

FTM85/115系列无框力矩电机

FTM85/115 Series Frameless torque motor

一般性能参数

| | |
|----------------------------|-----------------|
| 绕组类型 winding type | YWE |
| 霍尔电角度 hall angle | 120° |
| 介电强度 Dielectric strength | 1000VAC/1S |
| 绝缘电阻 Insulation resistance | >100M Ω @500VDC |
| 运行环境 Operation ambient | -20℃~50℃ |
| 绝缘等级 Insulation class | F |



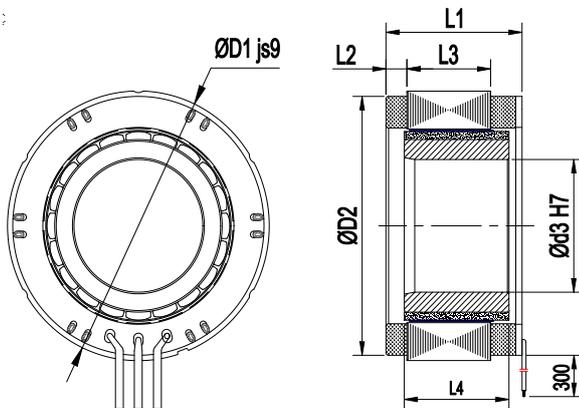
引线接线定义及功能

| | | | | | | | | | | |
|--|--------------------------|-----|-----|----|----|----|-----|----------|------|------|
| 管脚号或引线颜色 PIN NUM. Or lead color | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 红(U) | 蓝(V) | 黄(W) |
| 引线功能 Function | NTC | NTC | Vcc | Hu | Hv | Hw | GND | PHu | PHv | PHw |
| 插件型号和线规 Connector type and lead gauge | MOLEX 532610771 or AWG28 | | | | | | | AWG16/12 | | |

电机性能参数

| 项目 | 单位 | FTM85- | | | FTM115- | | |
|---------------------------|--------------------|------------|------------|-----------|------------|------------|-----------|
| | | 08C00935 | 16C01827 | 24C02716 | 08C03025 | 16C03925 | 24C06115 |
| 电机极数 Motor poles | / | 20 | | | 30 | | |
| 电机相数 Motor phase | / | 3 | | | | | |
| 额定电压 Rated voltage | VDC | 48 | 48 | 48 | 48 | 48 | 48 |
| 额定功率 Rated output power | W | 330 | 500 | 450 | 940 | 1000 | 950 |
| 额定转速 Rated speed | rpm | 3500 | 2700 | 1600 | 2500 | 2500 | 1500 |
| 额定转矩 Rated torque | N.m | 0.9 | 1.8 | 2.7 | 3 | 3.9 | 6.1 |
| 额定电流 Rated current | A | 8.5 | 9.4 | 11.2 | 25 | 25 | 23.5 |
| 最高转速 Max. Operating speed | rpm | 5000 | 2700 | 2200 | 4500 | 3500 | 2000 |
| 峰值转矩 Peak torque | N.m | 0.9 | 1.8 | 2.7 | 7.5 | 9.7 | 15.2 |
| 峰值电流 Peak current | A | 25.5 | 28.2 | 33.5 | 75 | 75 | 70.5 |
| 反电势常数 Voltage constant | Vrms/krpm | 6.5 | 12 | 15 | 7.4 | 9.5 | 16 |
| 转矩常数 Torque constant | N.m/A | 0.108 | 0.199 | 0.248 | 0.122 | 0.157 | 0.265 |
| 绝缘等级 Insulation class | / | F | F | F | F | F | F |
| 转子惯量 Rotor inertia | Kg.mm ² | 57.3/76.4* | 109/128* | 156/179* | 138/184* | 261/307* | 384/430* |
| 重量 Weight | Kg | 0.21/0.24* | 0.41/0.44* | 0.6/0.63* | 0.48/0.51* | 0.77/0.81* | 1.07/1.1* |

外形图 (outline)



| Motor code | L1 | L2 | L3 | L4 | D1 | D2 | d3 |
|-----------------|----|-----|----|--------|-----|-----|----|
| FTM85-08C00935 | 18 | 4.5 | 8 | 9/12* | 82 | 81 | 46 |
| FTM85-16C01827 | 26 | 4.5 | 16 | 17/20* | 85 | 81 | 46 |
| FTM85-24C02716 | 34 | 4.5 | 24 | 25/28* | 85 | 81 | 46 |
| FTM115-08C03025 | 18 | 5.5 | 8 | 9/12* | 115 | 112 | 74 |
| FTM115-16C03925 | 26 | 5.5 | 16 | 17/20* | 115 | 112 | 74 |
| FTM115-24C06115 | 34 | 5.5 | 24 | 25/28* | 115 | 112 | 74 |

Note: The data with "*" refers to the version with Hall.