



样本  
Catalog

# 低压一般用途电机

Low voltage

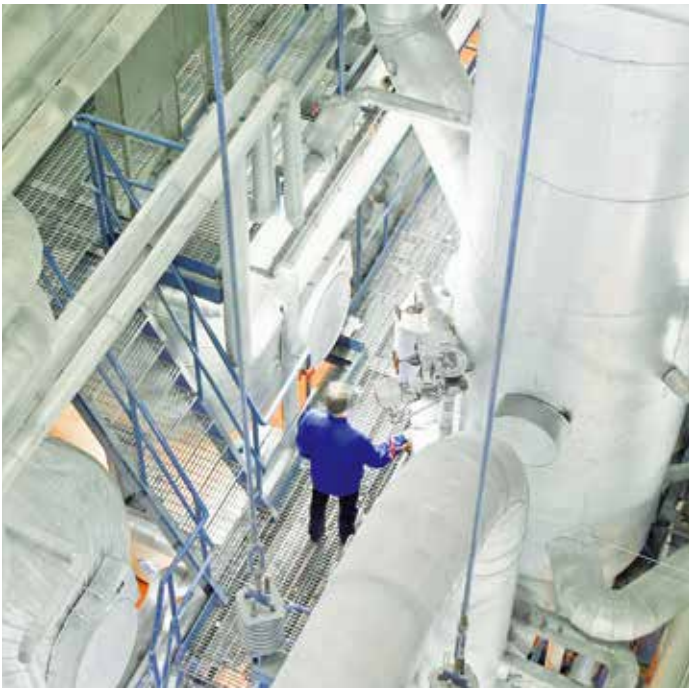
General performance motors

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

概述	04	General information	04
订购信息	09	Ordering information	09
铭牌	10	Rating plates	10
机械设计	11	Mechanical design	11
技术数据	19	Technical data	19
变量代码	22	Variant codes	22
尺寸图	26	Dimension drawings	26
一般用途电机简介	29	General performance motors in brief	29
ABB全部电机产品	32	ABB Motor's total product offer	32

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



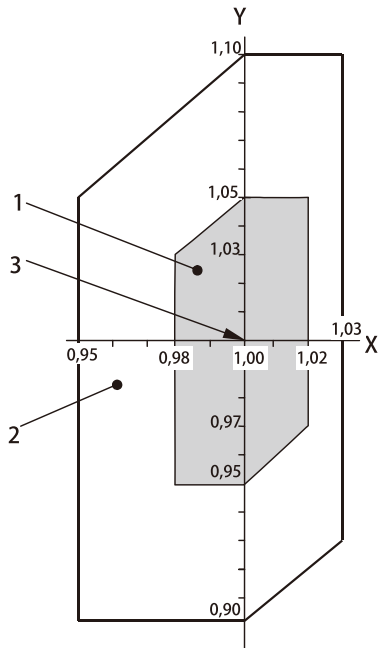
# 电气特性

## 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     | 频率标么值                   |
| Y轴     | 电压标么值                   |
| 1      | 区域A                     |
| 2      | 区域B ( 区域A外 )            |
| 3      | 定额点                     |
| X axis | frequency 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-cosφ)	+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-cosφ)	+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。

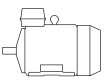
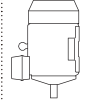
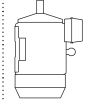
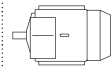
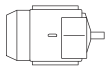
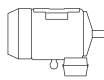
详情请咨询ABB。

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.


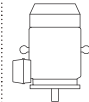
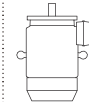
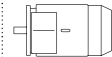
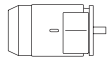
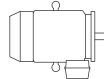
# 安装结构形式

## Mounting arrangements

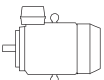
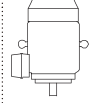
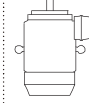
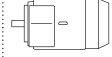

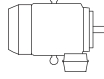
### 底脚安装型电机 Foot-mounted motor

代码I/代码II Code I / code II						产品代码位置12 Product code pos. 12
						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	


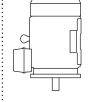
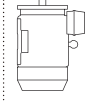
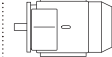

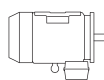
### 凸缘安装型电机, 大凸缘 Flange-mounted motor, large flange

代码I/代码II Code I / code II						产品代码位置12 Product code pos. 12
						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	

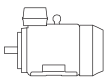
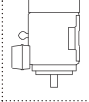
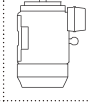
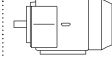

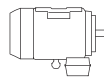
### 凸缘安装型电机, 小凸缘 Flange-mounted motor, small flange

代码I/代码II Code I / code II						变量代码 variant code
						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
						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
						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
<b>IP</b>	<b>5</b>	<b>5</b>
	<b>1</b>	<b>2</b>

#### 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	Characteristic group
国际机械保护	特征组
<b>IK</b>	<b>08</b>
	<b>1</b>

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

## 机座号

### Motor size

A	B	C	D
<b>M2BAX</b>	<b>112 MA</b>	<b>3GBA 112 310 - ADCCN, 002, 451, etc.</b>	
		1   2   3   4   5   6   7   8   9   10   11   12   13   ...	
A 电机型号 Motor type		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	
B 电机尺寸 Motor size			
C 产品代码 Product code			

## 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  
**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

# 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

CE		IE2	
3 ~ Motor		M2BAX 90LA 2 IMB3/IM1001	
		No.	
		Ins.cl.	F IP 55
V	Hz	kW	r/min A cos $\phi$ Duty
220 $\Delta$	50	2.2	2880 7.89 0.88 S1
380 Y	50	2.2	2880 4.57 0.88 S1
400 Y	50	2.2	2895 4.44 0.86 S1
50Hz: IE2 - 83.2(100%)			
Prod. code 3GBA091510-ASCCN			
		Nmax	r/min
6205-2Z/C3		6204-2Z/C3	23 kg
ABB		IEC 60034-1	

CE		IE2	
3 ~ Motor		M2BAX 160MLA 2 IMB3/IM1001	
		No.	
		Ins.cl.	F IP 55
V	Hz	kW	r/min A cos $\phi$ Duty
380 $\Delta$	50	11	2919 21.2 0.88 S1
660 Y	50	11	2919 12.2 0.88 S1
400 $\Delta$	50	11	2931 20.7 0.86 S1
50Hz: IE2 - 89.4(100%)			
Prod. code 3GBA161410-ADCCN			
		Nmax	r/min
6209-2Z/C3		6209-2Z/C3	102 kg
ABB		IEC 60034-1	

# 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 environments, 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。

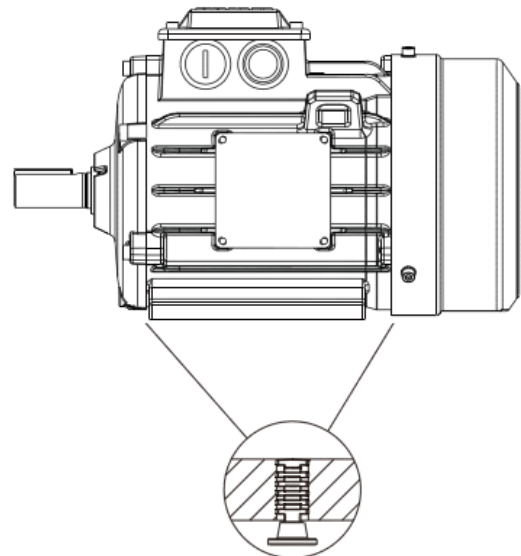
In the case of vertical mounting, the upper plug must be hammered home completely. In very dusty environments, both plugs should be hammered home.

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。

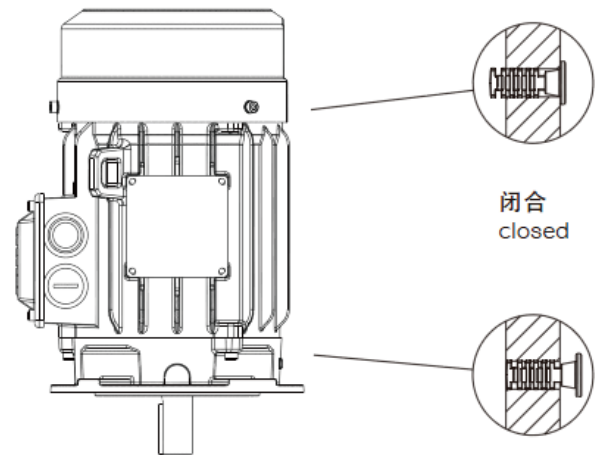
When mounting arrangement differs from foot mounted IM B3, mention variant code 066 when ordering.

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



闭合  
closed

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

机座号 Motor size	极数 Number of poles	标准设计 Standard design	
		深沟球轴承 Deep groove ball bearings	
		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

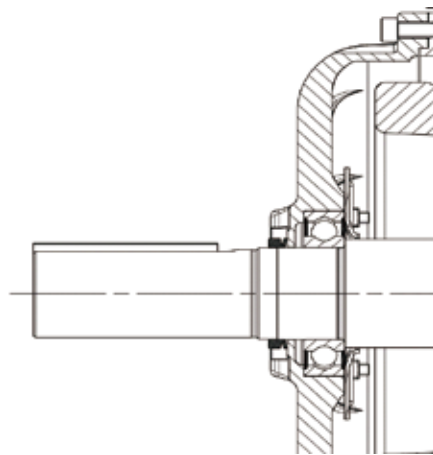
## Bearing seals

机座号为71-355的密封件尺寸和类型符合下表：

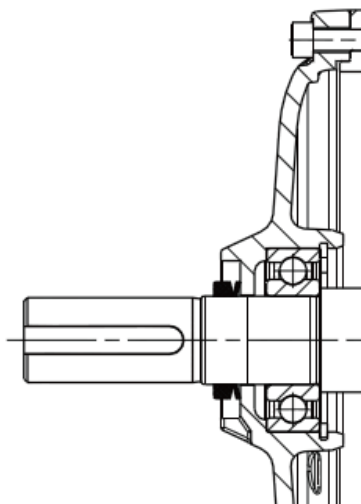
This table presents the standard sizes and types of bearing seals per motor size.

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 D-end	附件代码 784 Variant code 784
71	2-6	V-16A	17x32x4
80	2-6	V-20A	20x35x4
90	2-6	V-25A	25x40x4
100	2-6	V-30A	30x47x4,5
112	2-6	V-30A	30x47x4,5
132	2-6	V-40A	40x57x4,5
160	2-6	V-45A	45x62x4,5
180	2-6	V-50A	50x70x5,5
200	2-6	V-60A	60x80x5,5
225	2-6	V-65A	65x85x5,5
250	2-6	V-75A	75x95x5,5
280	2-6	VS85	R
315	2	VS85	R
315	4-6	VS95	R
355	2	VS95	R
355	4-6	VS110	R

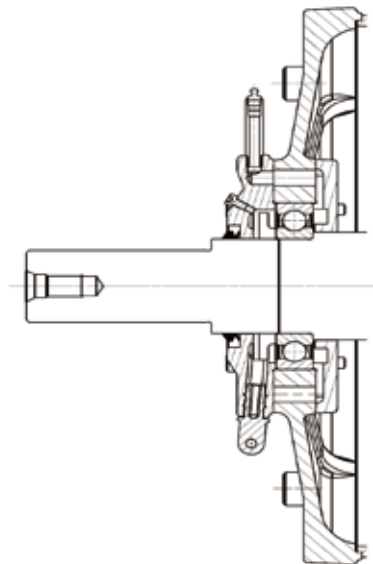
**机座号160-250**  
Motor sizes 160-250



**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℃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 C, 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.

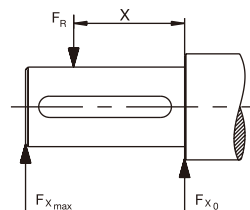
如果径向力作用于点 $X_0$ 和 $X_{max}$ 之间，则允许负载力 $F_R$ 可以通过以下公式计算：

If the radial force is applied between points  $X_0$  and  $X_{max}$ , the permissible force  $F_R$  can be calculated with the following formula:

$$F_R = F_{X_0} - \frac{X}{E} (F_{X_0} - F_{X_{max}})$$

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	
			$F_{X_0}$ (N)	$F_{X_{max}}$ (N)	$F_{X_0}$ (N)	$F_{X_{max}}$ (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

## 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

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



# 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mm <sup>2</sup> /相 Single core cross-section mm <sup>2</sup> /phase	端子螺 栓尺寸 6x terminal 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.

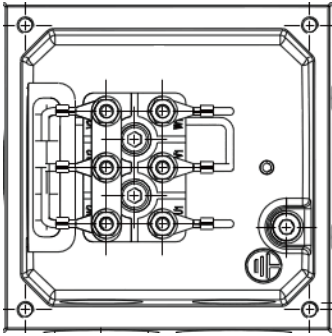


图1. 机座号为71-132时所使用的接线板  
Fig.1. Terminal board for motor sizes 71 – 132



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.

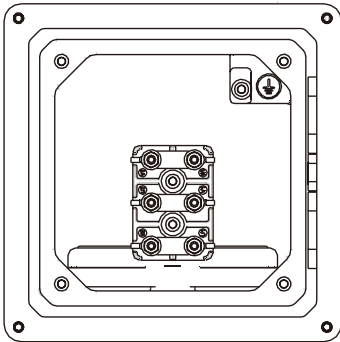


图3. 机座号为160-250时所使用的接线板  
Fig.3. Terminal board for motor sizes 160–250



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.

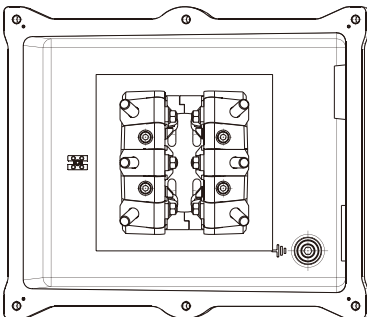


图5. 机座号为280-355时所使用的接线板  
Fig.5. Terminal board for motor sizes 280–355



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

# 一般用途铸铁电机

## General performance cast iron motors

### 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

IE2  
3级能效

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			功率 因数 Power factor cos φ	电流 Current		转矩 Torque			转动惯量 Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	重量 Weight kg	声压等级 Sound pressure level L <sub>PA</sub> dB
				Full load 100%	3/4 load 75%	1/2 load 50%		I <sub>N</sub> A	I <sub>s</sub> I <sub>N</sub>	T <sub>N</sub> Nm	T <sub>l</sub> T <sub>N</sub>	T <sub>b</sub> T <sub>N</sub>			
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 <sup>1)</sup>	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

<sup>1)</sup> 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).

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.

ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

IE等级涉及功率为0.75KW-355KW。

IE-class concerns motors from 0.75KW-355KW .

I<sub>s</sub> / I<sub>N</sub> = 启动电流  
Starting current

T<sub>l</sub> / T<sub>N</sub> = 转子堵转转矩  
Locked rotor torque

T<sub>b</sub> / T<sub>N</sub> = 最大转矩  
Breakdown torque

# 一般用途铸铁电机 General performance cast iron motors

## 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

IE2  
3级能效

IP 55 - IC 411 - 绝缘等级F, 温升等级B

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			功率 因数 Power factor cos φ	电流 Current			转矩 Torque			转动惯量 Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	重量 Weight kg	声压等级 Sound pressure level L <sub>PA</sub> dB
				满载 load 100%	3/4负载 load 75%	1/2负载 load 50%		I <sub>N</sub> A	I <sub>s</sub> I <sub>N</sub>	T <sub>N</sub> Nm	T <sub>L</sub> T <sub>N</sub>	T <sub>b</sub> T <sub>N</sub>				
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 <sup>1)</sup>	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 <sup>1)</sup>	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	

<sup>1)</sup> 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).

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.  
ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

IE等级涉及功率为0.75KW-355KW 的电机。  
IE-class concerns motors from 0.75KW-355KW

I<sub>s</sub> / I<sub>N</sub> = 启动电流  
Starting current  
T<sub>L</sub> / T<sub>N</sub> = 转子堵转转矩  
Locked rotor torque  
T<sub>b</sub> / T<sub>N</sub> = 最大转矩  
Breakdown torque

# 一般用途铸铁电机 General performance cast iron motors

## 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

IE2  
3级能效

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			功率 因数 Power factor cos φ	电流 Current		转矩 Torque			转动惯量 Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	重量 Weight kg	声压等级 Sound pressure level L <sub>PA</sub> dB
				Full load 100%	3/4 load 75%	1/2 load 50%		I <sub>N</sub> A	I <sub>s</sub> I <sub>N</sub>	T <sub>N</sub> Nm	T <sub>l</sub> T <sub>N</sub>	T <sub>b</sub> T <sub>N</sub>			
<b>1000 r/min = 6 poles</b>			<b>380 V 50 Hz</b>			<b>CENELEC-设计design</b>									
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 <sup>1)</sup>	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

<sup>1)</sup> 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).

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.

ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

$I_s / I_N$  = 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

IE等级涉及功率为0.75KW-355KW 的电机。

IE-class concerns motors from 0.75KW-355KW

# 一般用途电机变量代码

## General performance motors variant codes

代码 <sup>1)</sup> 变量代码 Code <sup>1)</sup> Variant code	M2BAX													
	71	80	90	100	112	132	160	180	200	225	250	280	315	355
<b>部门标准设计</b> Branch standard designs														
<b>209</b> 非标准电压或频率(特殊绕组) (注: 此代码的使用需先与工厂确认) Non-standard voltage or frequency, (special winding).	P	P	P	P	P	P	P	P	P	P	P	R	R	R
<b>178</b> 不锈钢/耐酸螺栓 Stainless steel / acid proof bolts.	M/P	M/P	M/P	M/P	M/P	M/P	R	R	R	R	R	M/P	M/P	M/P
<b>文件材料</b> Documentation														
<b>141</b> 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
<b>加热元件</b> Heating elements														
<b>451</b> 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
<b>450</b> 加热带,100–120V Heating element, 100–120V	M/P	M/P	M/P	M/P	M/P	M/P	R	R	R	R	R	M/P	M/P	M/P
<b>安装方式</b> Mounting arrangements														
<b>009</b> 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
<b>066</b> 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
<b>320</b> 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	NA	NA	NA	NA	NA	NA	NA	NA
<b>008</b> 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
<b>047</b> 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
<b>喷漆</b> Painting														
<b>114</b> 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

特定变量代码不能同时使用。

1) Certain variant codes cannot be used simultaneously.

可以使用下述变量代码,  
详情请咨询ABB。

S = 在标准情况下包含

P = 仅适用于新生产模式

M = 跟据库存电机改装, 或新制造产品,  
每次订购数量可能受限

NA = 不适用

R = 根据需要

Following variant codes are available,  
more information from ABB

S = Included as standard

P = New manufacture only

M = On modifications for a stocked motor or  
on new manufacture ; the number of  
variants per order may be limited

NA = Not applicable

R = On request

# 一般用途电机变量代码

## General performance motors variant codes

代码 <sup>1)</sup> Code <sup>1)</sup>	变量代码 Variant code	M2BAX													
		71	80	90	100	112	132	160	180	200	225	250	280	315	355
<b>防护</b> 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
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 protection 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
072	D端径向密封 Radial seal at D-end.	M/P	M/P	M/P	M/P	M/P	M/P	R	R	R	R	R	M/P	M/P	M/P
784	D端伽马密封 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	R	R	R
<b>铭牌和指示牌</b> 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
163	变频铭牌。铭牌数据根据报价单(需先技术确认) Frequency converter rating plate.	P	P	P	P	P	P	P	P	P	P	P	R	R	R
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	R	R	R	R	R	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	R	R	R	R	R	M/P	M/P	M/P
<b>轴承和润滑</b> Bearing and Lubrication															
043	SPM振动测量接头。 SPM compatible nipples for vibration measurement	P	P	P	P	P	P	R	R	R	R	R	M/P	M/P	M/P
188	63系列轴承 63-series bearings in D-end.	NA	R	R	P	P	P	R	R	R	R	R	R	R	R
037	D端圆柱滚子轴承 Roller bearing at D-end.	NA	NA	NA	NA	NA	NA	R	R	R	R	R	M/P	M/P	M/P
041	通过注油嘴对轴承加油 Bearings regreasable via grease	NA	R	R	R	R	R	R	R	R	R	R	S	S	S
<b>轴和转子</b> Shaft & rotor															
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	R	R	R

特定变量代码不能同时使用。

1) Certain variant codes cannot be used simultaneously.

可以使用下述变量代码,  
详情请咨询ABB。

- S = 在标准情况下包含
- P = 仅适用于新生产模式
- M = 跟据库存电机改装, 或新制造产品, 每次订购数量可能受限
- NA = 不适用
- R = 根据需要

Following variant codes are available,  
more information from ABB

- S = Included as standard
- P = New manufacture only
- M = On modifications for a stocked motor or on new manufacture ; the number of variants per order may be limited
- NA = Not applicable
- R = On request

# 一般用途电机变量代码

## General performance motors variant codes

代码 <sup>1)</sup>	变量代码	M2BAX													
Code <sup>1)</sup>	Variant code	71	80	90	100	112	132	160	180	200	225	250	280	315	355
<b>测试</b>															
<b>Testing</b>															
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	指定交货批次内的某一电机的型式试验报告 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	R	R	R
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
<b>标准和规范</b>															
<b>Standards and Regulations</b>															
540	中国能源标志 China energy label	S	S	S	S	S	S	S	S	S	S	S	S	S	S
<b>接线盒</b>															
<b>Terminal nox</b>															
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	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	标准塑料葛兰 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	R	R	R
376	两个标准塑料葛兰 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	R	R	R
731	2个标准金属电缆密封管 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	R	R	R
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
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	R	R	R	R	R	R	R	R
400	4 x 90 度可转动的接线盒 4 x 90 degr turnable terminal box.	R	R	R	R	R	R	S	S	S	S	S	S	S	S
<b>接地螺栓</b>															
<b>Earthing bolt</b>															
067	外部接地螺栓 External earthing bolt.	M/P	M/P	M/P	M/P	M/P	M/P	R	R	R	R	R	S	S	S

特定变量代码不能同时使用。

1) Certain variant codes cannot be used simultaneously.

可以使用下述变量代码,  
详情请咨询ABB。

S = 在标准情况下包含

P = 仅适用于新生产模式

M = 跟据库存电机改装, 或新制造产品,  
每次订购数量可能受限

NA = 不适用

R = 根据需要

Following variant codes are available,  
more information from ABB

S = Included as standard

P = New manufacture only

M = On modifications for a stocked motor or  
on new manufacture ; the number of  
variants per order may be limeted

NA = Not applicable

R = On request



# 一般用途电机变量代码

## General performance motors variant codes

代码 <sup>1)</sup> Code <sup>1)</sup>	变量代码 Variant code	M2BAX													
		71	80	90	100	112	132	160	180	200	225	250	280	315	355
<b>定子绕组温度传感器</b> 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	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
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	R	R	R	R	R	R	R	R
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	R	R	R	R	R	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	R	R	R	R	R	M/P	M/P	M/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	R	R	R	R	R	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	R	R	R	R	R	M/P	M/P	M/P
<b>定子绕组温度传感器</b> Stator winding temperature sensors															
701	N端绝缘轴承 Insulated bearing at N-end.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	M/P	M/P	M/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
<b>冷却系统</b> 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	R	R	R	R	R	M/P	M/P	M/P
075	冷却方式IC418(无叶无罩) Cooling method IC418 (without fan).	P	P	P	P	P	P	R	R	R	R	R	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	R	R	R	R	R	R	R	R

特定变量代码不能同时使用。

1) Certain variant codes cannot be used simultaneously.

可以使用下述变量代码,  
详情请咨询ABB。

S = 在标准情况下包含

P = 仅适用于新生产模式

M = 跟据库存电机改装, 或新制造产品,  
每次订购数量可能受限

NA = 不适用

R = 根据需要

Following variant codes are available,  
more information from ABB

S = Included as standard

P = New manufacture only

M = On modifications for a stocked motor or  
on new manufacture ; the number of  
variants per order may be limited

NA = Not applicable

R = On request

# 一般用途电机机座号71 - 132

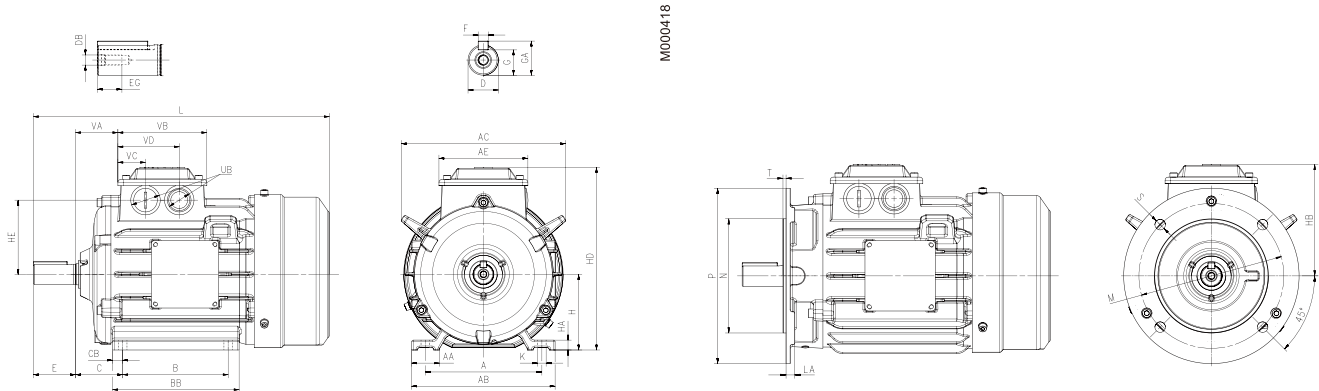
## General performance motors Sizes 71 - 132

### 尺寸图

### Dimension drawings

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	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)  
如需图纸详情, 请访问我们的网页  
[www.abb.com/motors&generators](http://www.abb.com/motors&generators) 或  
联系ABB。  
Above table gives the main dimensions in mm.  
For detailed drawings please see our web-  
pages 'www.abb.com/motors&generators'  
or contact ABB.

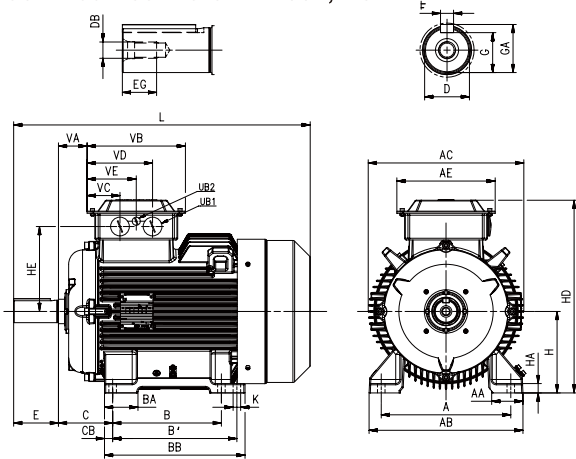
# 一般用途电机机座号160 – 250

## General performance motors Sizes 160 - 250

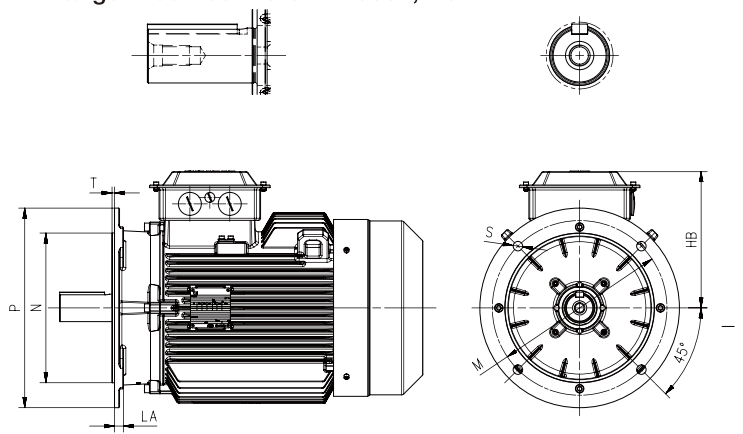
### 尺寸图

### Dimension drawings

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 <sup>1)</sup>	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

电机尺寸 Motorsize	IM B3(IM 1001)										IM B5(IM 3001)								
	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

<sup>1)</sup> 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

上表给出了主要尺寸 (单位: mm)

如需图纸详情, 请访问我们的网页  
[www.abb.com/motors&generators](http://www.abb.com/motors&generators) 或  
联系ABB。

Above table gives the main dimensions in mm.  
For detailed drawings please see our web-  
pages '[www.abb.com/motors&generators](http://www.abb.com/motors&generators)'  
or contact ABB.

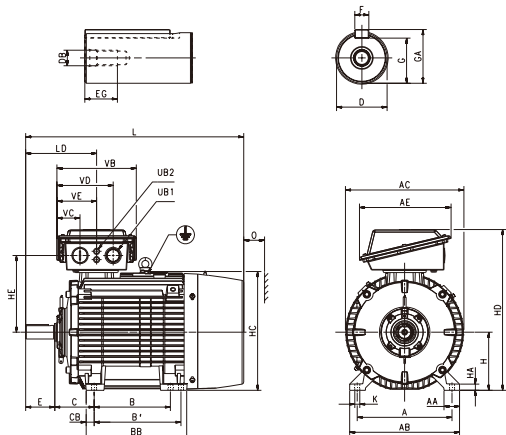
# 一般用途电机机座号280 – 355

## General performance motors Sizes 280 - 355

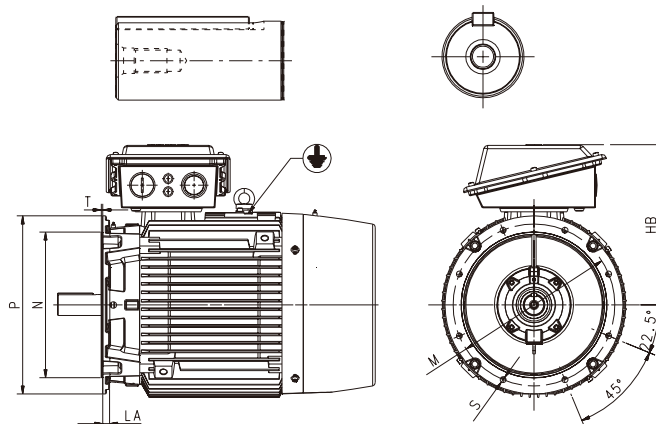
### 尺寸图

### Dimension drawings

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	2P	457	75	530	571	368	-	431	190	38	775	24	495	21	500	450	550	18.5	5	
280S 4-6P	4-6P	457	75	530	571	368	-	431	190	38	775	24	495	21	500	450	550	18.5	5	
280SM 2P	2P	457	75	530	571	368	419	485	190	38	775	24	495	21	500	450	550	18.5	5	
280SM 4-6P	4-6P	457	75	530	571	368	419	485	190	38	775	24	495	21	500	450	550	18.5	5	
315SM 2P	2P	508	100	590	644	406	457	563	216	52	849	28	534	27	600	550	660	24	6	
315SM 4-6P	4-6P	508	100	590	644	406	457	563	216	52	849	28	534	27	600	550	660	24	6	
315ML 2P	2P	508	100	590	644	457	508	664	216	52	849	28	534	27	600	550	660	24	6	
315ML 4-6P	4-6P	508	100	590	644	457	508	664	216	52	849	28	534	27	600	550	660	24	6	
355SM 2P	2P	610	120	700	739	500	560	698	254	72	933	35	578	22	740	680	800	24	6	
355SM 4-6P	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)

如需图纸详情, 请访问我们的网页

[www.abb.com/motors&generators](http://www.abb.com/motors&generators) 或  
联系ABB。

Above table gives the main dimensions in mm.

For detailed drawings please see our web-  
pages '[www.abb.com/motors&generators](http://www.abb.com/motors&generators)'  
or contact ABB.

# 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 (mm <sup>2</sup> ) Max Cu-area mm <sup>2</sup>	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 lifting lug					

# 一般用途电机简介

## General performance motors in brief

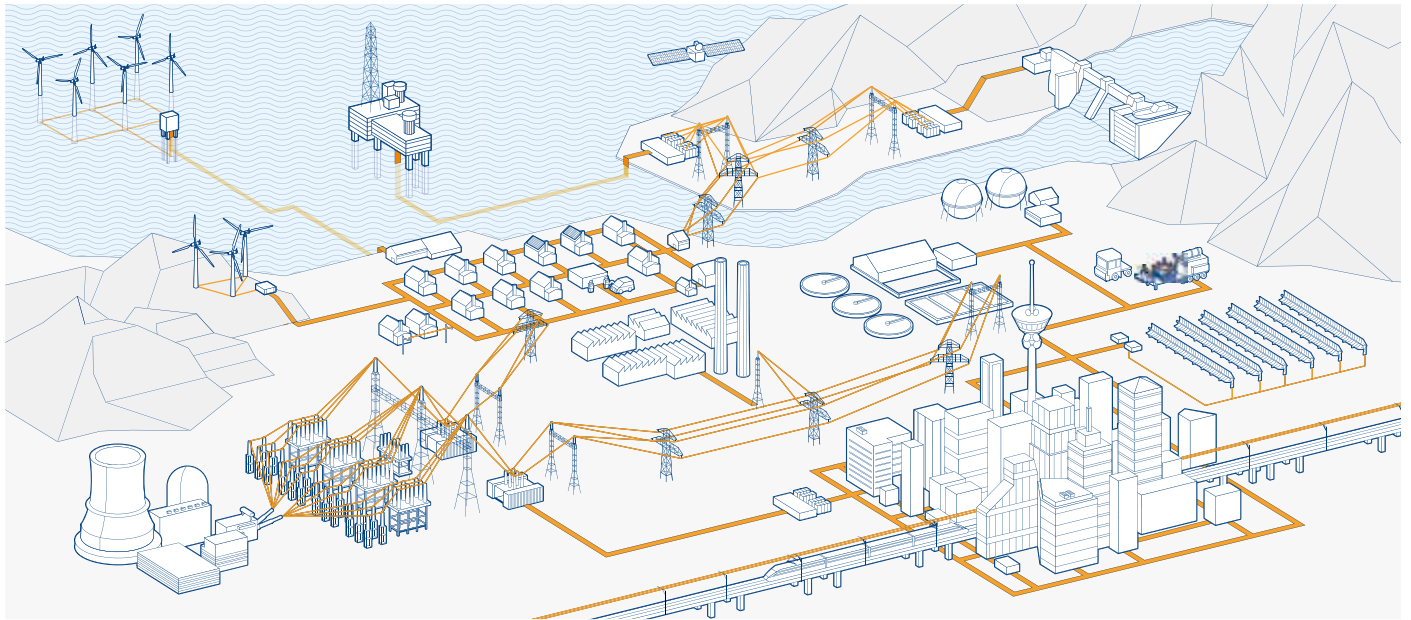
电机尺寸 Motor size		160	180	200	225	250
机座与端盖 Stator and end shields	材料 Material	铸铁 Cast iron				
	油漆颜色 Paint colour shade	Munsell蓝8B 4.5/3.25 Munsell blue 8B 4.5/3.25				
	防腐蚀等级 Corrosion class	C3(中等) C3 (medium)				
底脚 Feet		一体式铸铁底脚 Integrated cast iron feet				
轴承 Bearings	D端 D-end	6209-2Z/C3	6210-2Z/C3	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 (mm <sup>2</sup> ) 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 lifting 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 <sup>2</sup> ) 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		

# 电机、发电机和机械传动产品以及全套服务的总览



**ABB是低压、中压和高压电机及发电机、机械传动产品制造领域的领军企业，提供全套服务。我们掌握各种工业过程领域的专业知识，确保能够根据您的需求制定最佳的解决方案。**

## 低压及高压 IEC感应电机

- 过程用途电机
- 一般用途电机
- 高压铸铁电机
- 模块化感应电机
- 模块化滑环式电机
- 同步磁阻电机

## 低压及中压 NEMA电机

- 钢制开启式电机
- 户外电机、水冷式电机、风机用电机
- 铸铁电机 (TEFC)
- 空气冷却式 (TEAAC) 电机

## 用于易爆气体环境的 电机和发电机

- IEC、NEMA电机和发电机，各种防护类型

## 同步电机

### 同步发电机

- 柴油机及汽油机用同步发电机
- 蒸汽及燃气轮机用同步发电机

### 风力发电机

### 小型水电站用发电机

### 其它电机及发电机

- 制动电机
- 直流电机及发电机
- 齿轮电机
- 船用电机及发电机
- 单相电机
- 耐高温电机

- 永磁电机及发电机
- 高速电机
- 烟道电机
- 清洁电机
- 水冷式电机
- 发电机设备
- 辊道电机
- 伺服电机
- 牵引电机

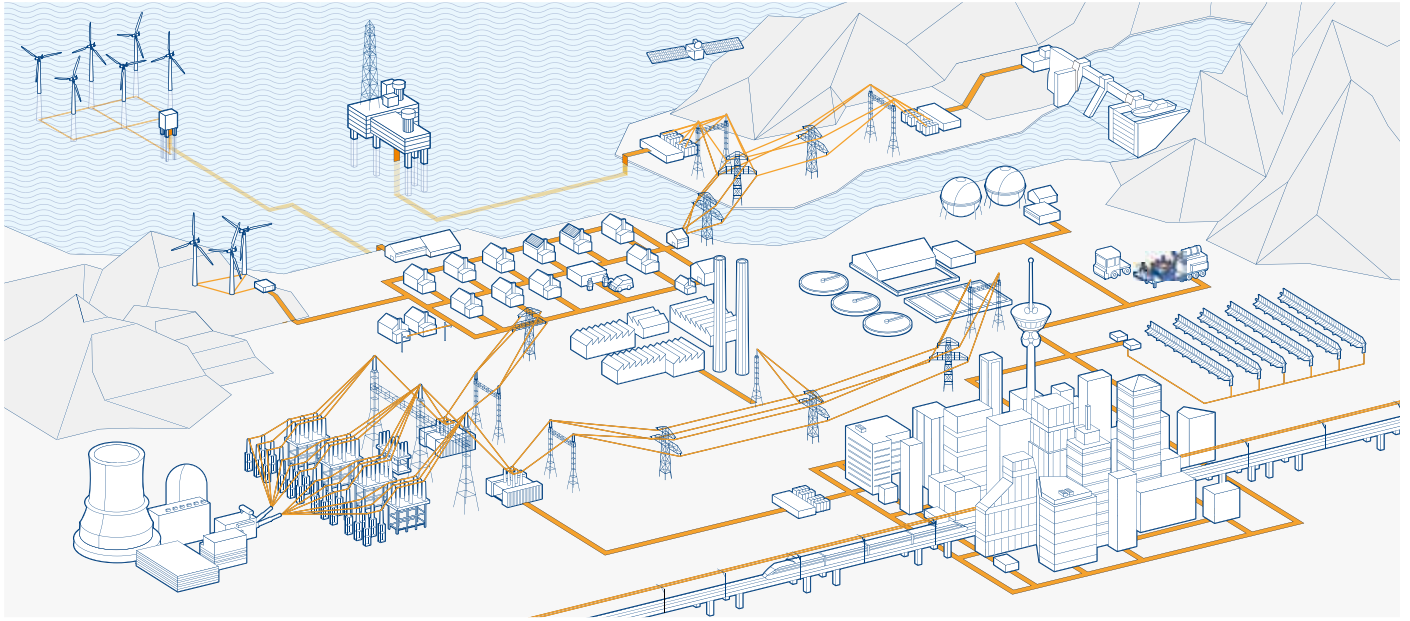
### 生命周期服务

- 安装和试运行
- 服务合同
- 预防性维护
- 备件
- 诊断
- 维修及整修
- 维修及整修
- 电机及发电机更换
- 技术支持及咨询
- 培训

### 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**