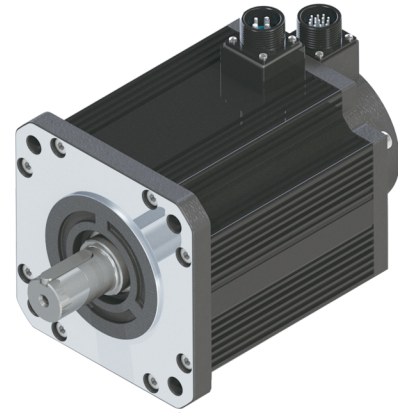


### SM180系列伺服电机 SM180 Series servo motor

|                                     |     |
|-------------------------------------|-----|
| 运行径向负载 (N)<br>Operating radial load | 784 |
| 运行轴向负载 (N)<br>Operating axial load  | 343 |

备注：径向负载为在轴伸1/2处  
Radial load point is the 1/2 shaft output



#### 产品性能参数(Electrical specification):

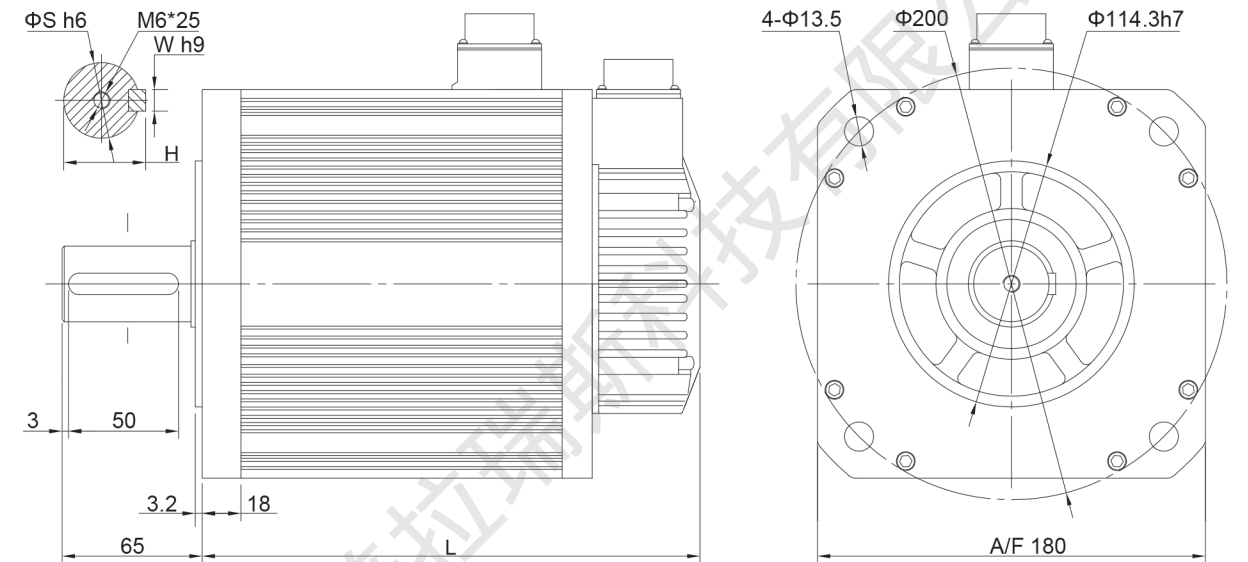
| 电机型号<br>Parameter   | SM180  |     |        |     |        |     |        |     |        |     |        |     |        |     |        |     |    |
|---|--|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|----|
|   | -17215   |     | -19015 |     | -21520 |     | -27010 |     | -27015 |     | -35010 |     | -35015 |     | -48015 |     |    |
| 额定功率<br>Rated power (KW)                                      | 2.7  |     | 3.0    |     | 4.5    |     | 2.9    |     | 4.3    |     | 3.7    |     | 5.5    |     | 7.5    |     |    |
| 额定运行电压<br>Rated Voltage(3Φ VAC)                               | 220  | 380 | 220    | 380 | 220    | 380 | 220    | 380 | 220    | 380 | 220    | 380 | 220    | 380 | 220    | 380 |    |
| 额定电流<br>Rated current (A)                                     | 10.5   | 6.5 | 12     | 7.5 | 16     | 9.5 | 12     | 7.5 | 16     | 10  | 16     | 10  | 19     | 12  | 32     | 20  |    |
| 额定转速<br>Rated speed (rpm)                                     | 1500   |     | 1500   |     | 2000   |     | 1000   |     | 1500   |     | 1000   |     | 1500   |     | 1500   |     |    |
| 额定转矩<br>Rated torque (N.m)                                    | 17.2   |     | 19.0   |     | 21.5   |     | 27.0   |     | 27.0   |     | 35.0   |     | 35.0   |     | 48.0   |     |    |
| 峰值扭矩<br>Peak torque (N.m)                                     | 43   |     | 47     |     | 53     |     | 67     |     | 67     |     | 70     |     | 70     |     | 96     |     |    |
| 反电势常数<br>Voltage constant (V/Krpm)                            | 112  | 167 | 97     | 158 | 84     | 140 | 138    | 224 | 103    | 172 | 134    | 223 | 113    | 181 | 94     | 156 |    |
| 转矩常数<br>Torque constant (N.m/A)                               | 1.6  | 2.6 | 1.6    | 2.5 | 1.3    | 2.3 | 2.3    | 3.6 | 1.7    | 2.7 | 2.2    | 3.5 | 1.8    | 2.9 | 1.5    | 2.4 |    |
| 转子惯量<br>Rotor inertia (× 10 <sup>-3</sup> Kg.m <sup>2</sup> ) | 3.4  |     | 3.8    |     | 4.7    |     | 6.1    |     | 6.1    |     | 8.6    |     | 8.6    |     | 9.5    |     |    |
| 电子时间常数<br>Electrical time constant(ms)                        | 5.0  | 5.3 | 6      | 5.6 | 6      | 5.6 | 6.8    | 6.3 | 6.2    | 6.0 | 10.6   | 9.7 | 7.5    | 6.4 | 7.4    | 7.8 |    |
| 电机重量<br>Motor weight (Kg)                                     | 19.5   |     | 20.5   |     | 22.5   |     | 25.5   |     | 25.5   |     | 30.5   |     | 30.5   |     | 40     |     |    |
| 编码器线数<br>Encoder resolution( PPR)                             | 2500   |     | 2500   |     | 2500   |     | 2500   |     | 2500   |     | 2500   |     | 2500   |     | 2500   |     |    |
| 绝缘等级<br>Insulation class                                      | F  |     | F      |     | F      |     | F      |     | F      |     | F      |     | F      |     | F      |     |    |
| 防护等级<br>Protection class                                      | IP65   |     | IP65   |     | IP65   |     | IP65   |     | IP65   |     | IP65   |     | IP65   |     | IP65   |     |    |
| 使用环境要求<br>Service environment                                 | 环境温度：-20~+50℃<br>Operating ambient temperature: -20~+50℃<br>环境湿度：相对湿度<90%(无结霜)<br>Operating ambient humidity :below 90%RH,No freezing  |     |        |     |        |     |        |     |        |     |        |     |        |     |        |     |    |
| 绕组航插定义<br>Power plugs definition                              | 管脚功能<br>Pin function   |     | U      |     |        |     | V      |     |        |     | W      |     |        |     | PE     |     |    |
|   | 管脚编号<br>Pin number   |     | 2      |     |        |     | 3      |     |        |     | 4      |     |        |     | 1      |     |    |
| 编码器航插定义<br>Signal plugs definition                            | 管脚功能<br>Pin function   |     | 5V     | 0V  | A+     | B+  | Z+     | A-  | B-     | Z-  | U+     | V+  | W+     | U-  | V-     | W-  | PE |
|   | 管脚编号<br>Pin number   |     | 2      | 3   | 4      | 5   | 6      | 7   | 8      | 9   | 10     | 11  | 12     | 13  | 14     | 15  | 1  |
| 航插规格<br>Plug model  | 绕组插件型号: YD28J4Z-E(or YD32J4Z-E)<br>Power plugs model: YD28J4Z-E(or YD32J4Z-E)<br>编码器插件型号: YD28J15Z-E<br>Signal plugs model: YD28J15Z-E |     |        |     |        |     |        |     |        |     |        |     |        |     |        |     |    |

以上产品可按客户要求进行出轴规格、信号反馈元件类别、参数及相关配件定制  
Above products can be customized according to customer requirement.

#### 外形尺寸(Dimension):

| Item   | SM180  |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|        | -17215 | -19015 | -21520 | -27010 | -27015 | -35010 | -35015 | -48015 |
| L (mm) | 226    | 232    | 243    | 262    | 262    | 292    | 292    | 346    |
| S (mm) | 35     | 35     | 35     | 35     | 35     | 35     | 35     | 35     |
| H (mm) | 38     | 38     | 38     | 38     | 38     | 38     | 38     | 38     |
| W (mm) | 10     | 10     | 10     | 10     | 10     | 10     | 10     | 10     |

#### 外形图(Outline drawing):



#### 安装注意事项(Installation precaution):

1. 安装或拆卸电机时，不得敲击电机及转轴，以免损坏编码器；
  2. 尽量防止轴座的振动，以免损坏轴承；
  3. 电机与驱动器须正确可靠连接，以免损坏电机和编码器；
  4. 装配时，须确保电机轴和负载轴的同轴，以免损坏电机
- 1.Never hit the servo motor or shaft, especially when coupling or disassembly the servo motor to machine, the encoder may become faulty;
  - 2.striving to make the best of its shaft to prevent vibration and bearing damage;
  - 3.The motor and amplifier must be connected to be correct and reliable, so as not to damage motor and encoder;
  - 4.When installing the motor, must ensure that motor shaft and load shaft concentric, so as not to damage the motor and encoder.