

# 一级能效永磁同步电机 IE5<sup>+</sup> Permanent Magnet Motor



### 总体介绍 Overview



- 电机型号: 1TP8
- 电机能效: GB Grade 1 (GB30253), IE5 (IEC 60034-30-2)
- 运行方式: 变频器驱动
- 绝缘系统按 155 (F) 温度等级设计, 在额定输出时按 130 (B) 温度等 级使用
- 冷却方式: IC411(自扇冷却) IC416(独立风扇)(可选)
- 防护等级: IP55
- 连接方式: 星接

- Motor Type: 1TP8
- Efficiency Class: GB Grade 1 (GB30253), IE5 (IEC 60034-30-2)
- Operation: Conve ter Driven
- Insulation system is designed for temperature class 155 (F). At rated output the motors can be used in temperature class 130 (B)
- Cooling Method: IC411 (self-ventilation)
  IC416 (forced ventilation) (Optional)
- Protection Level: IP55

### 贝得品牌永磁同步电机主要特点 Key features of PM motors

#### 更大扭矩及功率密度 High torque and power density

与感应电机技术相比,永磁同步电机在更小的外形尺寸下能够产生转矩。

Motor can deliver the same torque from a smaller frame size when compared to induction motor technology.

#### 无与伦比的效率 Unparalleled efficiency

这些电机符合国家一级能效标准,因其高能效而脱颖而出。这对运营成本和碳足迹有着积极影响。

Complying with the IE5 efficiency class, these motors set themselves apa t as a result of their high energy efficiency. This has a positive impact on operational expenses and the carbon footprint.

#### 部分负荷时高效率 High efficiency in the pa tial load range

永磁同步电机在部分负载和较低转速下能够提供优秀的电机效率。

PM motors are able to deliver significantly higher energy efficiency values in the patial load range and at lower speeds.

#### 重量更轻 Reduced weight

永磁同步电机更轻的重量使它们更适用于对电机重量敏感的应用场景。

PM motors have weigh less than conventional induction motors with a comparable power rating. This lower weight makes them ideal for applications where the overall weight is a critical factor.

#### 设计灵活性 Design flexibility

永磁同步电机的特点,如紧凑性和重量轻等,为机械原始设备制造商(OEM)提供了更高程度的灵活性。

The inherent prope ties of PM motors, such as their compactness and reduced weight, provide machine OEMs with a higher degree of flexibility.

#### 更宽运行转速范围 Wide operating rang

永磁同步电机具有更宽的转速范围,在这种宽转速范围内其效率变化极小,使其在应对各种应用时确保高度适用性。

PM motors are well known for their wide speed range without compromising efficiency and ensuring a high degree of flexibility in addressing various applications.

#### 增强的动态性能 Enhanced dynamic performance

永磁同步电机加减速迅速,这使得它们成为速度和方向快速变化的应用场景的不二之选。

PM motors accelerate and decelerate quickly, making them the obvious choice for applications where speed and direction change rapidly.

#### 运行温度更低 Cooler operation

由于没有转子电流损耗,永磁同步电机具有更低的运行温度,这延长了电机寿命。

With no rotor current losses, PM motors frequently operate at cooler temperatures, extending component lifetimes and reducing thermal stress.

# 主要应用 Application

从单个应用到大型工业基础设施项目,永磁同步电机无与伦比的效率、紧凑性和卓越性能使其成为显而易见的选择。 Innomotics 的永磁同步电机适用于物流、暖通空调 (HVAC)、供水和污水处理、汽车、食品加工、纺织等诸多应用领域。永磁同步电机不受限于传统应用,在其他要求苛刻的使用场景中也表现出色,特别适用于需要恒定转矩或高功率密度起决定性作用的应用场景下。

#### 广泛的应用领域不局限于以下这些, 例如:

- 泵
- 风扇
- 鼓风机
- 压缩机
- 传送带
- 挤出机
- 搅拌机

From individual applications up to large-scale infrastructure projects in industry, the unparalleled efficiency, compactness and superior performance of PM motors make them the obvious choice. Innomotics has PM motors suitable for applications such as material handling, HVAC, water and wastewater, automotive, food processing, textiles – to name just a few. PM motors are not limited to conventional applications, but excel in other demanding use cases, especially where constant torque is required or high power density is a decisive factor.

## The wide field of applications that can be addressed includes the following, for example:

- Pumps
- Fans
- Blowers
- Compressors
- · Conveyor belts
- Extruders
- Mixers









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