



YBX3 系列高效率隔爆型三相异步电动机
(机座号 80~355) (ExdI MB)
YBX3 Series High Efficiency Explosion-proof
Three Phase Induction Motors
(Frame 80~355) (ExdI MB)

使用说明书

Operation Manual

安徽皖南电机股份有限公司
Anhui Wannan Electric Machine Co.,Ltd

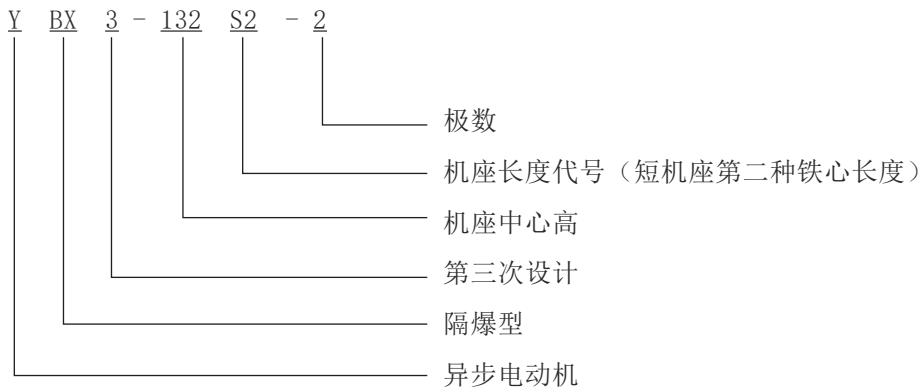
衷心感谢您选购、使用皖南电机。

在使用电动机之前，请扫码仔细阅读本说明书，以便您正确的使用和维护。

1 产品概述

我公司生产的 YBX3 系列高效率隔爆型三相异步电动机符合 Q/WN.288-2022《YBX3 系列高效率隔爆型三相异步电动机技术条件（机座号 80～355）》要求，按照 GB/T 3836.1-2021《爆炸性环境第 1 部分：设备 通用要求》和 GB/T 3836.2-2021《爆炸性环境 第 2 部分：由隔爆外壳“d”保护的的设备》以及 GB/T 3836.3-2021《爆炸性环境 第 3 部分：由增安型“e”保护的的设备》的要求，制成隔爆型。其防爆标志为 Ex db I Mb。产品符合 MT 451-2011《煤矿用隔爆型低压三相异步电动机安全性能通用技术规范》，适用于含有甲烷等气体或煤尘的煤矿井下（非采掘工作面）的可燃性气体或蒸汽与空气形成的爆炸性混合物的场所。其效率指标达到了国家最新能效标准 GB 18613-2020《中小型三相异步电动机能效限定值及能效等级》的 3 级能效标准。

2 产品型号及名称



3 使用范围及使用条件

3.1 运行使用条件

3.1.1 适用于含有甲烷等气体或煤尘的煤矿井下（非采掘工作面）的可燃性气体或蒸汽与空气形成的爆炸性混合物的场所。

3.1.2 海拔不超过 1000m。

3.1.3 环境空气温度随季节而变化，但最高不超过 40℃，最低为 -15℃。

3.1.4 环境空气最大相对湿度为 90%，同时该月月平均最低温度不高于 25℃。

3.1.5 电动机额定电压为 380V、660V、1140V、380/660V、660/1140V，额定频率为 50Hz，绝缘等级为 F 级。

3.1.6 电动机 3kW 及以下为 Y 接法（380V）；电压为 380/660 时，3kW 以上的电动机，当电压在 380V 时为△接法、660V 时为 Y 接法。电压为 660/1140V 时，电压在 660V 时为△接法、1140V 时为 Y 接法。

3.1.7 电动机的定额是以连续工作制（S1）为基准的连续定额，允许满压起动。

3.1.8 电动机外壳最高表面温度（温度计法）在规定允许最不利的工作条件下不超过 130℃。

3.1.9 电动机运行时，电源电压和频率与额定值的偏差按 GB/T 755-2019 的规定。

4 电动机的主要技术参数及安装结构型式

4.1 主要技术参数见表 2

表 2

机座号	同步转速 r/min				
	3000	1500	1000	750	600
	功率 kW				
80M1	0.75	0.55	0.37	0.18	
80M2	1.1	0.75	0.55	0.25	
90S	1.5	1.1	0.75	0.37	
90L	2.2	1.5	1.1	0.55	
100L1	3	2.2	1.5	0.75	
100L2		3		1.1	
112M	4	4	2.2	1.5	
132S1	5.5	5.5	3	2.2	
132S2	7.5				
132M1	-	7.5	4	3	-
132M2			5.5		
160M1	11	11	7.5	4	
160M2	15			5.5	
160L	18.5	15	11	7.5	
180M	22	18.5	-	-	
180L	-	22	15	11	
200L1	30	30	18.5	15	
200L2	37		22		
225S	-	37	-	18.5	
225M	45	45	30	22	
250M	55	55	37	30	
280S	75	75	45	37	-
280M	90	90	55	45	
315S	110	110	75	55	45
315M	132	132	90	75	55
315L1	160	160	110	90	75
315L2	200	200	132	110	
355S1	(185)	(185)	160	132	90
355S2	(200)	(200)			
355M1	(220)	(220)	(185)	160	110
355M2	250	250			200
355L1	(280)	(280)	(220)	(185)	160
355L2	315	315	250	200	(185)

注：1 带括号的为不优先推荐规格。

2 S、M、L 后面的数字 1、2 分别代表同一机座号和转速下不同的功率。

4.2 电动机的结构及安装型式见表 3

表 3

机座号	结构及安装代号 (IM)
80~112	B3、B5、B6、B7、B8、B14、B34、B35、V1、V3、V5、V6、V15、V18、V35、V37
132~160	B3、B5、B6、B7、B8、B35、V1、V3、V5、V6、V15、V35、V37
180~280	B3、B5、B35、V1
315~355	B3、B35、V1

5 主要结构

5.1 电动机的接线盒位于电动机顶部，制成三个或六个接线端子。适用于橡胶套电缆（或塑料电缆）和钢管布线的两种结构，内设一个接地端子，并按其需要分别制成一个或二个（M8 及以上）出线口。在接线盒座与接线盒盖的止口处加设“O”型密封圈。

5.2 电机外露紧固件处，铸有凸起护垫，防止碰撞或落石损坏紧固件。

5.3 电动机转轴旋转部位采用“V”型轴封环保护。

5.4 电动机机座号 80 ~ 225 的轴承采用密封轴承，机座号 250 及以上电动机设置了不停机注、排油装置。

5.5 电动机主体结构见图 1、接线盒结构见图 2。

6 防爆要点

6.1 本系列电动机为隔爆型。若电动机内部的可燃易爆性混合物爆炸时，隔爆型电动机外壳不应损坏或产生影响隔爆性能的变形；内部爆炸火焰不允许通过电机的隔爆接合面引起外部爆炸性混合物的爆炸。

6.2 隔爆型电动机的元件（如机座、端盖、轴承内盖、接线盒盖、接线盒座等），精加工后须经压力为 1.0Mpa，加压时间为 10S+2 的静压试验，以不滴水为合格。

6.3 隔爆接合面的长度、间隙、表面粗糙度、接线盒内部裸露导体之间、裸露导体与金属外壳之间的电气间隙及爬电距离应符合 GB/T 3836.3-2021 的规定。

6.4 联接隔爆外壳的螺栓均装有弹簧垫圈，防止自行松脱。

6.5 机座、端盖、轴承内盖、接线盒盖、接线盒座、接线螺栓、端子套（或接线板）、轴、橡胶密封圈是隔爆元件。

6.6 隔爆外壳紧固螺栓应保证抗拉强度 $\geq 800\text{MPa}$ ，屈服强度 $\geq 640\text{MPa}$ 。

7 安装与使用

警告!



严禁带电开盖!

搬运电动机时, 应小心谨慎!

强烈的摔、碰、震会严重损坏轴承及隔爆元件。

吊装带有吊攀的电机时, 一定要将吊攀旋紧。

7.1 安装前的准备

- 7.1.1 仔细检查电动机外观是否完好、核对电动机铭牌内容是否与实际需求相符。
- 7.1.2 电动机是否有矿用安全标志, 矿用安全合格证编号, 防爆标志、防爆合格证编号。
- 7.1.3 隔爆外壳各零部件联接正确, 紧固可靠无松动。
- 7.1.4 所有隔爆元件应无裂纹或影响隔爆性能的缺陷。
- 7.1.5 取下接线盒盖检查电动机定子绕组冷态绝缘电阻应不低于 $5\text{ M}\Omega$ 。

7.2 安装

- 7.2.1 电动机的安装应由专业技术人员完成。
- 7.2.2 电动机宜采用弹性联轴器传动。
- 7.2.3 电动机轴中心与被传动的主机轴中心要保持一致。
- 7.2.4 对带底脚的电动机, 安装平面应平整、坚固。
- 7.2.5 联接电动机的电源线(电缆)不宜过细、过长。

7.2.6 电缆的外径要与密封圈(图3)的孔径相符。使用电缆最小直径为 $D1$, 最大直径为 $D5$, 密封圈材质为橡胶 XH-21, 规格及尺寸见表4、表5(可根据引入电缆外径大小剥去密封圈同心圆)。配合直径差不大于 1mm , 当压紧接线头后, 应保证密封圈与电缆之间及密封圈与接线盒座之间无间隙, 否则将失去隔爆性能。(注: 当电机为双出线口时, 除 H80-132 机座号, 密封圈尺寸降一档。即, H160-180 的双出线口的密封圈, 借用于 H80-132 单出线口的密封圈; H200-225 的借用于 H160-180。)

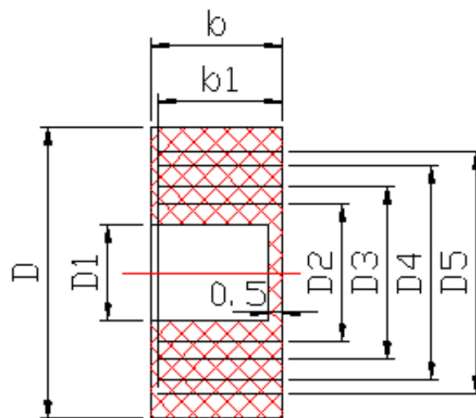


图3

表 4 (380/660V)

机座号	进线方式	密封圈形式	D1	D2	D3	D4	D5	D	b1	b
80~132	橡套电缆	图 3	φ 14	φ 20			φ 25	φ 42 - 0.62	24	26
160~180			φ 14	φ 20	φ 26	φ 31	φ 35	φ 58 - 0.74	24	26
200~225			φ 20	φ 26	φ 32	φ 38	φ 42	φ 72 - 0.74	30	32
250~280			φ 25	φ 31	φ 36	φ 45	φ 50	φ 90 - 0.87	36	38
315~355			φ 40	φ 46	φ 50	φ 56	φ 64	φ 105 - 0.87	44	46

表 5 (660/1140V)

机座号	进线方式	密封圈形式	D1	D2	D3	D4	D5	D	b1	b
112~132	橡套电缆	图 3	φ 14	φ 20	φ 26	φ 31	φ 35	φ 58 - 0.74	24	26
160~180			φ 20	φ 26	φ 32	φ 38	φ 42	φ 72 - 0.74	30	32
200~225			φ 25	φ 31	φ 36	φ 45	φ 50	φ 90 - 0.87	36	38
250~280			φ 40	φ 46	φ 50	φ 56	φ 64	φ 105 - 0.87	44	46
315~355			φ 40	φ 46	φ 50	φ 56	φ 64	φ 105 - 0.87	44	46

7.2.7 引入的电缆芯线要接在两弓型垫圈之间，注意芯线的飞刺不要突出，引入接线孔时应防止线芯损伤，引入电缆还须用接线压板和弓形垫圈压紧固定，防止窜动。

7.2.8 六端子接线盒通过连接片改变接法，可适应两种不同电压需要（见接线盒盖内侧接线图）。对有两个进线口的接线盒，当引入一根多芯电缆只使用一个进线口时，另一个进线口的堵棒不得拿掉，否则将失去防爆性能。

7.2.9 电动机的相序 U、V、W 须与接入外电源相序 A、B、C 相对应，电动机转向从轴伸端视之为顺时针方向，否则电动机将反转。

7.2.10 电动机内、外接地螺栓必须可靠接地。

7.2.11 电动机接好线，经检查确认无误后，方可接通电源进行空载试运转，并观察电机有无异常现象，待空转正常后方可投入负载运行。

警告!



- 1、电源电压的波动不得超过额定电压的 95% ~ 105%。
- 2、必须接好接地线。
- 3、电机运行若有异常立即停机。
- 4、保持身体、衣物远离电动机运转部分。

8 保养与维修

8.1 电动机应定期检查和清洁，不得用水龙头喷射清扫电机。

8.2 电动机运行时轴承允许温度不得超过 95 ℃（温度计法），轴承每运行 2500 小时（约半年）至少检查一次，如发现轴承润滑脂变质必须及时更换，更换前，须将轴承外盖、贮油盒内的废油以及排油装置的油管、油杯清理干净，并用汽油将轴承清洗干净，润滑脂推荐 2 号中小型电机轴承润滑油脂。轴承润滑油使用量和加油时间见附件表 5，机座号和适用轴承型号见附表 6。

8.3 对于存储半年的电动机，建议每 2 个月将电机轴旋转 180 度；存储超过半年的，通电运转一段时间，使轴承润滑脂分布均匀。

8.4 拆装电动机时应注意保护隔爆面。H80 ~ 132 机座号的电机没有轴承内外盖。拆卸电动机时，应先拆掉风罩、再拆掉轴伸端的“V”型轴封环，拆去前端盖、后端盖的固定螺栓，将后端盖连同转子、风扇连体抽出。装配时，所有隔爆面需涂 204-1 防锈脂。

8.5 电机受潮后，必须经干燥处理后方可使用。干燥处理可采用烘干或短路电流法。在烘焙过程中，温度应逐渐升高，但不可超过 145℃。用短路电流法干燥时，（严重受潮的电机不宜用此方法，以免发生电解现象。）电机处于短路状态，其输入电流为 0.6 ~ 0.8 倍额定电流值为宜。

8.6 更换绕组时，须记下原绕组的型式、尺寸、线规、匝数。当失落这些数据时，应向我公司索取。随意改变设计绕组会使电动机某项或几项性能恶化，以致不能使用。

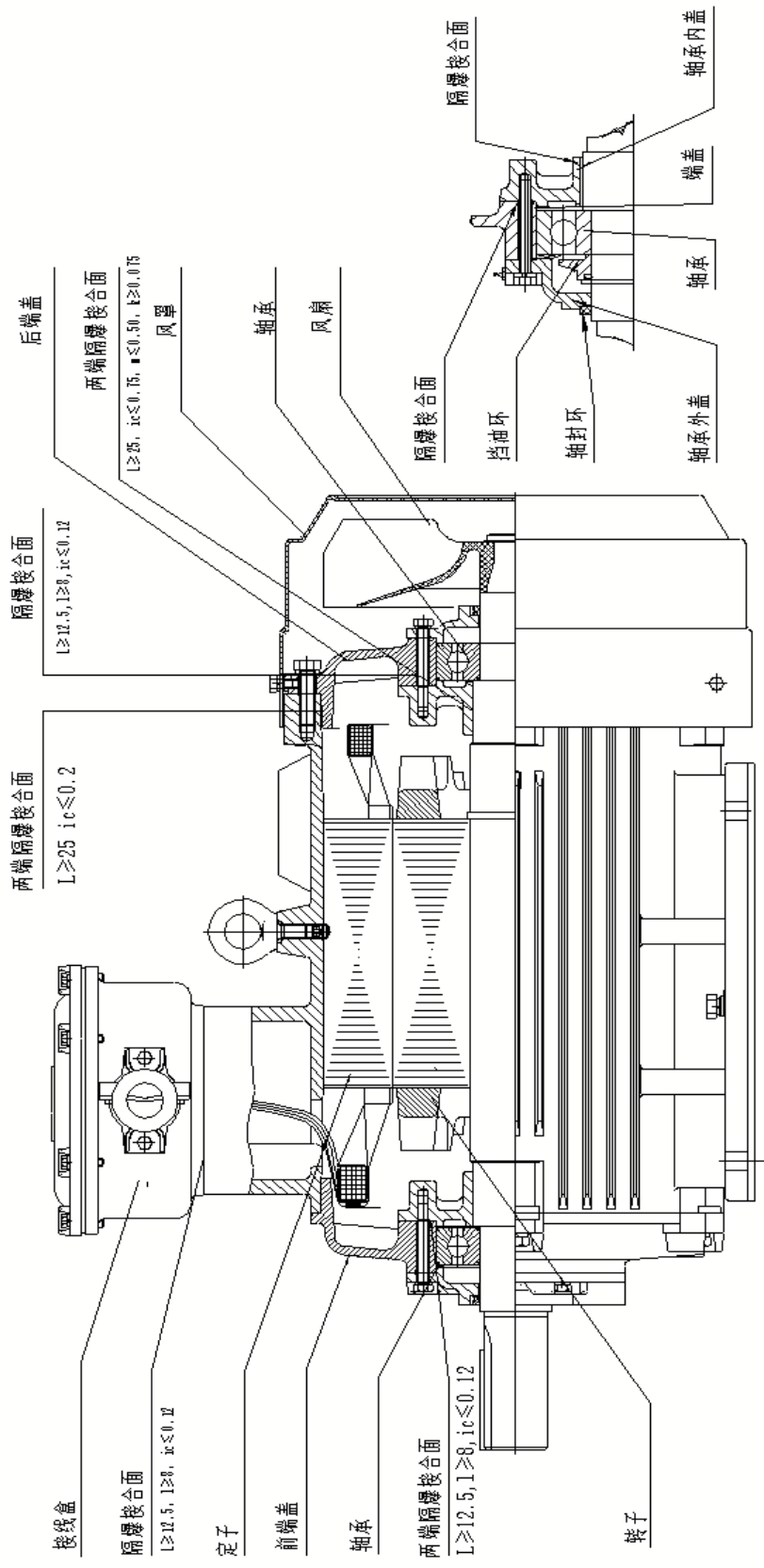
8.7 防爆零部件维修、更换，须由专业技术人员按有关技术标准进行维修、验收。

表 5 轴承润滑油使用量和加油时间

机座号	极数	油脂量 (g)	加油时间 (h)
180	2	20	4200
	4	20	7000
	6	20	9000
200	2	25	3100
	4	25	6500
	6	25	8500
225	2	25	3100
	4	30	6200
	6	30	6200
250	2	30	2600
	4	35	6000
	6	35	8000
280	2	35	2000
	4	40	5500
	6	40	7500
315	2	30	2500
	4-10	36	2500
355	2	36	2500
355	4	47	2500
	6, 8, 10	47	2500

表 6 机座号和适用轴承型号表

机座号	极数	轴伸端	非轴伸端
80	2, 4, 6, 8	6204-2RZ	6204-2RZ
90	2, 4, 6, 8	6205-2RZ	6205-2RZ
100	2, 4, 6, 8	6206-2RZ	6206-2RZ
112	2, 4, 6, 8	6206-2RZ	6206-2RZ
132	2, 4, 6, 8	6308-2RZ	6308-2RZ
160	2, 4, 6, 8	6309-2RZ	6309-2RZ
180	2	6311-2RZ	6211-2RZ
	4, 6, 8	6311-2RZ	6311-2RZ
200	2, 4, 6, 8	6312-2RZ	6312-2RZ
225	2	6312-2RZ	6312-2RZ
	4, 6, 8	6313-2RZ	6312-2RZ
250	2	6313	6313
	4, 6, 8	6314	6313
280	2	6314	6314
	4, 6, 8	6317	6314
315	2	6317	6317
	4, 6, 8, 10	NU319	6319
355	2	6319	6319
	4, 6, 8, 10	NU322	6322



注: YBX3-160 两端隔爆接合面 $L \geq 25$, $ic \leq 0.75$, $m \leq 0.5$, $k \geq 0.075$

图2 电机主体结构 (B3)

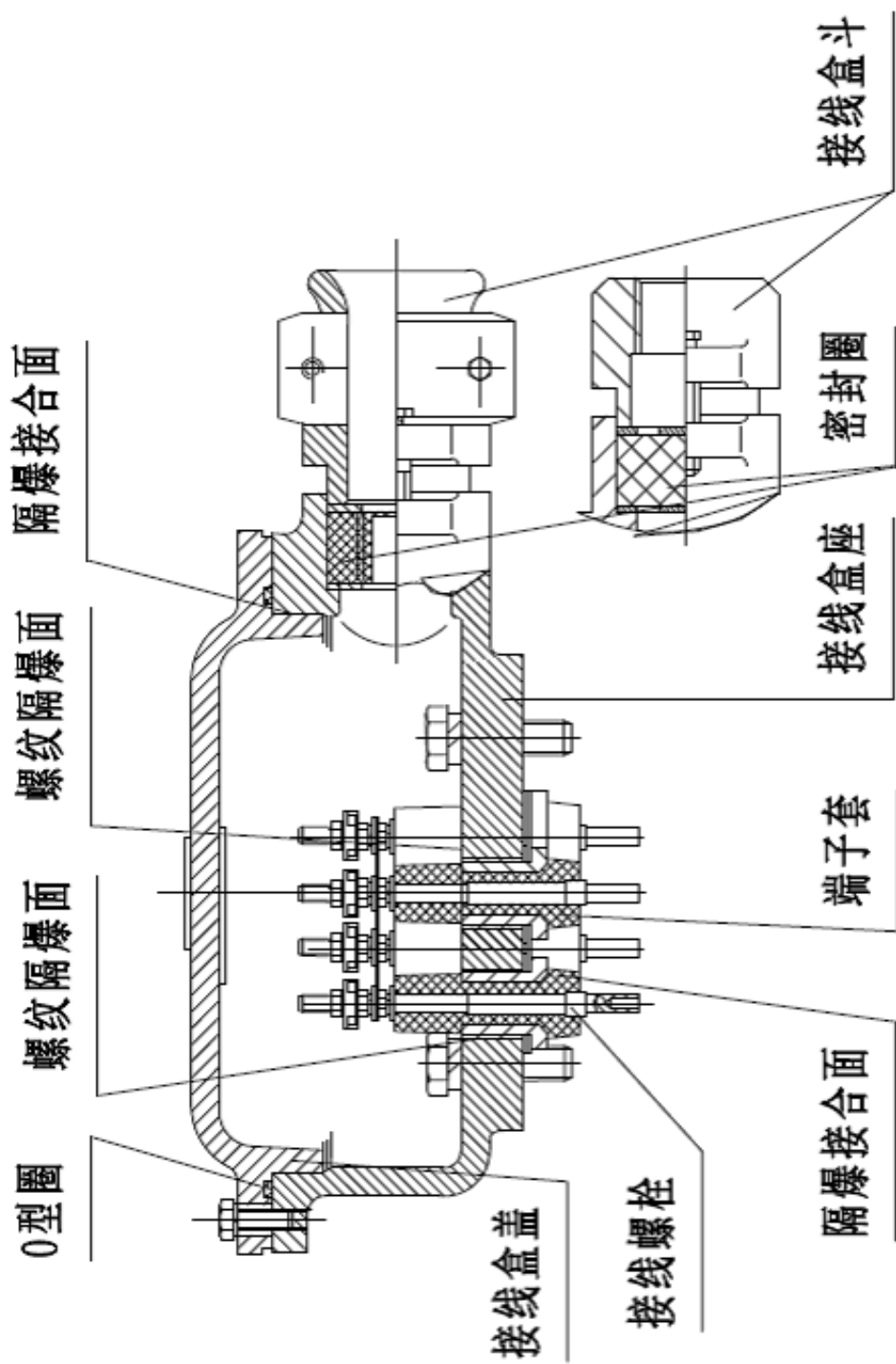


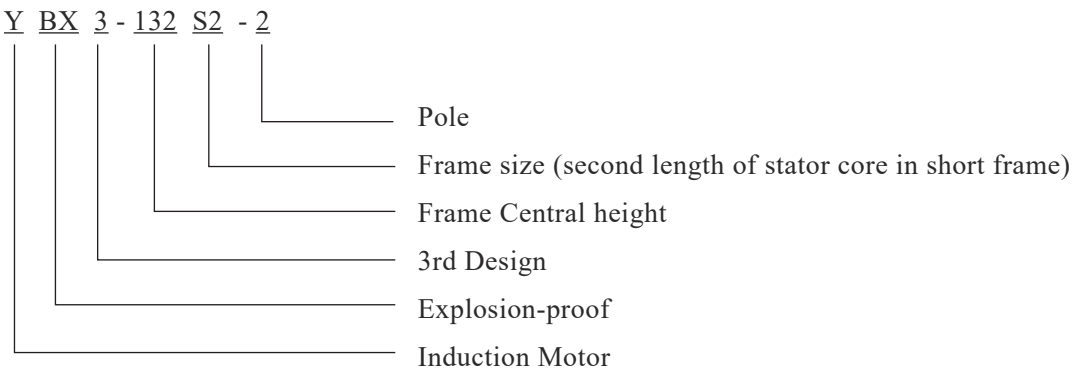
图2 接线盒结构

We are truly grateful for your purchasing of Wannan Motors. Before using the motor, please scan the QR code to read the manual so as to use and maintain the motor in a right way.

1. Summary

YXB3 series high efficiency explosion-proof three-phase induction motors are found to be in conforming to the requirements of standard Q/WN.288-2022 “The requirement of YBX3 series high efficiency explosion-proof three-phase induction motors (Frame 80~355)”. The explosion-proof motor is manufactured according to standard GB 3836.1-2021 “Electrical equipment used in explosive environment-Part 1 General Requirement” and GB3836.2-2021 “Electrical equipment used in explosive environment-part 2: The Apparatus with the flameproof enclosure ‘d’” and GB 3836.3-2021 “Electrical equipment used in explosive environment-Pat 3: Increased-Safety ‘e’”. Marked with Ex db I, conforming to standard MT 451-2011 “General specification for low voltage three phase flameproof induction motors” the products are can be used in coal mine (except for mining working-face) where explosive mixture of methane gas/steam and coal dust contains YBX3 Series have been up to the Level 3 of efficiency standard GB 18613-2020 “Energy efficiency threshold and energy efficiency grade of medium-small sized motor”.

2.Designation and types



3. Application circumstance

3.1 Operating condition

3.1.1 Ideal for coal mine (except for mining working-face) where explosive mixture of air-methane gas/steam and coal dust contains.

3.1.2 Not exceed 1000m above the sea level.

3.1.3 Ambient temperature varies according to the seasonal variation, but the highest temperature should be not higher than 40°C , and the lowest be -15°C 。

3.1.4 The maximum relative humidity of the environment should be no more than 90%, besides the month mean minimum temperature should be not higher than 25°C

3.1.5 The rated voltage of the motor is 380V、660V、1140V、380V/660V、660V/1140V, rated frequency is 50Hz, insulation is in F class

3.1.6 Motor of 3kW and below shall adopt Y connection; but the motor over 3kW shall adopt Δ connection for single rating voltage motor; for motor of dual- voltage 380/660V, 380V shall be

connected as Δ 、660V as Y; dual- voltage 660/1140V, 660V shall be connected as Δ 、1140V as Y.

3.1.7 The rating here refers to the continuous rating power on the basis of S1 duty system, the motor allows full voltage starting.

3.1.8 Allowable maximum surface temperature of motor casing (by thermometer method) shall be not higher than 130°C even under the most unfavorable condition permitted by provision.

3.1.9 Deviation of voltage and frequency from the rating value should be in accordance with the rule of GB/T 755-2019 at the motor running time.

4. Main technical parameter and installation type

4.1 Main technical parameter see table 2

Table 2

Frame	Synchronous Speed r/min				
	3000	1500	1000	750	600
	Power kW				
80M1	0.75	0.55	0.37	0.18	
80M2	1.1	0.75	0.55	0.25	
90S	1.5	1.1	0.75	0.37	
90L	2.2	1.5	1.1	0.55	
100L1	3	2.2	1.5	0.75	
100L2		3		1.1	
112M	4	4	2.2	1.5	
132S1	5.5	5.5	3	2.2	
132S2	7.5				
132M1	-	7.5	4	3	
132M2			5.5		
160M1	11	11	7.5	4	
160M2	15		5.5		
160L	18.5	15	11	7.5	
180M	22	18.5	-	-	
180L	-	22	15	11	
200L1	30	30	18.5	15	
200L2	37		22		
225S	-	37	-	18.5	
225M	45	45	30	22	
250M	55	55	37	30	
280S	75	75	45	37	
280M	90	90	55	45	
315S	110	110	75	55	
315M	132	132	90	75	55
315L1	160	160	110	90	75
315L2	200	200	132	110	90
355S1	(185)	(185)	160	132	
355S2	(200)	(200)			
355M1	(220)	(220)	(185)	160	110
355M2	250	250	200		132
355L1	(280)	(280)	(220)	(185)	160
355L2	315	315	250	200	(185)

Note: 1. The models with bracket are not preferred recommended type.

2. The figures 1、2 behind S、M、L refer to the different output power of the motors with the same frame and speed.

4.2 Motor Structure and installation type see table 3

Table 3

Frame	Structure and Installation Code (IM)
80~112	B3、B5、B6、B7、B8、B14、B34、B35、V1、V3、V5、V6、V15、V18、V35、V37
132~160	B3、B5、B6、B7、B8、B35、V1、V3、V5、V6、V15、V35、V37
180~280	B3、B5、B35、V1
315~355	B3、B35、V1

5. Motor Structure

5.1 Terminal box is on the top of the motor, with 3 or 6 connecting terminals. This series motor has 2 kinds of cable structure, rubber-sheathed cable wiring (or plastic cable wiring) and steel pipe wiring, each is with one grounding terminal in it, one or two outlets of M8 or above (depending on its requirement) will be produced. At the front edge between connection box body and its cover an o-sealing ring will be fitted

5.2 The exposed fasteners have raised casted pad to protect damage from bumping or rock falling

5.3 V-sealing ring is adopted at the rotation part of motor shaft for protection.

5.4The frame 80~225 Motors is fitted with closed bearing, but motors of frame 250 or above are equipped with open bearing and on-the-go oil filling/discharging device.

5.5Subject structure of the motor see figure 1, and the structure of terminal box see figure 2.

6. Explosion-proof highlight

6.1 The series motor highlights its explosion-proof feature. If the explosive mixture inside the motor explodes, the motor shall not be damaged or deformed to the extent that may affect its explosion-proof performance. The flame inside should not pass through conjunction plane to explode the flammable mixture outside the motor.

6.2 Components of the explosion-proof motor (such cover, bearing inner cover, connection box cover, connection box body etc) shall be tested with 1.5Mpa static pressure for 10S+2. The motor will be checked as qualified one only by without dripping in or after the test.

6.3 The length of the explosion-proof conjunction surface, clearance, roughness of the surface, the electric clearance between the exposed conductors, the electric clearance between bare conductor and metal casing all should be in accordance with GB3836.3-2021.

6.4 Spring washer is fitted to prevent the bolts releasing down from explosion-proof casing.

6.5 Frame, end closure, bearing inner cover, terminal box cover, terminal box body, connection bolt, terminal lug (or connection board), bearing, rubber seal ring all are explosion components.

6.6 Flameproof casing fixing bolts are guaranteed to have $\geq 800\text{Mpa}$ tensile strength and $\geq 640\text{MPa}$ yield strength.

7.Installation and usage



Warn!

Open the cover with power on is forbidden.
Handle the motor with care
Strong fall, impact, vibration will heavily damage bearing and flameproof component.
Fasten onto the lifting hook tightly if the motor is moved by the crane.

7.1 Preparation

7.1.1 Check and ensure the appearance of the motor is in good order. Check and ensure that the motor nameplate is consistent with actual requirement.

7.1.2 Inspect the motor's coal mining safety symbol and certificate No., ex-code, and ex-certificate No.

7.1.3 Check and guarantee parts of explosion-proof casing have been connected correctly and tightly.

7.1.4 Check and guarantee that all explosion-proof components are without any crack or defect, as that may affect their explosion-proof performance.

7.1.5 Check and measure the insulation resistance of the stator winding, and ensure that the resistance value is no less than $5M\Omega$.

7.2 Installation

7.2.1 Installation shall be performed by technician.

7.2.2 Spring coupling is recommended be used to drive machine.

7.2.3 Keep the motor shaft's center and driven machine shaft's center at the same level.

7.2.4 For the motor with feet, all the feet shall be fixed to sound and flat plane.

7.2.5 Power wires shall be neither too thin nor too long.

7.2.6 External diameter of the cable should fit bore diameter of the seal ring (Figure 3). Cable's min diameter is D1, max is D5; seal ring is made of rubber XH-21, specification and dimension see table 5 (concentric-ring of seal gasket can be stripped off to fit inner diameter of lead-in cable). The diameter gap should not exceed 1mm. Clamp the connection plug and ensure that there is no clearance between seal ring and power cable as well as between seal ring and connection box body, otherwise the motor will lose its flameproof function.(When the motor has 2 cable outlets, sealing ring size downshift for one gear but except for H80-132 motors. That is: H160-180 dual-outlet motor adopt the sealing ring of H80-132 single outlet; H200-225 dual-outlet motor's sealing ring is the same with H160-180 single-outlet's.)

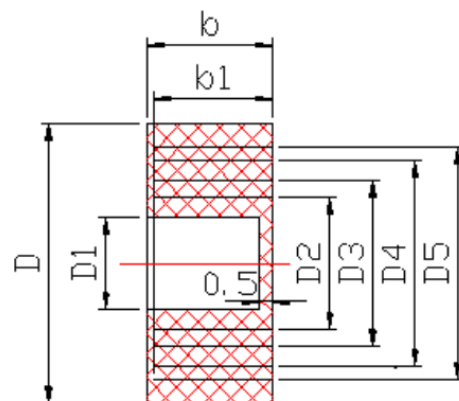


Table 4 (380/660V)

Frame	Cable	Sealing ring	D1	D2	D3	D4	D5	D	b1	b
80~132	Rubber-sheathed cable	Fig 3	φ14	φ20			φ25	φ42 -0.62	24	26
160~180			φ14	φ20	φ26	φ31	φ35	φ58 -0.74	24	26
200~225			φ20	φ26	φ32	φ38	φ42	φ72 -0.74	30	32
250~280			φ25	φ31	φ36	φ45	φ50	φ90 -0.87	36	38
315~355			φ40	φ46	φ50	φ56	φ64	φ105 -0.87	44	46

Table 5 (660/1140V)

Frame	Cable	Sealing ring	D1	D2	D3	D4	D5	D	b1	b
112~132	Rubber-sheathed cable	Fig 3	φ14	φ20	φ26	φ31	φ35	φ58 -0.74	24	26
160~180			φ20	φ26	φ32	φ38	φ42	φ72 -0.74	30	32
200~225			φ25	φ31	φ36	φ45	φ50	φ90 -0.87	36	38
250~280			φ40	φ46	φ50	φ56	φ64	φ105 -0.87	44	46
315~355			φ40	φ46	φ50	φ56	φ64	φ105 -0.87	44	46

7.2.7 The cable core shall be attached between arched washers, and thorn on the cable core can't be protruding in case of core damaging when pulling it out through cable entrance. The lead-in cable shall be fixed by connection board and arched washer.

7.2.8 To fit different supply voltage, different connection method should be chosen. For the connection box which has 6 terminals, connection way can be changed by connection strap. As one multi-core cable is introduced into one of the inlet holes, the blank cover of the other unused hole can't be removed; otherwise the motor will lose its explosion-proof function.

7.2.9 Motor will rotate clockwise viewed from DE if the terminals U,V,W are connected to power line phase A, B, C respectively. Otherwise the motor will rotate anti-clockwise.

7.2.10 Internal and external grounding screw bolts need to be grounded.

7.2.11 Correctly connect all wires, turn on power for no-load trial-operation. Only when the motor runs smoothly in the test-running, can it be put into load operation.

Warn!

1. Supply voltage fluctuation shall not go beyond the range 95% ~105% of the rated voltage.
2. Ground wire must be connected
3. Turn off the motor immediately when abnormal problem occurs.
4. Keep body and clothes far away from rotating parts of motor.

8.Maintenance and inspection

8.1 Examined and clean the motor periodically, ensure that no dust accumulated on motor casing, spraying with tap for cleaning is not allowed.

8.2 The permitted maximum temperature of bearing is 95°C during its operation (by thermometer method), inspect at least once every 2500-hour running (approximate half a year). Bearing lubrication grease shall be replaced when it is found to be spoiled. Before that the waste grease at bearing external cover, storage box, grease discharging device including oil tube and oil cup should be cleaned up, and clean the bearing with machine oil. No.2 Lithium-base lubricating grease for small-medium motor is recommended. Re-grease interval and mass see table 5 Bearing specification see table 6.

8.3 Turn the shaft by 180° with hand every 2 month for the motor which has been stored half year; the motor need to work for a period of time to make the lubrication grease equidistribution when the motor has been stored longer than half year.

8.4 Take care of the explosion-proof surface if the motor need to be dismantled. Frame H80~132 Motors have no internal and external shaft cover, so windshield should be removed at first, then remove the V-shape shaft sealing ring, knock down the fastener on front and rear end closure, and take out rear end closure together with the rotor and fan. Explosion proof plane of the motor has been painted with 204-1 rust protection grease when assembled.

8.5 Motor must be dried before use if the motor has been affected with damp, either by means of drying in the oven or short-circuit current. If dried in the oven the temperature should be increased gradually but not exceed 145°C. And when the motor adopt short-circuit method, it should be connected as short circuit whose input current is 0.6-0.8 times rated current. However the short-circuit method is not suitable if the motor is heavily damped, since it may cause the electrolysis.

8.6 When the winding need to be changed, please keep such data as the type size, wire gage, number of turns of the original winding firmly in mind. Contact us and ask for the date in case they are lost. Winding should not be optionally changed, otherwise some of the motor's properties may be deteriorated and even affect its running.

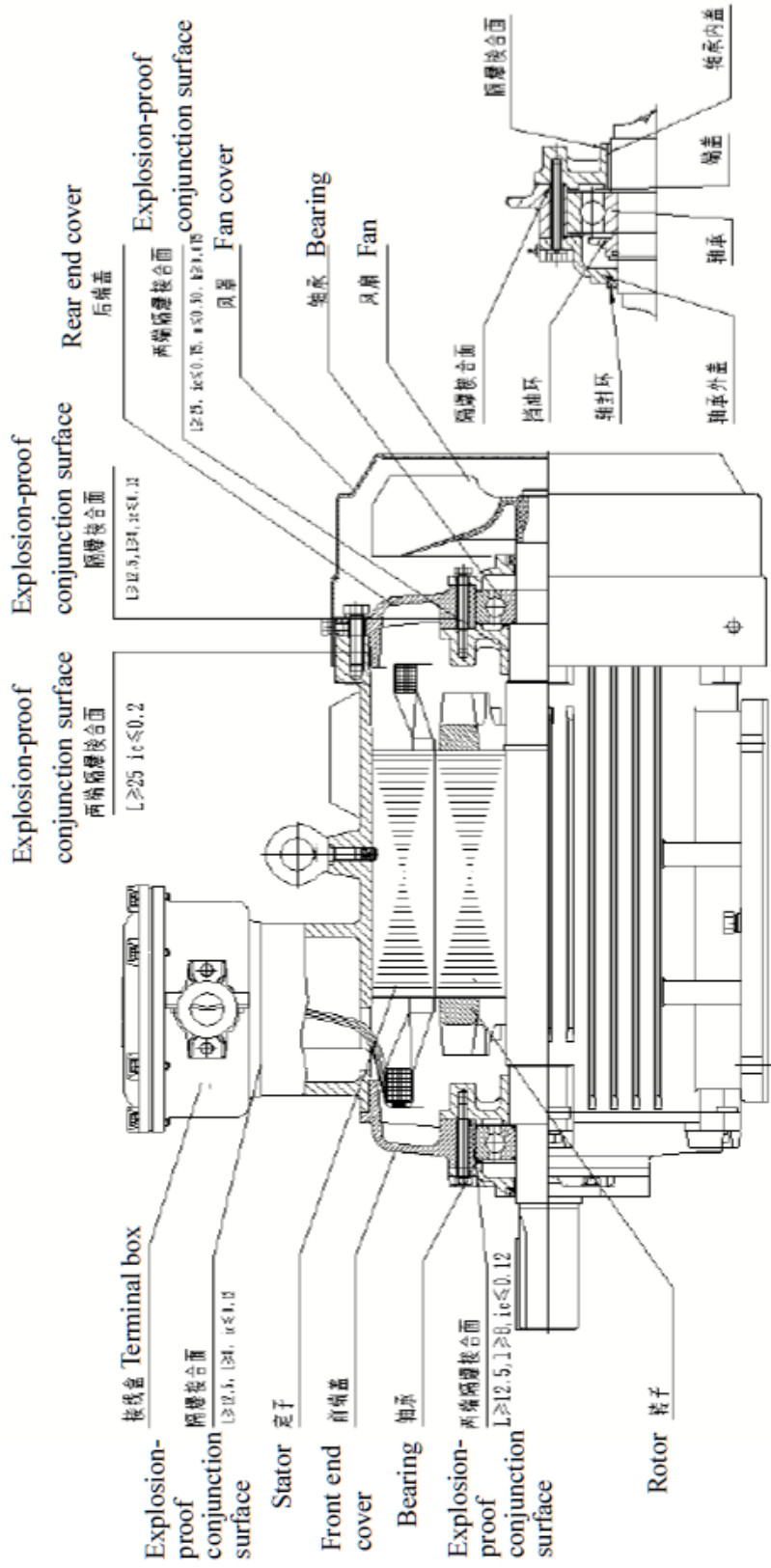
8.7 Explosion-proof components should be repaired, replaced, tested by technician following relevant technical standards.

Table 5: Lubrication Grease Content and Lifespan

Frame	Poles	Grease content (g)	Re-lubrication interval (h)
180	2	20	4200
	4	20	7000
	6,8	20	9000
200	2	25	3100
	4	25	6500
	6,8	25	8500
225	2	25	3100
	4	30	6200
	6,8	30	6200
250	2	30	2600
	4	35	6000
	6,8	35	8000
280	2	35	2000
	4	40	5500
	6,8	40	7500
315	2	30	2500
	4,6,8,10	36	2500
355	2	36	2500
	4	47	2500
	6,8,10	47	2500

Table 6: Bearing Type

Frame	Poles	DE	NDE
80	2,4,6,8	6204-2RZ	6204-2RZ
90	2,4,6,8	6205-2RZ	6205-2RZ
100	2,4,6,8	6206-2RZ	6206-2RZ
112	2,4,6,8	6206-2RZ	6206-2RZ
132	2,4,6,8	6308-2RZ	6308-2RZ
160	2,4,6,8	6309-2RZ	6309-2RZ
180	2	6311-2RZ	6211-2RZ
	4,6,8	6311-2RZ	6311-2RZ
200	2,4,6,8	6312-2RZ	6312-2RZ
225	2	6312-2RZ	6312-2RZ
	4,6,8	6313-2RZ	6312-2RZ
250	2	6313	6313
	4,6,8	6314	6313
280	2	6314	6314
	4,6,8	6317	6314
315	2	6317	6317
	4, 6,8,10	NU319	6319
355	2	6319	6319
	4, 6,8,10	NU322	6322



注: YEX3-160 两端隔爆接合面 $L \geq 25$, $ic \leq 0.75$, $m \leq 0.5$, $k \geq 0.075$

Sided explosion-proof conjunction surface

图2 电机主体结构 (B3)

Fig 1 Motor Structure(B3)

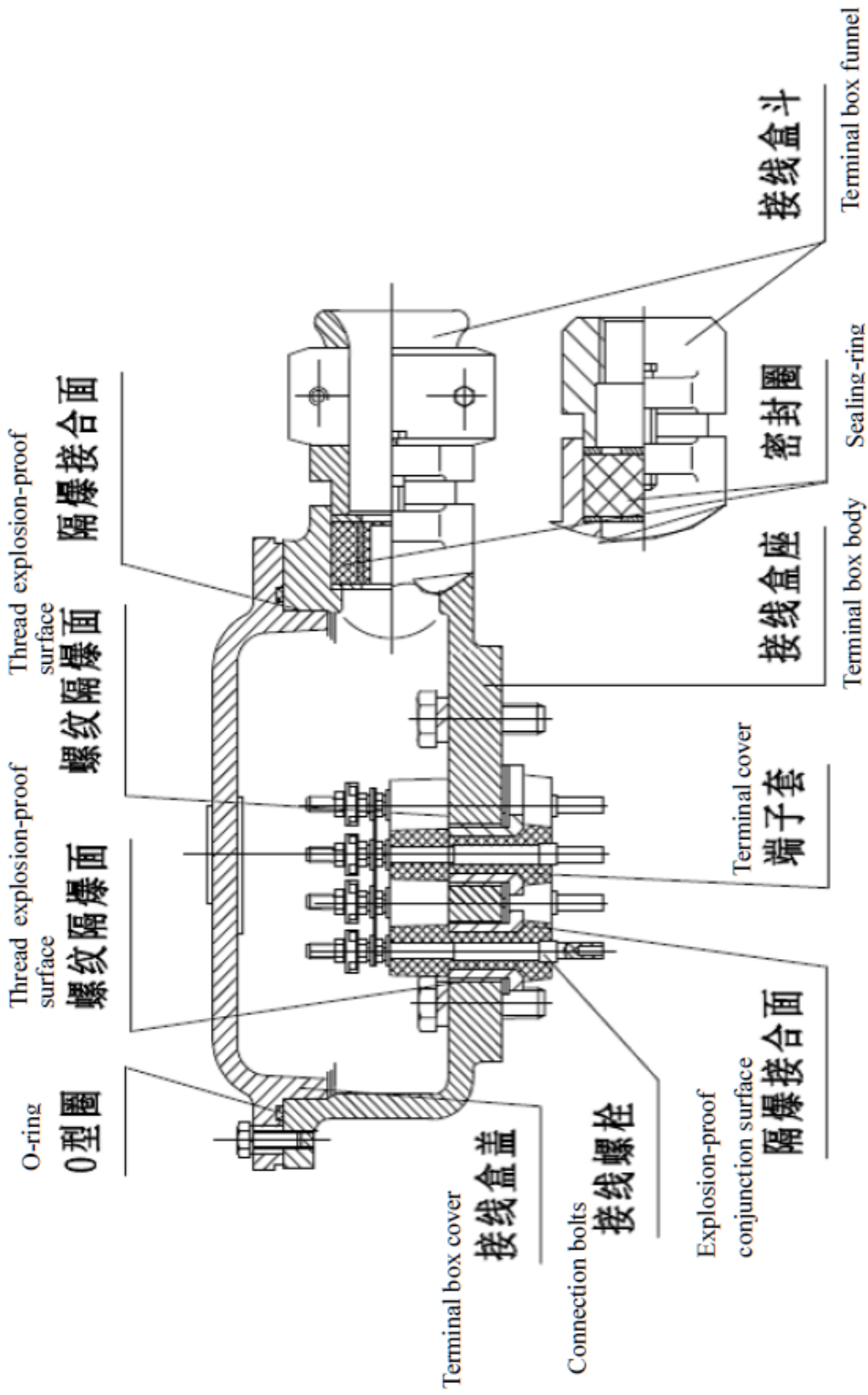


图2 接线盒结构

Fig 2 Terminal box Structure(B3)

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