

EC180-A800-001 074-05S-F-502

物品号 (Material no.) : 2000402105

编号 (Item no.) : 8100-1-00491

EC 轴流风机

EC Axial Fan

杭州 顿 力 风 机 有 限 公 司

HANGZHOU DUNLI MOTOR FANS CO., LTD.

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|                        |                              |
|------------------------|------------------------------|
| 型号 (Model No) :        | EC180-A800-001 074-05S-F-502 |
| 客户代码 (Customer Code) : | /                            |
| 版次 (Version No) :      | A/0                          |

客户确认/日期 (Customer Approval/Date) :

换 版 记 录 ( Description of Revision ) :

| 版本号<br>Version No. | 换版原因<br>Notes & Remarks | 换版内容<br>Contents | 修订人<br>Revised by | 日期<br>Date |
|--------------------|-------------------------|------------------|-------------------|------------|
| A/0                | 新版/New                  | 无/None           | MPJ012281         | 2025.11.05 |
|                    |                         |                  |                   |            |
|                    |                         |                  |                   |            |

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额 定 参 数 (Nominal Data) :

|                                    |                              |         |
|------------------------------------|------------------------------|---------|
| 型号 (Type)                          | EC180-A800-001 074-05S-F-502 |         |
| 电机 (Motor)                         | EC180-120M                   |         |
| 相制 (Phase)                         |                              | 3~      |
| 额定电压 (Nominal voltage)             | VAC                          | 380     |
| 电压范围 (voltage range)               | VAC                          | 380-480 |
| 频率 (Frequency)                     | Hz                           | 50/60   |
| 工作温度 (Operating temperature range) | °C                           | -25~+60 |
| 声压级噪音 (Sound pressure level Noise) | dB(A)                        | 89      |
| 最大静压 (Max. back pressure)          | Pa                           | 320     |

|                                |       |      |      |
|--------------------------------|-------|------|------|
| 数据状态 (Type of data definition) |       | fa   | ml   |
| 转速 (Speed (±10%))              | r/min | 1150 | 1150 |
| 输入功率 (Power input (±16%))      | W     | 2670 | 3500 |
| 电流 (Current draw (±16%))       | A     | 4.12 | 5.4  |

数据状态(Definition of Data):  
fa - 放空状态(Running at free air)  
ml-最大负载点(Max load)  
me-最大效率点(Max efficiency)  
cs-客户要求(Customer specified)  
cu-客户机箱中(Customer unit)  
rt-出厂测试数据(Routine testing)

1.根据ISO 13347, 该轴流风机噪声值在距离面板圆筒面1m处测试。测试在顿力实验室的测试条件及工装下进行, 可能因安装条件而异。(According to ISO 13347, sound pressure value of this fan is measured at 1 meter away from the fan nozzle. The tested values are measured under the specified conditions of Dunli lab, and the tested results might be different due to user's installation conditions.)

Erp 能 效 数 据 (Data according to ErP Directive) :

|                                | Actual 2015    Req.2015 |       | Actual 2026    Req.2026 |       |                            |                            |
|--------------------------------|-------------------------|-------|-------------------------|-------|----------------------------|----------------------------|
| Installation category          | A                       |       | A                       |       | Power consumption $P_{ed}$ | W    3531.1                |
| Efficiency category            | static                  |       | static                  |       | Air flow $q_v$             | m <sup>3</sup> /h    21010 |
| Overall efficiency $\eta_{es}$ | 55.9%                   | 37.1% | 59.3%                   | 45.3% | Pressure increase $P_{fs}$ | Pa    322                  |
| Efficiency grade N             | 58.7                    | 40    | 64.0                    | 50    | Speed                      | r/min    1151              |
| Variable speed drive           | yes                     |       | yes                     |       | C guard                    | 1.06877                    |

Data obtained at optimum efficiency level.  
The ErP data is determined by using a motor-impeller combination in a standardized measurement setup.

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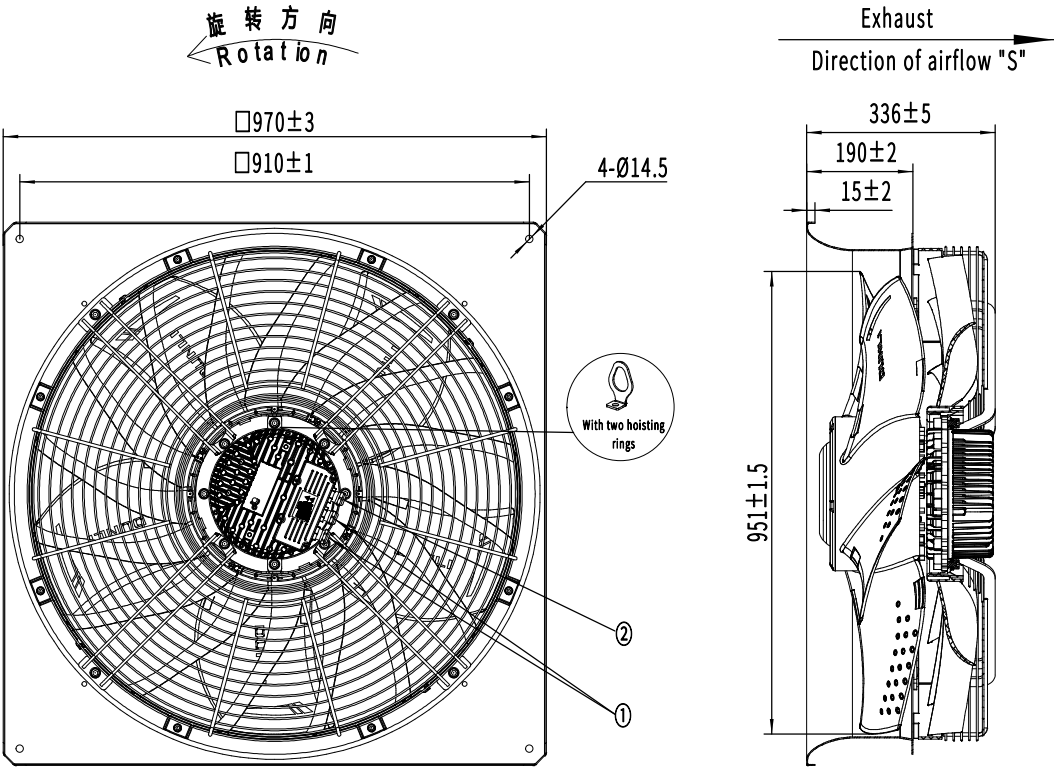
技术参数描述 (Technical description) :

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 风轮材质(Material of blade)                                 | 高分子复合材料 (Composite material)                                                                                                                                                                                                                                                                                                                                                                                                         |
| 电机磁材(Material of motor magnets)                         | 高强度漆包铜线 QZY-2 180°C/硅钢片/磁钢 (High strength enamelled wire QZY-2 180°C/Silicon steel/Magnet Steel)                                                                                                                                                                                                                                                                                                                                     |
| 轴承类型(Bearing type)                                      | 免维护滚珠轴承 (Maintenance free ball bearing)                                                                                                                                                                                                                                                                                                                                                                                              |
| 产品认证(Approval)                                          | CCC, CE                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 环保要求(Environmental requirements)                        | RoHS2.0、REACH                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 产品净重(Net weight)                                        | 59kg                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 控制方式(Control methods)                                   | 0-10VDC/PWM需调试 (need debug) /RS-485 MODBUS                                                                                                                                                                                                                                                                                                                                                                                           |
| 输出电源(Power output)                                      | +10VDC/+20VDC                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 技术特性(Technical features)                                | 软启动 (Soft start)                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 输出信号(Tach output)                                       | 5Pulse/R<br>FG端连接10k上拉电阻到上拉电压端 (上拉电压U推荐用5VDC或10VDC电压), R的阻值由 $R=U/1mA$ 确定; 风机启动后FG输出占空比50%的方波, 转速计算公式 $n=60f/To$ (f为FG信号频率) (To connect a pull-up resistance between and pull-up voltage( Recommended pull-up voltageU is 5VDC or 10VDC),the resistance value of R is determined by $R=U/1mA$ ;FG will output a 50% duty cycle square signal once the motor started,the speed of motor is " $n=60f/To$ "(n-speed,f-frequence of FG)) |
| 输出故障反馈 (Output fault feedback)                          | 继电器常开/常闭故障反馈 (Relay normally open/close fault feedback)                                                                                                                                                                                                                                                                                                                                                                              |
| 保护模式 (Protection functions)                             | 过温/过流/堵转保护/欠电压/过电压<br>(When there's any protection of over-temperature, locked-rotor,under-voltage,over-voltage,phase missing or current limit occurred and caused the motor stopped, the motor will restart automatically after the fault cleared)                                                                                                                                                                                  |
| 电磁兼容抗扰度(EMC immunity to interference)                   | According to EN IEC 61000-6-2工业环境(industrial environment)                                                                                                                                                                                                                                                                                                                                                                            |
| 电磁兼容辐射度(EMC interference emission)                      | According to EN IEC 61000-6-4工业环境(industrial environment)                                                                                                                                                                                                                                                                                                                                                                            |
| 防护等级(Degree of protection)                              | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 绝缘等级 (Insulation class)                                 | F                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 工作制类型 (Type of application)                             | S1                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 安装方式 (Installation Mode)                                | 轴水平或转子在底部,转子在顶部根据要求(Shaft horizontal or rotor on bottom; rotor on top on request)                                                                                                                                                                                                                                                                                                                                                    |
| 使用湿度范围 (Operating humidity range)                       | 最大相对湿度100% RH (Max. relative humidity 100% RH)                                                                                                                                                                                                                                                                                                                                                                                       |
| 海拔高度 (Operating altitude)                               | ≤1000m, 若海拔高度>1000m, 需参照GB/T 755 或EN60034-1标准<br>(When altitude higher than 1000m,please refer to GB 755/EN60034-1)                                                                                                                                                                                                                                                                                                                  |
| 大气压范围 (Atmospheric pressure range)                      | 80~110Kpa                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 运输/贮存环境要求 (Tansport/Storing environmental requirements) | 运输/贮存温度范围: -40°C~+80°C (Temperature range of transportation/storage: -40°C ~+80°C)<br>运输/贮存湿度范围: 0%~75% (Humidity range of transportation and storage: 0% ~ 75% RH)                                                                                                                                                                                                                                                                  |
| 包装方式 (Packaging)                                        | 纸箱包装 (Carton packaging)                                                                                                                                                                                                                                                                                                                                                                                                              |
| 标识内容 (Marks)                                            | 制造商名称、产品型号、重量、尺寸等<br>(Mark with the name of manufacturer, fan model, date of production, weight, dimensions, etc.)                                                                                                                                                                                                                                                                                                                   |
| 连接器型号 (Connector)                                       | /                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 端子型号 (Terminal)                                         | 欧式管型端子: E1008/E0508                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 产品符合的标准要求(Standards & Requirements)                     | GB 755 旋转电机 定额与性能<br>EN60034-1 《Rotating electrical machines – Rating and performance》)                                                                                                                                                                                                                                                                                                                                              |
| 平衡 (Balancing)                                          | 风机在额定电压和频率下运转时, 每个端面动平衡精度不低于G4.0, 符合JB/T9101或ISO 1940标准<br>(The residual unbalance weight is less than permit value of G4.0 rating (balancing precision grade, according to the standard of JB/T9101 or ISO 1940) when the fan is running at rated voltage and frequency)                                                                                                                                                            |
| 振动 (Vibration)                                          | 风机振动速度有效值按照JB/T8689或ISO 14694标准规定 (Vibrating speed virtual value of fans accord with JB/T8689 or ISO 14694)                                                                                                                                                                                                                                                                                                                          |
| 风机寿命 (Fan life)                                         | 估算值40000小时(在额定电压、环境温度为40°C、额定负载运转时)(The designed lifespan of the fan is 40000 hours assuming the fan is running at rated voltage, rated load and 40 degree C environmental temperature)                                                                                                                                                                                                                                              |
| 环境体系 (Quality Control)                                  | 符合ISO9001质量体系认证 (According to ISO9001 Quality Management System)                                                                                                                                                                                                                                                                                                                                                                     |

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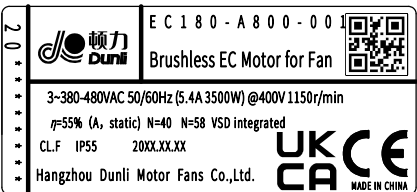
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外形图 (Dimensional drawings) :



- ①金属格兰头适配电缆尺寸: 最小Ø4mm, 最大 Ø6mm; 紧固扭矩:  $6 \pm 0.6 \text{ N} \cdot \text{m}$   
Metal Cable Gland diameter: min. 4 mm, max. 6 mm; tightening torque:  $6 \pm 0.6 \text{ Nm}$
- ②金属格兰头适配电缆尺寸: 最小Ø8mm, 最大 Ø12mm; 紧固扭矩:  $6 \pm 0.6 \text{ N} \cdot \text{m}$   
Metal Cable Gland diameter: min. 8 mm, max. 12 mm; tightening torque:  $6 \pm 0.6 \text{ Nm}$

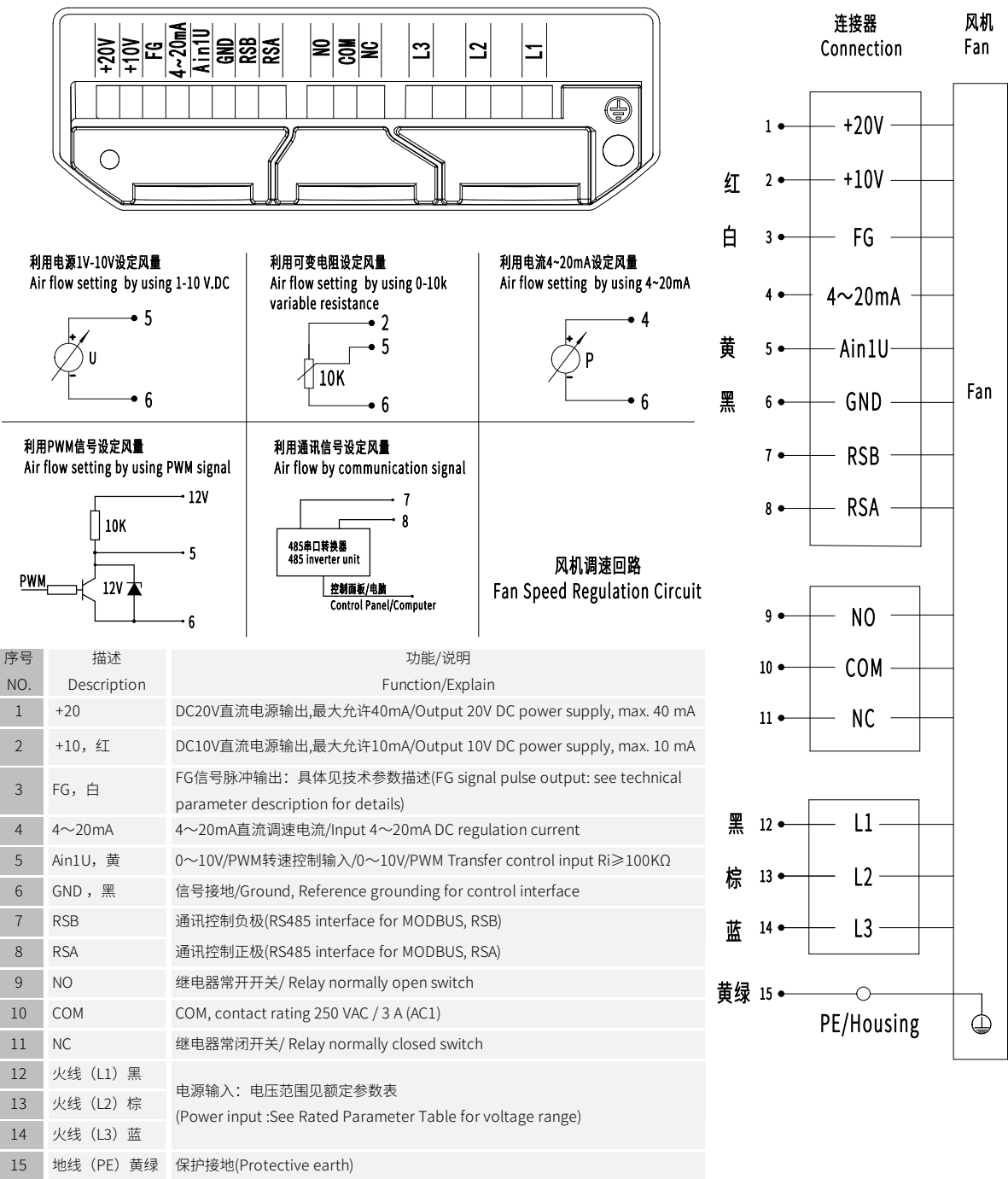
铭牌 (Label) :



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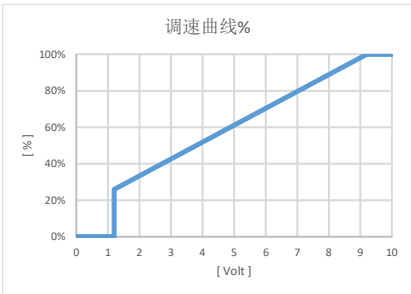
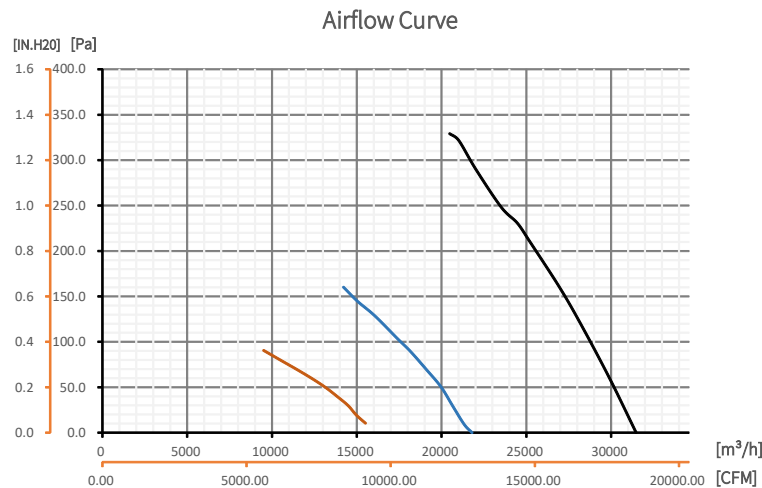
接线原理图 (Wiring diagram) :



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风量特性曲线 (Air performance curve(s)) :



$\rho=1.2\text{kg/m}^3\pm2\%$   
风量性能按照ISO 5801 A类安装标准测量  
声压级噪声: 按GB/T 2888标准在距风机进风口1米处测量  
Air performance measured as per ISO 5801 Installation Category A.Noise level:the noise is measured one (1) meter away axially from the fan inlet with LpA according to GB/T 2888.

| 序号<br>Item No. | 电压<br>V | 频率<br>Hz | 转速<br>r/min | 输入功率<br>Input Power<br>W | 输入电流<br>Input Current<br>A | 流量<br>Qv<br>m³/h | 静压<br>Ps<br>Pa | 流量<br>Qv<br>CFM | 静压<br>Ps<br>In.H₂O |
|----------------|---------|----------|-------------|--------------------------|----------------------------|------------------|----------------|-----------------|--------------------|
| 1              | 3~400   | 50/60    | 1153        | 3540                     | 5.45                       | 20481            | 329.1          | 12048           | 1.32               |
| 2              | 3~400   | 50/60    | 1151        | 3531                     | 5.45                       | 21010            | 321.8          | 12359           | 1.29               |
| 3              | 3~400   | 50/60    | 1155        | 3445                     | 5.29                       | 22018            | 290.0          | 12952           | 1.16               |
| 4              | 3~400   | 50/60    | 1153        | 3336                     | 5.10                       | 23516            | 248.3          | 13833           | 0.99               |
| 5              | 3~400   | 50/60    | 1153        | 3334                     | 5.12                       | 24474            | 230.6          | 14396           | 0.92               |
| 6              | 3~400   | 50/60    | 1151        | 3262                     | 5.02                       | 25202            | 210.4          | 14825           | 0.84               |
| 7              | 3~400   | 50/60    | 1153        | 3172                     | 4.86                       | 26925            | 161.0          | 15838           | 0.64               |
| 8              | 3~400   | 50/60    | 1151        | 3046                     | 4.68                       | 28185            | 120.4          | 16579           | 0.48               |
| 9              | 3~400   | 50/60    | 1153        | 2842                     | 4.36                       | 29921            | 59.4           | 17601           | 0.24               |
| 10             | 3~400   | 50/60    | 1153        | 2670                     | 4.12                       | 31471            | 0.2            | 18512           | 0.00               |

| 序号<br>Item No. | 电压<br>V | 频率<br>Hz | 转速<br>r/min | 输入功率<br>Input Power<br>W | 输入电流<br>Input Current<br>A | 流量<br>Qv<br>m³/h | 静压<br>Ps<br>Pa | 流量<br>Qv<br>CFM | 静压<br>Ps<br>In.H₂O |
|----------------|---------|----------|-------------|--------------------------|----------------------------|------------------|----------------|-----------------|--------------------|
| 1              | 3~400   | 50/60    | 807         | 1224                     | 1.96                       | 14220            | 160.1          | 8365            | 0.64               |
| 2              | 3~400   | 50/60    | 807         | 1193                     | 1.90                       | 15050            | 144.5          | 8853            | 0.58               |
| 3              | 3~400   | 50/60    | 810         | 1174                     | 1.88                       | 16048            | 128.9          | 9440            | 0.52               |
| 4              | 3~400   | 50/60    | 808         | 1135                     | 1.83                       | 17380            | 103.9          | 10223           | 0.42               |
| 5              | 3~400   | 50/60    | 807         | 1113                     | 1.78                       | 18172            | 89.3           | 10689           | 0.36               |
| 6              | 3~400   | 50/60    | 805         | 1074                     | 1.73                       | 19103            | 69.5           | 11237           | 0.28               |
| 7              | 3~400   | 50/60    | 803         | 1040                     | 1.69                       | 19972            | 50.3           | 11748           | 0.20               |
| 8              | 3~400   | 50/60    | 805         | 978                      | 1.60                       | 20658            | 29.3           | 12152           | 0.12               |
| 9              | 3~400   | 50/60    | 804         | 926                      | 1.52                       | 21342            | 8.9            | 12554           | 0.04               |
| 10             | 3~400   | 50/60    | 799         | 919                      | 1.51                       | 21793            | 0.1            | 12820           | 0.00               |

| 序号<br>Item No. | 电压<br>V | 频率<br>Hz | 转速<br>r/min | 输入功率<br>Input Power<br>W | 输入电流<br>Input Current<br>A | 流量<br>Qv<br>m³/h | 静压<br>Ps<br>Pa | 流量<br>Qv<br>CFM | 静压<br>Ps<br>In.H₂O |
|----------------|---------|----------|-------------|--------------------------|----------------------------|------------------|----------------|-----------------|--------------------|
| 1              | 3~400   | 50/60    | 598         | 512                      | 0.93                       | 9512             | 90.5           | 5595            | 0.36               |
| 2              | 3~400   | 50/60    | 599         | 501                      | 0.92                       | 10629            | 78.5           | 6252            | 0.31               |
| 3              | 3~400   | 50/60    | 599         | 495                      | 0.91                       | 11473            | 69.5           | 6749            | 0.28               |
| 4              | 3~400   | 50/60    | 598         | 489                      | 0.90                       | 12384            | 59.3           | 7284            | 0.24               |
| 5              | 3~400   | 50/60    | 599         | 479                      | 0.89                       | 13173            | 49.6           | 7749            | 0.20               |
| 6              | 3~400   | 50/60    | 598         | 464                      | 0.87                       | 13867            | 39.5           | 8157            | 0.16               |
| 7              | 3~400   | 50/60    | 599         | 455                      | 0.85                       | 14490            | 29.8           | 8523            | 0.12               |
| 8              | 3~400   | 50/60    | 602         | 433                      | 0.82                       | 14970            | 19.4           | 8806            | 0.08               |
| 9              | 3~400   | 50/60    | 599         | 424                      | 0.80                       | 15508            | 10.5           | 9122            | 0.04               |

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警告与说明 (Warnings & Instructions) :

- 1.本产品不适用于有明显破坏绝缘的气体或蒸汽的环境中；不适用具有甲烷混合气体和煤尘爆炸危险的煤矿井下；  
This product can not be used for these places where the corrosive gas and/or steam are existing, and/or in coal mine wells where there are methane mixed gas and coal that may cause dust explosion hazard.
- 2.产品内部使用球轴承，避免转子受到冲击， 不适用于有强烈冲击、振动的地方；  
The bearings used are ball bearing. Please prevent the rotor from strike and impact. The fan should be stored at and used for these places where have no strong impact force and shock.
- 3.本产品请专业人员按规格书或接线图连接线路,安装时确保风机转动无卡滞现象；风机启动时，观察风机转向是否与标识一致；  
Please do connections by professionals according to the wire diagram or this product specification. Please check to make sure there's no blocking with the fan before installation. Please make sure the fan is running in correct direction.
- 4.产品通电时请勿接触高压线路，防止触电，要求用户风机设备可靠接地；  
Please do not touch any of the high voltage line while the product is powered on. The fan unit should be connected to ground
- 5.产品需要通风冷却，使用时请考虑周边通风条件，并防止烫伤；  
In order to cool down the motor part, please use this product under a well-ventilated condition and beware of avoiding being scalded during operation.
- 6.产品运转时请勿靠近旋转部件，并防止异物进入内部；  
Please keep away from rotating parts while the product is running, and no exoteric matter getting into inside of the product.
- 7.移动产品时请勿拉扯线束，避免线路断裂或绝缘受损；  
Do not pull the wire when moving the product to avoid breakage of the circuit or damage to the insulation.
- 8.为了防止产品收到冲击电压的损坏，请使用调速信号来控制风扇的启动或停止，不要使用继电器或继电器电源线上的其他机械开关控制风机的频繁启动或停止；  
In order to prevent the product from damage by the impact voltage, please use speed control signal to control fan start or stop.Do not use relay or other mechanical switch on the power supply line to control fan tart or stop frequently.
- 9.风机断电后重启，再次上电的时间间隔不小于30秒；  
The time interval between power-on again after the fan is powered off shall not be less than 30s.
- 10.接近或接触风机时，确保其处于断电状态，即使风机处于停机静止状态；  
When approaching or touching the fan, ensure that it is powered off, even if the fan is stopped and stationary.
- 11.风机启动瞬间的浪涌可能引起客户端电源保护，建议客户端保护装置的限流大于所选风机的最大浪涌电流；  
The inrush current of the fan at the moment of starting may cause the client side power supply protection. It is recommended that the current limit of the client side protection device is greater than the maximum inrush current of the selected fan.
- 12.按本规格书中的参数评价产品，若工作参数发生变更，请与本公司联系；  
Please use this product under the conditions specified on this specification,and please contact with us if your application is out of the applicable conditions specified in the spec sheet.
- 13.产品自购买之日起，质保期为壹年 (具体以订货合同为准)；  
The warranty of the products is normally one (1) year (accordance to contract or purchase order).

其 他 (Others) :

- 1.本产品的知识产权属于本公司 在本产品的使用上不会发生专利争议问题；如果应用本产品形成有关新的产品或新方法或新的技术方案造成的专利侵权，本公司不予保证；  
We have intellectual rights on this product. We are not responsible for any patent disputes caused by using this product on other products/technical solutions.
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