

SIEMENS



1MB0061 隔爆型三相异步电动机

SIMOTICS XP 1MB0061 explosion proof motors

概 述

Overview



额定功率: 0.55 ~ 315 kW

机座号: 80 ~ 355

电压与频率: 380 V 50Hz,
380 / 660 V 50Hz

冷却方式: IC411

隔爆标志: Ex d IIB T4 Gb

防护等级: IP55

绝缘系统: F 级

注油装置: 机座号为 250 ~ 355 的
电机标配

环境温度: -20 ~ 40 °C

海拔高度: 不超过 1000 m

Rated output: 0.55 ~ 315 kW

Frame Size: 80 ~ 355

Rated voltage: 380V 50Hz,
380 / 660 V 50Hz

Cooling method: IC411

Flame proof marking: Ex d IIB T4 Gb

Protection degree: IP55

Insulation class: F

Re-greasing device: Frame size 250~355
motor standard

Coolant temperature: -20 ~ 40 °C

Site altitude: Up to 1000 m above sea level

SIMOTICS XP 1MB0061 (简称 "1MB0061") 系列高效隔爆型三相异步电动机是全封闭、自扇冷高效电动机, 其效率满足 GB18613-2012 能效等级 3 级标准要求, 以及 IEC60034-30 标准的 IE2 能效等级。该系列具有性能优良, 使用安全可靠, 振动小、噪声低等特点, 并且符合环保要求;

其生产设备采用先进的数控机床设备、引用西门子先进的绝缘结构设计以及制造工艺, 采用优质的冷轧硅钢片以及经过严格质量检测与控制的高品质轴承。

1MB0061 系列电动机防爆性能符合 GB3836.1-2010《爆炸性气体环境用电气设备第 1 部分: 通用要求》和 GB3836.2-2010《爆炸性气体环境用电气设备第 2 部分: 隔爆型 "d"》的规定适用的场所:

- Ex d IIB T4 Gb 适用于工厂用 II 类 B 级, 温度组别为 T4 组爆炸性气体混合物存在的环境。

1MB0061 系列危险环境用高效隔爆型三相异步电动机, 标准防爆级别达到 Ex d II B T4 Gb, 广泛适用于石化工厂等危险场所。

SIMOTICS XP 1MB0061 (short as "1MB0061") series flameproof three-phase asynchronous motors is totally enclosed fan cooled structure, whose efficiency is in accordance with GB18613-2012 Grade 3 standard. and IE2 according to IEC60034-30. This series of products has high performance, safe and reliable use, small vibration, low noise characteristics, and conforms to the requirements of environmental protection;

The production equipments employ the advanced CNC machine tools, reference Siemens advanced insulation structure design and manufacturing process, adopt the cold rolled silicon steel sheets of excellent quality and high quality bearings that passed strict quality inspection and control.

1MB0061 series flameproof motors meet the standard of GB3836.1-2010 and GB3836.2-2010, it can be applied in the following areas:

- Ex d IIB T4 Gb Suitable for factory where explosive gas atmosphere in Group II B and Temperature. classes T4 exists.

1MB0061 series flameproof three-phase motors, are designed for "Ex d II B T4 Gb" as standard. Motors are widely applied in chemical, oil and gas industries.

技术特点

- **机械特性硬**
1MB0061系列电动机的启动转矩和最大转矩较大，过载能力强
- **高品质轴承和润滑脂**
1MB0061系列电机采用国际知名品牌、高品质轴承以及润滑脂，保证电机可以可靠、稳定的运行。
- **噪声低**
通过优化电磁设计、通风、结构设计等，1MB0061 系列电动机的噪声较低。
- **可靠性好**
电动机为全封闭风冷结构，防护等级 IP55，电动机机械强度高，坚固耐用，防锈防腐性强。绕组可靠性好，采用 F 级绝缘结构，B 级考核。
- **采用高品质硅钢**
1MB0061 系列电机采用高品质硅钢片，保证电动机噪声低、电机性能一致性好。

Technical Features

- **Higher stiffness of mechanical performance**
1MB0061 series motors have higher starting torque and maximum torque. which help the motor have higher performance of overload.
- **High quality bearing and lubrication**
1MB0061 series motors is equipped with well-known foreign brand bearing and lubrication. This ensure the motor having features higher reliability.
- **Low noise**
The1MB0061 range has been designed to minimize motors noise levels, by means of improving magnetic and electrical design, ventilator condition, and structure assembling size and technology.
- **High reliability**
Motor is totally enclosed fan cooled structure with IP55. High mechanical strength and high anticorrosive property.
- **High quality of lamination**
Utilization of high quality lamination ensure lower noise and better consistency of quality for the 1MB0061 series of motors.

安装结构型式

Construction and mounting type

结构型式 Construction type	机座带底脚，端盖无法兰 With feet and without flange on the end-shield (DE)					
安装型式 Mounting type	IM B3 80 ~ 355	IM B6 80 ~ 160	IM B7 80 ~ 160	IM B8 80 ~ 160	IM V5 ¹⁾ 80 ~ 160	IM V6 ²⁾ 80 ~ 160
示意图 Diagram						
结构型式 Construction type	机座不带底脚，端盖有法兰 Without feet and with flange on the end-shield (DE)			机座带底脚，端盖有法兰 With feet and with flange on the end-shield (DE)		
安装型式 Mounting type	IM B5 80 ~ 280	IM V1 ¹⁾ 80 ~ 315	IM V3 ²⁾ 80 ~ 160	IM B35 80 ~ 355	IM V15 ¹⁾ 80 ~ 160	IM V35 ²⁾ 80 ~ 160
示意图 Diagram						

¹⁾ 室外使用时推荐使用护罩（选件号 H00）；
²⁾ 当户外安装时，推荐对电动机轴采取防护措施，避免水直接喷射到电动机轴上。
¹⁾ At outdoor application, the using of protective cover (Option code H00) is recommended
¹⁾ At out door application the protection of shaft again jet-water is recommended

轴承选配

Bearing Assignment

机座号 Frame size	极数 Pole	标准配置 Standard		
		驱动端轴承 DE bearing	非驱动端轴承(水平安装) NDE bearing (horizontal mounting)	非驱动端轴承(立式安装) NDE bearing (Vertical mounting)
80	2－6	6204-2RZ C3	6204-2RZ C3	6204-2RZ C3
90	2－6	6205-2RZ C3	6205-2RZ C3	6205-2RZ C3
100	2－6	6206-2RZ C3	6206-2RZ C3	6206-2RZ C3
112	2－6	6206-2RZ C3	6206-2RZ C3	6206-2RZ C3
132	2－8	6208-2RZ C3	6208-2RZ C3	6208-2RZ C3
160	2－8	6309-2RZ C3	6209-2RZ C3	6209-2RZ C3
180	2－8	6310-C3	6210-C3	6210-C3
200	2－8	6312-C3	6212-C3	6212-C3
225	2－8	6313-C3	6213-C3	6213-C3
250	2－8	6314-C3	6215-C3	7215 AC
280	2－8	6317-C3	6217-C3	7217 AC
315	2	6319-C3	6317-C3	7317 AC
	4－10	6319-C3	6319-C3	7319 AC
355	2	6319-C3	6319-C3	-
	4－10	6322-C3	6322-C3	

注： - 不能满足

Note: - Not possible

按爆炸性混合物的自然温度 (°C) 分组

Temperature classes

电子设备的温度等级 Temperature class of electrical equipment	电子设备的最大表面温度 Maximum surface temperature of electrical equipment	气体或蒸汽的点燃温度 Ignition temperature of gases or vapors
T1	450°C	> 450°C
T2	300°C	> 300°C
T3	200°C	> 200°C
T4	135°C	> 135°C
T5	100°C	> 100°C
T6	85°C	> 85°C

爆炸性气体（Gases）和蒸气（Vapours）的分组和温度等级

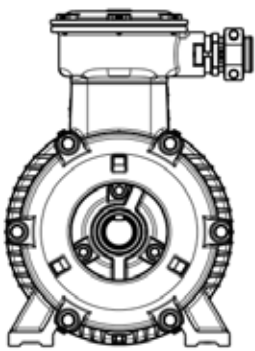
Examples of the assignment of combustible gases and vapors

爆炸性 气体分组 Group	按爆炸性混合物的自然温度 (°C) 分组 Temperature classes											
	T1		T2		T3		T4		T5		T6	
	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C	材料名称 Material designation	最低点燃温度 Minimum ignition temperature °C
IIA	丙酮 Acetone	540	醋酸戊酯 i-amyl acetate	380	汽油 Benzine		乙醛 Acetaldehyde	140				
	乙烷 Ethane	515	正丁烷 n-butane	365	汽油 ¹⁾ Gasoline							
	乙酸乙酯 Ethyl acetate	460	正丁醇 n-butyl alcohol	340	特殊汽油 ¹⁾ Special benzine							
	氯乙烷 Ethyl chloride	510	环己酮 Cyclohexanone	430	柴油燃料 ¹⁾ Diesel fuel							
	氨 Ammonia	630	二氯乙烷 1,2- dichloroethane	440	民用燃油 ¹⁾ Heating oils							
	苯 Benzene	555	乙酸酐 / 醋酸酐 Acetic acid anhydride	330	n-正己烷 n-hexane	240						
	醋酸 Acetic acid	485										
	一氧化碳 Carbon monoxide	605										
	甲烷 Methane	595										
	甲醇 Methanol	455										
	氯甲烷 Methyl chloride	625										
	萘 Naphthalene	520										
	苯酚 Phenol	595										
	丙烷 Propane	470										
	甲苯 Toluene	535										
II B	城市煤气 (照明气) Town gas (illuminating gas)	560	乙醇 Ethyl alcohol	425	硫化氢 Hydrogen sulfide	270	乙基醚 Ethyl ether	180				
			乙烯 Ethylene	425								
			环氧乙烷 Ethylene oxide	440								
IIC	氢 Hydrogen	560	乙炔 Acetylene	305							二硫化碳 Carbon disulfide	95

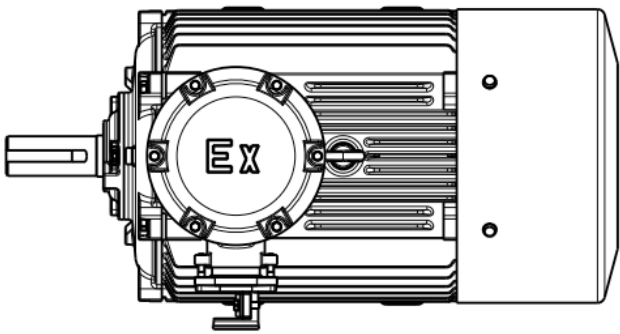
¹⁾ 最低点燃温度取决于可燃物成分，温度范围会在 220°C 至 300°C 之间；在有些特殊的场所，最低点燃温度会超过 300°C

¹⁾ The minimum ignition temperature depends on the composition and lies between 220 and 300 °C, over 300 °C in special cases.

接线盒



Terminal box



电动机接线盒具有优良的隔爆结构性能和较高防护等级，且具有较大的空腔以便于接线，进线分为橡胶套电缆和钢管布线（可选）两种结构。接线盒进线孔及适用范围见表 5。

The connection box has the features of flame proof structure, high protection degree, and bigger space for easier connection. There are two types of cable entry, one is for rubber shielded cable entry (standard), and another one is conduit entry (option). The technical features of connection box are shown as following table 5.

适用机座号 Frame size	接线螺栓尺寸 Dimension of Contact screw	进线孔数 Cable entry	进线电缆外径 Dimension of Gland	钢管布线进线孔螺纹 ⁴⁾ Dimension of conduit entry
80 ~ 100	小 M5 ³⁾	单	Ø13 ~ Ø24	M30 × 2
112 ~ 132	M5	单	Ø13 ~ Ø24	M30 × 2
160 ~ 180	M6	单	Ø13 ~ Ø34	M36 × 2
200 ~ 225 ¹⁾	M8	单	Ø19 ~ Ø41	M48 × 2
200 ~ 225 ²⁾	M8	双	Ø19 ~ Ø41	M36 × 2
250 ~ 280	M10	双	Ø19 ~ Ø41	M48 × 2
315 ~ 355	M16	双	Ø30 ~ Ø49	M64 × 2

¹⁾ 标准配置

²⁾ 可选，选件为 X96

³⁾ 接线盒内只有 3 个接线螺栓

⁴⁾ 可选，选件为 X97

¹⁾ Standard configuration

²⁾ Option code X96

³⁾ Only 3 contact screws in connection box

⁴⁾ Option code X97

铭牌示例（非矿用）

Nameplate(Non-mining)



防爆标志（非矿用）

Flame proof-marking(Non-mining)

