样本 Catalog

低压一般用途电机

Low voltage
General performance motors

Power and productivity
for a better world™

我们提供电机、发电机、机械传动产品、各项相应服务及专门技术，帮助客户在产品的整个使用周期及更长的期限内，实现节能及工艺改进。

We provide motors, generators and mechanical power transmission products, services and expertise to save energy and improve customers' processes over the total life cycle of our products, and beyond.

一般用途电机
General performance motors

机座号71-355,0.18-355KW
Sizes 71 to 355,from 0.18 to 355KW

ABB一般用途电机最适合注重简单标准设计使用的领域。拥有了ABB的一流品质和雄厚支持，这些电机的功能得到大量客户和OEM（原始设备制造商）的认可。电机达到IE2效率。

ABB’s General performance motors are best suited for applications where simplicity and off-the-shelf availability are paramount. With ABB quality and support these motors have the features appreciated by volume customers and serial OEM’s. Motors have IE2 efficiency.

概述
General information

标准
Standards

ABB电机采用全封闭三相鼠笼型设计，其工艺符合IEC和EN国际标准。同时，可按要求提供符合其他国家或国际规范的电机。

所有生产厂家均通过ISO 9001国际质量认证及ISO 14000环境标准，并符合所有适用的欧盟指令。

ABB motors are of the totally enclosed, three phase squirrel cage type, built to comply with international IEC and EN standards. Motors conforming to other national and international specifications are also available on request.

All production units are certified to ISO 9001 international quality standard as well ISO 14000 environmental standard and conform to all applicable EU Directives.

IEC / EN

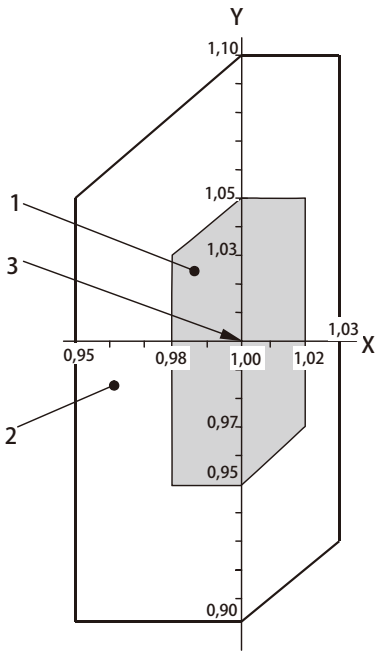
电气 Electrical	机械 Mechanical
IEC/EN 60034-1	IEC 60072
IEC/EN 60034-2-1	IEC/EN 60034-5
IEC/EN 60034-30	IEC/EN 60034-6
IEC 60034-8	IEC/EN 60034-7
IEC 60034-12	IEC/EN 60034-9
	IEC 60034-14

电气特性
Electrical design

额定输出
Rated Output

M2BAX系列电机的额定功率是指电机运行在S1-连续工作制的情况下（IEC 60034-1），此时周围环境温度范围为-20°C ~40°C，海拔高度不超过1000m。

M2BAX motors rated outputs means that the motor runs under continuous duty S1 (IEC 60034-1) operation at ambient temperature from -20°C ~40°C and at altitudes of up to 1000 m above sea level.



电压、频率
Voltage and Frequency

IEC 60034-1定义了电压和频率的波动对温升的影响。
标准将电压和频率的综合变化分为A和B两个区域。区域A是电压偏差+/-5%和频率偏差+/-2%的情况；区域B是电压偏差+/-10%和频率偏差+3%/-5%的情况。
电机均能在A和B两区域内提供额定转矩，但温升会高于在额定电压和频率情况下的值。电机只允许在区域B中短时间运行。

The impact on temperature rise caused by voltage and frequency fluctuation is defined in IEC 60034-1.
The standard divides the combinations into two zones, zone A and B. Zone A is the combination of voltage deviation +/-5% and frequency deviation +/-2%. Zone B is the combination of voltage deviation +/-10% and frequency deviation +3%/-5%.
The motors are capable of supplying the rated torque in both zone A and B, but the temperature rise will be higher than at rated voltage and frequency. The motors are to be in operation only for a short period of time in zone B.

X轴	频率标幺值
Y轴	电压标幺值
1	区域A
2	区域B（区域A外）
3	定额点

X axis	freqency p.u.
Y axis	voltage p.u.
1	zone A
2	zone B (outside zone A)
3	rating point

电气特性
Electrical design

运行环境
Environmental

根据IEC 60034-1规定，容差是指测试值与铭牌(或样本)标称值之间的最大允许偏差。测试结果基于按照IEC 60034-2-1, IEC 60034-9, IEC 60034-12所规定的测试。

In accordance with IEC 60034-1, tolerance is the maximum allowed deviation between the test result and the declared value on the rating plate (or in the catalog). Test results are based on test procedures in accordance with IEC 60034-2-1, IEC 60034-9, and IEC 60034-12.

过载倍数
Overload times

根据IEC 60034，M2BAX系列电机能够在额定电压和频率下承受1.5倍的额定电流达2分钟。

According to IEC 60034, M2BAX motors are designed to withstand overload capacity of 1.5 times rated current for 2 minutes at rated voltage and frequency.

	效率 Efficiency	**功率因数** Power factor	**启动电流** Locked rotor current I_s / I_N	**堵转转矩** Locked rotor torque T_l / T_N	**最大转矩** Breakdown torque T_b / T_N	**转动惯量** Moment of inertia	**噪声等级** Noise level
PN (kW) ≤ 150	-15 %(1- η)	-1/6 (1-cos°)	+20 % of the current	[-15 % + 25 %] of the torque	-10 % of the value	± 10 % of the value	+3 dB(A)
PN (kW) > 150	-10 %(1- η)	-1/6 (1-cos°)	+20 % of the current	[-15 % + 25 %] of the torque	-10 % of the value	± 10 % of the value	+3 dB(A)

	转差率 Slip
PN (kW) < 1	± 30 %
PN (kW) ≥ 1	± 20 %

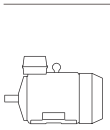
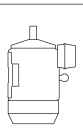
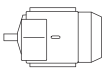
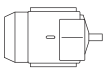
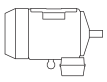
环境温度及海拔高度
Ambient temperatures and high altitudes

标准电机设计的最大环境温度为40°C，最高海拔为1000m。如果当电机在较高的环境温度或海拔下运行，输出功率相应降低。
详情请咨询ABB。

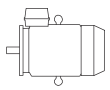
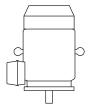
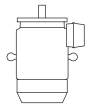
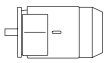
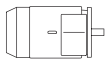
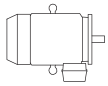
Normal motors are designed for operation at a maximum ambient temperature of 40°C and at a maximum altitude of 1000 meters above sea level. If a motor is operated at higher ambient temperatures or altitude, it should be derated. Detailed information, please contact your ABB sales office.

安装结构形式
Mounting arrangements

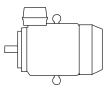
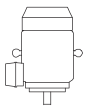
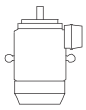
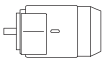
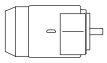
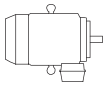
底脚安装型电机
Foot-mounted motor

代码I/代码II Code I / code II						产品代码位置12 Product code pos. 12
					 M000007	A = 底脚安装型，接线盒在顶部 foot-mounted, term.box top
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8	
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071	

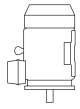
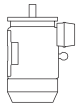
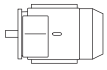
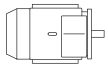
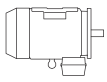
凸缘安装型电机，大凸缘
Flange-mounted motor, large flange

代码I/代码II Code I / code II						产品代码位置12 Product code pos. 12
					 M000008	B = 凸缘安装型，大凸缘 flange mounted, large flange
IM B5	IM V1	IM V3	*)	*)	*)	
IM 3001	IM 3011	IM 3031	IM 3051	IM 3061	IM 3071	

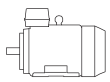
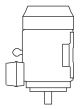
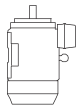
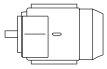
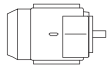
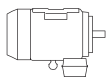
凸缘安装型电机，小凸缘
Flange-mounted motor, small flange

代码I/代码II Code I / code II						变量代码 variant code
					 M000009	047=B5派生出B14 B14 from B5
IM B14	IM V18	IM V19	*)	*)	*)	
IM 3601	IM 3611	IM 3631	IM 3651	IM 3661	IM 3671	

底脚和凸缘安装型电机，大凸缘
Foot- and flange-mounted motor with feet, large flange

代码I/代码II Code I / code II						变量代码 variant code
					 M000010	009=B3派生出B35 B35 from B3
IM B35	IM V15	IM V36	*)	*)	*)	
IM 2001	IM 2011	IM 2031	IM 2051	IM 2061	IM 2071	

底脚和凸缘安装型电机，小凸缘
Foot- and flange-mounted motor with feet, small flange

代码I/代码II Code I / code II						变量代码 variant code
					 M000011	008= B3派生出B34 B34 from B3
IM B34	IM V17					
IM 2101	IM 2111	IM 2131	IM 2151	IM 2161	IM 2171	

防护等级：IP代码/IK代码
Degrees of protection: IP code/IK code

按旋转电机外壳提供的防护等级分类符合：
Classification of degrees of protection provided by enclosures of rotating machines refers to:

- 对于IP代码，适用IEC 60034-5或EN 60529
- 对于IK代码，适用EN 50102
- Standard IEC 60034-5 or EN 60529 for IP code
- Standard EN 50102 for IK code

IP防护：
IP protection
防止人员接触（或接近）带电部件，以及机壳内的运转部件。同时避免外界固体异物侵入机器内，保护机器，避免进水防止受到有害影响。
Protection of persons against getting in contact with (or approaching) live parts and against contact with moving parts inside the enclosure. Also protection of the machine against ingress of solid foreign objects. Protection of machines against the harmful effects due to the ingress of water.

Explanation of the IP code

特征字母 Ingress protection	对人和机壳内电机部件的保护程度 Degree of protection to persons and to parts of the motors inside the enclosure	机壳防止机器进水，遭受有害影响的防水程度 Degree of protection provided by the enclosure with respect to harmful effects due to ingress of water
IP	5	5
	1	2

Position 1

2: 防止大于12mm的固体进入机壳
Motors protected against solid objects greater than 12 mm

4: 防止大于1mm的固体进入机壳
Motors protected against solid objects greater than 1 mm

5: 防尘保护电机
Dust-protected motors

6: 隔尘电机
Dust-tight motors

Position 2

3: 使电机被溅水后不受损害
Motors protected against spraying water

4: 使电机被淋水后不受损害
Motors protected against splashing water

5: 使电机被喷水后不受损害
Motors protected against water jets

6: 使电机遭大浪后不受损害
Motors protected against heavy seas

IK 代码:
IK code
机壳保护电机不受外部机械冲击不利影响的程度分级。
Classification of degrees of protection provided by enclosure for motors against external mechanical impacts.

Explanation of the IK code

International mechanical protection 国际机械保护	Characteristic group 特征组
IK	08
	1

Position 1

IK代码和冲击能量之间的关系：
Relation between IK code and impact energy:

IK代码 IK code	冲击能量焦耳 Impact energy/Joule
0:	**不按照**EN 50102**提供保护** Not protected according to EN 50102
01:	0.15
02:	0.2
03:	0.35
04:	0.5
05:	0.7
06:	1
07:	2
08:	5 (ABB **标准**) 5 (ABB Standard)
09:	10
10:	20

订购信息
Ordering information

订购时，请按照示例在订单中说明以下最小数据。
When placing an order, please state the following minimum data in the order, as in the example.

电机产品代码根据以下示例编写。
The product code of the motor is composed in accordance with the following example.

电机型号 **Motor type**	M2BAX 112 MA
极数 **Pole number**	4
安装方式（IM代码） **Mounting arrangement (IM-code)**	IM B3 (IM 1001)
额定输出 **Rated output**	4 kW
产品代码 **Product code**	3GBA 112 310-ADCCN
附加代码（如需） **Variant codes if needed**	

机座号
Motor size

A	B	C	D
M2BAX	**112 MA**	**3GBA 112 310**	**- ADCCN, 002, 451, etc.**
		1 2 3 4 5 6 7 8 9 10 11 12 13...	

A 电机型号 Motor type
B 电机尺寸 Motor size
C 产品代码 Product code

D 安装方式代码，电压及频率代码 (后跟产品族代码，客户代码及变量代码)
Codes for mounting, arrangement, voltage and frequency; followed by codes for generation, customer and variants

产品代码说明
Explanation of the product code

位置 1 - 4
3GBA =
全封闭铸铁机座电机
Positions 1 to 4
3GBA =
Totally enclosed motor with cast iron frame

位置 5 和 6
IEC机座尺寸
07 = 71
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

Positions 5 and 6
IEC size
07 = 71
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

位置 7
极对数
1 = 2 极
2 = 4 极
3 = 6 极
Position 7
Pole pairs
1 = 2 poles
2 = 4 poles
3 = 6 poles

位置 8-10
序列号
Positions 8 to 10
Running number

位置 11
-（破折号）
Position 11
- (dash)

位置 12
安装方式
A = 底脚安装型电机
B = 凸缘安装型电机带通孔的大凸缘。
Position 12
Mounting arrangement
A = Foot-mounted motor
B = Flange-mounted motor. Large flange with clearance holes.

位置 13
电压和频率
单速电机
D 380 VΔ, 400 VΔ, 660 VY 50 Hz
S 220 VΔ, 380 VY, 400 VY 50 Hz
E 500 VΔ 50Hz
Position 13
Voltage and frequency
Single-speed motors
D 380 VΔ, 400 VΔ, 660 VY 50 Hz
S 220 VΔ, 380 VY, 400 VY 50 Hz
E 500 VΔ 50Hz

铭牌
Rating plates

铭牌以表格形式提供三个电压的转速、电流和功率因数的数值。

The rating plates are in table form giving values for speed, current and power factor for three voltages.

机座号 71-355
Motor sizes 71 to 355
铭牌
Rating Plate

ABB

IE2 IEC 60034-1

3 ~ Motor

No. Ins.cl. F IP 55

V	Hz	kW	r/min	A	cos φ	Duty
230Δ	50	1.5	1441	6.11	0.74	S1
400 Y	50	1.5	1441	3.53	0.74	S1
220Δ	50	1.5	1435	6.10	0.78	S1
380 Y	50	1.5	1435	3.53	0.78	S1
460 Y	60	1.5	1741	3.22	0.70	S1
440 Y	60	1.5	1735	3.17	0.74	S1

50Hz: IE2 - 82.8(100%)
60Hz: IE2 - 84.0(100%)
Prod. code 3GBA092510-ASCCN

6205-2Z/C3 6204-2Z/C3 23 kg

ABB

IE2 IEC 60034-1

3 ~ Motor

No. Ins.cl. F IP 55

V	Hz	kW	r/min	A	cos φ	Duty
690 Y	50	11	1466	13.0	0.79	S1
400Δ	50	11	1466	22.4	0.79	S1
660 Y	50	11	1461	13.2	0.82	S1
380Δ	50	11	1461	22.7	0.82	S1
460Δ	60	11	1773	18.7	0.81	S1
440Δ	60	11	1770	19.1	0.83	S1

50Hz: IE2 - 89.8(100%)
60Hz: IE2 - 91.0(100%)
Prod. code 3GBA162410-ADCCN

6209-2Z/C3 6209-2Z/C3 110 kg

机械设计
Mechanical design

机座
Motor frame

包括底脚、轴承盖和接线盒在内的电机座是铸铁制成的。整体式铸铁底脚能够实现稳固的安装及最大程度的降低振动。可提供底脚安装型、凸缘安装型及二者结合的电机。
The motor frame is made of cast iron, and the standard design includes cast iron feet, bearing housing, and terminal box. Integrated cast iron feet provide rigid mounting and minimize vibration.
Motors can be supplied for foot mounting, flange mounting,and combinations of these.

排水孔
Drain holes

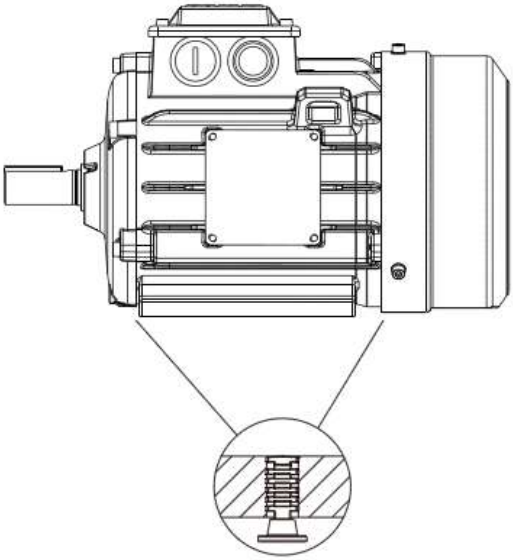
如果在非常湿润或潮湿的环境下，特别是在断续负载下操作电机，则应设置排水孔。根据电机安装方法，指定相应的IM标号，如IM 3031。
Motors that will be operated in very humid or wet environ-ments, and especially under intermittent duty, should be provided with drain holes. The IM designation, such as IM 3031, determines the intended mounting arrangement for the motor.

机座号为71到355的电机安装了排水孔及闭合塞。孔塞在出厂时打开。安装电机时，确保排水孔朝下。
Motor sizes 71 - 355 are fitted with drain holes and closable plugs. The plugs are open on delivery. When mounting the motors, ensure that the drain holes face downwards.

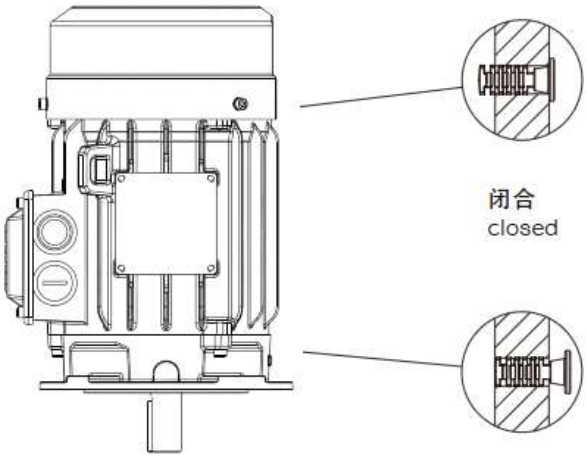
垂直安装时，上塞必须完全闭合。在灰尘过多的环境中，两个塞都应闭合。
In the case of vertical mounting, the upper plug must be hammered home completely. In very dusty environments, both plugs should be hammered home.

安装方式不同于底脚安装型IM B3**时，请在订购时使用变量代码**066**。**
When mounting arrangement differs from foot mounted IM B3, mention variant code 066 when ordering.

请参阅“排水孔”标题下的变量代码066**。**
See variant codes 066 under the heading “Drain holes”.



打开
open



机座号71-355
标准情况下配备排水孔及闭合塞
As standard, motor sizes 71 - 355 are delivered with drain holes and closable plugs.

轴承
Bearings

电机通常安装以下单列深沟球轴承。
General performance motors are normally fitted with single-row deep-groove ball bearings, as shown in the table below.

标准及可选设计
Standard and alternative designs

		标准设计 Standard design	
		深沟球轴承 Deep groove ball bearings	
机座号 Motor size	**极数** Number of poles	D**端** D-end	N**端** N-end
71	2 - 6	6203-2Z/C3	6202-2Z/C3
80	2 - 6	6204-2Z/C3	6203-2Z/C3
90	2 - 6	6205-2Z/C3	6204-2Z/C3
100	2 - 6	6206-2Z/C3	6205-2Z/C3
112	2 - 6	6206-2Z/C3	6205-2Z/C3
132	2 - 6	6208-2Z/C3	6208-2Z/C3
160	2 - 6	6209-2Z/C3	6209-2Z/C3
180	2 - 6	6210-2Z/C3	6209-2Z/C3
200	2 - 6	6212-2Z/C3	6209-2Z/C3
225	2 - 6	6213-2Z/C3	6210-2Z/C3
250	2 - 6	6215-2Z/C3	6212-2Z/C3
280	2 - 6	6217/C3	6217/C3
315	2	6217/C3	6217/C3
315	4 - 6	6219/C3	6217/C3
355	2	6219/C3	6219/C3
355	4 - 6	6222/C3	6219/C3

说明:
电机铭牌上显示轴承型号及描述方式仅供客户更换、维修轴承作参考，不代表轴承品牌，具体的轴承品牌以公司实际使用的为准。
Remark:
The bearing type and description on rating plate do not represent the bearing brand, instead it is a technical consideration that can help the owner to make replacement and set up a maintenance program. The brand is subject to the bearing installed.

轴向锁定轴承
Axially-locked bearings

所有电机在D**端标配轴向锁定轴承。**
All motors are equipped as standard with an axially locked bearing .
General at D-end .

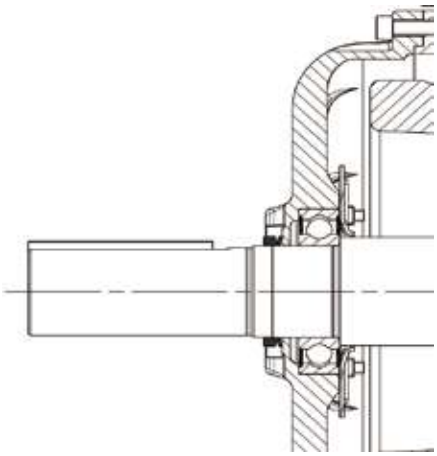
轴密封件
Bearing seals

机座号为71-355的密封件尺寸和类型符合下表：

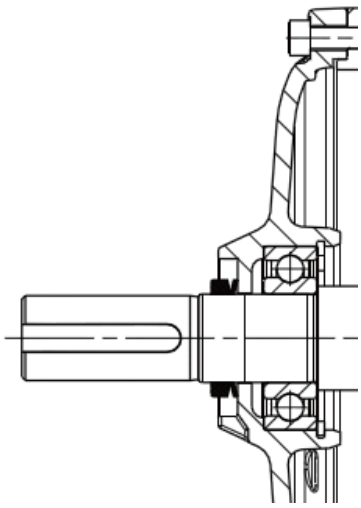
This table presents the standard sizes and types of bearing seals per motor size.

机座号 Motor size	极数 Number of poles	标准设计 Standard design	可选设计 Alternative design	
		轴向密封件 Axial seal	**D端伽玛密封** Gamma seal at D-end	**D端径向密封** Radial seal at D-end
		D端 D-end	**变量代码** 784 Variant codes 784	**变量代码** 072 Variant codes 072
71	2-6	V-16A	17x32x4	17x35x7
80	2-6	V-20A	20x35x4	20x40x7
90	2-6	V-25A	25x40x4	25x42x7
100	2-6	V-30A	30x47x4.5	30x52x7
112	2-6	V-30A	30x47x4.5	30x52x7
132	2-6	V-40A	40x57x4.5	40x62x7
160	2-6	V-45A	45x62x4.5	45x72x8
180	2-6	V-50A	50x70x5.5	50x80x8
200	2-6	V-60A	60x80x5.5	60x85x8
225	2-6	V-65A	65x85x5.5	65x90x10
250	2-6	V-75A	75x95x5.5	75x100x10
280	2	VS85	R	NA
280	4-6	VS85	R	85x110x12
315	2	VS85	R	NA
315	4-6	VS95	R	95x120x12
355	2	VS95	R	NA
355	4-6	VS110	R	NA

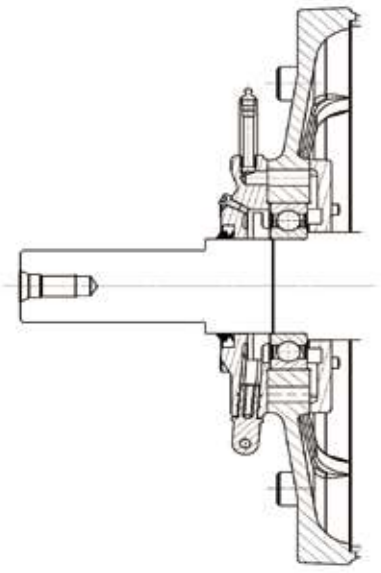
机座号160-250
Motor sizes 160-250



机座号71-132
Motor sizes 71 - 132



机座号280-355
Motor sizes 280-355



轴承寿命
Bearing life

根据ISO 281**，轴承的正常寿命**L_{10h}**定义为在特定条件下**90%**的相同轴承在一系列测试中所达到或超过的运行小时数。**50%**的轴承至少达到这一数字的五倍。**
The nominal life L_{10h} of a bearing is defined according to ISO 281 as the number of operating hours achieved or exceeded by 90 % of identical bearings in a large test series under specified conditions. 50 % of bearings achieve at least five times this lifetime.

润滑
Lubrication

装有永久润滑轴承的电机
Motors with bearings greased for life

机座号为71-250**的电机采用永久润滑轴承。永久润滑轴承中装有优质的润滑脂。铭牌上印有轴承型号。**
Motors in frame sizes 71-250 are equipped with bearings greased for life. Bearings are lubricated with high-quality grease.Bearing types are stated on the rating plate.

以下数值可作为轴承使用寿命指导值，具体寿命取决于应用和负载情况：
2-6**极电机约为**40,000**小时**
The following values can be used as a guide for bearing lifetime, depending on application and load conditions:
2-6 pole motors about 40,000h

加热元件
Heating elements

变量代码 451
加热元件安装在电机绕组上, 可选功率如下表所示
Heating elements are installed into windings to keep them free of corrosion in humid conditions. The required power of heating elements is shown in the table. You can order heating elements with variant code.

机座号 Motor size	71	80	90	100	112	132
功率(W) Power (W)	8	8	25	25	25	25

机座号 Motor size	160	180	200	225	250
功率(W) Power (W)	25	25	50	50	50

机座号 Motor size	280	315	355
功率(W) Power (W)	60	2×60	2×60

皮带轮直径
Pulley diameter

所需轴承寿命确定后，最小允许皮带轮直径可使用FR计算，如下所示：
When the desired bearing life has been determined, the minimum permissible pulley diameter can be calculated with F_R as follows:

$$D = \frac{1.9 \cdot 10^7 \cdot K \cdot P}{n \cdot F_R}$$

其中： Where:		
D	=	**带轮直径，单位**（mm） pulley diameter, mm
P	=	**功率要求，**kW power requirement, kW
n	=	**电机转速，**r/min motor speed, r/min.
K	=	**皮带张力因数，取决于皮带类型和负载类型。V形皮带通用值为**2.5。 belt tension factor, dependent on belt type and type of duty. A common value for V-belts is 2.5
F_R	=	**允许径向力** permissible radial force

轴上允许负载
Permissible loading on the shaft

允许径向力
Permissible radial forces

表中提供了环境温度为25°C时，50Hz的正常条件下，轴向力为零时的轴伸允许径向力（N）。分别对轴承寿命满足20000和40000小时进行计算。
The following table gives the permissible radial forces on shaft in Newton, assuming zero axial force, ambient temperature of 25 ℃, and normal conditions at 50Hz. The values are given for calculated bearing life of 20000 and 40000 hours per motor size.

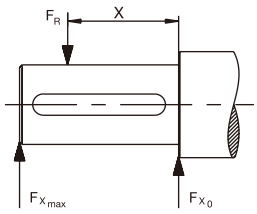
电机为底座安装型IM B3，并且含横向力。在某些情况下，轴的强度影响允许负载力。在60Hz时，数值将相应减少10%。对于双速电机，数值应以较高的速度为准。
These calculated values further assume mounting position IM B3 (foot-mounted), with force directed sideways. In some cases, the strength of the shaft affects permissible forces.

将根据要求提供同时存在径向力和轴向力的允许负载值。
Permissible loads of simultaneous radial and axial forces can be supplied on request.

如果径向力作用于点X_o和X_{max}之间，则允许负载力F_R可以通过以下公式计算：
If the radial force is applied between points X0 and Xmax,the permissible force FR can be calculated with the following formula:

$$F_R = F_{X0} - \frac{X}{E}(F_{X0} - F_{Xmax})$$

E = **基本型号中的轴伸长度**
length of the shaft extension in the standard version



机座号 Motor size	**极数** No. of poles	**轴伸长度** Length of shaft extension E (mm)	**深沟球轴承** Basic design with deep groove ball bearings			
			20,000 小时 20,000 h		**40,000 小时** 40,000 h	
			F_{X0} (N)	F_{Xmax}(N)	F_{X0} (N)	F_{Xmax}(N)
71	2	30	545	465	430	370
	4	30	685	585	545	465
	6	30	785	660	620	530
80	2	40	740	620	585	490
	4	40	925	775	730	615
	6	40	1065	890	840	705
90S	2	50	795	645	625	510
	4	50	1000	815	790	645
	6	50	1145	935	905	740
90L	2	50	795	660	630	520
	4	50	1005	830	790	655
	6	50	1150	950	910	750
100	2	60	1110	895	875	705
	4	60	1395	1120	1100	885
	6	60	1605	1290	1265	1020
112	2	60	1120	925	885	730
	4	60	1405	1160	1105	915
	6	60	1615	1335	1275	1050
132S	2	80	1630	1270	1285	1000
	4	80	2055	1600	1620	1260
	6	80	2360	1840	1860	1450
132M	4	80	2075	1665	1630	1310
	6	80	2375	1905	1865	1495
160	2	110	1945	1510	1545	1195
	4	110	2455	1905	1945	1510
	6	110	2835	2250	2245	1780
180	2	110	2095	1705	1660	1350
	4	110	2640	2145	2090	1700
	6	110	3025	2460	2395	1950
200	2	110	2815	2310	2230	1830
	4	110	3550	2910	2810	2305
	6	110	4065	3335	3220	2640
225	2	110	3335	2795	2640	2215
	4	140	4200	3370	3325	2670
	6	140	4810	3860	3805	3055
250	2	140	3965	3220	3140	2550
	4	140	4995	4060	3955	3215
	6	140	5715	4645	4525	3675

机座号 Motor size	极数 No. of poles	轴伸长度 Length of shaft extension E (mm)	深沟球轴承 Basic design with deep groove ball bearings			
			20,000 小时 20,000 h		40,000 小时 40,000 h	
			F_{X0} (N)	F_{Xmax}(N)	F_{X0} (N)	F_{Xmax}(N)
280S	2	140	4855	3960	3840	3135
	4	140	6120	4995	4840	3955
	6	140	7000	5715	5540	4525
280SM	2	140	4900	4075	3875	3225
	4	140	6180	5140	4885	4065
315SM	2	140	4900	4180	3855	3285
	4	170	8120	6715	6415	5300
	6	170	9270	7660	7305	6040
315ML	2	140	4925	4275	3860	3350
	4	170	8185	6910	6450	5445
	6	170	9335	7885	7340	6200
355SM	2	140	6365	5585	4980	4370
	4	210	10530	8700	8260	6825
	6	210	12050	9955	9445	7805

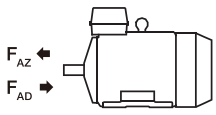
机座号 Motor size	极数 No. of poles	轴伸长度 Length of shaft extension E (mm)	深沟球轴承 Basic design with deep groove ball bearings			
			20,000 小时 20,000 h		40,000 小时 40,000 h	
			F_{AD} (N)	F_{AZ}(N)	F_{AD} (N)	F_{AZ}(N)
71	2	30	580	300	465	185
	4	30	725	445	580	300
	6	30	810	530	670	390
80	2	40	750	430	595	275
	4	40	940	620	750	430
	6	40	1055	735	870	550
90	2	50	845	445	675	275
	4	50	1050	650	840	440
	6	50	1175	775	935	535
100	2	60	1175	615	940	380
	4	60	1465	905	1175	615
	6	60	1640	1080	1305	745
112	2	60	1175	615	935	375
	4	60	1460	900	1170	610
	6	60	1635	1075	1300	740
132	2	80	1675	795	1415	535
	4	80	2110	1230	1665	785
	6	80	2450	1570	1950	1070
160	2	110	1665	1205	1300	840
	4	110	2135	1675	1650	1190
	6	110	2465	2005	1895	1435
180	2	110	1730	1275	1345	890
	4	110	2215	1755	1705	1245
	6	110	2590	2130	1990	1530
200	2	110	2240	1780	1725	1265
	4	110	2900	2445	2215	1755
	6	110	3400	2945	2595	2135
225	2	110	2440	2210	1845	1615
	4	140	3195	2965	2395	2170
	6	140	3745	3520	2810	2580
250	2	140	2860	2620	2155	1920
	4	140	3765	3525	2825	2585
	6	140	4420	4180	3310	3070
280	2	140	4360	2360	3490	1490
	4	140	5475	3475	4310	2310
	6	140	6320	4320	4945	2945
315	2	140	4180	2180	3325	1325
	4	170	6750	4750	5220	3220
	6	170	7700	5700	5900	3900
355	2	140	5020	3305	3890	2180
	4	210	8030	6320	6090	4375
	6	210	9315	7605	7015	5300

允许轴向力
Permissible axial forces

表中提供了环境温度为25°C时，50Hz的正常条件下，径向力为零时的轴伸允许轴向力（N）。分别对轴承寿命满足20000和40000小时进行计算。
The following table gives the permissible axial forces on shaft in Newton, assuming zero radial force, ambient temperature of 25 C, and normal conditions at 50Hz. The values are given for calculated bearing life of 20000 and 40000 hours per motor size.

在60 Hz**时，数值将相应减少**10%**。对于双速电机，数值将以较高的速度为准。将根据要求提供同时存在径向力和轴向力的允许负载值。**
At 60 Hz, the values must be reduced by 10 percent, and for two-speed motors, the higher speed determines permissible axial force. Permissible loads of simultaneous radial and axial forces can be supplied on request.

给定轴向力F_{AD}**，假设D端轴承由锁环锁定。**
For axial force F_{AD}, it is assumed that the D-bearing is locked with a locking ring.



安装方式 IM B3
Mounting arrangement IM B3

标准接线盒交付
Standard terminal box

标准接线盒的防护等级为IP55。标准情况下，接线盒安装在电机D端顶部。此外，还可以将接线盒安装在左侧或右侧，请参考订购信息。机座号71-132的电机，采用一体式接线盒。机座号160-355的电机，采用分体式接线盒。
The degree of protection for the standard terminal box is IP 55. By default, terminal boxes are mounted on top of the motor at D-end. In motor sizes 71 - 132, the terminal box is integrated in motor frame.In motor sizes 160-355, the terminal box is separate from motor frame.

机座号为160-355的电机接线盒可4x90 ° 转动。因此电机的两侧都可以接入电缆。但对于机座号为71-132的标准电机，接线盒无法转动，如需实现接线盒电缆入口2x180 ° 转向，可使用变量代码（VC022).
The terminal boxes of motor sizes 160-355 can be turned 4x90 ° , to allow cable entry from either side of motor. For motor sizes 71-132 , turning is not possible in the standard motor, but 2x180° turning is available as an option (variant code 022).

如果未另行规定，则采用标准交付。

注意：对于500V及/或侧面安装的电机，请联系ABB！
Standard delivery if no other information is provided.
Note: For other network voltages and/or side-mounted motors, contact your ABB sales office.

机座号 Motor size	极数 Pole number	螺纹孔 Threaded holes	电缆外径 mm Cable outer diameter mm	单芯横截面mm2/相 Single core cross-section mm2/phase	端子螺栓尺寸 6x terminai bolt size 6x
71	2-6	2xM16x1.5	Ø5-9	2.5	M4
80-90	2-6	2xM25x1.5	Ø11-16	4	M4
100-132	2-6	2xM32x1.5	Ø14-21	10	M5
160-200	2-6	2xM40x1.5+M16	Ø19-27	35	M6
225-250	2-6	2xM63x1.5+M16	Ø34-45	70	M10
280	2-6	2xM63, 2xM20	2xØ32-49, Ø8-14	2x150	M12
315	2-6	2xM63, 2xM20	2xØ32-49, Ø8-14	2x240	M12
355	2-6	2xM75, 2xM20	2xØ48-60, Ø8-14	4x240	M12

电机接地 Earthing	机座接地 Earthing on frame	主接线盒接地 Earthing in main terminal box
71-132	M5 （选配 optional）	M5
160-250	M6 （选配 optional）	M6
280-355	M10 （标配 standard）	M10

接线盒及接线部件示例
Terminal boxes and boards
下述图片为一系列接线盒及接线部件。
The pictures below show standard terminal boxes and the corresponding terminal boards for various motor sizes.

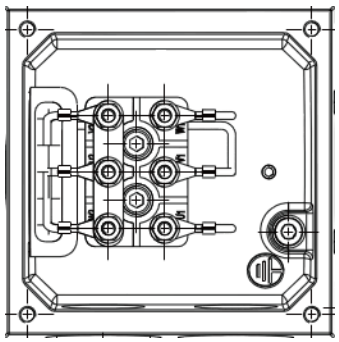


图1. **机座号为**71-132**时所使用的接线板**
Fig.1. Terminal board for motor sizes 71 - 132

图2. 71-132**为一体式接线盒, 螺纹孔供出线**
Fig. 2. Integrated terminal box for motor sizes 71 - 132. Tapped holes for cable entries.

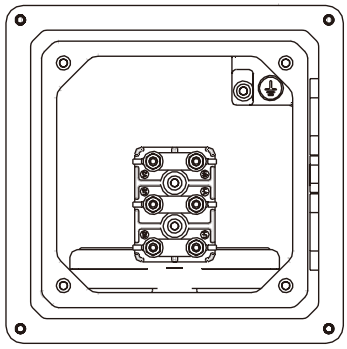


图3. **机座号为**160-250**时所使用的接线板**
Fig.3. Terminal board for motor sizes 160-250

图4. 160-250**为分体式接线盒，螺纹孔供出线**
Fig.4. Separated terminal box for motor sizes 160-250. Tapped holes for cable entries.

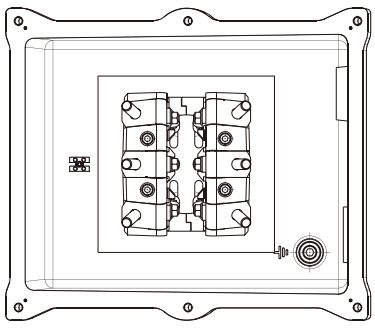


图5. **机座号为**280-355**时所使用的接线板**
Fig.5. Terminal board for motor sizes 280-355

图6. 280-355**为分体式接线盒，螺纹孔供出线**
Fig.6. Separated terminal box for motor sizes 280-355. Tapped holes for cable entries.

一般用途电机的变频器驱动
Variable speed drives with General performancence motors

鼠笼式感应电机具有无与伦比的可用性、可靠性与效率。通过变频器—一种变速驱动器（VSD），该电机的性能将更优异。电机不是一直处于全速运转状态，相反，变速驱动器能够根据实际需要调节速度。这样，就能够准确地控制工艺过程，在某些情况下，甚至可以达到比标称速度更快的运转速度，从而提高产能。

Squirrel cage induction motors offer excellent availability, reliability and effi ciency. With a variable speed drive (VSD) – a frequency converter – the motor performance can be further improved. Instead of running the motor continuously at full speed, the VSD enables speed adjustment according to actual need. The VSD makes it possible to control the process accurately and in some cases even to improve the capacity of the process by operating at higher than nominal speeds.

与传统的全压启动（DOL）不同，变速驱动器（VSD）能够平滑地进行启动。这样就大大地减少了电机及驱动应用中的压力。平滑启动还意味着供电网络不受高启动电流的影响。在电网设计时，应将该因素纳入考虑。

In contrast with conventional applications operating with a direct-on-line (DOL) supply, a VSD makes smooth starting possible. This signifi cantly reduces the stress on the motor and driven application. Smooth starting also means that the supply network will not be affected by high starting current transients, a fact that can be taken into account in the design of the network.

由于在速度和工艺用电方面的优化，ABB低压一般用途电机以及变频器的使用，尤其是ABB变频器的使用，通常能够在很大程度上实现节能。节能不仅能够产生环境效益，还能够带来经济效益。ABB低压一般用途电机适用于DOL运行，也适用于变速运行。选择面广，电机能够适应甚至是最苛刻的应用要求。

The use of ABB industrial drives together with General performance motors usually provides substantial energy savings as the speed and therefore the power required by the process can be optimized.General performance motors are designed for both DOL and variable speed operation. A wide range of options is available, so motors can be adapted to the most demanding applications.

在为变速驱动器选择低压一般用途电机时，应考虑以下方面：

When selecting general performance motors for VSDs, the followin gpoints must be taken into consideration.

1.确定规格
Dimensioning

变频器所馈送的电压（或电流）并非完全是正弦的。这可能会增加电机的损耗、振动以及噪音等级。此外，这些损耗分布的变化可能影响电机的温升。因此，在任何情况下，需要根据特定的变频器说明书正确选择电机规格。

The voltage (or current) fed by the VSD is not purely sinusoidal. This may increase motor losses, vibration, and noise level. Further, a change in the distribution of losses may affect the motor's temperature rise. In each case, the motor must be correctly sized according to the instructions supplied for thefrequency converter.

使用ABB变频器时，请使用ABB的DriveSize程序来确定电机规格。该工具利用的是基本综合性组合型式试验的规格确定规则。

ABB's DriveSize program utilizes dimensioning rules that are based on comprehensive motor and drive type tests. Please use DriveSize for selecting the correct motor and drive combination for a desired load profile.

当手动确定规格时，请注意，此目录中以及相关手册中给出的负载率（负载能力）曲线仅供参考。可根据要求提供针对各个电机和变频器的精确数值。除确定热容量外，必须保持一个转矩裕度，以保持稳定。电机的最大转矩在整个工作周期内应至少高于负载转矩30%。

In case of manual dimensioning, note that the loadability (or load capacity) curves provided in this catalog and in the respective manuals are indicative only. Values for a specific motor and drive are available on request.
In addition to thermal dimensioning, an adequate torque margin must be maintained for stability. The maximum torque of the motor must be at least 30 % higher than the load torque over the whole duty range.

尤其是在使用较长的供电电缆时，还必须考虑供电电缆的压降。

Voltage drop in the supply cable must also be taken into consideration, especially in cases where long supply cables are needed.

2.工作转速、振动及轴密封
Operating speed, vibrations and shaft seals

低压一般用途电机设计可以在宽转速范围下工作，在大多数情况下，也可以显著高于额定转速（即铭牌上印制的转速）的较高转速运行可以通过铭牌或DriveSize工具获知最大转速。除电机转速范围外，请确保不超出整个应用的最大或临界转速。

General performance motors are designed to work over a wide speed range and also at significantly higher than nominal speeds. The maximum speeds can be found on motor rating plates or in DriveSize. In addition to motor speed, make sure that the maximum or critical speed of the entire application is not exceeded.

下表1给出了低压一般用途电机的最大规定转速值。

Guideline maximum speed values for general performance motors are shown in Table 1.

表1低压一般用途电机的最大规定转速值

Table 1. Guideline maximum speed values for general performance cast iron motors.

机座号 Motor size	转速r/min Maximum speed, r/min 2电极 2-pole motors	 4电极 4-pole motors
71-80	6000	4500
90-100	6000	6000
112-200	4500	4500
225-250	3600	3600
280	3600	2600
315	3600	2300
355 SM	3600	2000

3.通风
Ventilation

电机低速运行时，风扇的冷却能力下降，进面降低电机的负载能力。可以另外使用一个独立的恒速风扇（变量代码183）来提升冷却能力。

When the motor is operated at low speeds, the cooling capacity of the fan decreases, which again reduces the motor's load capacity. A separate constant speed fan (variant codes 183) can be used to increase cooling capacity.

高速运行时，应考虑使用金属风扇在（变量代码068），而不是塑料风扇。

At high speeds, the use of metal fans (variant code 068) instead of plastic ones should be considered.

4.润滑
Lubrication

在变速应用场合中，轴承温度的变化是由于速度和电机负载变化的结果。这时，在正常工作条件下，通过测量轴承温度，可以得到最精确的润滑间隔时间。如果测量温度高于+80°C，则需要缩短在润滑铭牌或电机手册中规定的润滑间隔时间，或使用适用于高温工况的润滑油。请参见ABB低压电机手册。

In variable speed applications, bearing temperature varies as a function of speed and motor load. In such cases, the most accurate relubrication intervals can be obtained by measuring the bearing temperature under normal operating conditions. If the measured temperature is higher than +80°C, the relubrication intervals specified on the lubrication plate or in the maintenance manual must be shortened, or lubricants suitable for high operating temperatures must be used. See ABB low voltage motor manual.

在非常低的速度和温度（低于20°C）下连续工作时，标准润滑油的润滑能力可能不足，而需要使用含添加剂的特定润滑油。更多详情，请联系ABB。

In case of continuous operation at very low speeds and at very low temperatures (below -20 °C), the lubrication properties of standard greases may not be sufficient, and special greases with additives are needed.

如果电机配备密封轴承，即一次性润滑轴承，则务必注意，当工作温度与设计温度不同时，轴承的工作寿命也会与设计值不同。有关轴承工作寿命的详细信息，请参见本目录及相关手册中与产品相关的章节。

Operating temperatures also affect bearing life. When motors are equipped with sealed bearings, that is, bearings greased for life, it must be noted that if the operating temperature differs from the design temperature, the bearing life will also be different. More information on bearing lifetimes can be found in section Mechanical design of this catalog and in the relevant manuals.

我们不建议使用所谓的导电润滑油来消除轴承电流，因为此类产品的润滑性能不良，因此导电性很弱。

The use of so-called conductive greases for elimination of bearing currents is not recommended because of their poor lubrication characteristics and low conductivity.

5.绕组绝缘
Winding insulation

为确保电机的可靠性，当为电机选择正确的绝缘系统和为变频器选择正确的输出滤波器时，必须考虑变频器的非正弦输出电压的影响。

To ensure that motors operate reliably, the effects of non-sinusoidal output voltages from the converter must be taken into consideration when selecting the correct insulation system for the motor and output filters for the converter.

当使用具有非受控直流电压的变频器时，应根据表2选择绝缘和滤波器。

Insulation and filters must be selected according to Table 2.

表2 变频器（其具有非受控直流电压）电机的绕组绝缘及变频器输出滤波器选择

Table 2. Selection of motor winding insulation and converter output filters

所要求的绕组绝缘和滤波器 Winding insulation and fi lters required	
$U_N \leq 500$ V	ABB变频绝缘 VSD insulation
$U_N \leq 600$ V	ABB变频绝缘+dU/dt滤波器 或 ABB变频加强绝缘（变量代码405） VSD insulation + dU/dt fi lters OR VSD reinforced insulation (variant code 405)
$U_N \leq 690$ V	ABB变频加强绝缘（变量代码405） 及 变频器输出端的dU/dt滤波器 VSD reinforced insulation (variant code 405) AND dU/dt-fi lters at converter output
600 V < $U_N \leq 690$ V 电缆长度 > 150 m cable length > 150 m	ABB变频加强绝缘（变量代码405） VSD reinforced insulation (variant code 405)

GB14711-2013新增变频电源供电绝缘结构要求
GB14711-2013 added insulation specification for frequency converter

dU/dt 滤波器的详细信息，请参见相关的ABB驱动目录。

For more information on dU/dt filters, see the relevant ABB drives catalogs.

如果表2中的内容不适用，以及对于其它类型的变频器，则应根据电机端子电压进行选择。

For other converters and cases where the guidelines shown in Table 2 cannot be applied, selection must be based on the voltages present at motor terminals. The allowed

电机端子处允许的相对地电压峰值为：
— ABB变频绝缘1300V
— ABB变频加强绝缘（变量代码405）1800V

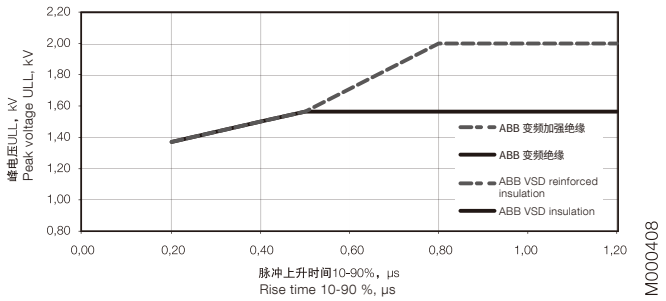
phase-toground voltage peaks at motor terminals:
– 1300 V peak: VSD insulation
– 1800 V peak: VSD reinforced insulation, variant code 405

受脉冲上升时间的影响，电机端子处允许的最大相对地电压峰值见图1。最高的曲线（即“ ABB变频加强绝缘 ”）适用于变频器电源采用特殊绕组绝缘的电机，变量代码为405。“ ABB标准绝缘 ”适用于具有标准设计的电机。

The maximum allowed phase-to-phase voltage peaks at the motor terminals as a function of pulse rise time are shown in Figure 1. The higher curve, VSD reinforced insulation, applies to motors with special winding insulation for frequency converter supply, variant code 405. VSD insulation applies to motors with standard design.

图1受脉冲上升时间的影响，电机端子处允许的最大相对地电压峰值

Figure 1. Maximum allowed phase-to-phase voltage peaks at motor terminals, as a function pulse rise time



6.轴承电流 Bearing currents

必须在所有电机中消除轴承电压和电流，确保整项工作的可靠开展。如果使用具有非受控直流电压的ABB ACS800 or ACS550驱动器，则必须按照下表3所示，使用绝缘轴承（变量代码701）和/或在变频器输出上加上适当规格的滤波器。有关其它代替产品和变频器类型，请联系ABB。订购时，请明确注明将使用的代替产品。

有关轴承电流和电压的详细资料，请参见“ AC驱动系统中的轴承电流 ”工厂文件或联系ABB。

Bearing voltages and currents must be avoided in all motors to ensure reliable operation of the entire application. With ACS800 or ACS550 drives and uncontrolled DC voltage, insulated bearings (variant code 701) and/or properly dimensioned filters at the converter must be used, as indicated in Table 3.

For information on other converter types, contact ABB Sales. When ordering, clearly state which alternative will be used.

表3与变频器（其具有非受控直流电压）配合使用的电机中的轴承电流防护

Table 3. Precautionary measures to avoid bearing currents in variable speed drives.

For more information on bearing currents, see“Technical guide No. 5, Bearing currents in modern AC drive systems”.

标称功率（PN）及/或机座号（IEC）	防护措施 Precautionary measures
P_N < 100 kW	无需采取措施 No action needed
P_N ≥ 100 kW 或 IEC 315 ≤ 机座号 ≤ IEC 355 PN ≥ 100 kW OR IEC 315 ≤ Frame size ≤ IEC 355	非驱动端绝缘轴承 Insulated non-drive end bearing
P_N ≥ 350 kW	非驱动端绝缘轴承，关在变频器中设置共模滤波器 Insulated non-drive end bearing AND Common mode fi lter at the converter

共模滤波器

共模滤波器减少了共模电流，从而减少了出现轴承电流的风险。共模滤波留不会严重影响电机接线端子的相电压或电源电压。更多详情，请参见ABB驱动器目录。

Common mode filters

Common mode filters reduce common mode currents and so decrease the risk of bearing currents. Common mode filters do not significantly affect the phase of main voltages on motor terminals. For more information, see ABB drives catalogs.

绝缘轴承

ABB使用带绝缘内圈或外圈的轴承。所谓混合轴承，也就是带非导电性陶瓷滚动元件的轴承，也可用于特定用途。

Insulated bearings

ABB uses bearings with insulated inner or outer races. Hybrid bearings, that is, bearings with non-conductive ceramic rolling elements, can also be used in special applications.

7.电缆敷设、接地及EMC Cabling, grounding, and EMC

变频器对驱动系统的电缆铺设和接地提出了更高的要求。应使用屏蔽对称电缆和提供360 ° 接头的电缆接头（也称为EMC接头，变量代码704）来连接电机。对于高达30kW的电机，可使用非对称电缆，但使始终建议使用屏蔽电缆，尤其在驱动应用中存在敏感部件时。

The use of a variable speed drive sets higher demands on the cabling and grounding of the drive system. The motor must be cabled using shielded symmetrical cables and cable glands providing 360° bonding (EMC glands, variant code 704). For motors up to 30 kW, asymmetrical cables can be used, but shielded cables are always recommended, especially if there are sensitive components in the driven application.

对于机座号为IEC 280及以上的电机，除非在一个公共的金属底座上安装电机和驱动机器，否则需要在电机机座和机器之间另外进行电位均衡处理。当使用一个金属底座来实现电位均衡时，应检查此连接的高频导电性。有关变速驱动器的接地和电缆敷设的更多信息，请参见手册“ 驱动系统的接地和电缆敷设 ”（编号：3AFY 61201998 R0125 REV B）。

For motor sizes IEC 280 and above, additional potential equalization is needed between the motor frame and the machinery, unless the motor and the driven machine are installed on a common steel base. When a steel base is used for potential equalization, high frequency conductivity of the connection must be checked.

为满足EMC的要求，除安装正确的电缆接头外，还必须使用专用的EMC电缆（另外具有专用接地件）。请参见变频器手册。

To meet EMC requirements, special EMC cables must be used in addition to appropriate cable gland mounting with special earthing pieces. Refer to ABB drives manuals for more information.

8.变频器的电机负载能力
Motor loadability with frequency converter drives

图2、图3所示的负载能力曲线具有指导意义。欲知精确数值，请联系ABB。这些负载能力曲线还可以用于其它变频器的初步规格确定，但必须注意的是，不同变频器的谐波分量和控制算法互不相同，因此电机的温升也会不同。

The loadability curves shown in Figures 2 and 3 are indicative guidelines and do not present exact values. These loadability curves can also be used for preliminary dimensioning of motors used at frequency converter duty, but it must be noted that the harmonic content and control algorithms vary between frequency converters, so the motor temperature rise will also be different.

这些指导曲线显示了在频率（速度）影响下的最大连续负载转矩，其中，采用额定正弦电源时，在额定频率和满额定负载条件下，所述频率（速度）能够实现相同的温升。

The curves show the maximum continuous load torque as a function of frequency (speed), which results in the same temperature rise as operation with the rated sinusoidal supply at nominal frequency and full rated load.

在大多数情况下，ABB低压一般用途电机运行时采用B级温升。对于这些电机来说，可根据B级温升的负载能力曲线来确定规格，或电机可以稍稍过载，即根据F级温升的负载能力曲线来确定规格。

Normally, general performance motors operate according to class B temperature rise. For these motors, dimensioning should be done according to temperature rise B curve, or the motor can be slightly overloaded. In other words, it can be dimensioned according to temperature rise F curve.

然而，如果ABB目录指出，F级温升时使用正弦电源，则应根据B级温升负载能力曲线来确定规格。

However, if only class F temperature rise with a sinusoidal supply is indicated for the motor in the technical data section,dimensioning must be done according to the temperature rise curve B.

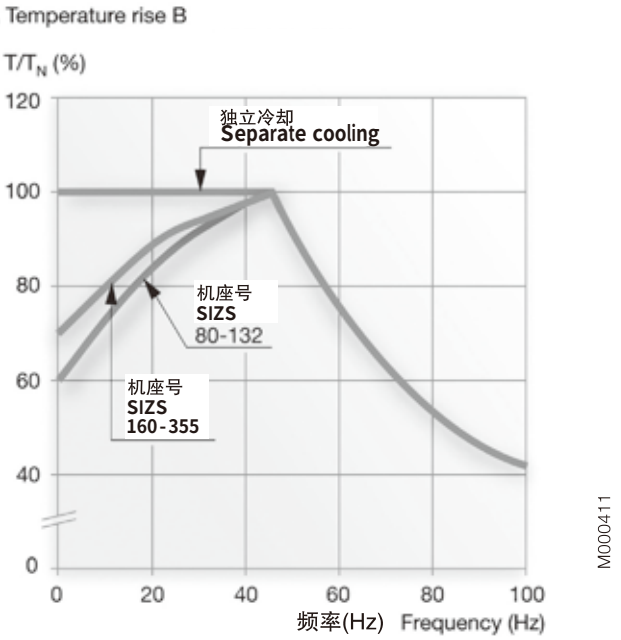
如果根据F级温升负载能力曲线使用电机，则必须检查电机其它部件的温升，并确保润滑间隔时间的润滑油类型均正确。

If the motor is loaded according the temperature rise F curve, it will be necessary to check the temperature rise in other parts of the motor and ensure that the lubrication intervals and grease type are still appropriate.

图2 具有DTC控制的变频器负载曲线

Figure 2. Loadability curves for frequency converters with DTC control

B级温升



F级温升

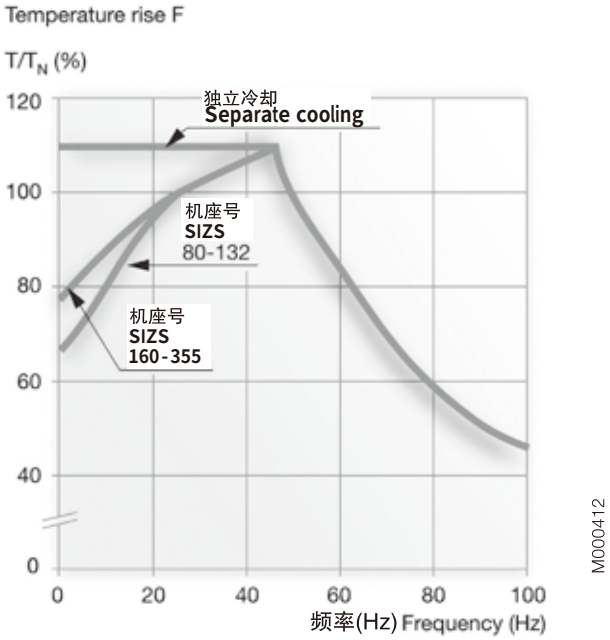
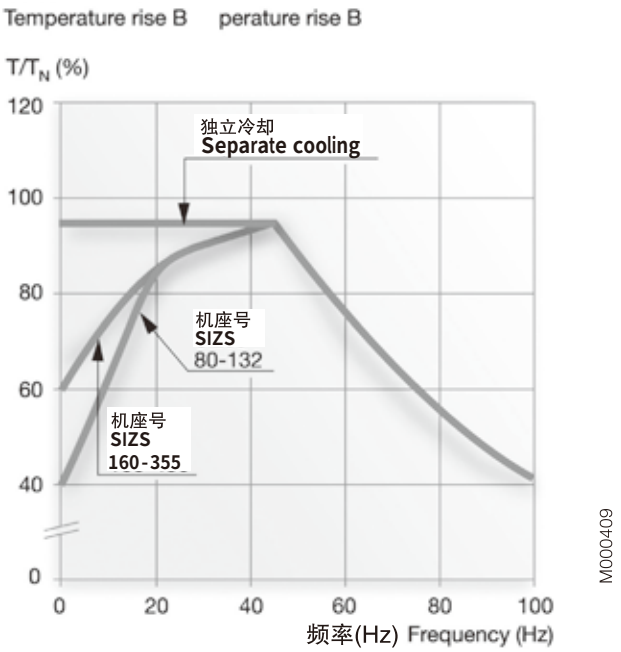


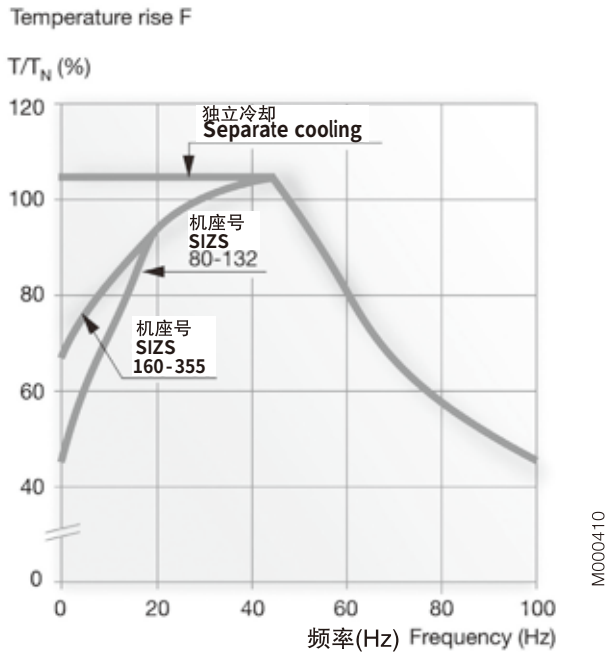
图3 其它控制类型的变频器负载曲线

Figure 3. Loadability curves for other frequency converters

B级温升



F级温升



更多详情，请联系ABB。

For further information, please contact ABB.

技术数据
Technical data

IE2
3级能效

三相全封闭鼠笼式电机的技术数据
Technical data for totally enclosed squirrel cage three phase motors

IP 55 – IC 411 – 绝缘等级F，温升等级B

符合IEC 60034-30; 2008的IE2效率等级及 GB 18613-2012的3级能效

IP 55 - IC 411 - Insulation class F, temperature rise class B

IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	$\frac{I_s}{I_N}$	转矩 Torque T_N Nm	$\frac{T_l}{T_N}$	$\frac{T_b}{T_N}$	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
3000 r/min = 2 poles		380 V 50 Hz						CENELEC-设计 design							
0.37	M2BAX 71 MA	3GBA 071 310-••CCN	2769	73.5	73.0	70.3	0.84	0.91	4.9	1.26	2.5	3.0	0.00033	9	56
0.55	M2BAX 71 MB	3GBA 071 320-••CCN	2790	75.5	75.3	73.1	0.83	1.33	5.2	1.86	2.8	3.2	0.00041	10	58
0.75	M2BAX 80 MA	3GBA 081 310-••CCN	2797	77.4	76.5	76.2	0.86	1.71	5.3	2.51	2.7	3.9	0.00067	13	63
1.1	M2BAX 80 MB	3GBA 081 320-••CCN	2821	79.6	80.2	79.8	0.87	2.41	5.2	3.67	2.8	3.7	0.00088	14	62
1.5	M2BAX 90 SA	3GBA 091 110-••CCN	2876	81.3	80.6	78.6	0.84	3.34	6.7	4.93	2.8	3.5	0.00208	20	66
2.2	M2BAX 90 LA	3GBA 091 510-••CCN	2882	83.2	83.6	82.9	0.88	4.57	7.1	7.25	2.8	3.4	0.00274	23	67
3	M2BAX 100 LA	3GBA 101 510-••CCN	2910	84.6	84.2	82.6	0.89	6.05	8.3	9.81	3.7	4.5	0.00475	32	74
4	M2BAX 112 MA	3GBA 111 310-••CCN	2902	85.8	85.7	84.3	0.90	7.87	8.5	13.1	3.7	4.2	0.00561	36	74
5.5	M2BAX 132 SA	3GBA 131 110-••CCN	2908	87.0	86.5	84.8	0.89	10.8	7.6	18.0	2.3	3.8	0.01170	54	74
7.5	M2BAX 132 SB	3GBA 131 120-••CCN	2905	88.1	87.7	86.7	0.88	14.7	8.1	24.6	2.7	4.0	0.01319	58	72
11	M2BAX 160 MLA	3GBA 161 410-••CCN	2919	89.4	89.9	89.6	0.88	21.2	6.2	35.9	2.2	3.1	0.041	102	72
15	M2BAX 160 MLB	3GBA 161 420-••CCN	2929	90.3	90.7	90.5	0.9	28	7	48.9	2.7	3.1	0.054	115	72
18.5	M2BAX 160 MLC	3GBA 161 430-••CCN	2932	90.9	91.2	91.1	0.9	34.4	7.9	60.1	2.8	3.4	0.060	123	73
22	M2BAX 180 MLA	3GBA 181 410-••CCN	2935	91.3	91.8	91.7	0.9	40.7	7.8	71.5	3.4	3.5	0.073	150	72
30	M2BAX 200 MLA	3GBA 201 410-••CCN	2952	92	91.7	90.9	0.88	56.3	8.1	97.1	3.5	3.8	0.110	198	81
37	M2BAX 200 MLB	3GBA 201 420-••CCN	2943	92.5	92.8	92.6	0.91	66.8	7.6	120	3.2	3.3	0.141	229	80
45	M2BAX 225 SMA	3GBA 221 210-••CCN	2955	92.9	93.1	92.7	0.89	82.7	8.2	145.6	3.4	3.4	0.226	273	82
55	M2BAX 250 SMA	3GBA 251 210-••CCN	2958	93.2	93.5	93.4	0.89	99.6	7.4	177.1	3.1	2.7	0.344	334	78
75	M2BAX 280 SA	3GBA 281 110-••CCN	2975	93.9	93.7	92.4	0.89	136	6.9	241	1.8	2.7	0.8	546	78
90	M2BAX 280 SMB	3GBA 281 220-••CCN	2970	94.2	94.1	93.2	0.90	161	6.6	288	1.8	2.6	0.9	586	79
110	M2BAX 315 SMA	3GBA 311 210-••CCN	2980	94.5	94.2	92.9	0.87	203	6.9	352	1.8	2.7	1.2	767	78
132	M2BAX 315 SMB	3GBA 311 220-••CCN	2980	94.9	94.7	93.6	0.89	237	6.7	422	2.0	2.7	1.4	827	78
160	M2BAX 315 SMC	3GBA 311 230-••CCN	2979	95.1	95.0	94.3	0.90	284	6.8	512	2.1	2.7	1.7	917	78
200	M2BAX 315 MLA	3GBA 311 410-••CCN	2977	95.2	95.1	94.4	0.90	354	7.0	641	2.3	2.7	2.1	1037	83
250	M2BAX 355 SMA	3GBA 351 210-••CCN	2981	95.3	95.2	94.4	0.90	442	6.2	800	1.4	2.5	2.7	1329	83
315	M2BAX 355 SMB	3GBA 351 220-••CCN	2978	95.4	95.4	94.8	0.89	563	6.5	1010	1.7	2.5	3.4	1469	83
355[1)]	M2BAX 355 SMC	3GBA 351 230-••CCN	2981	95.4	95.5	95.1	0.89	635	6.8	1137	1.9	2.4	3.6	1539	83

[1)] 温升等级F
temperature rise class F

产品代码中的两个圆点表示可选的安装方式、电压及频率代码（见订购信息一页）。
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根据IEC 60034-2-1:2007的要求，给出效率值。
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Efficiency values are given according to IEC 60034-2-1; 2007.
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IE等级涉及功率为0.75KW-355KW。
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IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	I_s/I_N	转矩 Torque T_N Nm	T_l/T_N	T_b/T_N	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
1500 r/min = 4 poles		380 V 50 Hz						CENELEC-设计 design							
0.25	M2BAX 71 MA	3GBA 072 310-••CCN	1404	67.0	64.1	58.6	0.77	0.74	4.2	1.68	1.9	2.5	0.00059	9	49
0.37	M2BAX 71 MB	3GBA 072 320-••CCN	1393	69.5	68.5	65.2	0.81	1.00	4.2	2.52	1.8	2.3	0.00076	10	46
0.55	M2BAX 80 MA	3GBA 082 310-••CCN	1402	73.5	72.8	70.1	0.80	1.42	4.8	3.70	2.1	2.6	0.00156	13	54
0.75	M2BAX 80 MB	3GBA 082 320-••CCN	1438	79.6	79.5	76.5	0.75	1.91	6.4	4.97	3.4	3.5	0.00247	17	53
1.1	M2BAX 90 SA	3GBA 092 110-••CCN	1440	81.4	80.4	77.3	0.77	2.67	6.3	7.35	3.5	3.8	0.00372	21	51
1.5	M2BAX 90 LA	3GBA 092 510-••CCN	1435	82.8	81.9	80.0	0.78	3.53	6.6	10.0	3.3	3.8	0.00462	23	55
2.2	M2BAX 100 LA	3GBA 102 510-••CCN	1437	84.3	84.1	82.9	0.82	4.84	6.7	14.5	2.9	3.4	0.00759	31	55
3	M2BAX 100 LB	3GBA 102 520-••CCN	1437	85.5	85.4	84.2	0.83	6.42	7.3	19.8	3.2	3.8	0.00939	35	58
4	M2BAX 112 MA	3GBA 112 310-••CCN	1433	86.6	87.0	86.1	0.83	8.46	7.1	26.5	3.6	3.9	0.01195	41	56
5.5	M2BAX 132 SA	3GBA 132 110-••CCN	1451	87.7	87.8	87.2	0.81	11.8	6.4	36.0	2.2	3.0	0.02570	57	66
7.5	M2BAX 132 MA	3GBA 132 310-••CCN	1453	88.7	89.0	88.6	0.81	15.9	6.8	49.1	2.3	3.2	0.03195	68	66
11	M2BAX 160 MLA	3GBA 162 410-••CCN	1461	89.8	90.2	90.1	0.82	22.7	7	71.5	2.9	2.9	0.078	110	67
15	M2BAX 160 MLB	3GBA 162 420-••CCN	1463	90.6	91.1	91	0.84	29.9	7.4	97.7	2.9	3.3	0.100	125	66
18.5	M2BAX 180 MLA	3GBA 182 410-••CCN	1467	91.2	91.5	91.2	0.83	37.1	7.9	120.8	3.3	3.7	0.120	155	65
22	M2BAX 180 MLB	3GBA 182 420-••CCN	1468	91.6	91.7	91.1	0.82	44.5	8.7	143	3.7	4.1	0.139	168	66
30	M2BAX 200 MLA	3GBA 202 410-••CCN	1471	92.3	92.8	92.9	0.84	58.8	6.5	193.6	2.7	2.8	0.236	222	68
37	M2BAX 225 SMA	3GBA 222 210-••CCN	1476	92.7	93	93	0.85	71.3	6.9	238.9	2.8	2.9	0.350	263	69
45	M2BAX 225 SMB	3GBA 222 220-••CCN	1478	93.1	93.4	93.1	0.84	87.4	7.5	291	3.1	3.1	0.416	290	69
55	M2BAX 250 SMA	3GBA 252 210-••CCN	1478	93.5	93.8	93.4	0.85	105	7.1	355.9	2.9	2.9	0.533	339	77
75	M2BAX 280 SA	3GBA 282 110-••CCN	1482	94.0	94.2	93.7	0.86	140	6.2	483	2.2	2.5	1.3	531	71
90	M2BAX 280 SMB	3GBA 282 220-••CCN	1481	94.2	94.5	94.2	0.87	166	6.5	580	2.2	2.4	1.5	591	71
110	M2BAX 315 SMA	3GBA 312 210-••CCN	1486	94.6	94.7	93.9	0.87	203	6.5	706	1.8	2.3	2.3	792	78
132	M2BAX 315 SMB	3GBA 312 220-••CCN	1486	94.9	95.0	94.5	0.87	242	6.4	847	2.0	2.4	2.6	847	78
160	M2BAX 315 SMC	3GBA 312 230-••CCN	1485	95.1	95.3	94.8	0.86	297	6.6	1028	2.1	2.6	2.9	887	78
200	M2BAX 315 MLA	3GBA 312 410-••CCN	1484	95.2	95.4	95.1	0.87	366	6.4	1286	2.1	2.5	3.5	1012	78
250	M2BAX 355 SMA	3GBA 352 210-••CCN	1487	95.1	95.2	94.5	0.86	464	6.0	1605	1.8	2.3	5.4	1419	82
315[1)]	M2BAX 355 SMB	3GBA 352 220-••CCN	1487	95.4	95.5	95.0	0.86	583	6.7	2021	2.0	2.4	6.9	1589	82
355[1)]	M2BAX 355 SMC	3GBA 352 230-••CCN	1485	95.4	95.7	95.3	0.87	649	6.1	2279	2.1	2.3	7.2	1669	84

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temperature rise class F

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根据IEC 60034-2-1:2007的要求，给出效率值。
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IE等级涉及功率为0.75KW-355KW 的电机。
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IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	$\frac{I_s}{I_N}$	转矩 Torque T_N Nm	$\frac{T_l}{T_N}$	$\frac{T_b}{T_N}$	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
1000 r/min = 6 poles		380 V 50 Hz						CENELEC-设计design							
0.18	M2BAX 71 MA	3GBA 073 310-••CCN	890	59.0	56.5	50.9	0.77	0.60	3.1	1.87	1.8	2.1	0.00082	9	40
0.25	M2BAX 71 MB	3GBA 073 320-••CCN	896	63.0	61.4	56.7	0.76	0.79	3.5	2.64	2.1	2.5	0.00105	10	47
0.37	M2BAX 80 MA	3GBA 083 310-••CCN	906	68.0	67.4	63.4	0.80	1.03	4.0	3.84	2.2	2.5	0.00173	13	49
0.55	M2BAX 80 MB	3GBA 083 320-••CCN	908	71.0	70.6	67.5	0.77	1.53	4.2	5.74	2.6	2.6	0.00234	14	47
0.75	M2BAX 90 SA	3GBA 093 110-••CCN	945	75.9	74	69.6	0.66	2.27	4.8	7.58	3.0	3.3	0.00438	21	50
1.1	M2BAX 90 LA	3GBA 093 510-••CCN	926	78.1	77.4	74.8	0.71	3.01	4.4	11.1	2.7	3.0	0.00507	24	48
1.5	M2BAX 100 LA	3GBA 103 510-••CCN	946	79.8	79.3	77.2	0.71	4.02	5.0	15.0	2.3	2.8	0.00795	31	56
2.2	M2BAX 112 MA	3GBA 113 310-••CCN	950	81.8	81.1	79.1	0.72	5.68	5.3	21.9	2.6	3.2	0.01157	40	54
3	M2BAX 132 SA	3GBA 133 110-••CCN	962	83.3	83.2	82.1	0.69	7.93	5.3	29.5	1.8	2.7	0.02509	55	60
4	M2BAX 132 MA	3GBA 133 310-••CCN	959	84.6	84.9	84.1	0.74	9.71	6.0	40.0	2.4	3.0	0.02935	63	58
5.5	M2BAX 132 MB	3GBA 133 320-••CCN	959	86.0	86.4	86.0	0.71	13.7	5.5	54.2	2.0	2.6	0.03972	77	62
7.5	M2BAX 160 MLA	3GBA 163 410-••CCN	977	87.2	87.3	86.5	0.74	17.7	6.9	73.1	2	3.2	0.081	113	61
11	M2BAX 160 MLB	3GBA 163 420-••CCN	977	88.7	88.7	87.9	0.73	25.8	7.6	107.5	2.2	3.7	0.102	133	62
15	M2BAX 180 MLA	3GBA 183 410-••CCN	968	89.7	90.3	90.6	0.8	31.8	7.4	147	2.1	3.5	0.136	168	62
18.5	M2BAX 200 MLA	3GBA 203 410-••CCN	975	90.4	90.8	90.7	0.8	38.9	5.6	180.8	1.8	2.6	0.204	205	61
22	M2BAX 200 MLB	3GBA 203 420-••CCN	974	90.9	91.3	91.3	0.8	46	5.7	215.9	1.6	2.6	0.227	219	62
30	M2BAX 225 SMA	3GBA 223 210-••CCN	986	91.7	91.9	91.5	0.82	60.6	6.7	290	2.4	2.9	0.579	282	64
37	M2BAX 250 SMA	3GBA 253 210-••CCN	985	92.2	92.7	92.6	0.84	72.6	6.4	358.7	2.3	2.6	0.783	336	66
45	M2BAX 280 SA	3GBA 283 110-••CCN	988	92.7	93.0	92.4	0.84	87.8	6.2	434	2.2	2.3	1.9	516	71
55	M2BAX 280 SB	3GBA 283 120-••CCN	988	93.1	93.6	93.1	0.84	106	6.3	530	2.4	2.3	2.2	556	71
75	M2BAX 315 SMA	3GBA 313 210-••CCN	991	94.0	94.1	93.4	0.83	146	6.5	722	1.9	2.4	3.2	722	75
90	M2BAX 315 SMB	3GBA 313 220-••CCN	991	94.2	94.4	93.9	0.84	172	6.6	866	1.9	2.4	4.1	817	75
110	M2BAX 315 SMC	3GBA 313 230-••CCN	990	94.6	94.9	94.4	0.84	210	6.4	1058	2.0	2.4	4.9	887	75
132	M2BAX 315 MLA	3GBA 313 410-••CCN	991	94.8	95.1	94.6	0.84	251	6.6	1270	2.2	2.4	5.8	997	75
160	M2BAX 355 SMA	3GBA 353 210-••CCN	991	94.8	95.0	94.6	0.84	305	5.7	1541	1.9	2.1	7.3	1309	77
200	M2BAX 355 SMB	3GBA 353 220-••CCN	991	95.1	95.4	95.1	0.85	375	5.9	1927	1.9	2.1	9.7	1459	77
250[1)]	M2BAX 355 SMC	3GBA 353 230-••CCN	990	95.1	95.5	95.3	0.85	469	6.1	2409	2.1	2.1	11.3	1609	77

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IP 55 - IC 411 - Insulation class F, temperature rise class B

IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	$\frac{I_s}{I_N}$	转矩 Torque T_N Nm	$\frac{T_l}{T_N}$	$\frac{T_b}{T_N}$	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
3000 r/min = 2 poles		400 V 50 Hz						CENELEC-设计design							
0.37	M2BAX 71 MA	3GBA 071 310-••CCN	2807	73.5	71.4	67.3	0.80	0.91	5.1	1.26	2.8	3.4	0.00033	9	56
0.55	M2BAX 71 MB	3GBA 071 320-••CCN	2820	75.5	73.9	70.2	0.79	1.33	5.5	1.86	3.6	3.2	0.00041	10	58
0.75	M2BAX 80 MA	3GBA 081 310-••CCN	2830	77.4	76.7	74.4	0.83	1.69	5.7	2.51	3.1	4.3	0.00067	13	63
1.1	M2BAX 80 MB	3GBA 081 320-••CCN	2849	79.6	79.7	77.7	0.84	2.37	5.8	3.67	3.2	4.1	0.00088	14	62
1.5	M2BAX 90 SA	3GBA 091 110-••CCN	2890	81.3	80.0	76.9	0.80	3.33	7.1	4.93	3.1	3.9	0.00208	20	66
2.2	M2BAX 90 LA	3GBA 091 510-••CCN	2897	83.2	82.9	81.2	0.85	4.49	7.7	7.25	3.1	3.8	0.00274	23	67
3	M2BAX 100 LA	3GBA 101 510-••CCN	2919	84.6	83.7	81.2	0.85	6.02	8.7	9.81	4.2	5.0	0.00475	32	74
4	M2BAX 112 MA	3GBA 111 310-••CCN	2916	85.8	85.3	83.1	0.87	7.73	9.1	13.1	4.1	4.7	0.00561	36	74
5.5	M2BAX 132 SA	3GBA 131 110-••CCN	2921	87.0	85.9	83.6	0.86	10.6	8.3	18.0	2.6	4.3	0.01170	54	74
7.5	M2BAX 132 SB	3GBA 131 120-••CCN	2916	88.1	87.5	85.8	0.85	14.5	8.7	24.6	3.1	4.5	0.01319	58	72
11	M2BAX 160 MLA	3GBA 161 410-••CCN	2931	89.4	89.4	88.4	0.86	20.7	6.6	35.9	2.5	3.5	0.041	102	72
15	M2BAX 160 MLB	3GBA 161 420-••CCN	2938	90.3	90.6	89.8	0.89	26.9	7.6	48.9	3.0	3.5	0.054	115	72
18.5	M2BAX 160 MLC	3GBA 161 430-••CCN	2939	90.9	91.0	90.3	0.88	33.4	7.9	60.1	3.1	3.8	0.060	123	73
22	M2BAX 180 MLA	3GBA 181 410-••CCN	2943	91.3	91.4	90.7	0.88	39.5	8.4	71.4	3.8	3.9	0.073	150	72
30	M2BAX 200 MLA	3GBA 201 410-••CCN	2957	92.0	91.5	90.1	0.85	55.4	8.6	97.1	4.0	4.2	0.110	198	81
37	M2BAX 200 MLB	3GBA 201 420-••CCN	2951	92.5	92.5	92.1	0.90	64.2	8.4	120	3.6	3.7	0.141	229	80
45	M2BAX 225 SMA	3GBA 221 210-••CCN	2962	92.9	92.8	92.1	0.87	80.4	8.8	145	3.8	3.8	0.226	273	82
55	M2BAX 250 SMA	3GBA 251 210-••CCN	2965	93.2	93.2	92.6	0.88	96.8	7.4	177	3.4	3.0	0.344	334	78
75	M2BAX 280 SA	3GBA 281 110-••CCN	2977	94.0	93.7	92.3	0.88	130	7.6	240	2.1	3.0	0.8	546	78
90	M2BAX 280 SMB	3GBA 281 220-••CCN	2976	94.3	94.2	93.1	0.90	153	7.4	288	2.1	2.9	0.9	586	78
110	M2BAX 315 SMA	3GBA 311 210-••CCN	2982	94.6	94.1	92.7	0.86	195	7.6	352	2.0	3.0	1.2	767	78
132	M2BAX 315 SMB	3GBA 311 220-••CCN	2982	94.9	94.6	93.4	0.88	228	7.4	422	2.2	3.0	1.4	827	78
160	M2BAX 315 SMC	3GBA 311 230-••CCN	2981	95.2	95.0	94.1	0.89	272	7.5	512	2.3	3.0	1.7	917	78
200	M2BAX 315 MLA	3GBA 311 410-••CCN	2980	95.3	95.2	94.4	0.90	336	7.7	640	2.6	3.0	2.1	1037	83
250	M2BAX 355 SMA	3GBA 351 210-••CCN	2983	95.4	95.2	94.3	0.89	424	6.8	800	1.5	2.8	2.7	1329	83
315	M2BAX 355 SMB	3GBA 351 220-••CCN	2980	95.4	95.4	94.7	0.89	535	7.2	1009	1.9	2.8	3.4	1469	83
355[1)]	M2BAX 355 SMC	3GBA 351 230-••CCN	2983	95.5	95.5	94.9	0.88	609	7.4	1136	2.1	2.7	3.6	1539	83

[1)] 温升等级F
temperature rise class F

产品代码中的两个圆点表示可选的安装方式、电压及频率代码（见订购信息一页）。
The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

I_s / I_N = 启动电流 Starting current

T_l / T_N = 转子堵转转矩 Locked rotor torque

T_b / T_N = 最大转矩 Breakdown torque

根据IEC 60034-2-1:2007的要求，给出效率值。
请注意，在测试方法未知时，这些数值没有可比性。
ABB已经根据间接法计算出效率值，且根据测量得出杂散损耗（附加损耗）。
Efficiency values are given according to IEC 60034-2-1; 2007.
Please note that the values are not comparable without knowing the testing method.
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IE等级涉及功率为0.75KW-355KW 的电机。
IE-class concerns motors from 0.75KW-355KW

技术数据
Technical data

IE2
3级能效

三相全封闭鼠笼式电机的技术数据
Technical data for totally enclosed squirrel cage three phase motors

IP 55 – IC 411 – 绝缘等级F，温升等级B

符合IEC 60034-30; 2008的IE2效率等级及 GB 18613-2012的3级能效

IP 55 - IC 411 - Insulation class F, temperature rise class B

IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	$\frac{I_s}{I_N}$	转矩 Torque T_N Nm	$\frac{T_l}{T_N}$	$\frac{T_b}{T_N}$	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
1500 r/min = 4 poles		400 V 50 Hz						CENELEC-设计design							
0.25	M2BAX 71 MA	3GBA 072 310-••CCN	1415	67.0	63.1	56.6	0.73	0.74	4.4	1.68	2.1	2.8	0.00059	9	49
0.37	M2BAX 71 MB	3GBA 072 320-••CCN	1407	69.5	67.2	62.2	0.77	1.00	4.4	2.50	2.0	2.6	0.00076	10	46
0.55	M2BAX 80 MA	3GBA 082 310-••CCN	1413	73.5	72.0	67.8	0.76	1.42	5.1	3.70	2.4	2.9	0.00156	13	54
0.75	M2BAX 80 MB	3GBA 082 320-••CCN	1462	79.6	77.1	73.2	0.71	1.92	6.7	4.97	3.8	3.9	0.00247	17	53
1.1	M2BAX 90 SA	3GBA 092 110-••CCN	1447	81.4	79.5	75.7	0.73	2.67	6.6	7.35	3.9	4.3	0.00372	21	51
1.5	M2BAX 90 LA	3GBA 092 510-••CCN	1441	82.8	81.6	78.4	0.74	3.53	6.9	10.0	3.7	4.2	0.00462	23	55
2.2	M2BAX 100 LA	3GBA 102 510-••CCN	1445	84.3	83.4	81.2	0.78	4.83	7.1	14.5	3.2	3.8	0.00759	31	55
3	M2BAX 100 LB	3GBA 102 520-••CCN	1443	85.5	85.0	82.9	0.79	6.41	7.7	19.8	3.6	4.2	0.00939	35	58
4	M2BAX 112 MA	3GBA 112 310-••CCN	1442	86.6	86.2	84.6	0.79	8.44	7.5	26.5	4.0	4.3	0.01195	41	56
5.5	M2BAX 132 SA	3GBA 132 110-••CCN	1457	87.7	87.5	86.2	0.78	11.6	6.9	36.0	2.5	3.4	0.02570	57	66
7.5	M2BAX 132 MA	3GBA 132 310-••CCN	1457	88.7	88.6	87.5	0.78	15.6	7.2	49.1	2.6	3.6	0.03195	68	66
11	M2BAX 160 MLA	3GBA 162 410-••CCN	1466	89.8	89.9	89.2	0.79	22.4	7.0	71.5	3.2	3.2	0.078	110	67
15	M2BAX 160 MLB	3GBA 162 420-••CCN	1468	90.6	91.1	90.5	0.82	29.1	8.0	97.7	3.2	3.7	0.100	125	66
18.5	M2BAX 180 MLA	3GBA 182 410-••CCN	1470	91.2	91.5	90.6	0.80	36.6	8.5	120	3.7	4.2	0.120	155	65
22	M2BAX 180 MLB	3GBA 182 420-••CCN	1472	91.6	91.3	90.2	0.78	44.4	9.2	143	4.1	4.6	0.139	168	66
30	M2BAX 200 MLA	3GBA 202 410-••CCN	1476	92.3	92.4	92.0	0.81	57.9	6.8	194	3.0	3.2	0.236	222	68
37	M2BAX 225 SMA	3GBA 222 210-••CCN	1479	92.7	92.7	92.2	0.82	70.3	7.4	239	3.1	3.3	0.350	263	69
45	M2BAX 225 SMB	3GBA 222 220-••CCN	1481	93.1	93.0	92.3	0.83	84.1	7.9	290	3.5	3.5	0.416	290	69
55	M2BAX 250 SMA	3GBA 252 210-••CCN	1480	93.5	93.4	92.7	0.83	102	7.6	355	3.3	3.3	0.533	339	77
75	M2BAX 280 SA	3GBA 282 110-••CCN	1484	94.2	94.2	93.5	0.85	135	6.9	482	2.5	2.8	1.25	531	71
90	M2BAX 280 SMB	3GBA 282 220-••CCN	1483	94.4	94.6	94.1	0.86	160	7.2	579	2.5	2.7	1.5	591	71
110	M2BAX 315 SMA	3GBA 312 210-••CCN	1487	94.7	94.6	93.8	0.86	194	7.2	706	2.0	2.5	2.3	792	78
132	M2BAX 315 SMB	3GBA 312 220-••CCN	1487	95.0	95.0	94.3	0.86	233	7.1	847	2.3	2.7	2.6	847	78
160	M2BAX 315 SMC	3GBA 312 230-••CCN	1487	95.2	95.3	94.6	0.85	285	7.2	1027	2.4	2.9	2.9	887	78
200	M2BAX 315 MLA	3GBA 312 410-••CCN	1486	95.3	95.4	94.9	0.86	352	7.0	1285	2.3	2.8	3.5	1012	78
250	M2BAX 355 SMA	3GBA 352 210-••CCN	1488	95.2	95.2	94.4	0.85	445	6.7	1604	2.0	2.6	5.4	1419	82
315[1)]	M2BAX 355 SMB	3GBA 352 220-••CCN	1488	95.5	95.5	94.8	0.85	560	7.3	2021	2.2	2.7	6.9	1589	82
355[1)]	M2BAX 355 SMC	3GBA 352 230-••CCN	1487	95.5	95.7	95.2	0.86	623	6.8	2279	2.4	2.7	7.2	1669	82

[1)] 温升等级F
temperature rise class F

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IE等级涉及功率为0.75KW-355KW 的电机。
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符合IEC 60034-30; 2008的IE2效率等级及 GB 18613-2012的3级能效

IP 55 - IC 411 - Insulation class F, temperature rise class B

IE2 efficiency class according to IEC 60034-30; 2008 , Grade 3 according to GB 18613-2012

输出 Output kW	电机型号 Motor type	产品代码 Product code	转速 Speed r/min	效率 Efficiency IEC 60034-2-1; 2007 Full 满载 load 100%	3/4负载 load 75%	1/2负载 load 50%	功率因数 Power factor cos φ	电流 Current I_N A	$\frac{I_s}{I_N}$	转矩 Torque T_N Nm	$\frac{T_l}{T_N}$	$\frac{T_b}{T_N}$	转动惯量 Moment of inertia J = 1/4 GD² kgm²	重量 Weight kg	声压等级 Sound pressure level L_{PA} dB
1000 r/min = 6 poles		400 V 50 Hz						CENELEC-设计design							
0.18	M2BAX 71 MA	3GBA 073 310-••CCN	910	59.0	54.7	47.5	0.72	0.61	3.3	1.87	2.0	2.4	0.00082	9	40
0.25	M2BAX 71 MB	3GBA 073 320-••CCN	913	63.0	59.9	53.8	0.71	0.81	3.6	2.64	2.4	2.8	0.00105	10	47
0.37	M2BAX 80 MA	3GBA 083 310-••CCN	919	68.0	65.9	60.7	0.74	1.06	4.2	3.84	2.5	2.7	0.00173	13	49
0.55	M2BAX 80 MB	3GBA 083 320-••CCN	921	71.0	69.6	64.9	0.73	1.53	4.4	5.74	2.9	3.0	0.00234	14	47
0.75	M2BAX 90 SA	3GBA 093 110-••CCN	949	75.9	73.0	67.7	0.62	2.30	5.1	7.60	3.3	3.7	0.00438	21	50
1.1	M2BAX 90 LA	3GBA 093 510-••CCN	936	78.1	76.2	72.8	0.67	3.03	4.6	11.1	3.0	3.3	0.00507	24	48
1.5	M2BAX 100 LA	3GBA 103 510-••CCN	953	79.8	78.4	75.1	0.67	4.05	5.2	15.0	2.6	3.1	0.00795	31	56
2.2	M2BAX 112 MA	3GBA 113 310-••CCN	956	81.8	80.4	77.4	0.68	5.71	5.5	21.9	2.9	3.5	0.01157	40	54
3	M2BAX 132 SA	3GBA 133 110-••CCN	967	83.3	82.5	80.2	0.65	8.00	5.5	29.5	2.0	3.0	0.02509	55	60
4	M2BAX 132 MA	3GBA 133 310-••CCN	965	84.6	84.2	82.4	0.70	9.75	5.7	40.0	2.6	3.3	0.02832	63	62
5.5	M2BAX 132 MB	3GBA 133 320-••CCN	964	86.0	85.9	84.7	0.68	13.6	5.8	54.2	2.2	2.9	0.03972	77	62
7.5	M2BAX 160 MLA	3GBA 163 410-••CCN	974	87.2	87.5	87.0	0.76	16.3	6.6	73.7	2.0	3.2	0.081	113	61
11	M2BAX 160 MLB	3GBA 163 420-••CCN	971	88.7	89.4	89.8	0.79	22.7	6.6	108	1.6	2.8	0.102	133	62
15	M2BAX 180 MLA	3GBA 183 410-••CCN	971	89.7	90.0	89.6	0.77	31.3	7.4	147	2.4	3.9	0.136	168	62
18.5	M2BAX 200 MLA	3GBA 203 410-••CCN	978	90.4	90.7	90.0	0.77	38.4	6.1	181	2.0	2.9	0.204	205	61
22	M2BAX 200 MLB	3GBA 203 420-••CCN	978	90.9	91.1	90.5	0.78	44.8	6.2	215	1.8	2.9	0.227	219	62
30	M2BAX 225 SMA	3GBA 223 210-••CCN	987	91.7	91.5	90.5	0.79	59.8	7.0	290	2.7	3.2	0.579	282	64
37	M2BAX 250 SMA	3GBA 253 210-••CCN	986	92.2	92.5	91.9	0.81	71.5	6.9	359	2.6	2.9	0.783	336	66
45	M2BAX 280 SA	3GBA 283 110-••CCN	990	92.8	93.0	92.1	0.84	83.3	7.0	434	2.5	2.5	1.85	516	71
55	M2BAX 280 SB	3GBA 283 120-••CCN	990	93.3	93.5	92.9	0.84	101	7.0	530	2.7	2.6	2.2	556	71
75	M2BAX 315 SMA	3GBA 313 210-••CCN	992	94.0	94.0	93.0	0.81	142	7.0	721	2.1	2.7	3.2	722	75
90	M2BAX 315 SMB	3GBA 313 220-••CCN	992	94.3	94.4	93.6	0.83	165	7.2	866	2.1	2.7	4.1	817	75
110	M2BAX 315 SMC	3GBA 313 230-••CCN	992	94.7	94.8	94.2	0.83	201	7.0	1058	2.2	2.7	4.9	887	75
132	M2BAX 315 MLA	3GBA 313 410-••CCN	992	94.9	95.0	94.4	0.83	241	7.2	1270	2.4	2.7	5.8	997	75
160	M2BAX 355 SMA	3GBA 353 210-••CCN	992	94.9	95.0	94.4	0.83	293	6.2	1540	2.1	2.3	7.3	1309	77
200	M2BAX 355 SMB	3GBA 353 220-••CCN	992	95.2	95.4	94.9	0.84	360	6.5	1925	2.1	2.3	9.7	1459	77
250[1)]	M2BAX 355 SMC	3GBA 353 230-••CCN	991	95.3	95.5	95.2	0.84	450	6.7	2409	2.3	2.3	11.3	1609	77

[1)] 温升等级F
temperature rise class F

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IE-class concerns motors from 0.75KW-355KW

变量代码
Variant codes

代码 [1] 变量代码 Code [1] Variant code		M2BAX 71	80	90	100	112	132	160	180	200	225	250	280	315	355
部门标准设计 Branch standard designs															
178	不锈钢/耐酸螺栓 Stainless steel / acid proof bolts.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
209	非标准电压或频率 Non-standard voltage or frequency,	P	P	P	P	P	P	P	P	P	P	P	P	P	P
文件材料 Documentation															
141	配尺寸图 Binding dimension drawing.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
加热元件 Heating elements															
450	加热带,100–120V Heating element, 100–120V	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
451	加热带,200–240V Heating element, 200-240V.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
安装方式 Mounting arrangements															
008	IM 2101 底脚/法兰安装，IEC 法兰，由IM 1001派生(B3派生出B34) IM 2101 foot/flange mounted, IEC flange, from IM 1001 (B34 from B3).	M/P	M/P	M/P	M/P	M/P	M/P	NA	NA	NA	NA	NA	NA	NA	NA
009	IM2001底脚/法兰安装，IEC法兰，由IM1001派生(B3派生出B35) IM 2001 foot/flange mounted, IEC flange, from IM 1001 (B35 from B3).	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
047	IM 3601 法兰安装，IEC 法兰，由IM 3001派生(B5派生出B14) IM 3601 flange mounted, IEC flange, from IM 3001 (B14 from B5).	M/P	M/P	M/P	M/P	M/P	M/P	NA	NA	NA	NA	NA	NA	NA	NA
066	除IM B3 (1001)、 IM B5 (3001)、IM B14 (3601)、IM B35 (2001) 、 IM B34 (2101) 外的其它安装方式 Modified for specified mounting position differing Modified for specified mounting position differing from IM B3 (1001), IM B5 (3001), B14 (3601), IM B35 (2001) & IM B34 (2101)	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
320	IM2001 底脚/缺边法兰安装，由IM1001派生(B3派生出B35) IM2001 foot/flat bottom flange mounted, from IM1001 (B35 flat bottom flange from B3)	M/P	M/P	M/P	M/P	M/P	M/P	M/P	NA	NA	NA	NA	NA	NA	NA
999D003	加强型铸件 Reinforced casting	P	P	P	P	P	P	P	P	P	P	P	P	P	P
999D005	多功能法兰 Multi-functional flange	P	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA

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变量代码
Variant codes

代码 [1] Code [1]	变量代码 Variant code	M2BAX 71	80	90	100	112	132	160	180	200	225	250	280	315	355
接地螺栓 Earthing bolt															
067	外部接地螺栓 External earthing bolt.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	S	S	S
变速驱动器															
701	N端绝缘轴承 Insulated bearing at N-end.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P
704	EMC 电缆密封管 EMC cable gland.	R	R	R	R	R	R	R	R	R	R	R	M/P	M/P	M/P
绝缘系统															
014	H级绝缘绕组 Winding insulation class H	P	P	P	P	P	P	P	P	P	P	P	P	P	P
405	用于变频电源的特殊绕组绝缘 Special winding insulation for frequency converter supply.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
喷漆 Painting															
114	特殊油漆颜色，标准等级 (此代码需注明备注限定颜色种类的编号，列表之外的其它颜色需同时选用999/限定范围之外的特殊油漆颜色，标准等级) Special paint colour, standard grade.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
999E001	限定范围之外的特殊油漆颜色，标准等级(必须与VC114同用，适用于VC114适用颜色列表之外，此代码每单最低收费2510元) Special paint color(except 8 colors) Use together with VC114	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
115	C4M 喷漆系统, 根据ISO 12944-5:2007 Painting system C4M acc. to ISO 12944-2:2007	P	P	P	P	P	P	P	P	P	P	P	P	P	P
754	C5M喷漆系统, 根据ISO 12944-5:2007 Painting system C5M acc. to ISO 12944-2:2007	P	P	P	P	P	P	P	P	P	P	P	P	P	P
防护 Protection															
005	金属防护罩，立式电机，轴伸向下 Metal protective roof, vertical motor, shaft down.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
072	D端径向密封 Radial seal at D end	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
158	防护等级IP65 Degree of protection IP65	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
403	防护等级IP56 Degree of proteetion IP56	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
784	D端伽玛密封 Gamma-seal at D-end.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P

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Variant codes

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铭牌和指示牌 Rating & instruction plates															
002	重敲铭牌电压、频率、输出、连续工作制 Restamping voltage, frequency and output, continuous duty.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
095	重敲输出（持续电压、频率）、间歇工作制 Restamping output (maintained voltage, frequency), intermittent duty.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
098	不锈钢铭牌 Stainless rating plate.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
135	安装额外不锈钢指示牌 Mounting of additional identification plate, stainless.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
159	额外带铭牌"made in……" Additional plate with text "Made in ...."	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
163	变频铭牌,铭牌数据根据报价单 Frequency converter rating plate.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
轴和转子 Shaft & rotor															
069	标准双出轴 Two shaft extensions as per basic catalogue.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
070	D端特殊轴伸,标准材料（需先技术确认） Special shaft extension at D-end, standard shaft material.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
164	闭口键槽轴伸 Shaft extension with closed keyway.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
标准和规范 Standards and Regulations															
540	中国能源标志 China energy label	S	S	S	S	S	S	S	S	S	S	S	S	S	S
定子绕组温度传感器 Stator winding temperature sensors															
121	定子绕组安装双金属温度开关 (NCC,3 个串联)，130°C Bimetal detectors, break type (NCC), (3 in series), 130°C, in stator winding.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
122	定子绕组安装双金属温度开关 (NCC,3 个串联)，150°C Bimetal detectors, break type (NCC), (3 in series), 150°C, in stator winding.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
435	定子绕组安装PTC热敏电阻 (3 个串联)，130°C PTC - thermistors (3 in series), 130°C, in stator winding.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P

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变量代码
Variant codes

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定子绕组温度传感器 Stator winding temperature sensors															
436	定子绕组安装PTC热敏电阻 (3 个串联)，150°C PTC - thermistors (3 in series), 150 °C, in stator winding.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	S	S	S
439	定子绕组安装PTC热敏电阻 (2×3 个串联)，150°C PTC - thermistors (2x3 in series), 150°C, in stator winding.	R	R	R	R	R	R	P	P	P	P	P	P	P	P
441	定子绕组安装PTC热敏电阻 (3 个串联，130°C 以及3个串联，150°C) PTC - thermistors (3 in series, 130°C & 3 in series, 150°C), in stator winding.	P	P	P	P	P	P	P	P	P	P	P	M/P	M/P	M/P
445	定子绕组安装PT100(2线)，每相1个 Pt 100 2-wire in stator winding, 1 per phase	P	P	P	P	P	P	P	P	P	P	P	M/P	M/P	M/P
轴承和润滑 Bearing and Lubrication															
037	D端圆柱滚子轴承 Roller bearing at D-end.	NA	NA	NA	NA	NA	NA	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
040	耐高温油脂 Heat-resistant grease.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
041	可通过注油嘴润滑的轴承 Bearings regreasable via grease	NA	R	R	R	R	R	M/P	M/P	M/P	M/P	M/P	S	S	S
043	SPM振动测量接头。 SPM compatible nipples for vibration measurement	P	P	P	P	P	P	P	P	P	P	P	M/P	M/P	M/P
130	轴承安装pt100(三线) Pt100 3-wire in bearings.	NA	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	P
188	D端63系列轴承 63-series bearings in D-end	NA	P	P	P	P	P	P	P	P	P	P	P	P	P
379	SKF 轴承 SKF bearings.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
测试 Testing															
145	样本电机的型式试验报告，400V 50Hz Type test report from a catalogue motor, 400V 50Hz.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
146	指定交货批次中的一台电机，进行型式试验并附带试验报告 Type test with report for one motor from specific delivery batch.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
148	出厂试验报告 Routine test report.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P

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Variant codes

代码 [1] Code [1]	变量代码 Variant code	M2BAX 71	80	90	100	112	132	160	180	200	225	250	280	315	355
接线盒 Terminal nox															
020	可拆卸接线盒 Detached terminal box.	P	P	P	P	P	P	P	P	P	P	P	R	R	R
021	左侧接线盒，从D端看 Terminal box LHS (seen from D-end).	NA	P	P	P	P	P	P	P	P	P	P	R	R	R
022	左侧电缆入口（从D端看） Cable entry LHS (seen from D-end).	P	P	P	P	P	P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
180	右侧接线盒，从D端看 Terminal box RHS (seen from D-end).	NA	P	P	P	P	P	P	P	P	P	P	R	R	R
230	标准金属电缆密封管（1个） Standard metal cable glands.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
375	标准塑料电缆接头 Standard plastic cable gland.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
376	2个标准塑料电缆接头 Two Standard plastic cable gland.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
400	4 x 90 度可转动的接线盒 4 x 90 degr turnable terminal box.	M/P	M/P	M/P	M/P	M/P	M/P	S	S	S	S	S	S	S	S
413	延长电缆连接，无接线盒 Extended cable connection, no terminal box.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
418	独立的辅助接线盒，标准材料 Separate terminal box for auxiliaries, standard material.	P	P	P	P	P	P	P	P	P	P	P	NA	NA	NA
447	用于监测装置的辅助接线盒，顶部安装 Top mounted separate terminal box for monitoring	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	M/P	M/P	M/P
468	电缆进口从D端 Cable entry from D-end.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	P	P	P
469	电缆进口从N端 Cable entry from N-end.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	P	P	P
731	两个标准金属电缆接头 Two standard metal cable glands.	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
999K009	预留非标出线孔 Non-standard cable entry.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
999K019	铸铁接线盒 Cast iron terminal box.	P	P	P	P	P	P	P	P	P	P	P	S	S	S
冷却系统 Cooling system															
068	轻合金金属风扇 Light alloy metal fan	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P	M/P
075	冷却方式IC418（无风扇） Cooling method IC418 (without fan).	P	P	P	P	P	P	P	P	P	P	P	R	R	R
183	独立电机冷却（轴流风扇，N端） Separate motor cooling (fan axial, N-end).	P	P	P	P	P	P	P	P	P	P	P	R	R	R
999F801	纺织风罩，带网孔 Textile fan cover with holes.	P	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA
999F802	纺织风罩，不带网孔 Textile fan cover without holes.	P	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA

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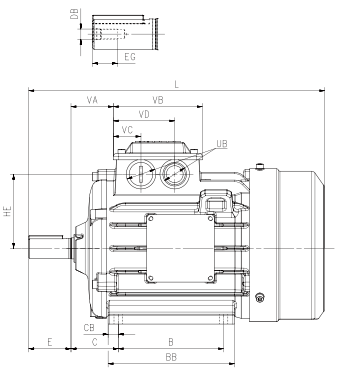
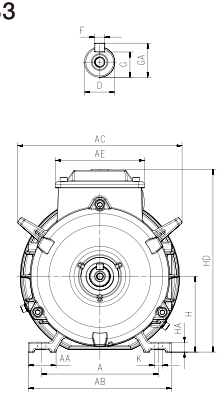
尺寸图
Dimension drawings

一般用途电机机座号 71 - 132
General performance motors Sizes 71-132

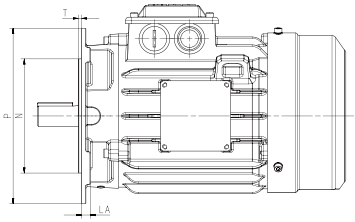
底脚安装型电机IM1001，B3
Foot-mounted motor IM1001, B3

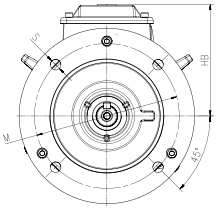




M0000418

凸缘安装型电机IM 3001，B5
Flange-mounted motor IM 3001, B5





电机尺寸 Motorsize		AE	D-tol.	DB	E	EG	F	G	GA	H	HA	HE	L	UB	VA	VB	VC	VD
M2BAX	71M	96	14-j6	M5	30	12.5	5	11	16	71	9	65	257	M16x1.5	40	96	32	64
	80M	106	19-j6	M6	40	16	6	15.5	21.5	80	12	72	309	M25x1.5	43	106	33	73
	90S	106	24-j6	M8	50	19	8	20	27	90	12	88	335	M25x1.5	50	106	33	73
	90L	106	24-j6	M8	50	19	8	20	27	90	12	88	351	M25x1.5	50	106	33	73
	100L	122	28-j6	M10	60	22	8	24	31	100	15	100	376	M32x1.5	55	122	37	84
	112M	122	28-j6	M10	60	22	8	24	31	112	15	100	411	M32x1.5	55	122	37	84
	132S	122	38-k6	M12	80	28	10	33	41	132	18	129	479	M32x1.5	65	122	37	84
	132M	122	38-k6	M12	80	28	10	33	41	132	18	129	521	M32x1.5	65	122	37	84

		IM B3(IM 1001)										IM B5(IM 3001)						
电机尺寸 Motorsize		A	AA	AB	AC	B	BB	C	CB	HD	K	HB	LA	M	N	P	S	T
M2BAX	71M	112	30	136	147	90	110	45	10	175	7	104	9	130	110	160	10	3.5
	80M	125	33	154	161	100	125	50	12.5	192	10	112	10	165	130	200	12	3.5
	90S	140	33	170	195	100	124	56	12	217	10	127	10	165	130	200	12	3.5
	90L	140	33	170	195	125	150	56	12	217	10	127	10	165	130	200	12	3.5
	100L	160	38	200	218	140	170	63	15	240	12	141	11	215	180	250	14.5	4
	112M	190	48	230	218	140	170	70	15	252	12	141	11	215	180	250	14.5	4
	132S	216	53	262	270	140	170	89	16	301	12	170	12	265	230	300	14.5	4
	132M	216	53	262	270	178	210	89	16	301	12	170	12	265	230	300	14.5	4

IM B14(IM 3601)

电机尺寸 Motorsize	M	N	P	S	T
71M	85	70	105	M6	2.5
80M	100	80	120	M6	3
90S	115	95	140	M8	3
90L	115	95	140	M8	3
100L	130	110	160	M8	3.5
112M	130	110	160	M8	3.5
132S	165	130	200	M10	3.5
132M	165	130	200	M10	3.5

公差 Tolerances	
A,B	±0,8
D	ISO j6 ≤ Ø 28 mm
	ISO k6 < Ø 38 mm
F	ISO h9
H	-0,5
N	ISO j6
C	±0,8

上表给出了主要尺寸（单位：mm）
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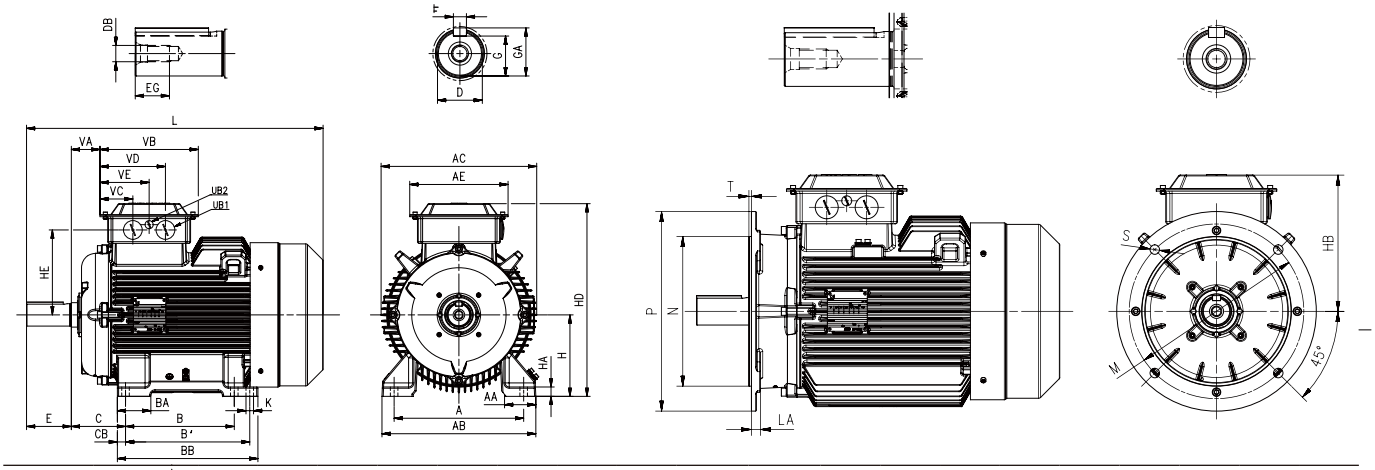
尺寸图
Dimension drawings

一般用途电机机座号 160 - 250
General performance motors Sizes 160-252

底脚安装型电机IM1001，B3
Foot-mounted motor IM1001, B3

凸缘安装型电机IM 3001，B5
Flange-mounted motor IM 3001, B5



电机尺寸 Motorsize	AE	D-tol.	DB	E	EG	F	G	GA	H	HA	HE	L	UB1	UB2	VA	VB	VC	VD	VE
M2BAX 160	241	42-k6	M16	110	36	12	37	45	160	23	188	586.5 [1]	M40*1.5	M16*1.5	59	241	81	161	121
180	241	48-k6	M16	110	36	14	42.5	51.5	180	23	188	683	M40*1.5	M16*1.5	59	241	81	161	121
200	241	55-m6	M20	110	42	16	49	59	200	23	208	728	M40*1.5	M16*1.5	70	241	81	161	121
225 2P	262	55-m6	M20	110	42	16	49	59	225	23	228	824	M63*1.5	M16*1.5	79	262	83	179	131
225 4-6P	262	60-m6	M20	140	42	18	53	64	225	23	228	854	M63*1.5	M16*1.5	79	262	83	179	131
250 2P	262	60-m6	M20	140	42	18	53	64	250	23	248	882	M63*1.5	M16*1.5	72	262	83	179	131
250 4-6P	262	65-m6	M20	140	42	18	58	69	250	23	248	882	M63*1.5	M16*1.5	72	262	83	179	131

	IM B3(IM 1001)											IM B5(IM 3001)							
电机尺寸 Motorsize	A	AA	AB	AC	B	B'	BA	BB	C	CB	HD	K	HB	LA	M	N	P	S	T
M2BAX 160	254	67	310	338	210	254	69	294	108	20	413	14.5	253	16	300	250	350	18.5	5
180	279	72	340	338	241	279	68	318	121	19	434	14.5	253	16	300	250	350	18.5	5
200	318	77	378	382	267	305	82	345	133	20	473	18.5	273	18	350	300	400	18.5	5
225 2P	356	91	435	414	286	311	69	351	149	20	539	18.5	314	20	400	350	450	18.5	5
225 4-6P	356	91	435	414	286	311	69	351	149	20	539	18.5	314	20	400	350	450	18.5	5
250 2P	406	98	480	462	311	349	72	392	168	22	585	24	334	22	500	450	550	18.5	5
250 4-6P	406	98	480	462	311	349	72	392	168	22	585	24	334	22	500	450	550	18.5	5

[1] 160MLB6 L=626.5

公差 Tolerances	
A, B, B'	± 0.8
D	ISO k6 < ϕ50 mm ISO m6 > ϕ50 mm
F	ISO h9
H	+0, -0.5
N	ISO j6
C	± 0.8

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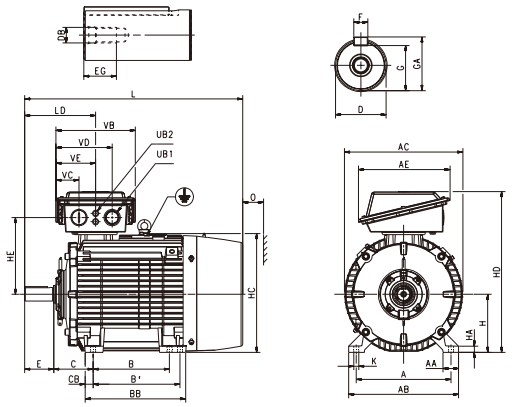
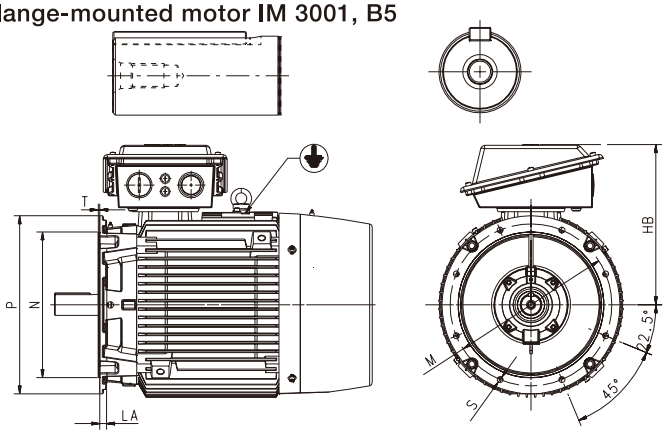
尺寸图
Dimension drawings

一般用途电机机座号 280 - 355
General performance motors Sizes 280-355

底脚安装型电机IM1001，B3
Foot-mounted motor IM1001, B3



凸缘安装型电机IM 3001，B5
Flange-mounted motor IM 3001, B5



电机尺寸 Motorsize	AE	D-tol.	DB	E	EG	F	G	GA	H	HA	HC	HE	L	LD	O	UB1	UB2	VB	VC	VD	VE
M2BAX 280S 2P	442	65-m6	M20	140	42	18	58	69	280	30	573	370	982	342	100	M63x1.5	M20x1.5	383	111	271	191
280S 4-6P	442	75-m6	M20	140	42	20	67.5	79.5	280	30	573	370	982	342	100	M63x1.5	M20x1.5	383	111	271	191
280SM 2P	442	65-m6	M20	140	42	18	58	69	280	30	573	370	1052	342	100	M63x1.5	M20x1.5	383	111	271	191
280SM 4-6P	442	75-m6	M20	140	42	20	67.5	79.5	280	30	573	370	1052	342	100	M63x1.5	M20x1.5	383	111	271	191
315SM 2P	442	65-m6	M20	140	42	18	58	69	315	38	638	409	1216	348	115	M63x1.5	M20x1.5	383	111	271	191
315SM 4-6P	442	80-m6	M20	170	42	22	71	85	315	38	638	409	1246	378	115	M63x1.5	M20x1.5	383	111	271	191
315ML 2P	442	65-m6	M20	140	42	18	58	69	315	38	638	409	1326	348	115	M63x1.5	M20x1.5	383	111	271	191
315ML 4-6P	442	90-m6	M24	170	50	25	81	95	315	38	638	409	1356	378	115	M63x1.5	M20x1.5	383	111	271	191
355SM 2P	493	70-m6	M20	140	42	20	62.5	74.5	355	41	725	462	1399	399	130	M75x1.5	M20x1.5	382	111	271	191
355SM 4-6P	493	100-m6	M24	210	50	28	90	106	355	41	725	462	1469	469	130	M75x1.5	M20x1.5	382	111	271	191

	IM B3(IM 1001)									IM B5(IM 3001)							
电机尺寸 Motorsize	A	AA	AB	AC	B	B'	BB	C	CB	HD	K	HB	LA	M	N	P	S	T
M2BAX 280S 2P	457	75	530	571	368	-	431	190	38	775	24	495	21	500	450	550	18.5	5
280S 4-6P	457	75	530	571	368	-	431	190	38	775	24	495	21	500	450	550	18.5	5
280SM 2P	457	75	530	571	368	419	485	190	38	775	24	495	21	500	450	550	18.5	5
280SM 4-6P	457	75	530	571	368	419	485	190	38	775	24	495	21	500	450	550	18.5	5
315SM 2P	508	100	590	644	406	457	563	216	52	849	28	534	27	600	550	660	24	6
315SM 4-6P	508	100	590	644	406	457	563	216	52	849	28	534	27	600	550	660	24	6
315ML 2P	508	100	590	644	457	508	664	216	52	849	28	534	27	600	550	660	24	6
315ML 4-6P	508	100	590	644	457	508	664	216	52	849	28	534	27	600	550	660	24	6
355SM 2P	610	120	700	739	500	560	698	254	72	933	35	578	22	740	680	800	24	6
355SM 4-6P	610	120	700	739	500	560	698	254	72	933	35	578	22	740	680	800	24	6

公差 Tolerances	
A, B, B'	± 0.8
D	ISO k6 < ϕ50 mm ISO m6 > ϕ50 mm
F	ISO h9
H	+0, -1
N	ISO j6
C	± 0.8

上表给出了主要尺寸（单位：mm）
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一般用途电机简介
General performance motors in brief

电机尺寸 **Motor size**		**71**	**80**	**90**	**100**	**112**	**132**
机座与端盖 **Stator and end shields**	材料 Material	铸铁 Cast iron					
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B 4.5/3.25					
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）					
底脚 **Feet**		一体式铸铁底脚 Integrated cast iron feet					
轴承 **Bearings**	D端 D-end	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6206-2Z/C3	6206-2Z/C3	6208-2Z/C3
	N端 N-end	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6205-2Z/C3	6208-2Z/C3
轴向锁定轴承 **Axially-locked bearings**		D端锁定 Locked at D-end					
轴密密封 **Bearing seals**	D端 D-end	V形环 V-ring					
润滑 **Lubrication**		永久润滑封闭轴承。 Permanently lubricated shielded bearings.					
铭牌 **Rating plate**	材料 Material	铝 Aluminum					
接线盒 **Terminal box**	接线盒材料 Frame material	铸铁 Cast iron					
	接线盒盖材料 Cover material	钢板 Steel					
	防腐蚀等级 Corrosion	C3(中等) C3（medium）					
	螺钉 Screws	电镀锌钢 zinc - electroplated steel					
连接件 **Connections**	螺纹孔 Threaded openings	2 x M16	2 x M25		2 x M32		
	最大铜线（Cu）截面积（mm²） Max Cu-area mm	4	6		10		
	接线盒 Terminal box	电缆接线头，6个端子 Cable lugs, 6 terminals					
风扇 **Fan**	材料 Material	玻璃纤维增强聚丙烯 Glass-fiber reinforced polypropylene					
风罩 **Fan cover**	材料 Material	钢板 Steel					
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B4.5/3.25					
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）					
定子绕组 **Stator winding**	材料 Material	铜 Copper					
	绝缘等级 Insulation class	F级绝缘，B级升温，除非另有规定 Insulation class F。Temperature rise class B unless otherwise stated					
	绕组保护 Winding protection	可选 As option					
转子绕组 **Rotor winding**	材料 Material	压铸铝 Pressure die-cast aluminum					
平衡方法 **Balancing method**		半键平衡 Half key balancing					
排水孔 **Drain holes**		排水孔具有可闭合塞，交付时为打开状态。 Drain holes with closable plastic plugs, open on delivery.					
键槽 **Key ways**		开口槽 Open key way					
防护等级 **Enclosure**		IP 55					
冷却方式 **Cooling method**		IC 411					
吊环 **Lifting lugs**		一体式铸铁吊环 Integrated cast iron lifing lug					

一般用途电机简介
General performance motors in brief

电机尺寸 **Motor size**		160	180	200	225	250
机座与端盖 **Stator and end shields**	材料 Material	铸铁 Cast iron				
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B 4.5/3.25				
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）				
底脚 **Feet**		一体式铸铁底脚 Integrated cast iron feet				
轴承 **Bearings**	D端 D-end	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3	6213-2Z/C3	6215-2Z/C3
	N端 N-end	6209-2Z/C3	6209-2Z/C3	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3
轴向锁定轴承 **Axially-locked bearings**		D端锁定 Locked at D-end				
轴密密封 **Bearing seals**	D端 D-end	V形环 V-ring				
润滑 **Lubrication**		永久润滑封闭轴承。 Permanently lubricated shielded bearings.				
铭牌 **Rating plate**	材料 Material	铝 Aluminum				
接线盒 **Terminal box**	接线盒材料 Frame material	钢板 Steel				
	接线盒盖材料 Cover material	钢板 Steel				
	防腐蚀等级 Corrosion	C3(中等) C3（medium）				
	螺钉 Screws	电镀锌钢 zinc - electroplated steel				
连接件 **Connections**	螺纹孔 Threaded openings	2xM40+M16			2x M63+M16	
	最大铜线（Cu）截面积（mm²） Max Cu-area mm	35			70	
	接线盒 Terminal box	电缆接线头，6个端子 Cable lugs, 6 terminals				
风扇 **Fan**	材料 Material	玻璃纤维增强聚丙烯 Glass-fiber reinforced polypropylene				
风罩 **Fan cover**	材料 Material	钢板 Steel				
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B4.5/3.25				
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）				
定子绕组 **Stator winding**	材料 Material	钢板 Steel				
	绝缘等级 Insulation class	F级绝缘，B级升温，除非另有规定 Insulation class F。Temperature rise class B unless otherwise stated				
	绕组保护 Winding protection	可选 As option				
转子绕组 **Rotor winding**	材料 Material	压铸铝 Pressure die-cast aluminum				
平衡方法 **Balancing method**		半键平衡 Half key balancing				
排水孔 **Drain holes**		排水孔具有可闭合塞，交付时为打开状态。 Drain holes with closable plastic plugs, open on delivery.				
键槽 **Key ways**		开口槽 Open key way				
防护等级 **Enclosure**		IP 55				
冷却方式 **Cooling method**		IC 411				
吊环 **Lifting lugs**		一体式铸铁吊环 Integrated cast iron lifing lug				

一般用途电机简介
General performance motors in brief

电机尺寸 **Motor size**		**280**	**315**	**355**
机座与端盖 **Stator and end shields**	材料 Material	铸铁 Cast iron		
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B 4.5/3.25		
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）		
底脚 **Feet**		一体式铸铁底脚 Integrated cast iron feet		
轴承 **Bearings**	D端 D-end	6217/C3	6217/C3 (2P) 6219/C3 (4-6P)	6219/C3 (2P) 6222/C3 (4-6P)
	N端 N-end	6217/C3	6217/C3	6219/C3
轴向锁定轴承 **Axially-locked bearings**		D端锁定 Locked at D-end		
轴密密封 **Bearing seals**	D端 D-end	V形环 V-ring		
润滑 **Lubrication**		可润滑轴承 Regreaseable bearings		
铭牌 **Rating plate**	材料 Material	铝 Aluminum		
接线盒 **Terminal box**	接线盒材料 Frame material	铸铁 Cast iron		
	接线盒盖材料 Cover material	铸铁 Cast iron		
	防腐蚀等级 Corrosion	C3(中等) C3（medium）		
	螺钉 Screws	电镀锌钢 zinc - electroplated steel		
连接件 **Connections**	螺纹孔 Threaded openings	2×M63, 2×M20	2×M63, 2×M20	2×M75, 2×M20
	最大铜线（Cu）截面积（mm^2） Max Cu-area mm	2×150	2×240	4×240
	接线盒 Terminal box	电缆接线头，6个端子 Cable lugs, 6 terminals		
风扇 **Fan**	材料 Material	玻璃纤维增强聚丙烯 Glass-fiber reinforced polypropylene		
风罩 **Fan cover**	材料 Material	钢板 Steel		
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B4.5/3.25		
	防腐蚀等级 Corrosion class	C3(中等) C3（medium）		
定子绕组 **Stator winding**	材料 Material	铜 Copper		
	绝缘等级 Insulation class	F级绝缘，B级升温，除非另有规定 Insulation class F。Temperature rise class B unless otherwise stated		
	绕组保护 Winding protection	标准情况下，每相1个PTC热敏电阻，155° C 1 PTC thermistor per phase, 155°C		
转子绕组 **Rotor winding**	材料 Material	压铸铝 Pressure die-cast aluminum		
平衡方法 **Balancing method**		半键平衡 Half key balancing		
排水孔 **Drain holes**		排水孔具有可闭合塞，交付时为打开状态。 Drain holes with closable plastic plugs, open on delivery.		
键槽 **Key ways**		开口槽 Open key way		
防护等级 **Enclosure**		IP 55		
冷却方式 **Cooling method**		IC 411		
吊环 **Lifting lugs**		分体式钢制吊环，通过吊环螺纹连接到机座 Separate steel lifting lug, bolted to the stator		

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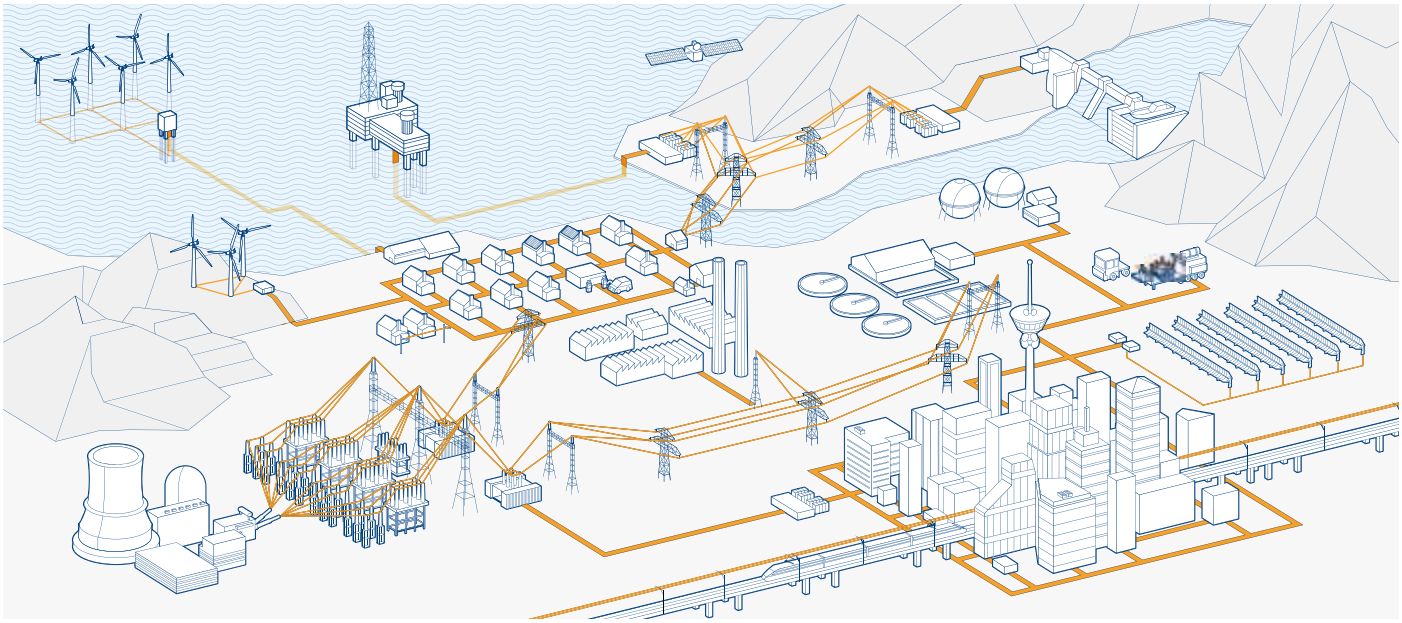

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– 同步磁阻电机

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– 高速电机
– 烟道电机
– 清洁电机
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机械传动部件、轴承、齿轮

Total offer of motors,generators and mechanical power transmission products with a complete portfolio of services

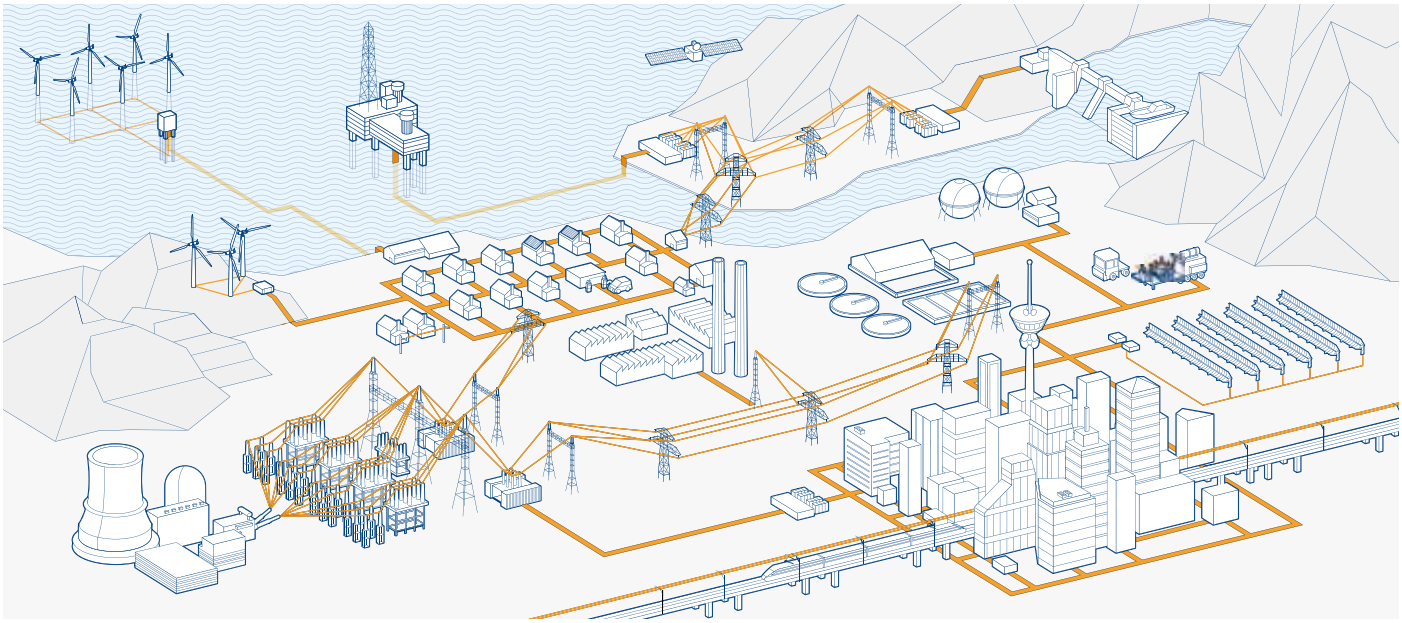

ABB is the leading manufacturer of low, medium and high voltage motors and generators, mechanical power transmission products with an offering of a complete portfolio of services. Our in-depth knowledge of virtually every type of industrial processing ensures we always specify the best solution for your needs.

Low and high voltage IEC induction motors
– Process performance motors
– General performance motors
– High voltage cast iron motors
– Induction modular motors
– Slip-ring modular motors
– Synchronous reluctance motors

Low and medium voltage NEMA motors
– Steel frame open drip proof (ODP) motors
– Weather protected, water cooled, fan ventilated
– Cast iron frame (TEFC)
– Air to air cooled (TEAAC) motors

Motors and generators for explosive atmospheres
– IEC and NEMA motors and generators, for all protection types

Synchronous motors

Synchronous generators
– Synchronous generators for diesel and gas engines
– Synchronous generators for steam and gas turbines

Wind power generators

Generators for small hydro

Other motors and generators
– Brake motors
– DC motors and generators
– Gear motors
– Marine motors and generators
– Single phase motors
– Motors for high ambient temperatures
– Permanent magnet motors and generators
– High speed motors
– Smoke extraction motors
– Wash down motors
– Water cooled motors
– Generator sets
– Roller table motors
– Servo motors
– Traction motors

Life cycle services
– Installation and commissioning
– Service contracts
– Preventive maintenance
– Spare parts
– Diagnosis
– Repair and refurbishment
– Site survey and overhaul
– Replacement motors and generators
– Technical support and consulting
– Trainings

Mechanical power transmission components, bearings, gears

联系方式
Contact

www.abb.com/motors&generators

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