

电机术语解释 *Explanation of terminology*

1 额定电压 *Nominal voltage*

是两个供电相之间施加的电压。
is the applied voltage between two powered phases in block commutation.

2 空载转速 *No load speed*

是空载电机在额定电压下的运行速度，它与所施加的电压大致成正比。
is the speed at which the unloaded motor runs with the nominal voltage applied. It is approximately proportional to the applied voltage.

3 空载电流 *No load current*

是空载电机在额定电压下的运行时产生的电流，由于轴承摩擦和铁损，它随着转速的升高而增加。空载摩擦在很大程度上取决于温度。它在长时间运行时减少，在较低温度会增加。
This is the typical current that the unloaded motor draws when operating at nominal voltage. It increases with rising speed owing to bearing friction and iron losses. No load friction depends heavily on temperature. It decreases in extended operation and increases at lower temperatures.

4 额定转速 *Nominal speed*

是在25°C的温度下，电机在额定电压和额定扭矩下运行时的转速。
is the speed set for operation at nominal voltage and nominal torque at a motor temperature of 25° C.

5 额定扭矩 *Nominal torque*

是在25°C的温度下，电机在额定电压和额定电流下运行时产生的扭矩。它处于电机连续运行范围的极限更高的扭矩会使绕组过热。
is the torque generated for operation at nominal voltage and nominal current at a motor temperature of 25° C. It is at the limit of the motor's continuous operation range. Higher torques heat up the winding too much.

6 额定电流 *Nominal current*

是在给定额定速度 (=最大允许连续负载电流) 下产生额定扭矩的换向中的有源相中的电流。
is the current in the active phase in block commutation that generates the nominal torque at the given nominal speed (= max. permissible continuous load current).

7 堵转扭矩 *Stall torque*

是电机静止时产生的扭矩。电机温度升高会降低堵转扭矩。
is the torque produced by the motor when at standstill. Rising motor temperatures reduce stall torque.

8 堵转电流 *Stall current*

是标称电压和电机电阻的商，堵转电流等同于堵转扭矩。
is the quotient from nominal voltage and the motor's terminal resistance. Stall current is equivalent to stall torque.

9 最大效率 *Max. efficiency*

是额定电压下输入和输出功率之间的最佳关系，它也并不总是表示最佳操作点。
is the optimal relationship between input and output power at nominal voltage. It also doesn't always denote the optimal operating point.

10 线间电阻 *Terminal resistance phase to phase*

通过25°C时两个线间的电阻来确定。
is determined through the resistance at 25° C between two connections.

11 线间电感 *Terminal inductance phase to phase*

绕组的两个线间的电感，测量频率为1kHz正弦曲线。
is the winding inductance between two connections. It is measured at 1 kHz, sinusoidal.

12 扭矩常数 *Torque constant*

这也可以称之为“特定扭矩”，表示产生的扭矩和适用的电流。
This may also be referred to as «specific torque» and represents the quotient from generated torque and applicable current.

13 速度常数 *Speed constant*

表示每伏施加电压的理论空载速度，不考虑摩擦损失。
indicates the theoretical no load speed per volt of applied voltage, disregarding friction losses.

14 速度扭矩比 *Speed/torque gradient*

速度扭矩比是电机性能的一个指标。改值越小，电机的功率就越大，因此电机速度随负载变化的变化就越小。它基于理想空载速度和理想失速扭矩的商 (公差±20%)
The speed/torque gradient is an indicator of the motor's performance. The smaller the value, the more powerful the motor and consequently the less motor speed varies with load variations. It is based on the quotient of ideal no load speed and ideal stall torque (tolerance ± 20%).

15 机械时间常数 *Mechanical time constant*

是转子从静止加速到空载速度的63%所需要的时间。
is the time required for the rotor to accelerate from standstill to 63% of its no load speed.

16 转子惯量 *Rotor moment of inertia*

是基于旋转轴的转子的质量惯性矩。
is the mass moment of inertia of the rotor, based on the axis of rotation.