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客户名称/Customer:

发行编号/NO.:

版本编号/Rev: \_

## 全封闭型压缩机技术规格书

HERMETIC COMPRESSOR SPECIFICATION

机型/Model: HSM150V1UFZ

客户承认栏/Accept Marking:

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安徽美芝压缩机销售有限公司

承认/Approved: \_\_\_\_\_

做成/Drafted : \_\_\_\_\_

## 1、适用范围 (Application)

压缩机型号 Model Name	HSM150V1UFZ
压缩机类型 Compressor Type	全封闭型电动压缩机 Hermetic Motor Compressor
空调器类型 A/C Type	冷暖兼用型空调器 Cooling & Heating A/C System
冷媒类型 Refrigerant Type	R22
最大冷媒充注量 Maximum Refrigerant Charged	0.9Kg Max
电机类型 Motor Type	单相诱导电机·运转电容型 Single Phase Induction Motor·PSC
电源类型 Power Source	单相 Single Phase 1φ-50Hz-220/240V
安全认证 Safety Approval	CCC

## 2、规格参数 (Specification)

汽缸容积 Displacement	15.1cm <sup>3</sup> /rev.
冷冻机油充注量 Oil Charged	4GSD/NM56EP-350ml
总重量 (含冷冻机油) Weight (Oil Included)	11.5Kg
电机极数 Pole Numbers	2 极/Poles
绕组阻值 (20℃时) Coil Resistance (at 20℃)	主绕组                      辅绕组 Main: 3.88±5%Ω    Aux.: 3.95±5%Ω
堵转电流 Locked Rotor Amps	(at 1φ-50Hz-240V) 20.5±10%    A
运转电容 Ruing Capacitor	25μF-370V
绝缘等级 Insulation Grade	E 级/Grade
排气管内径 I. D. of Discharge Pipe	8.1 mm
吸气管内径 I. D. of Suction Pipe	12.9 mm

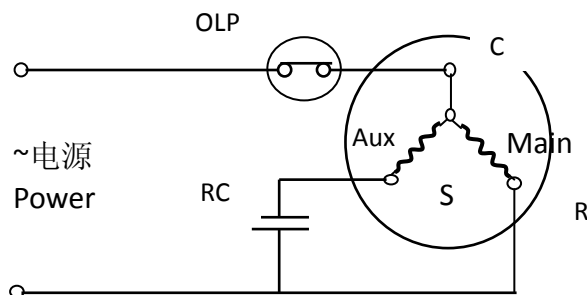
### 3、额定性能规格 (Rated Performance Parameters)

额定能力 Rated Capacity	2665/2710 ±5% W
额定输入功率 Rated Input Power	815/835 ±5% W
额定输入电流 Rated Input Current	3.67/3.50 ±5% A
能效比 COP	327/325 ±5%
绝缘阻抗 Insulation Resistance	≥20 MΩ 封入氮气时/Nitrogen Charged
绝缘耐压/泄漏电流 Withstanding Voltage/Leakage Current	AC1500V-1min / 10 mA MAX
残留水分量 Residual Moisture	冷凝法 ≤160mg
含尘量 Residual Impurities	≤45 mg

#### 测定条件 (Rating Condition)

电源 Power Source	1φ-50Hz-220/240V
冷凝温度 Cond. Temp.	54.4℃
蒸发温度 Evap. Temp.	7.2℃
吸气温度 Return Gas Temp.	35℃
过冷却温度 Liquid Temp.	46.1℃
排气温度 Discharge Tube Temp.	85℃ (Forced Air)

### 4、电气配线接线图 (Wire Connection Figure)



S: START (辅绕组 Aux Winding)  
R: RUN (主绕组 Main Winding)  
C: COMMON (共通)  
RC: 运转电容 Run Capacitor  
OLP: 外置保护器 Overload Protector

## 系统使用条件(Limit of System Application)

NO.	项目 Item	标准状况下 Standard Cond.	极限状况下 Limit Cond.	说明 Note
1	排气压力 Discharge Temp.	2.06MPa Max	2.6MPa Max	详细压力使用范围见附纸! See the attached chart of limitation of operation pressure.
2	吸气压力 Suction Temp.	0.29~0.59MPa	0.1~0.69MPa	
3	压缩比 Compressing Ratio	8 Max	8 Max	
4	电机绕组温度 Motor Coil Temp.	100°C Max	125°C Max	
5	排气温度 Discharge Temp.	100°C Max	115°C Max	

### 注意事项 Application Notice:

1. 整个运行过程中无液压缩发生。  
No liquid refrigerant go back to compressor during the whole time.
2. 连续运转时（包括除霜、除湿）压缩机底部温度-冷凝器中部温度需大于等于 5°C 以上；  
When continuous running (include defrost and dehumidify), compressor bottom temp. subtract condensing temp. should be more than 5°C.  
断续运转时压缩机底部温度-冷凝器中部温度需大于等于 0°C 以上。  
When intermittent running, compressor bottom temp. subtract condensing temp. should be more than 0°C.
3. 断续运转，每一周期 5 分钟以上，开 2 分钟以上，停 2 分钟以上。  
When intermittent running, each cycle should be longer than 5 minutes. (On: over 2 min, Off: over 2 min)
4. 运转电压波动允许范围 220V-10%~240V+10%(198~264V)。  
The supply voltage should be 220V-10%~240V+10%(198~264V)
5. 高压侧和低压侧压力需保持平衡后才能启动。  
Pressure should be balanced between high and low pressure side.
6. 运转过程中不能有异常噪音发生。  
In operation, abnormal noise is not allowed.
7. 最大允许倾斜角度：5°。  
Tilt angle should be less than 5°.
8. 当压缩机以下状态时，需确认油面水平：  
Oil level confirmation should be tested at:
  - 1) 超负荷、低负荷时；  
Overload and low load running;
  - 2) 冷媒沉积启动时；  
Refrigerant soaking starting;
  - 3) 除霜开始、恢复时；  
Defrost starting and resuming;
  - 4) 超过最长配管时；  
Connection pipe over 15m;
  - 5) 超过最大落差时；

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Elevation over 5m;

使用带视窗镜的压缩机进行确认;

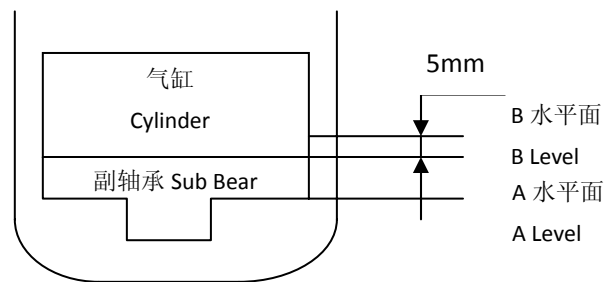
Oil level confirmation test performed with side glass compressor:

1、在稳定运转过程中，油面需在水平线 B 以上;

At steady running: oil level should be higher than B level.

2、在启动的 3 分钟以内，油面需在水平面 A 以上;

Within 3 minutes at starting: oil level should be higher than A level.

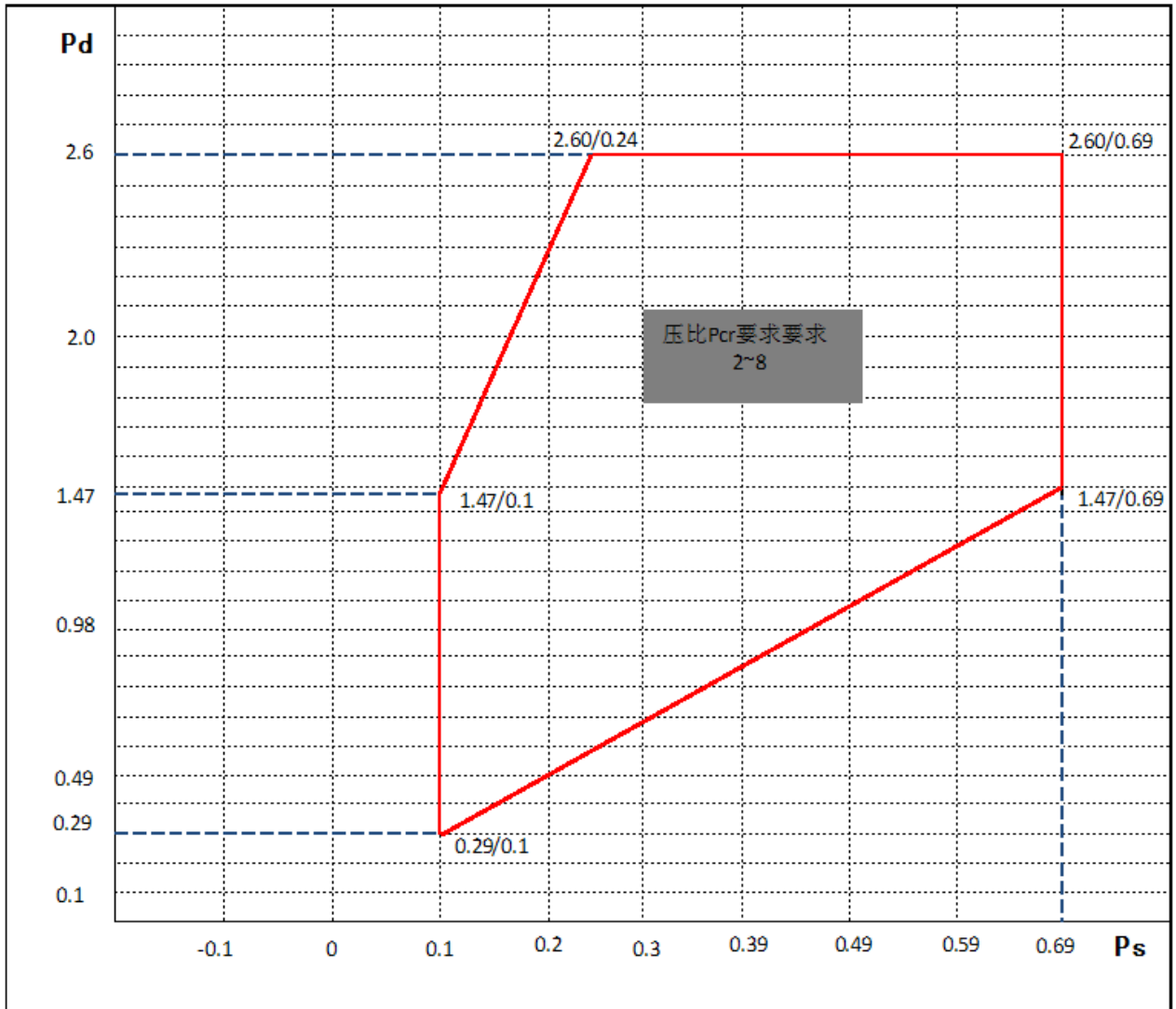


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## 其他注意事项 Other Application Notice

1. 不要给吐出管、吸入管施加弯曲的力，强制其弯曲。  
而且，对于始动、运转停止以及运输搬运等时所受冲击，配管设计时，各管许容应力如下：始动、停止时=30N/mm<sup>2</sup> 以下，运转时=20N/mm<sup>2</sup> 以下。  
Don't provide any force on discharge & suction pipes. The piping stress should be less than 30N/mm<sup>2</sup> at starting & stopping, and less than 20N/mm<sup>2</sup> at running when designing the piping.
2. 压缩机不允许横置、倒置，在搬运时不允许跌落。  
Do not put a compressor on its side or turn it over. And do not fall it off when moving.
3. 绝对不允许空气中运转。  
COMPRESSING AIR IS NOT PERMITTED.
4. 压缩机密封塞拔除后，请尽快使用，不要将压缩机长时间放置。  
Please assemble the compressor in your Air Conditioner rapidly after removing the plugs.  
Don't place the compressor in air for a long time.
5. 电气品要使用弊社所指定的规格同等品。  
Please use the accessories indicated by Our Company.
6. 冷媒量超过规定量时，需另行协商决定压缩机规格。（此时要考虑增加储液器、油加热器）  
When the amount of refrigerant charged in the Air Conditioner is over the max amount allowable, compressor specification should be discussed. (install additional accumulator, oil heater, etc.)
7. 冷媒填充原则上从高压侧开始实行。  
Refrigerant must always be filled from the higher side of the refrigeration cycle.
8. 避免因误配线发生逆转。（若发生逆转，则压缩机不能再使用）  
Avoiding compressor running in reverse caused by connecting electrical wire incorrectly.  
(Don't reuse the compressor after running in reverse.)
9. 压缩机不得露天存放或存放在腐蚀性空气中如化学仓库等。  
The compressor should be kept out of storing in open storage or corrosive atmosphere such as in a chemicals storage and so on.
10. 压缩机壳体表面不容许配线或类似物接触压缩机表面。  
Do not allow electric cables or the like to touch compressor directly.
11. 必须有适当的防湿、防尘处理以防止水滴，灰尘进入压缩机  
To avoid water droplets and dust into the compressor , moisture-proof or dust-proof measures must be take.
12. 分体式空调最长配管不超过 15m，配管的高低落差最大 5m。  
For split type Air Conditioner, the maximum piping length should be 15m, and elevation difference should be within 5m.
13. 禁止使用 R22 之外的冷媒。  
Do not fill refrigeration cycles with other refrigerant except R22.
14. 请不要裸手触摸运行中或刚停机正处于高温的压缩机，当心烫伤。  
Do not touch the compressor with bare hands during operation or immediately after stoppage.  
The compressor is at a high temperature. There is the danger of burns.
15. 维修保养设备时必须配戴防护眼镜。由于焊枪温度过高，拆卸配管时，当心会有冷媒、油的溅出而导致烫伤或进入眼中。  
Wear safety goggles when servicing the unit. When removing the tubes by heating it with a burner, there is the danger of burns or eye injury if the refrigerant and/or oil remaining in the tubes is emitted.

**压缩机运行范围 Operation Limitation of Compressor 单位MPa (表压)**  
**Unit : MPa (G)**



备注：压缩机稳定运行时需满足上图运行范围  
 Pd: 冷凝压力 condensing pressure

Pcr : 压缩比 compressing ratio  
 Ps: 蒸发压力 suction pressure

## 图纸/附件清单 Drawing/Accessories List

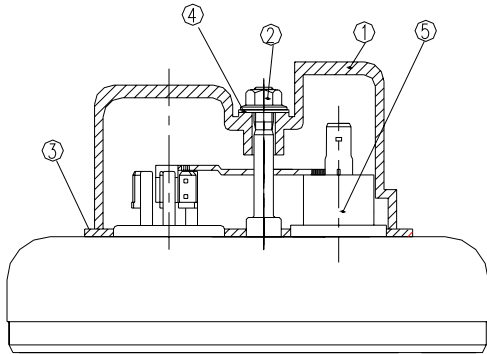
(See the Attached Pages)

NO	名 称	数量 (Pieces)	图 号 (Drawing No.)	备注
1	电装品图 DRAW EXTER	1	MC347204Gr	
2	端子盖 TERMINAL COVER	1	MC33721610	
3	端子垫片 TERMINAL PACKING	1	MC33721910	
4	端子螺母 TERMINAL NUT	1	MC33300810	
5	螺母垫片 NUT PACKING	1	MC33720810	
6	橡胶垫 RUBBER CUSHION	3	MC33910210	
7	外保护器 EXTERNAL OVERLOAD PROTECTOR	1	BF750-MH MC35920110	
8	接地螺钉 EARTHING HEX	1	MC33300610	Note: GMCC Not Deliver; 客户自备。
9	接地螺钉垫片 WASHER FOR EARTHING BOLT	1	MC33300710	Note: GMCC Not Deliver; 客户自备。

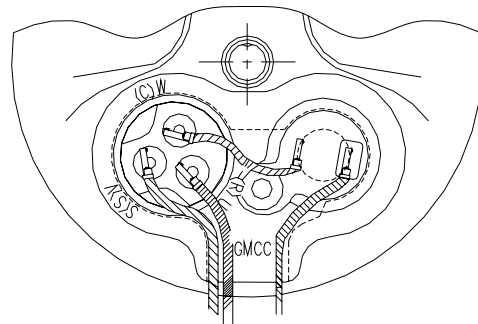
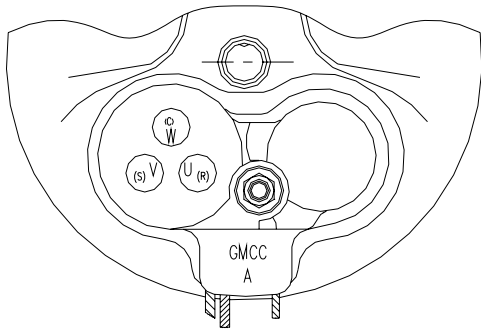


# ELE COMPONENTS

Drawing No. MC347204Gr



⑤	OVER LOAD RELAY	MC359210GR
④	NUT PACKING	MC33720810
③	TERMINAL PACKING	MC33721910
②	TERMINAL NUT	MC33300810
①	TERMINAL COVER	MC33721610
PART NO	TITLE	DRAWN NO

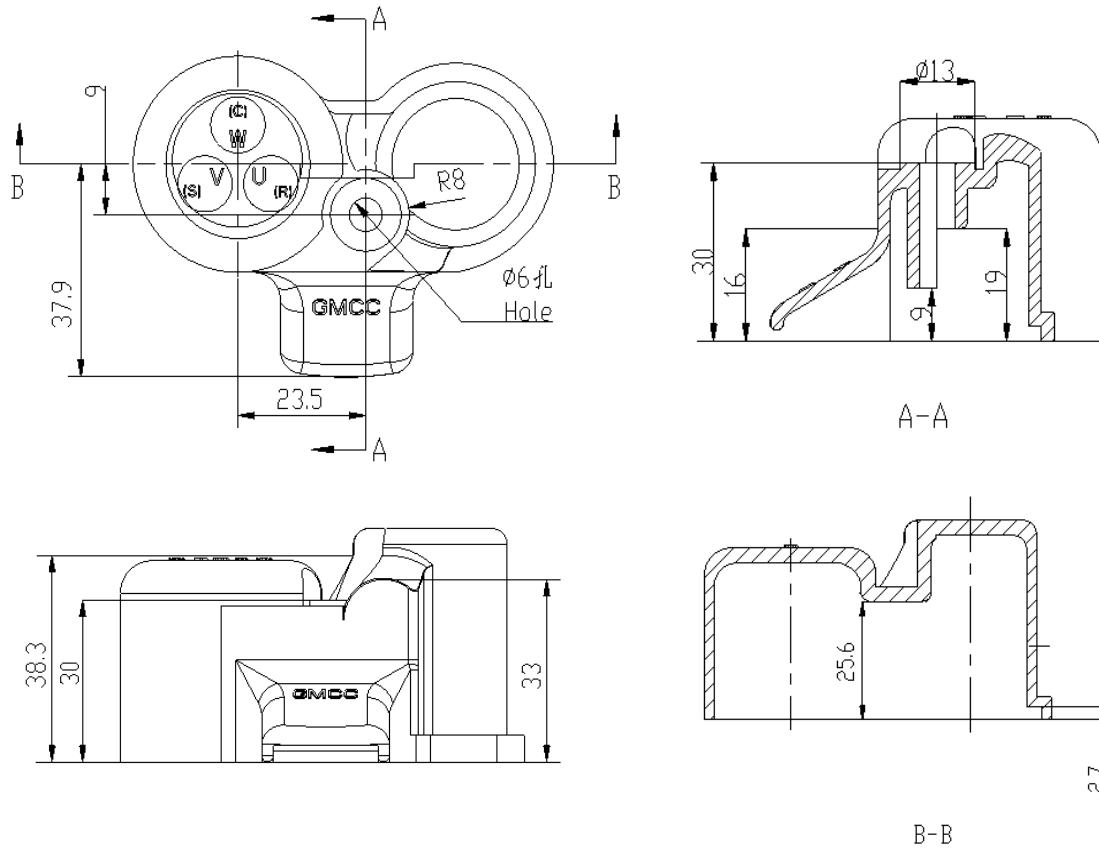


## NOTES

Tightening torque of terminal nut:  $1.2 \pm 0.2 \text{ Nm}$

# TERMI COVER

Drawing No. MC33721610



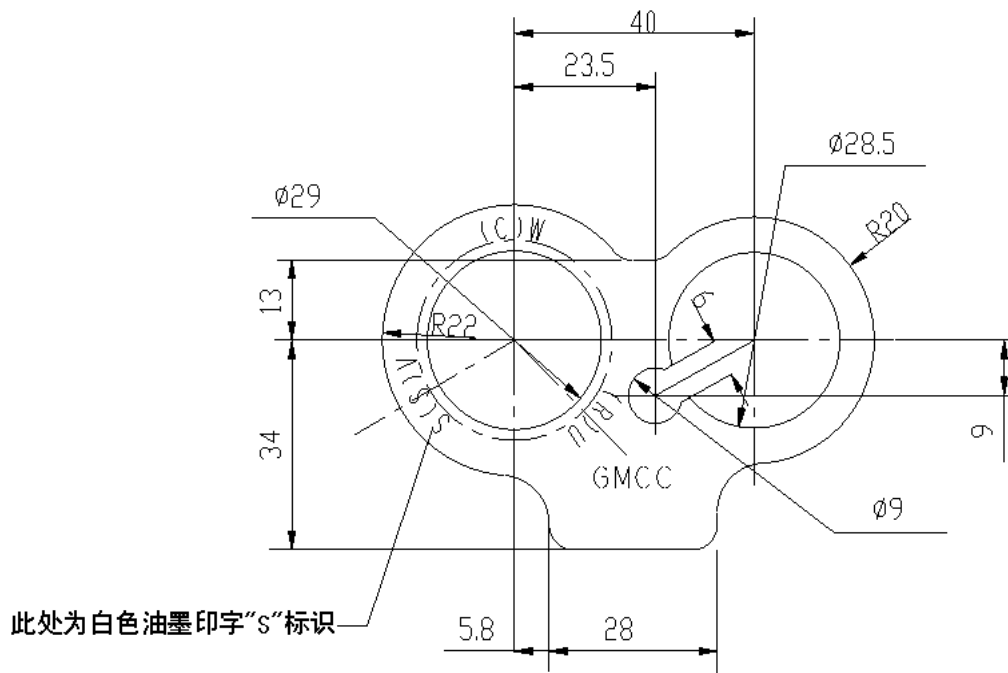
NOTES

MATERIAL: MATERIAL: POLYBUTYLENE TEREPHTHALATE or BULK MOLDING COMPOUND or POLYCARBONATE

COLOR: BLACK

# TERMINAL PACKING

Drawing No. MC33721910



## NOTES

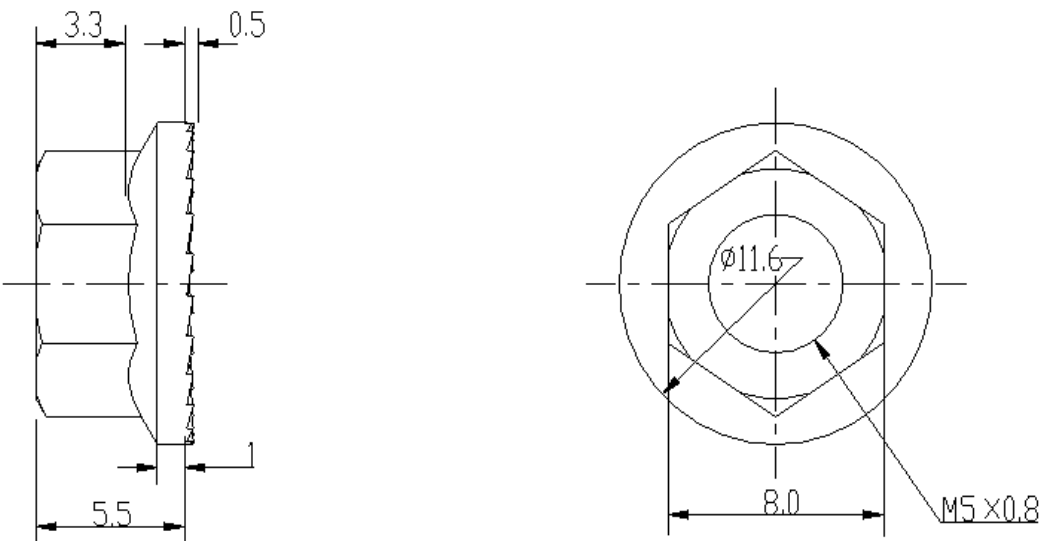
MATERIAL:SI

THICKNESS: 1mm

COLOR:BLACK

# TERMINAL NUT

Drawing No. MC33300810

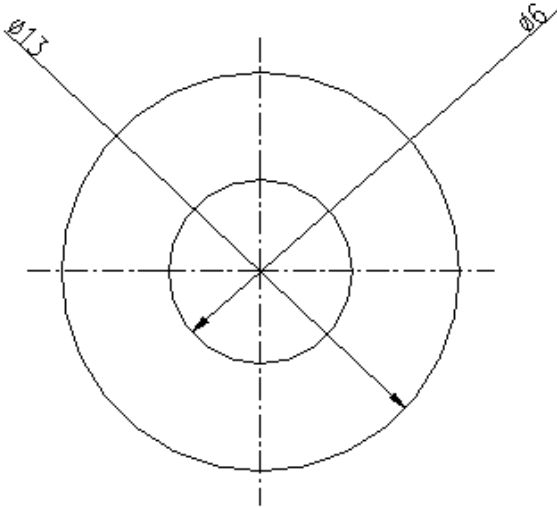


NOTES  
MATERIAL: SWCH12A  
TREATMENT: WITHOUT HEXAVALENT CHROMIUM COMPOUNDS (Ep-Fe/Zn 2-CM 2镀锌处理)

# NUT PACKING

Drawing No. MC33720810

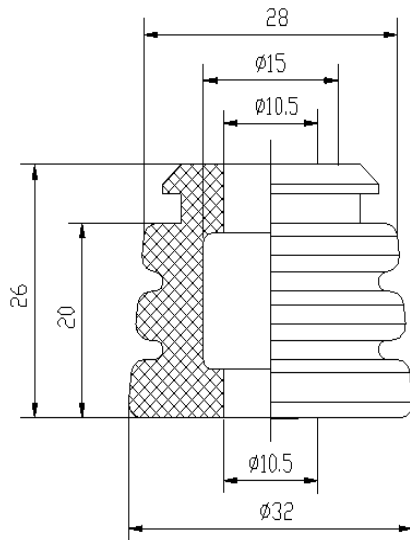
**THICKNESS : 1mm**



NOTES  
MATERIAL:SI  
COLOR:BLACK

# RUBBER CUSHION

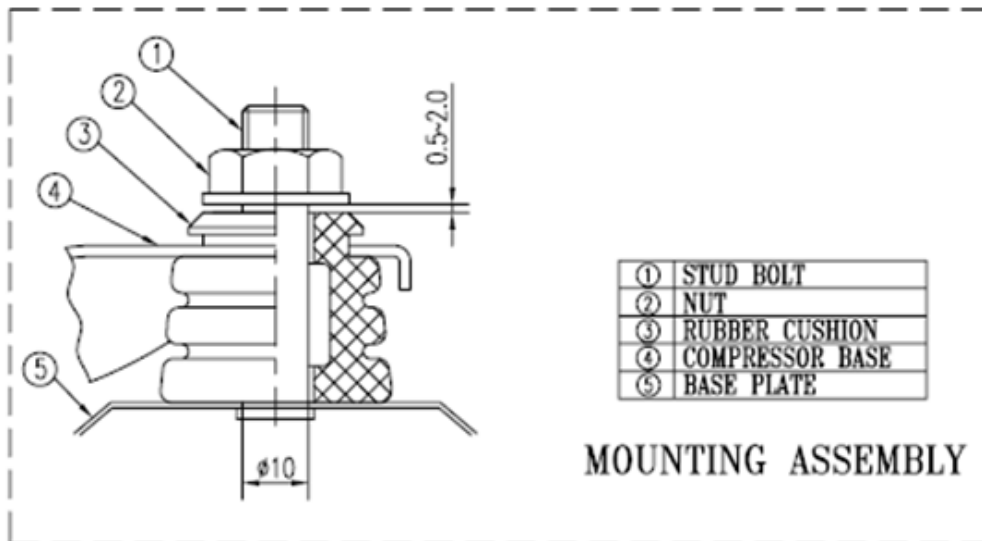
Drawing: MC33910210



## NOTES

MATERIAL: EPDM

HARDNESS: HS=38

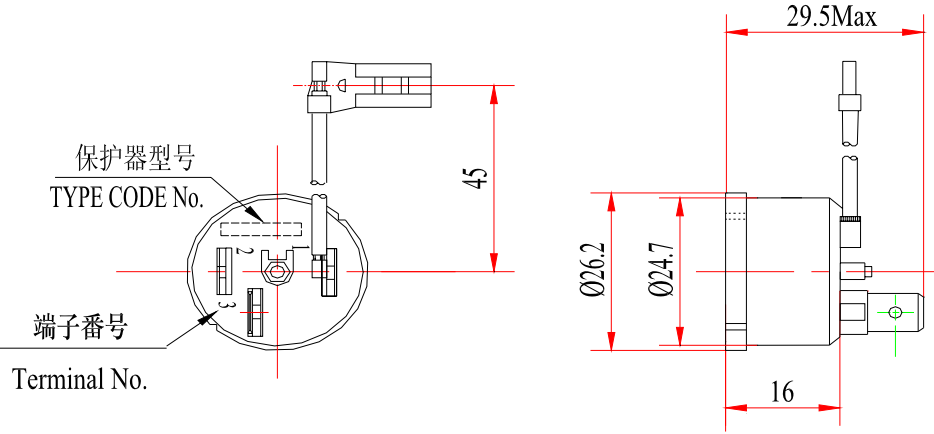


MOUNTING ASSEMBLY

附 7: 保护器 (OVERLOAD PROTECTOR)

**External Overload Protector**

外置保护器  
MC35920110



制造厂: 佛山通宝股份有限公司

Manufacturer: Foshan TongBao Co., Limited

型名Model: B × ×× - ××× - ××××

制造厂: 苏州华旗航天电器有限公司

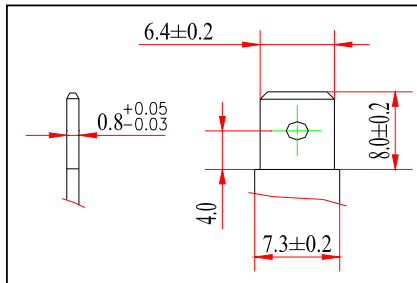
Manufacturer: Suzhou Huazhan Space Appliance

型名Model: B F××× - ××

☆注: 根据型号不同, 端子插片位置可在2或3处。

☆Note: Terminal may be at the position of "2" or "3" because of different Model.

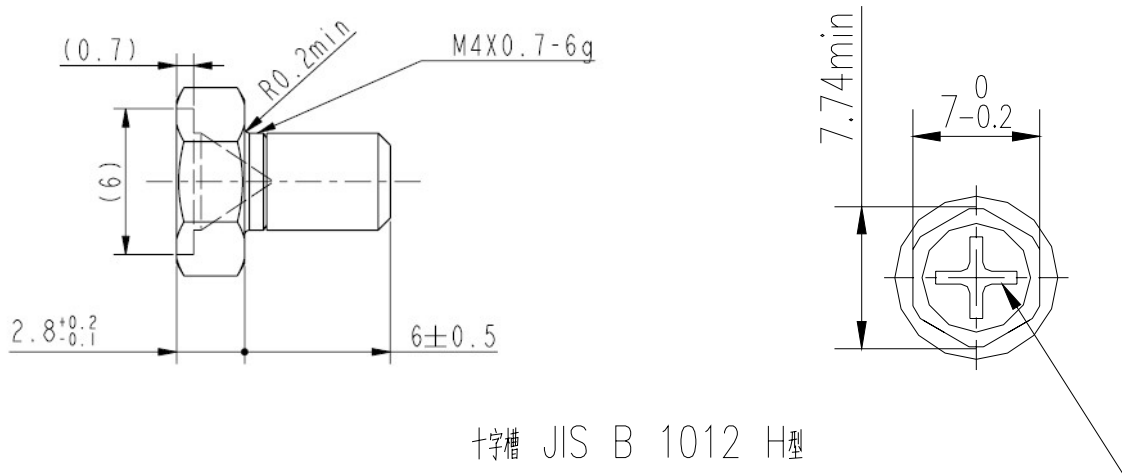
端子插片尺寸(Terminal)



MC35920	110	BF750-MH	135±5	65±11	
图号 Drawing No.	型号 Model	动作温度 Trip Temp.(°C)	复位温度 Reset Temp.(°C)	备注 Remarks	

# EARTHING HEX BOLT

Drawing: MC33300610



十字槽 JIS B 1012 H型

Cross Recesses JIS B 1012 Type H

NOTES

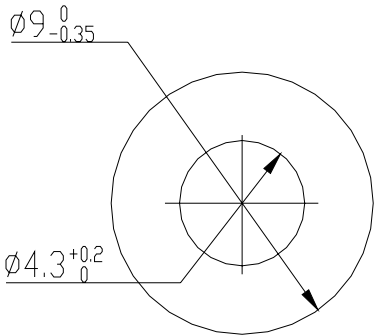
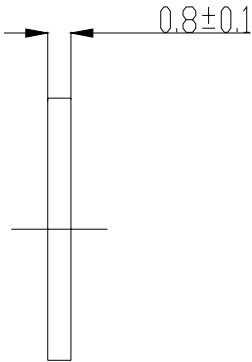
MATERIAL:H68

TREATMENT: ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)



# WASHER FOR EARTHING BOLT

Drawing: MC33300710



NOTES

MATERIAL:H62

TREATMENT: ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)

附 10: 外形图 (DRAW EXTER)

