



图像类似 / Figure similar

订购数据  
MLFB-Ordering data

1FK7042-2AC74-1TH0

客户订单号 / Client order no.:  
西门子订单号 / Order no.:  
报价号 / Offer no.:  
注释 / Remarks:

物品号 / Item no.:  
托运号 / Consignment no.:  
项目 / Project:

| 选型数据 / Engineering data                                                          | 机械数据 / Mechanical data                                                                                     |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 额定转速 (100 K)<br><i>Rated speed (100 K)</i> 2000 rpm                              | 电机类型<br><i>Motor type</i> 永磁同步电机<br><i>Permanent-magnet synchronous motor</i>                              |
| 极数<br><i>Number of poles</i> 8                                                   | 电机类型<br><i>Motor type</i> Compact                                                                          |
| 额定扭矩 (100 K)<br><i>Rated torque (100 K)</i> 2.8 Nm                               | 轴高<br><i>Shaft height</i> 48                                                                               |
| 额定电流<br><i>Rated current</i> 1.6 A                                               | 冷却<br><i>Cooling</i> 自冷却<br><i>Natural cooling</i>                                                         |
| 静态扭矩 (60 K)<br><i>Static torque (60 K)</i> 2.50 Nm                               | 圆跳公差<br><i>Radial runout tolerance</i> 0.040 mm                                                            |
| 静态扭矩 (100 K)<br><i>Static torque (100 K)</i> 3.00 Nm                             | 同轴度公差<br><i>Concentricity tolerance</i> 0.08 mm                                                            |
| 静止电流 (60 K)<br><i>Stall current (60 K)</i> 1.30 A                                | 端面跳动公差<br><i>Axial runout tolerance</i> 0.08 mm                                                            |
| 静止电流 (100 K)<br><i>Stall current (100 K)</i> 1.61 A                              | 振动值等级<br><i>Vibration severity grade</i> 等级 A<br><i>Grade A</i>                                            |
| 转动惯量<br><i>Moment of inertia</i> 3.200 kgcm²                                     | 连接器尺寸<br><i>Connector size</i> 1                                                                           |
| 有效系数<br><i>Efficiency</i> 88.0 %                                                 | 防护等级<br><i>Degree of protection</i> IP64<br><i>IP64</i>                                                    |
| 物理常量 / Physical constants                                                        | 结构型式, 根据代码 I<br><i>Design acc. to Code I</i> IM B5 (IM V1,IM V3)                                           |
| 扭矩常量<br><i>Torque constant</i> 1.86 Nm/A                                         | 温度监视<br><i>Temperature monitoring</i> 温度传感器 Pt1000<br><i>Pt1000 temperature sensor</i>                     |
| 电压常数, 20° C 时<br><i>Voltage constant at 20° C</i> 122.0 V/1000*min <sup>-1</sup> | 电子连接的排列<br><i>Electrical connectors</i> 信号和功率的插头, 可旋转<br><i>Connectors for signals and power rotatable</i> |
| 绕组电阻, 20° C 时<br><i>Winding resistance at 20° C</i> 8.60 Ω                       | 外壳的特殊颜色<br><i>Color of the housing</i> 标准 (煤灰色 RAL 7016)<br><i>Standard (Anthracite RAL 7016)</i>          |
| 旋转电感<br><i>Rotating field inductance</i> 64.0 mH                                 | 抱闸<br><i>Holding brake</i> 带抱闸<br><i>with holding brake</i>                                                |
| 电气时间常数<br><i>Electrical time constant</i> 7.40 ms                                | 轴端<br><i>Shaft end</i> 光轴<br><i>Plain shaft</i>                                                            |
| 机械时间常数<br><i>Mechanical time constant</i> 2.15 ms                                | 编码器系统<br><i>Encoder system</i> 2 极旋转变压器<br><i>Resolver 2-pole</i>                                          |
| 热时间常数<br><i>Thermal time constant</i> 30 min                                     |                                                                                                            |
| 轴抗扭刚度<br><i>Shaft torsional stiffness</i> 11400 Nm/rad                           |                                                                                                            |
| 电机净重<br><i>Net weight of the motor</i> 5.3 kg                                    |                                                                                                            |



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| 最佳工作点 / Optimum operating point                         |                                       | 推荐的电机模块 / Recommended Motor Module         |          |
|---------------------------------------------------------|---------------------------------------|--------------------------------------------|----------|
| 最佳转速<br><i>Optimum speed</i>                            | 2000 rpm                              | 变频器额定电流<br><i>Rated inverter current</i>   | 3 A      |
| 最佳功率<br><i>Optimum power</i>                            | 0.6 kW                                | 变频器最大电流<br><i>Maximum inverter current</i> | 9 A      |
| 极限数据 / Limiting data                                    |                                       | 最大扭矩<br><i>Maximum torque</i>              | 10.50 Nm |
| 最大允许转速（机械）<br><i>Max. permissible speed (mech.)</i>     | 9000 rpm                              |                                            |          |
| 最大允许转速（变频器）<br><i>Max. permissible speed (inverter)</i> | 4750 rpm                              |                                            |          |
| 最大扭矩<br><i>Maximum torque</i>                           | 10.5 Nm                               |                                            |          |
| 最大电流<br><i>Maximum current</i>                          | 5.6 A                                 |                                            |          |
| 抱闸 / Holding brake                                      |                                       |                                            |          |
| 抱闸型号<br><i>Holding brake version</i>                    | 永磁抱闸<br><i>Permanent-magnet brake</i> |                                            |          |
| 支撑力矩<br><i>Holding torque</i>                           | 4.0 Nm                                |                                            |          |
| 供电电压<br><i>Power supply voltage</i>                     | DC 24 V ± 10 %                        |                                            |          |
| 线圈电流<br><i>Coil current</i>                             | 0.5 A                                 |                                            |          |
| 开启时间<br><i>Opening time</i>                             | 70 ms                                 |                                            |          |
| 闭合时间<br><i>Closing time</i>                             | 30 ms                                 |                                            |          |
| 最高开关操作功<br><i>Highest braking work</i>                  | 150 J                                 |                                            |          |