

上海全锐电器设备有限公司
产品规格书

Shanghai Quanrui Electrical Equipment Co.,Ltd.
Product Specification

Part Name: QR220FLW2

设计_____

审核_____

Designer by:

Auditor:

认可_____

Confirmed by:

1、电机规格 Motor model:QR220F LW2

- 1.1 额定电压 Rated voltage: 230V
- 1.2 额定频率 Rated frequency: 50Hz
- 1.3 绝缘等级 Insulation Class: B
- 1.4 运行方式 Mode of operation: 连续工作制 continuous duty
- 1.5 极数 Pole: 2 极 poles
- 1.6 额定电容 Rated capacitor: 2.5 μ F/450VAC
- 1.7 旋转方向 Rotation Direction:
从转子端看, 顺时针方向旋转 CW viewing from rotor side.
- 1.8 输入功率 Input power: 77 \pm 10%W
- 1.9 额定转速 Rated speed: 2700 \pm 100r/min
- 1.11 额定电流 Rated current: 0.37 \pm 10%A
- 1.12 温度保护装置 Temperature protection device: SO1 125 $^{\circ}$ C
- 1.13 结构型式 Construction: 外转子 External rotor
- 1.14 防护等级 IP degree: IP44
- 1.15 重量 Weight: 1.2KG
- 1.16 动平衡精度等级 Balancing degree: G6.3
- 1.17 储藏环境温度 Storage ambient temperature: -40 $^{\circ}$ C — +80 $^{\circ}$ C,
相对湿度 relative humidity: 70%, 通风良好 with good ventilation.
- 1.18 使用寿命 Operation life:
正常情况下大于 25000 小时 By normal operation, more than 25K hours

2、电机特性 Motor characteristic

2.1 线圈电阻(环境温度 25 $^{\circ}$ C)

Winding resistance(ambient temperature 25 $^{\circ}$ C)

引出线颜色 Cable color	线圈电阻(欧姆) Winding resistance	容 差 Tolerance
黑—兰 Black—Blue	76.78	\pm 10%
兰—棕 Blue—Brown	92.36	\pm 10%

2.2 负载特性 Load characteristic

档 位 Level	电 压 (V) Voltage	频 率 (Hz) Frequency	电 流 (A) Current	输 入 功 率 (W) Power Input	转 速 (r/min) Speed
	230	50	0.37 \pm 15%	77 \pm 15%	2700 \pm 10%

3、技术要求

Technical Requirements

3.1 绝缘电阻 Insulation resistance

电机定子绕组在热态或温升试验后, 其对机壳绝缘电阻应不低于 $100\text{M}\Omega$, 电机湿热试验后, 绝缘电阻不低于 $10\text{M}\Omega$ 。

After the motor stator and winding get heated, or after the temperature rise test, its motor housing insulation resistance is not less than $100\text{M}\Omega$. And motor insulation resistance is not less than $10\text{M}\Omega$ after humidity heat test.

3.2 电气强度 Electrical strength

定子绕组与机壳间外加 50Hz 近似正弦波的电压 1500V 持续 1min 或 1800V 持续 1S 无击穿闪烁现象(泄露电流小于 5mA); 在潮态时, 应经受 1275V, 持续 1min 无击穿闪烁现象。

With a force from 50Hz, 1500V voltage similar like sine wave for a duration of 1 minute, or 1800V continuously for a second, stator winding has no disruptive spark (Current leakage less than 5mA); In the humidity environment, the motor can withstand 1275V, and no disruptive spark for a minute.

3.3 匝间绝缘试验 Turn to turn test

电机定子绕组应能承受匝间绝缘耐冲击电压试验而无击穿, 试验电压(峰值)为 1800V。

Motor stator winding can withstand turn-to-turn test and Impact resistance voltage test without breakdown impact. Test voltage(peak value) is 1800V.

3.4 电机在实际冷态和热态稳定后, 施加 90%-110%额定电压, 带实际负载应能正常起动和工作。

After the actual cold and hot state, and motor become stable, under the rated voltage 90-110%, motor is able to start correctly and operate under actual load.

3.5 温升试验 Temperature rise test

在额定电压, 额定频率(环境温度不超过 40°C 的条件下)带实际负载运行, 热稳定后绕组温升(电阻法)不超过 70K。

Under rated voltage, rated frequency(ambient temperature not more than 40°C) and with actual load, after heat state, temperature rise less than 70K

3.6 电压波动特性 Voltage fluctuation characteristic

在额定频率下, 当外加电压在额定电压的 $\pm 10\%$ 范围内波动时, 电机仍能正常运转, 无异常。

Under rated frequency, if the voltage fluctuate in the range of $\pm 10\%$, motor is still able to operate correctly.

3.7 噪声 Noise

风机在空载运转时距离风机水平距离 1 米时测得的 A 计权声功率级的噪声值不超 70dB。

In no-load operation, noise level is not more than 70dB in the distance of 1 meter.

3.8 风轮径向跳动和端面跳动不大于 1mm

Fan radial and facial runout are not more than 1mm.

3.9 电机轴向间隙：0.2-1.5mm

Motor axial clearance: 0.2-1.5mm

3.10 外观 Aspect

各部位无划伤，脏污，锈斑；接插件牢固，无松脱；线色符合要求，铭牌清晰正确，粘贴牢固，电机转子外壳电泳漆处理

No scratch, dirty spot, rusty spot; Secure connector. Right wire color. Clean and right label, sticked securely. Motor rotor housing is well treated by electrophoresis painting.

4、使用条件 Operation condition

4.1 环境温度 Ambient temperature: -25°C — $+60^{\circ}\text{C}$

4.2 相对湿度 Relative humidity : Less than 95%

4.3 使用状态 Application Postion

Horizontal position of built-in motor, cord downward direction

Vertical position of built-in motor, cord upward direction

5、主要零件材料

Main component material

项 目 Item	材 料 Material
硅钢片 Silicon lamination	B50A600
定子座 Stator housing	压铸铝合金 casting aluminium
漆包线 lacquered wire	聚酯亚胺/聚酰胺亚胺复合漆包铜圆线 Q (ZY/XY) -2/200℃ Polyester-imide / polyamide imide enamelled round copper wire Q(ZY/XY) -2/200℃
轴 Shaft	3Cr13
引出线 Cable	四芯护套线 Four core sheathed cable
轴承 Bearing	NMB 606ZZLY121
叶轮材料 Impeller material	PA66+GF25%
阻燃等级 Flame Rating	UL94V-0

6、未尽事宜依据:

All the other technical items not mentioned are in conformity with:

GB/T 5171-2002
《小功率电动机通用技术条件 General technical requirements for small power motors》

GB /T 12350-2009
《小功率电动机的安全要求 Small power motors safety requirements》

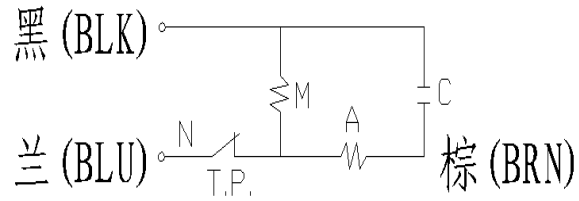
7、构造 Construction

其他外观构造参照附加图面。

Other outer construction please refer to the attached picture:

接线原理图

Wiring diagram



风量—静压曲线图

Air volume - Static pressure curve

环境温度：16℃ 大气压：1028Hpa

ambient temperature: 16℃

Atmospheric pressure: 1028Hpa

