GB18613-2020				额定 转矩 Rated torque	起动 电流 / 额定 电流 Starting current / Rated current	起动 转矩 / 额定 转矩 Starting torque / Rated torque	最大 转矩 / 额定 转矩 Max torque / Rated torque	转动 惯量 Moment of Inertia	重量 IMB3 Weight	噪声 Noise
					效率 (100% 负载) Efficiency at (50 Hz) 4/4 load	效率 (75% 负载) Efficiency at (50 Hz) 3/4 load	功率 因数 Power factor	额定 电流 Rated current							
	kW			rpm	%	%		A	Nm	I_{LR}/I_{rated}	T_{LR}/T_{rated}	T_{max}/T_{rated}	kgm^2	kg	L_{pA}
750rpm 8 极															
220VD/380VY 50HZ															
132S	2.2	OCV3130D	1TL0003-1CD02-1 □□□	725	81.9	82.6	0.73	5.6	29	5.5	1.8	3.0	0.0470	59	51
132M	3	OCV3132D	1TL0003-1CD22-1 □□□	720	83.5	84.5	0.74	7.4	39.8	5.5	1.8	3.0	0.0615	72	51
750rpm 8 极															
380VD/660VY 50HZ															
160M	4	OCV3162D	1TL0003-1DD23-3 □□□	728	84.8	86.4	0.74	9.7	52.5	5.5	1.7	2.8	0.0759	87	55
160M	5.5	OCV3163D	1TL0003-1DD33-3 □□□	732	86.2	87.1	0.74	13.1	71.8	6.0	1.7	3.0	0.1002	99	55
160L	7.5	OCV3164D	1TL0003-1DD43-3 □□□	732	87.3	88.3	0.74	17.6	97.8	6.0	1.8	3.0	0.1277	117	55
180L	11	OCV3184D	1TL0003-1ED43-3 □□□	720	88.6	89.9	0.74	25.5	146	5.5	2.0	3.0	0.2540	186	60
200L	15	OCV3205D	1TL0003-2AD53-3 □□□	728	89.6	90.2	0.73	35	197	6.5	2.5	3.5	0.411	254	61
225S	18.5	OCV3220D	1TL0003-2BD03-3 □□□	732	90.1	90.9	0.75	41.5	241	6.5	2.0	3.0	0.564	251	58
225M	22	OCV3222D	1TL0003-2BD23-3 □□□	732	90.6	91.5	0.75	49	287	6.5	2.0	2.5	0.595	276	58
250M	30	OCV3252D	1TL0003-2CD23-3 □□□	735	91.3	92.1	0.79	63	390	6.5	2.0	3.0	0.91	334	67
280S	37	OCV3280D	1TL0003-2DD03-3 □□□	735	91.8	92.8	0.79	78	481	5.5	2.4	2.5	1.17	420	69
280M	45	OCV3282D	1TL0003-2DD23-3 □□□	735	92.2	93.1	0.80	93	585	6.0	2.4	2.5	1.73	525	69
315S	55	OCV3310D	1TL0003-3AD03-3 □□□	738	92.5	93.0	0.81	112	710	6.2	1.8	2.9	2.09	620	70
315M	75	OCV3312D	1TL0003-3AD23-3 □□□	738	93.1	93.6	0.81	151	970	6.7	1.8	2.5	2.60	730	70
315L	90	OCV3315D	1TL0003-3AD53-3 □□□	738	93.4	93.9	0.82	179	1165	5.9	1.8	2.3	3.31	850	70
315L	110	OCV3316D	1TL0003-3AD63-3 □□□	738	93.7	94.2	0.82	220	1418	7.1	2.3	3.0	4.13	960	70
355M	132	OCV3352D	1TL0003-3BD23-3 □□□	743	94.0	94.5	0.81	265	1699	7.1	2.2	2.4	8.14	1430	77
355M	160	OCV3353D	1TL0003-3BD33-3 □□□	742	94.3	94.8	0.81	320	2059	7.1	2.2	2.4	9.53	1560	77
355L	185	OCV3355D	1TL0003-3BD53-3 □□□	742	94.6	95.0	0.82	360	2382	7.1	2.0	2.1	11.30	1800	77
355L	200	OCV3356D	1TL0003-3BD63-3 □□□	742	94.6	95.0	0.83	385	2576	7.4	2.0	2.1	12.70	1930	77

注:

¹⁾ 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 14 页“订货号”部分;

²⁾ 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:

¹⁾ About the code of other voltage and frequency, winding protection and connection box position, please refer to Order No. in page 14.

²⁾ 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 Motor order code	选件号 ¹⁾ Option Code	描述 Description	应用范围 Application Scope
电压与频率 Voltages and frequency			
ITL0003- □□□□□ 9-0 □□□	M2A ²⁾¹⁶⁾	220VD/380VY 60Hz, 50Hz 功率输出 power output	FS80 ~ 355
	M2B ³⁾¹⁶⁾	380VD/660VY 60Hz, 50Hz 功率输出 power output	FS80 ~ 355
	M2C ²⁾¹⁶⁾	440VY 60Hz, 50Hz 功率输出 power output	FS80 ~ 280
	M2D ³⁾¹⁶⁾	440VD 60Hz, 50Hz 功率输出 power output	FS80 ~ 355
	M2E ²⁾¹⁶⁾	460VY 60Hz, 50Hz 功率输出 power output	FS80 ~ 280
	M2F ³⁾¹⁶⁾	460VD 60Hz, 50Hz 功率输出 power output	FS80 ~ 355
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) Temperature class 155 (F), used according to 155 (F), with service factor (SF1.15)	FS80 ~ 355
—	N10	180 (H) 度温度等级绝缘 Temperature class 180 (H)	FS80 ~ 355
—	Q04 ⁴⁾	绕组带 220 V 防潮加热带 Anti-condensation heater for 220 VAC (spaces heater)	FS80 ~ 355
电动机接线盒 Motor connection box			
—	R10 ⁵⁾	接线盒直接旋转 90°, 进线口朝向驱动端 Rotation of the connection box through 90°, entry from DE	FS80 ~ 355
—	R11 ⁶⁾	接线盒直接旋转 90°, 进线口朝向非驱动端 Rotation of the connection box through 90°, entry from NDE	FS80 ~ 355
—	R12	接线盒直接旋转 180° Rotation of the connection box through 180°	FS80 ~ 355
—	H04	外部接地 external earthing	FS80 ~ 280
—	X07	铸铁接线盒 cast iron connection box	FS80 ~ 355
—	X47	电机接线盒标配 2 个自锁葛兰 Connection boxes of the motors include 2 self-locking cable gland	FS112 ~ 355
轴承 Bearings			
—	Q72	轴承带两个 PT100 测温元件 Installation of 2PT100 screw-in resistance thermometers for bearing	FS180 ~ 355
—	L80	SKF 轴承 SKF Bearing	FS80 ~ 355
—	L81	其他进口品牌轴承 Other imported brand bearings	FS80 ~ 355
—	L20 ¹⁷⁾	驱动端轴承固定 Located bearing at DE	FS80 ~ 160
—	L22 ^{7) 17)}	增强悬臂力 Increased cantilever forces	FS100 ~ 355
—	L51	非驱动端轴承绝缘 Bearing insulation NDE	FS315 ~ 355

1) 订货时, 电动机订货号需带“-Z”, 另外附带上选件号;

2) 一般适用于 3kW 及以下功率的电机;

3) 一般适用于 3kW 以上功率的电机;

4) 选择此选件, 接线盒将更改为铸铁壳;

5) 不适用 FS80-100 法兰安装电机;

6) 不适用于顶出线;

7) 铸铁机座电机不含 160 机座号;

8) H00、F70 均不能与此选件并用;

9) 非驱动端上的第二轴伸尺寸见外形尺寸;

10) 对于机座号为 180、200、225 和 280 的电动机不适用, 这些机座号的电动机标配的法兰为全圆法兰;

1) Order No. supplement Z with option code when ordering.

2) Only applicable to the motor whose power is 3kW and below.

3) Only applicable to the motor whose power is 3kW and above.

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

5) Not applicable to the FS80~100 flange mounted motors.

6) Not applicable to the outlet on top.

7) Cast iron motor exclude FS160.

8) H00、F70 can't be used with this option.

9) Second standard shaft extension on NDE is shown in the dimension drawings.

10) Not applicable to the FS180、200、225 and 280 motors, these motors include the full circle flange.

选件 Options

电动机订货号 Motor order code	选件号 ¹⁾ Option Code	描述 Description	应用范围 Application Scope
机械设计和防护等级 Mechanical design and degrees of protection			
—	X17 ⁸⁾⁹⁾	第二标准轴伸 Second standard shaft extension	FS80 ~ 355
—	P80 ¹⁰⁾	全圆法兰 Full circle flange	FS80 ~ 315
—	H22	IP56 防护等级 (非高海况) IP56 degree of protection (non-heavy-sea)	FS80 ~ 355
—	H00 ¹¹⁾	电动机带防护罩 Motor with protective cover	FS80 ~ 355
—	H03 ¹²⁾	排水孔 Drainage holes	FS80 ~ 355
—	F90 ¹³⁾	风机电机 (无风扇风罩, 非驱动端全封闭) Fan motor(no fan cover, NDE fully enclosed)	FS80 ~ 355
—	D03	用于环境温度 -40 °C ~ +40 °C 下使用的电机 Applicable to the motors that is used in the coolant temperature of -40°C~+40°C	FS80 ~ 355
—	X50 ¹⁴⁾	安装欧姆龙编码器 (E6B2-CWZ6C-1024) 和独立驱动风扇 Install OMRON encoder (E6B2-CWZ6C-1024)and independent drive fan	FS80 ~ 355
—	F01	安装电磁制动器 Install the electro-magnetic brake	FS80 ~ 225
—	W74 ¹⁵⁾	安装欧姆龙编码器 (E6B2-CWZ1X-1024) 和独立驱动风扇 Install the OMRON encoder(E6B2-CWZ1X-1024) and independent drive fan	FS80 ~ 355
—	F70 ¹¹⁾	电动机带独立驱动风扇 Motors with the independent drive fan	FS80 ~ 355
铭牌和测试证书 Rating plate and test certificates			
—	B80	出厂检验报告 Acceptance test certificate 3.1 in accordance with EN 10204	FS80 ~ 355
喷漆 Paint finish			
—	S01	不喷漆, 只带底漆 Unpainted, only primed	FS80 ~ 355
—	W88	适用 TH, W, F1, WF1 以及海洋性气候环境用电机 Design for TH, W, F1, WF1 and Sea air resistant	FS80 ~ 355
包装 Packing			
—	B90	包装 (FS80 ~ 132 电动机采用纸箱包装, FS160 ~ 355 电动机采用木箱包装) Packing(FS80~132 motors adopt the carton packaging, FS160~355 motors adopt the wooden cases packaging)	FS80 ~ 355

¹¹⁾ 无法与选件号 X17 并用；

¹²⁾ 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；

¹³⁾ 无风扇和风罩时，电动机的长度将减小 Δl 。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；

¹⁴⁾ 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；

¹⁵⁾ SINAMICS 变频器可以直接与 Omron 编码器 (E6B2-CWZ1X) 联结。

¹⁶⁾ 根据国标要求，60Hz 频率下不考核能效要求。

¹⁷⁾ FS 180-355, L20 与 L22 不能同时选用。

¹¹⁾ Unable to be used with the option X17.

¹²⁾ 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.

¹³⁾ When without the fans or the shells, the motor length will be decreased by Δl . 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.

¹⁴⁾ 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.

¹⁵⁾ SINAMICS frequency converter can be directly coupled with the Omron encoder(E6B2-CWZ1X).

¹⁶⁾ According to the requirements of the GB, the energy efficiency requirement is not evaluated under the frequency of 60Hz.

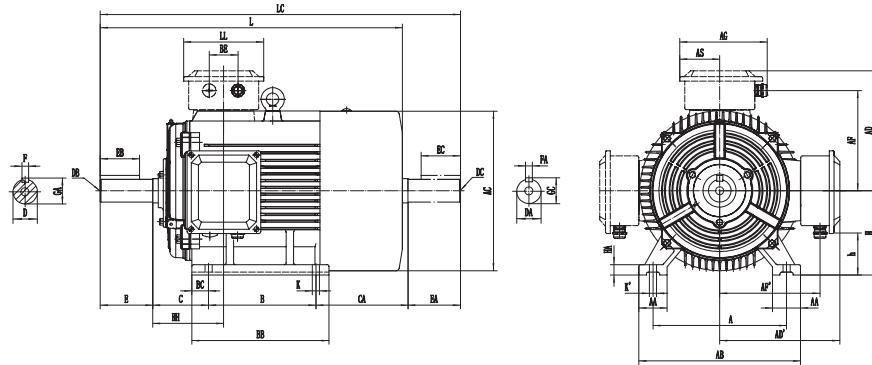
¹⁷⁾ For FS 180-355, L20+L22 can't be selected.

外形尺寸 Dimension drawings

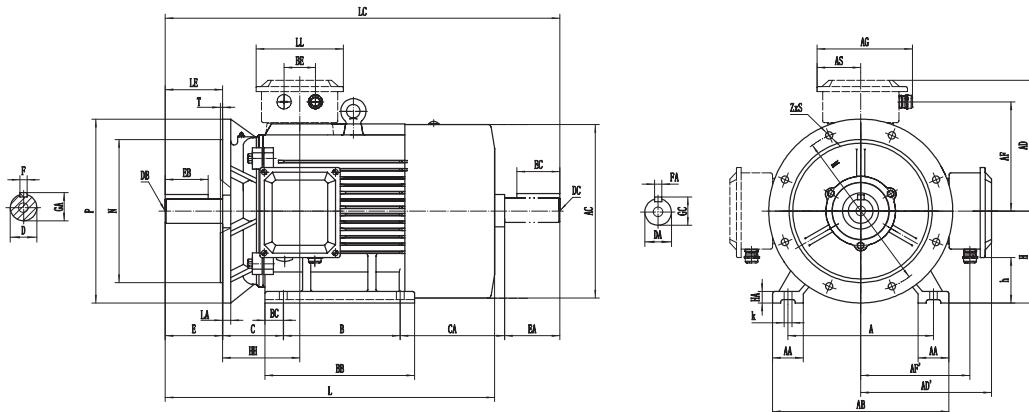
1TL0003 铸铁系列电机 Cast-iron series 1TL0003

机座号从 80M~355L Frame sizes 80M to 355L

IM B3 安装结构方式 Type of construction IM B3



IM B35 安装结构方式 Type of construction IM B35

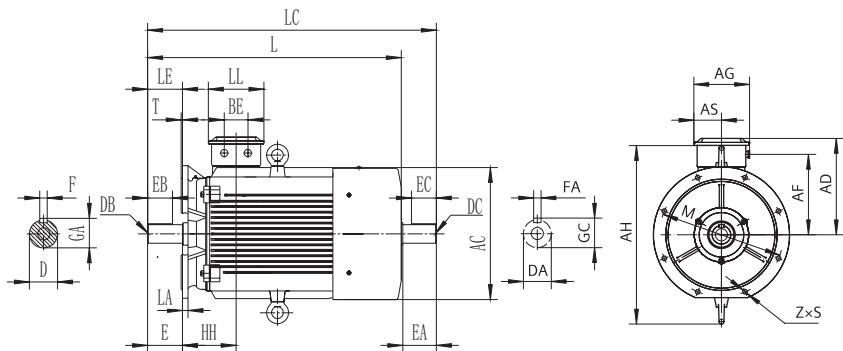


机座号 Frame size	类型 Type 1TL0003-	极数 Poles	尺寸图依据 IEC 标准 Dimension designation according to IEC standards														
			A	AA	AB	AC ¹⁾	AD / AD'	AF / AF'	AG	AH	AS	B ²⁾	BB	BC	BE	C	
80 M	OD□2 OD□3	2,4,6 125	125 34	34	160	166	140	107	130	-	52	100	135	15	-	50	
90 S	OE□0	2,4,6	140	36	180	182	155	116	135	-	55	100	155	20	-	56	
90 L	OE□4	140	36	180	182	155	116	135	-	55	125	180	20	-	56		
100 L	1A□4 1A□5	2,4,6 4	160 160	40	200	196	165	135	135	-	55	140	188	24	-	63	
112 M	1B□2	2,4,6	190	45	226	225	193	145	152	-	64	140	196	20	42	70	
132 S	1C□0 1C□1	2,4,6,8 2	216 216	55	262	267	203	166	152	-	64	140	190	23	42	89	
132 M	1C□2 1C□3	4,6,8 6	216 216	55	262	267	203	166	152	-	64	140	190	23	42	89	
160 M	1D□2 1D□3	2,4,6,8 2,8	254 254	65	314	324	255	201	195	450	83	210	260	25	60	108	
160 L	1D□4	2,4,6,8	254	65	314	324	255	201	195	450	83	210	260	25	60	108	
180M	1E□2	2,4	279	70	349	368	275	223	195	481	83	241	319	35	60	121	
180L	1E□4	4,6,8	279	70	349	368	275	223	195	481	83	279	349	35	60	121	
200L	2A□4 2A□5	2,4,6 2,6,8	318 318	70	388	415	310	245	255	585	102	305	369	32	72	133	
225S	2B□0 2B□2	4,8 2	356 356	75	431	443	320	257	255	605	102	286	350	32	72	149	
225M		4,6,8					320	257	255	605	102	311	375	32	72	149	

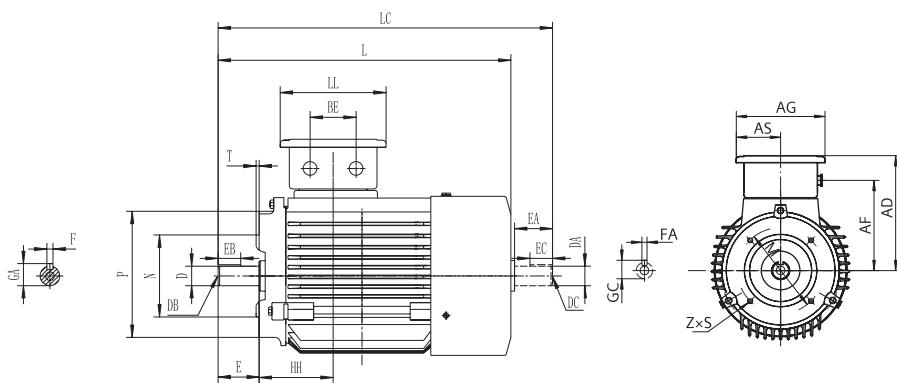
¹⁾ 包含螺栓头的尺寸 Measured across the bolt heads.

²⁾ 该值为此机座号中接线盒在顶部时的对应尺寸 This dimension for terminal box on top.

IM B5 以及 IM V1 安装方式 Type of construction IM B5 and IM V1



IM B14 安装结构型式 Type of construction IM B14



尺寸图依据 IEC 标准 Dimension designation according to IEC standards									驱动端轴伸直径 DE shaft extension					非驱动端轴伸 (选件号为 X17) NDE shaft extension (option code X17)					
CA ²⁾	H	h	HA	HH	K / K'	L	LC	LL	D	DB	E	EB	F	GA	DA	EA	EC	FA	GC
148	80	45	10	72	10	330	378	103	19	M6	40	22	6	21.5	19	40	22	6	21.5
148	80	45	10	72	10	330	378	103	19	M6	40	22	6	21.5	19	40	22	6	21.5
164	90	53	12	87/77 ³⁾	10	365	420	110	24	M8	50	32	8	27	24	50	32	8	27
169	90	53	12	87/77 ³⁾	10	395	450	110	24	M8	50	32	8	27	24	50	32	8	27
204	100	60	14	77	12	465	527	110	28	M10	60	40	8	31	28	60	40	8	31
204	100	60	14	77	12	465	527	110	28	M10	60	40	8	31	28	60	40	8	31
176	112	48	15	87	12	450	515	119	28	M10	60	40	8	31	28	60	40	8	31
193	132	81	18	99	12	500	582	119	38	M12	80	56	10	41	38	80	56	10	41
193	132	81	18	99	12	500	582	119	38	M12	80	56	10	41	38	80	56	10	41
200	132	81	18	99	12	545	627	119	38	M12	80	56	10	41	38	80	56	10	41
200	132	81	18	99	12	545	627	119	38	M12	80	56	10	41	38	80	56	10	41
192	160	93	20	150	15	615	730	157	42	M16	110	80	12	45	42	110	80	12	45
192	160	93	20	150	15	615	730	157	42	M16	110	80	12	45	42	110	80	12	45
193	160	93	20	150	15	660	775	157	42	M16	110	80	12	45	42	110	80	12	45
235	180	118	22	161	15	705	817	157	48	M16	110	80	14	51.5	48	110	80	14	51.5
227	180	118	22	161	15	735	847	157	48	M16	110	80	14	51.5	48	110	80	14	51.5
267	200	85	25	186	19	810	925	197	55	M20	110	80	16	59	55	110	80	16	59
267	200	85	25	186	19	810	925	197	55	M20	110	80	16	59	55	110	80	16	59
255	225	113	28	189	19	820	970	197	60	M20	140	100	18	64	60	140	100	18	64
285	225	113	28	189	19	845	965	197	55	M20	110	80	16	59	55	110	80	16	59
255	225	113	28	189	19	875	1025	60	140	100	18	64	60	140	100	18	64	64	

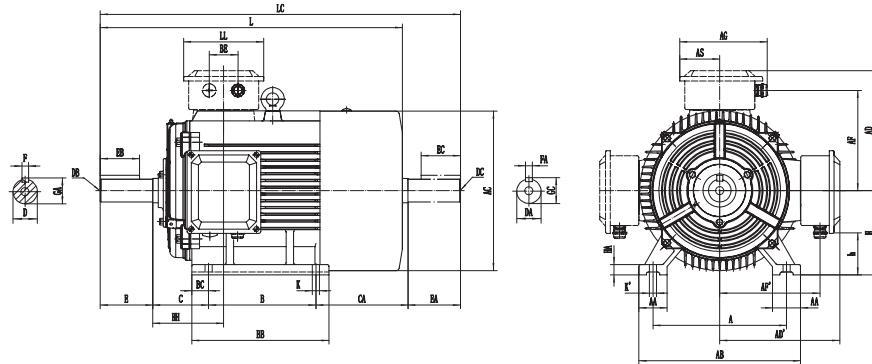
²⁾ 该尺寸为 DIN EN 50347 标准所列机座号对应尺寸 This dimension is assigned in DIN EN 50347 to the frame size listed.

外形尺寸 Dimension drawings

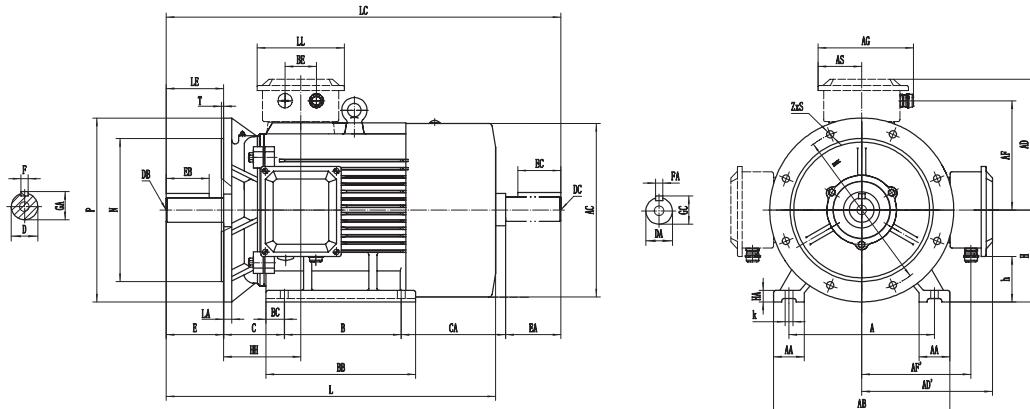
1TL0003 铸铁系列电机 Cast-iron series 1TL0003

机座号从 80M~355L Frame sizes 80M to 355L

IM B3 安装结构方式 Type of construction IM B3



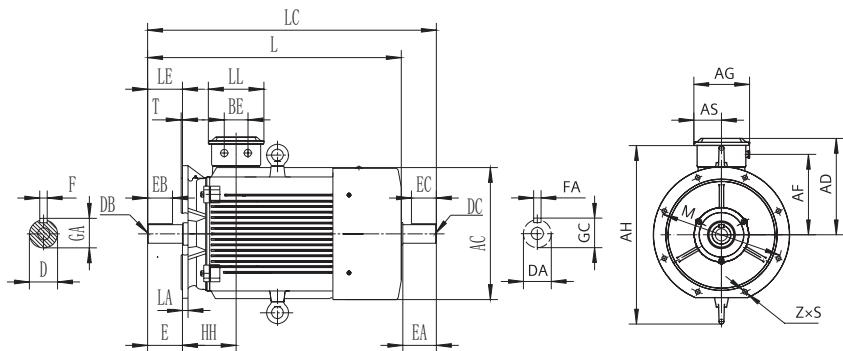
IM B35 安装结构方式 Type of construction IM B35



机座号 Frame size	类型 Type 1TL0003-	极数 Poles	尺寸图依据 IEC 标准 Dimension designation according to IEC standards													
			A	AA	AB	AC ¹⁾	AD / AD'	AF / AF'	AG	AH	AS	B ²⁾	BB	BC	BE	C
250M	2C □ 2	2 4, 6, 8	406	80	484	485	360	292	285	665	119	349	420	40	80	168
280S	2D □ 0	2 4, 6, 8	457	85	542	544	390	317	285	710	119	368	485	74	80	190
280M	2D □ 2	2 4, 6, 8	457	85	542	544	390	317	285	710	119	419	537.5	74	80	190
315S	3A □ 0	2 4, 6, 8	508	120	628	596	505	410	380	810	160	406	577	60	110	216
315M	3A □ 2	2 4, 6, 8	508	120	628	596	505	410	380	810	160	457	577	60	110	216
315L	3A □ 5/3A □ 6/3A □ 7	2 4, 6, 8	508	120	628	596	505	410	380	810	160	508	628	60	110	216
355M	3B □ 2	2 4, 6, 8	610	120	730	712	625	514	454	935	181	560	696	68	125	254
	3B □ 3	2 4, 6, 8	610	120	730	712	625	514	454	935	181	560	696	68	125	254
	3B □ 4	6	610	120	730	712	625	514	454	935	181	560	696	68	125	254
	3B □ 5	2 4, 6, 8	610	120	730	712	625	514	454	935	181	630	750	68	125	254
	3B □ 6	2 4, 6, 8	610	120	730	712	625	514	454	935	181	630	750	68	125	254

¹⁾ 包含螺栓头的尺寸 Measured across the bolt heads.

IM B5 以及 IM V1 安装方式 Type of construction IM B5 and IM V1



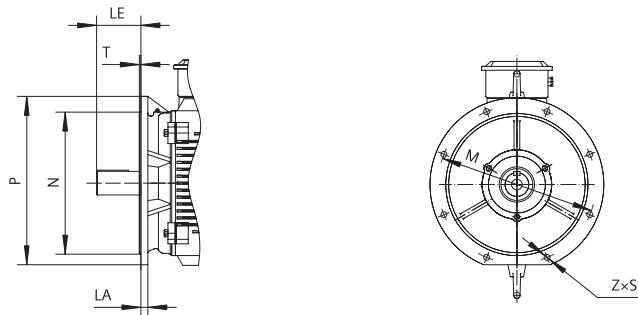
尺寸图依据 IEC 标准 Dimension designation according to IEC standards										驱动端轴伸直径 DE shaft extensiion						非驱动端轴伸 (选件号为 X17) NDE shaft extension (option code X17)				
	CA ²⁾	H	h	HA	HH	K / K'	L	LC	LL	D	DB	E	EB	F	GA	DA	EA	EC	FA	GC
	258	250	126	32	222	24	910	1055	224	60	M20	140	100	18	64	60	140	100	18	64
								1055		65					69	65	140		69	
	282	280	150	35	218.5	24	975	1120	224	65	M20	140	100	18	69	65	140	100	18	69
										75				20	79.5	75	140		20	79.5
	281	280	150	35	218.5	24	1025	1170	224	65	M20	140	100	18	69	65	140	100	18	69
										75				20	79.5	75	140		20	79.5
	450	315	120	45	257	28	1205	1352	310	65	M20	140	100	18	69	65	140	100	18	69
	360						1145	1322		80		170	130	22	85	80	170	130	22	85
	399	315	120	45	257	28	1205	1352	310	65	M20	140	100	18	69	65	140	100	18	69
							1235	1412		80		170	130	22	85	80	170	130	22	85
	468	315	120	45	257	28	1325	1472	310	65	M20	140	100	18	69	65	140	100	18	69
							1355	1532		80		170	130	22	85	80	170	130	22	85
	428	355	136	53	281	28	1370	1522	362	75	M20	140	100	20	79.5	75	140	100	20	79.5
							1400	1582		95	M24	170	130	25	100	95	170	130	25	100
	428	355	136	53	281	28	1370	1522	362	75	M20	140	100	20	79.5	75	140	100	20	79.5
							1400	1582		95	M24	170	130	25	100	95	170	130	25	100
	428	355	136	53	281	28	1400	1582	362	95	M24	170	130	25	100	95	170	130	25	100
	478	355	136	53	281	28	1490	1642	362	75	M20	140	100	20	79.5	75	140	100	20	79.5
							1520	1702		95	M24	170	130	25	100	95	170	130	25	100
	478	355	136	53	281	28	1490	1642	362	75	M20	140	100	20	79.5	75	140	100	20	79.5
							1520	1702		95	M24	170	130	25	100	95	170	130	25	100

²⁾ 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.

外形尺寸 Dimension drawings

法兰尺寸 Flange dimension

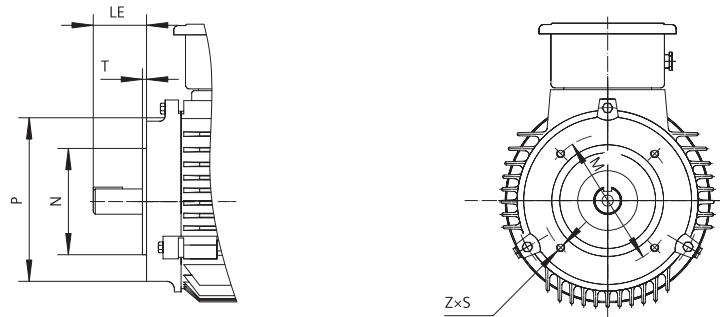
IM B5、IM B35、IM V1、IM V3 安装结构型式 Type of construction IM B5, IM B35, IM V1, IM V3



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 IM B14, IM V18, IM V19	FF 165 FT 100
90	IM B5, IM B35, IMV1, IM V3 IM B14, IM V18, IM V19	FF 165 FT 115
100	IM B5, IM B35, IMV1, IM V3 IM B14, IM V18, IM V19	FF 215 FT 130
112	IM B5, IM B35, IMV1, IM V3 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
180	IM B5, IM B35, IMV1, IM V3	FF 300
200	IM B5, IM B35, IMV1, IM V3	FF 350
225	IM B5, IM B35, IMV1, IM V3	FF 400
250	IM B5, IM B35, IMV1, IM V3	FF 500
280	IM B5, IM B35, IMV1, IM V3	FF 500
315	IM B5, IM B35, IMV1, IM V3	FF 600
355	IM B5, IM B35, IMV1, IM V3	FF 740

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	
	—	100	80	120	M 6	3	4	
12	50	165	130	200	12	3.5	4	
	—	115	95	140	M 8	3	4	
13	60	215	180	250	14.5	4	4	
	—	130	110	160	M 8	3.5	4	
14	60	215	180	250	14.5	4	4	
	—	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	
15	110	300	250	350	18.5	5	4	
17	110	350	300	400	18.5	5	4	
20	110 / 140	400	350	450	18.5	5	8	
22	140	500	450	550	18.5	5	8	
22	140	500	450	550	18.5	5	8	
22	140 / 170	600	550	660	24	6	8	
25	140 / 170	740	680	800	24	6	8	

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