

ZD Electric Drive Units

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INTELLIGENT LOGISTICS POWER UNIT

ZD[®]



Zhongda Realizes the infinite possible in automation application

Ningbo Zhongda Leader Intelligent Transmission Co., Ltd. was founded in 1998. It is an electromechanical automation enterprise integrating R&D, manufacturing, sales and service of motor drives, micro motors, precision reducers and integrated products. It has 7 branches and subsidiaries, 1,600 employees, and a registered capital of 80 million yuan. In August 2017, it was listed on the A-shares of the Shenzhen Stock Exchange (stock code 002896).

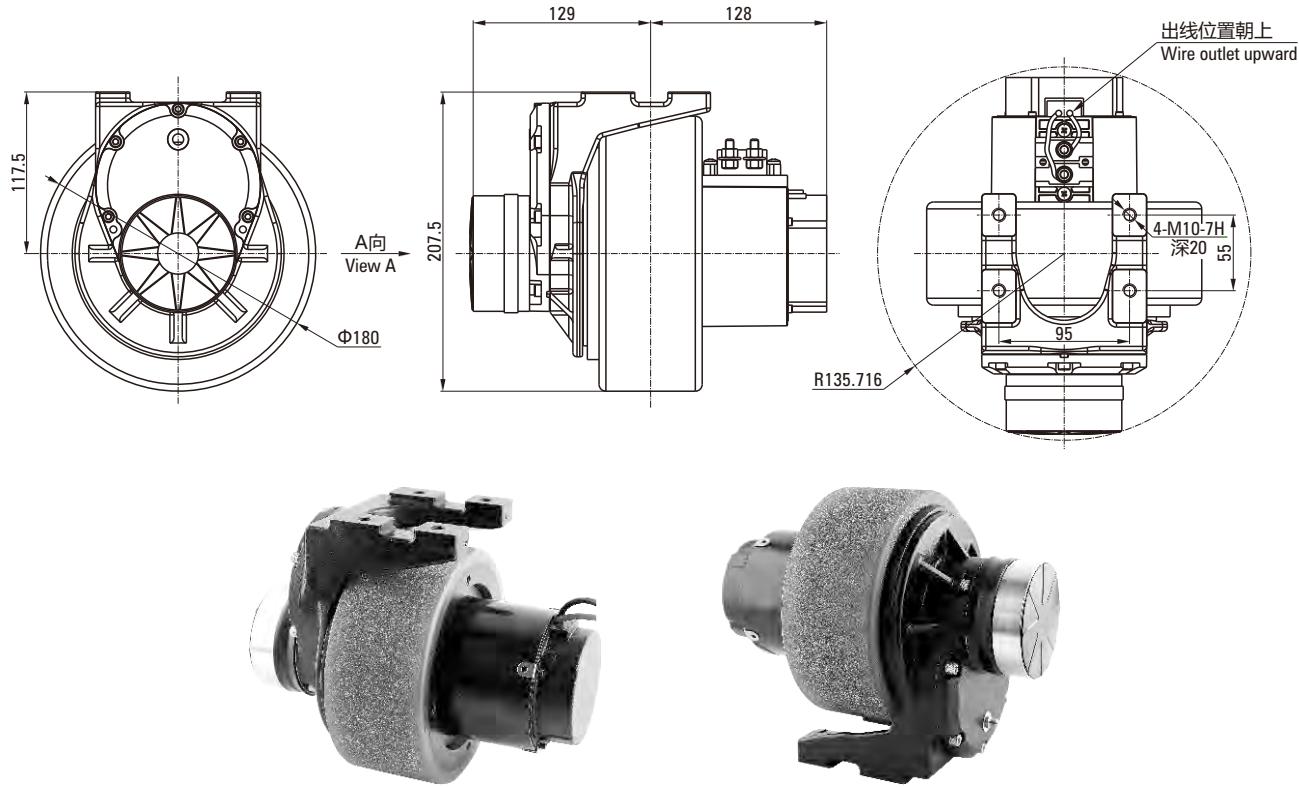
The company is a national-level high-tech enterprise, leading and participating in the drafting of 9 national and industry standards, maintaining 95 patents, and owning a Zhejiang-level enterprise R&D center.

The company is based on intelligent and automation equipment core component manufacturers and design solution providers. Through independent research and development by the team and cooperation with scientific research institutes and universities, the company has formed the main products of nearly a thousand varieties of micro permanent magnet gear motors, micro AC gear motors, small AC gear reducer motor, planetary reducer, precision cycloidal pinwheel reducer, motor controller and other product series.

With its differentiated and cost-effective advantages, the company's products are widely used in industrial robots, intelligent logistics, new energy, machine tools and other fields, as well as special machinery and equipment for food, packaging, textiles, electronics, and medical treatment. On the basis of realizing domestic substitution of imported products, gradually participate in international competition.

180 180 BRUSHED DRIVE WHEEL

Z100D550-24A1-30S/ZH180-25-001



Motor Basic Parameter Table

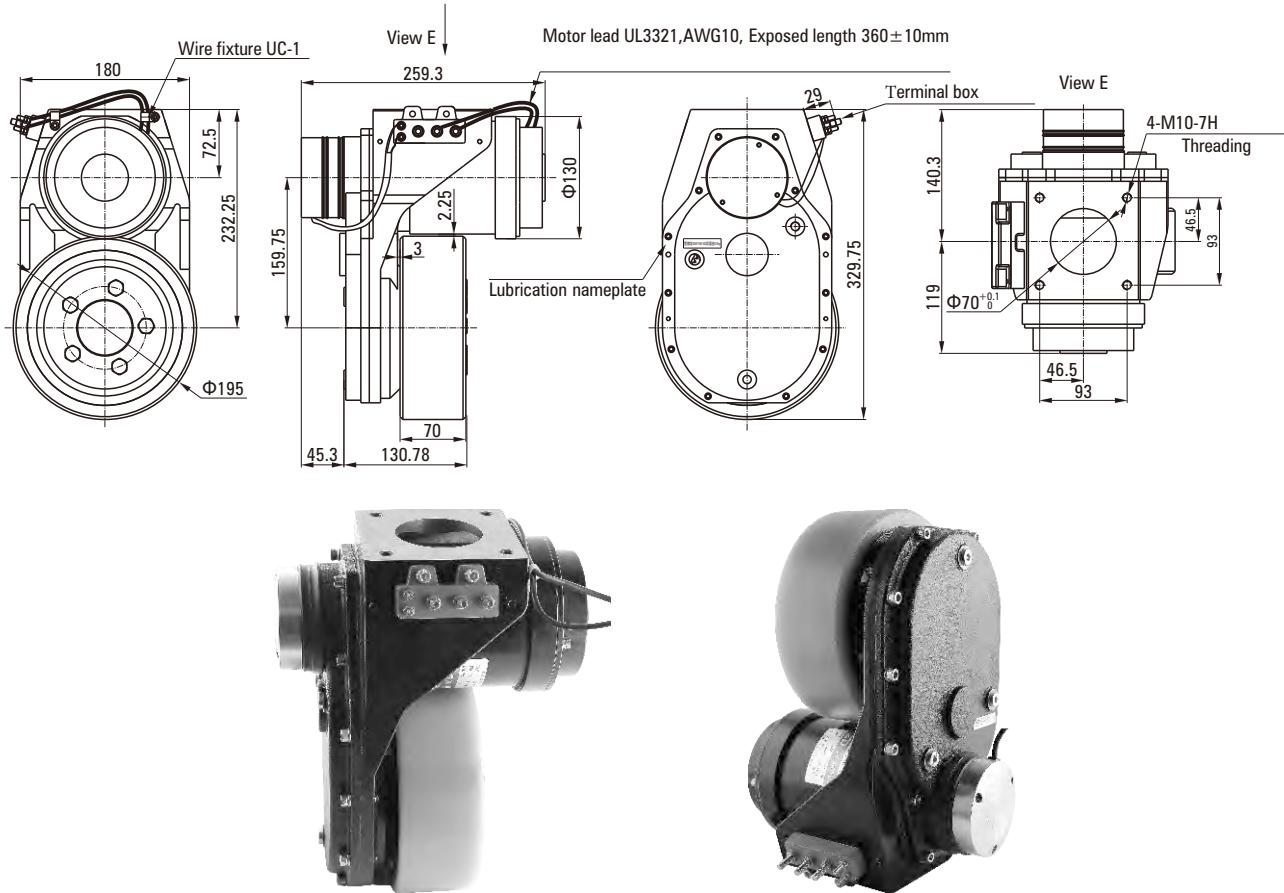
Type	Z100D550-24A1-30S	Protection grade	IP20
Rated voltage	24V DC	Reducer model	ZD-ZH180-25-001
Rated power	550W	Reduction ratio	25K /17K
Rated current	30A±10%	Brake voltage	24V DC
Rated speed	3000rpm±10%	Brake torque	6N.m
Rated torque	1.75N.m	Ambient temperature	-10°C~+40°C
No load current	≤6A	Noise	<60dB(L=100cm)
No load speed	3500rpm±10%	Wire diagram view A	
Work duty	S2(45min)		
Insulation resistance	>20MΩ		
Brush life	1200h		
Electrical strength	660V/S		
Insulation class	F		

Technical Requirement

- The basic parameters of the motor are shown in the table;
- The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
- The whole machine should be able to run smoothly, the sound is harmonious, and there is no bad noise such as noise;
- Fasteners are firmly connected, tightened in place, no slippage, and threaded glue should be applied;
- The wheels use non-slip wheels.

195 HORIZONTAL BRUSHED

Z130D650-24A1-26.5S/ZH-003



Motor Basic Parameter Table

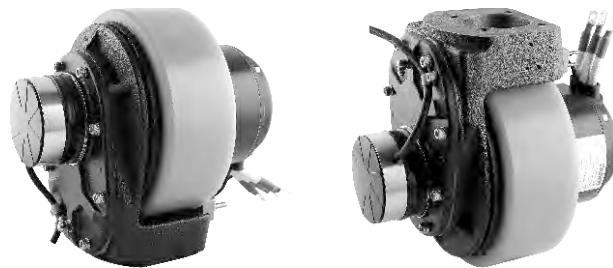
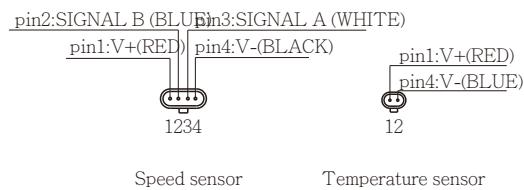
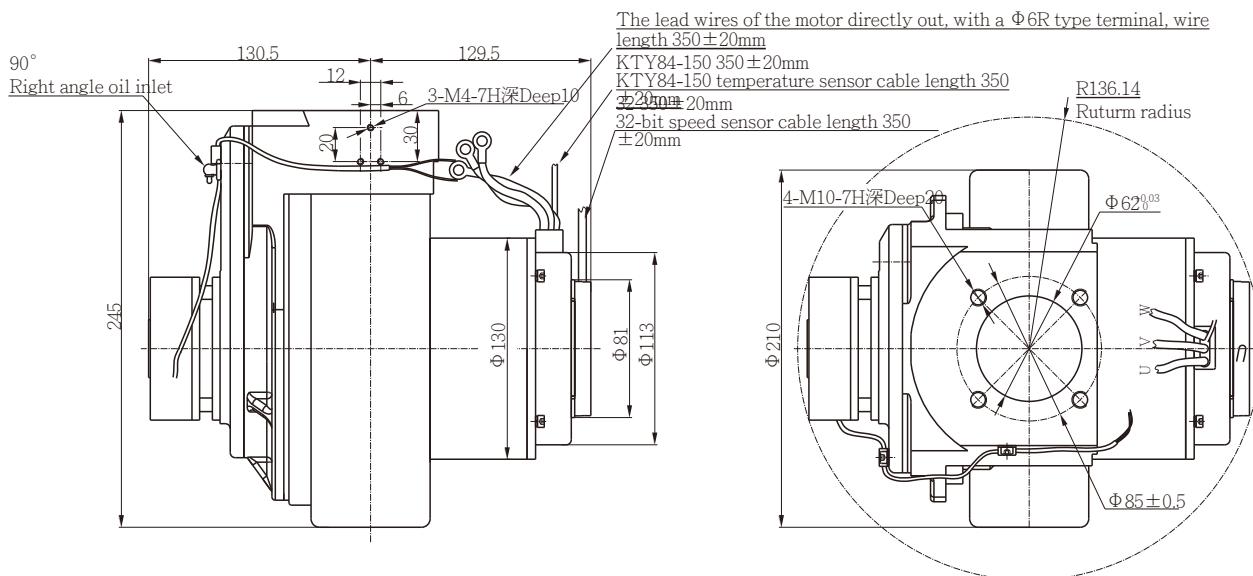
Type	Z130D650-24A1-26.5S	Protection grade	IP20
Rated voltage	24V DC	Reducer model	ZH-003
Rated power	650W	Ratio	24K
Rated current	38A±10%	Brake voltage	24V DC
Rated speed	2650±10%	Brake torque	6N.m
Rated torque	2.34N.m	Ambient temperature	-10°C~+40°C
No load current	≤11A	Noise	<65dB(A)(L=100cm)
No load speed	3000rpm±10%	Wire diagram	
Work duty	S2(60min)		
Insulation resistance	>20MΩ		
Brush life	1200h		
Electrical strength	660V/S		
Insulation class	F		

■ Technical Requirement

- The basic parameters of the motor are shown in the table;
 - The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
 - The whole machine should be able to run smoothly, the sound is harmonious, and there is no bad noise such as noise;
 - Fasteners are firmly connected, tightened in place, no slippage, and threaded glue should be applied.

210 LOW VOLTAGE AC HORIZONTAL

ZD-750W-S33V/NL24.68KL



Motor Basic Parameter Table

Basic parameter	
Type	ZDO-750W-S16V
Power	0.75kW
Voltage	16V
Frecuecnicy	90Hz
Current	41A
Speed	2560r/min
Work duty	S2-60min
Protection grade	IP42
Insulation class	F

Connection	
Black AMP 4-port terminal block connection	
①	VCC (YEL)
②	OUT A (HT)
③	OUT B (LU)
④	GND (BLK)
ncoder: 32 bites	
Black AMP 2-port terminal block connection	
①	Sensor (+) (RED)
②	Sensor (-) (BLU)
Speed detection	
Sensor type: KTY84-150 (PHILIPS)	

电机基本性能参数表 Motor Basic Parameter Table

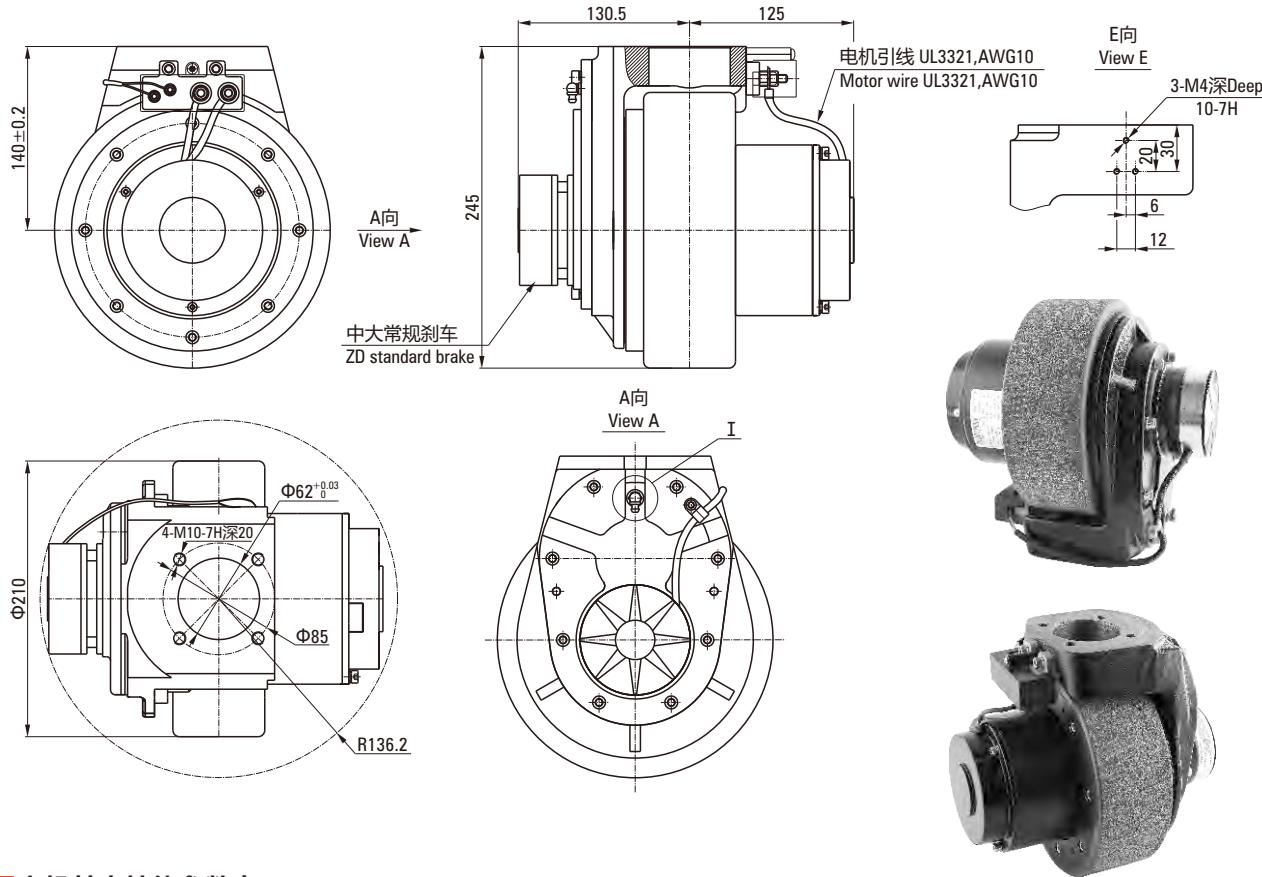
其他参数 Other parameter	
减速器型号 Reducer type	NL24.68KL
减速器速比 Reduction ratio	24.685K/17K
刹车电压 Brake voltage	48V DC
刹车力矩 Brake torque	8.0N.m
使用环境温度 Ambient temperature	-10°C~+40°C
噪音 Noise	<65dB(L=100cm)

判断产品合格 Qualified Product Guideline

- 产品通过客户提供驱动机能正常启动运行：
The product can start and run normally through the driver provided by the customer;
- 产品无明显异音：
The product has no obvious abnormal sound;
- 产品外观无明显划伤、磕碰等不良：
The appearance of the product has no obvious scratches, bumps, etc.
- 如有追加条件，由销售订单说明。
If there are additional conditions, it will be explained by the sales order.

210有刷 210 BRUSHED

Z130D650-24A1-26.5S-Q/NL-210-001



电机基本性能参数表 Motor Basic Parameter Table

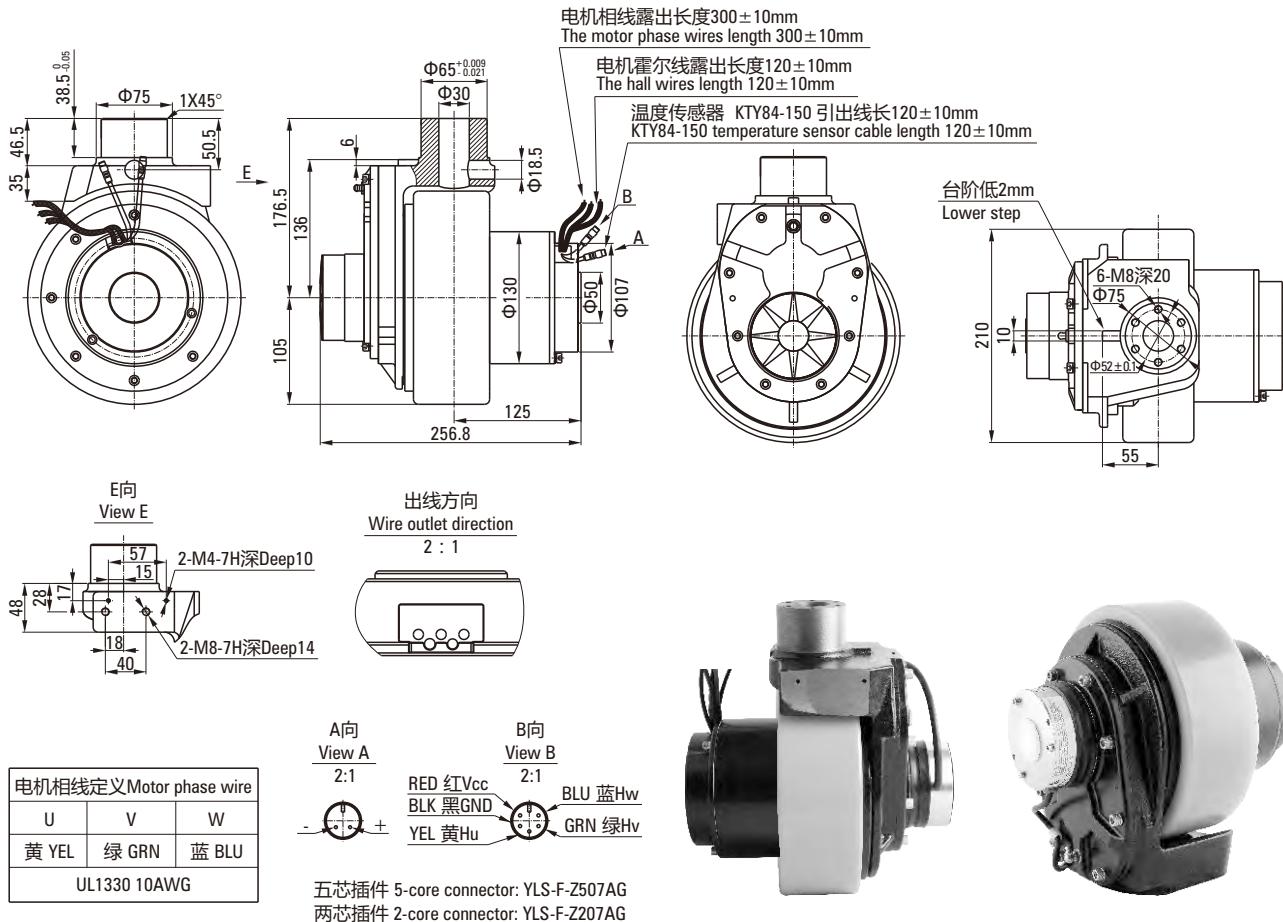
型号 Type	Z130D650-24A1-26.5S-Q	防护等级 Protection grade	IP44
额定电压 Rated voltage	24V DC	减速器型号 Reducer model	NL-210-001
额定功率 Rated power	650W	减速器速比 Reduction ratio	24.685K/17K
额定电流 Rated current	$38A \pm 10\%$	刹车电压 Brake voltage	24V DC
额定转速 Rated speed	$2650\text{rpm} \pm 10\%$	刹车力矩 Brake torque	6N.m
额定力矩 Rated torque	2.34N.m	使用环境温度 Ambient temperature	-10°C ~ +40°C
空载电流 Noload current	$\leq 11A$	噪音 Noise	< 65dB(A)(L=100cm)
空载转速 Noload speed	$3100\text{rpm} \pm 10\%$	电机接线图 Wire diagram A向 view A	CW (G/M) red + black - 24VDC
工作制 Work duty	S2(45min)		
绝缘电阻 Insulation resistance	$> 20M\Omega$		CCW (G/M) red + black - 24VDC
电刷寿命 Brush life	1200h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	F		

技术要求 Technical Requirement

- 电机基本参数如图所示；
The basic parameters of the motor are shown in the table;
- 红色引线接正和黑色引线接负，从刹车安装端看驱动轮顺时针转，引线位置对调，驱动轮的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
- 电刷工作寿命为1200个小时；
The working life of the brush is 1200 hours;
- 电机外露螺钉采用不锈钢螺钉，包胶轮外露螺钉采用达克罗；
The exposed screws of the motor use stainless steel screws, and the exposed screws of rubber wheel use dacromet screws;
- 努力加强型，铭牌上用V003表示加强型。
Nuoli enhanced type, "V003" on the nameplate indicates enhanced type.

210无刷 210 BRUSHLESS

Z130BLD1000-48A1-30S/JP-210-002



电机基本性能参数表 Motor Basic Parameter Table

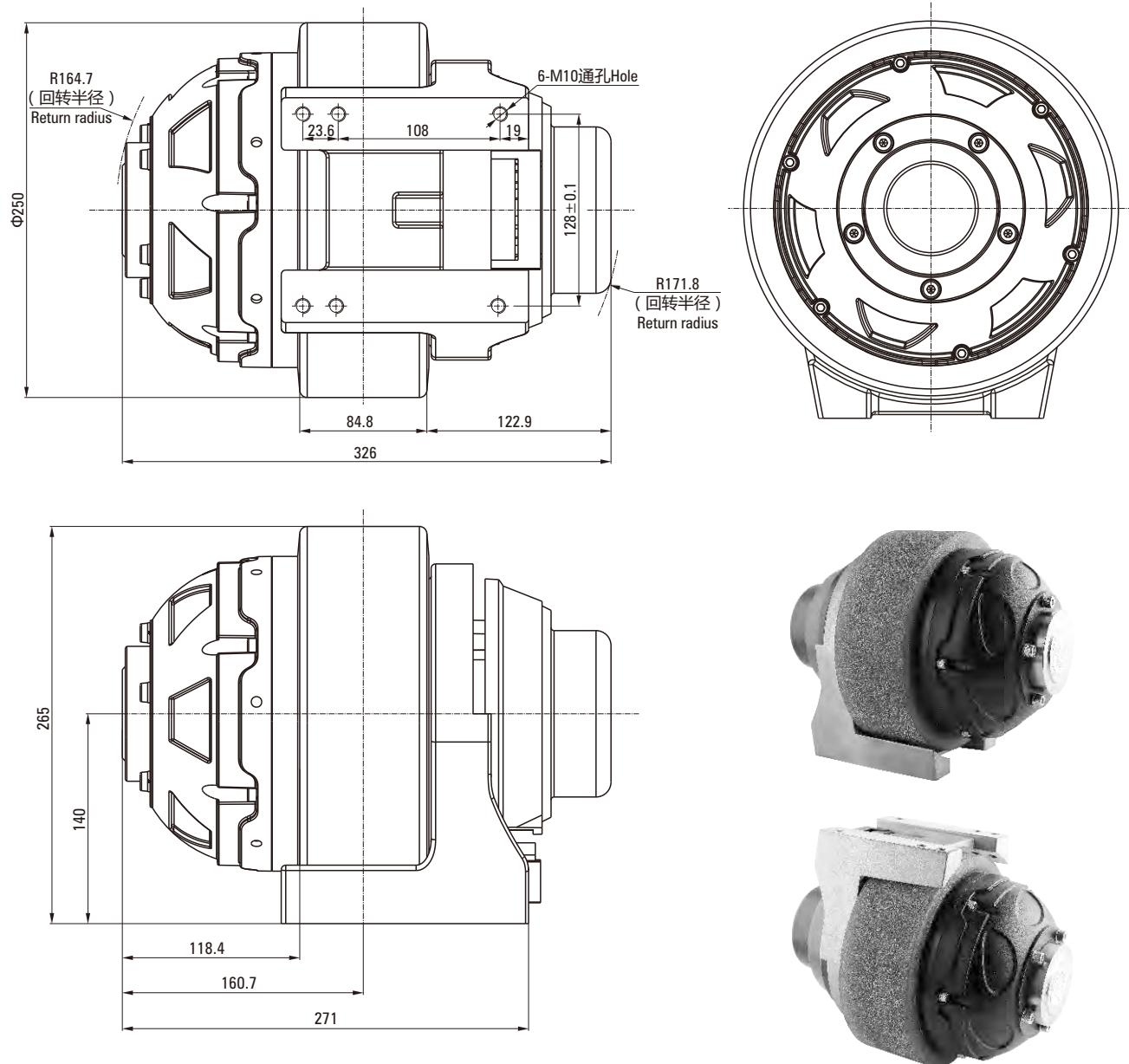
型号 Type	Z130BLD1000-48A1-30S	电刷寿命 Brush life	5000h
额定电压 Rated voltage	48V DC	电气强度 Electrical strength	660V/S
额定功率 Rated power	1000W	绝缘等级 Insulation class	B
额定电流 Rated current	28A±10%	防护等级 Protection grade	IP44
额定转速 Rated speed	3000rpm±10%	减速器型号 Reducer model	JP-210-002
额定力矩 Rated torque	3.18N.m	减速器速比 Reduction ratio	24.685K/17K
空载电流 Noload current	≤6A	刹车电压 Brake voltage	48V DC
空载转速 Noload speed	3800rpm±10%	刹车力矩 Brake torque	8N.m
工作制 Work duty	S2(60min)	使用环境温度 Ambient temperature	-10°C~+40°C
绝缘电阻 Insulation resistance	>20MΩ	噪音 Noise	<65dB(A)(L=100cm)

技术要求 Design Guide

- 电机基本参数如表格中内容；
The basic parameters of the motor are as in the table;
- 本产品符合GB/T21418-2008永磁无刷电动机系统通用技术条件（部分条件）；
This product complies with GB/T21418-2008 permanent magnet brushless motor system general technical conditions (partial conditions);
- 铭牌贴在电机表面；
The nameplate is attached to the surface of the motor;
- 装配整洁、电机运转平稳、声音和谐、无明显异音；
The assembly is clean, the motor runs smoothly, the sound is harmonious, and there is no obvious abnormal sound;
- 电机后盖螺钉采用不锈钢螺钉，其余外露螺钉采用达克罗螺钉。
The screws of the motor back cover are stainless steel screws, and the other exposed screws are dacromet screws.

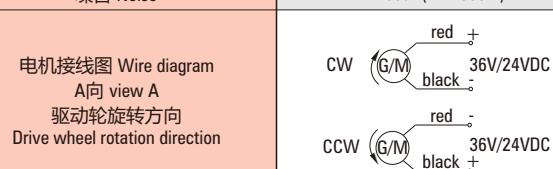
洗地机专用卧式250有刷 FLOOR WASHER MACHINE HORIZONTAL 250 BRUSHED

Z114D750-36GN-30S-M/ZHX-250/Z114D750-24GN-30S-M/ZHX-250



■ 电机基本性能参数表 Motor Basic Parameter Table

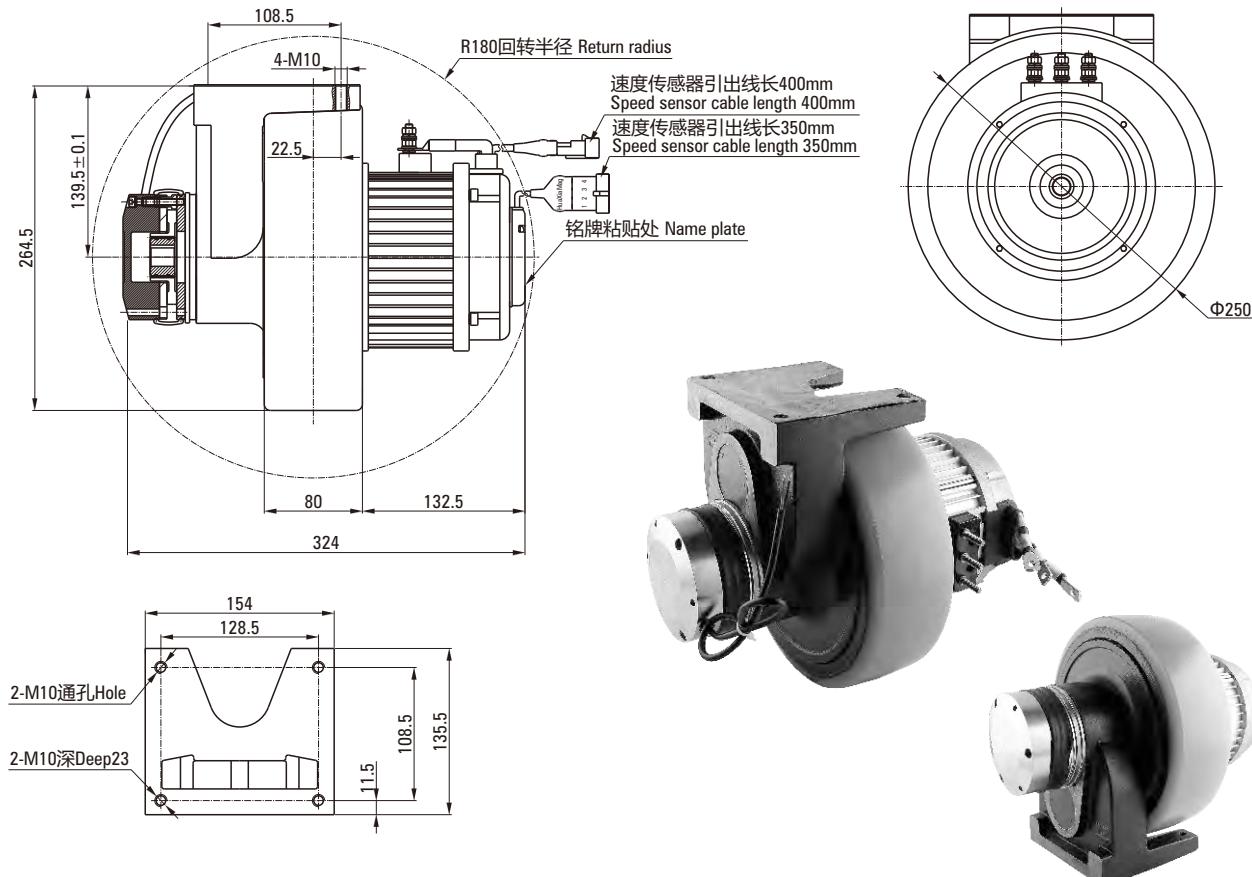
型号 Type	Z114D750-36GN-30S/Z114D-750-24GN-30S	防护等级 Protection grade	IP20
额定电压 Rated voltage	36V DC/24V DC	减速器型号 Reducer model	ZHX-250-001
额定功率 Rated power	750W	减速器速比 Reduction ratio	22K
额定电流 Rated current	28A/42A±10%	刹车电压 Brake voltage	36V DC/24V DC
额定转速 Rated speed	3000rpm±10%	刹车力矩 Brake torque	6N.m/8N.m
额定力矩 Rated torque	2.39N.m	使用环境温度 Ambient temperature	-10°C~+40°C
空载电流 Noload current	≤5A/7.5A	噪音 Noise	<60dB(L=100cm)
空载转速 Noload speed	3500rpm±10%	电机接线图 Wire diagram A向 view A 驱动轮旋转方向 Drive wheel rotation direction	
工作制 Work duty	S2(45min)		
绝缘电阻 Insulation resistance	>20MΩ		
电刷寿命 Brush life	1200h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		



250卧式低压交流

250 HORIZONTAL LOW VOLTAGE AC

ZD0-1.5kW-S16V-QDL250



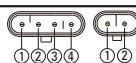
电机基本性能参数表 Motor Basic Parameter Table

基本参数 Basic parameter	
型号 Type	ZD0-1500W-S16V/33V
功率 Power	1500W
电压 Voltage	16V/33V
频率 Frequency	85Hz
电流 Current	65A/33A
转速 Speed	2250r/min
工作制 Work duty	S2-60min
防护等级 Protection grade	IP42
绝缘等级 Insulation class	F

电机基本性能参数表 Motor Basic Parameter Table

其他参数 Other parameter	
减速器型号 Reducer type	ZH-001
减速器速比 Reduction ratio	31.428K
刹车电压 Brake voltage	24V DC/48V DC
刹车力矩 Brake torque	10.0N.m
使用环境温度 Ambient temperature	-10°C~+40°C
噪音 Noise	<65dB(L=100cm)

电气接口 Connection



黑色AMP四芯插座接线示意
Black AMP 4-port terminal block connection

①	VCC (黄色 YEL)	速度检测 Speed detection
②	OUT A (白色 WHT)	
③	OUT B (蓝色 BLU)	
④	GND (黑色 BLK)	

编码器位数 Encoder: 32位 bites

黑色AMP两芯插座接线示意
Black AMP 2-port terminal block connection

①	传感器 Sensor (+) (红色 RED)	速度检测 Speed detection
②	传感器 Sensor (-) (蓝色 BLU)	

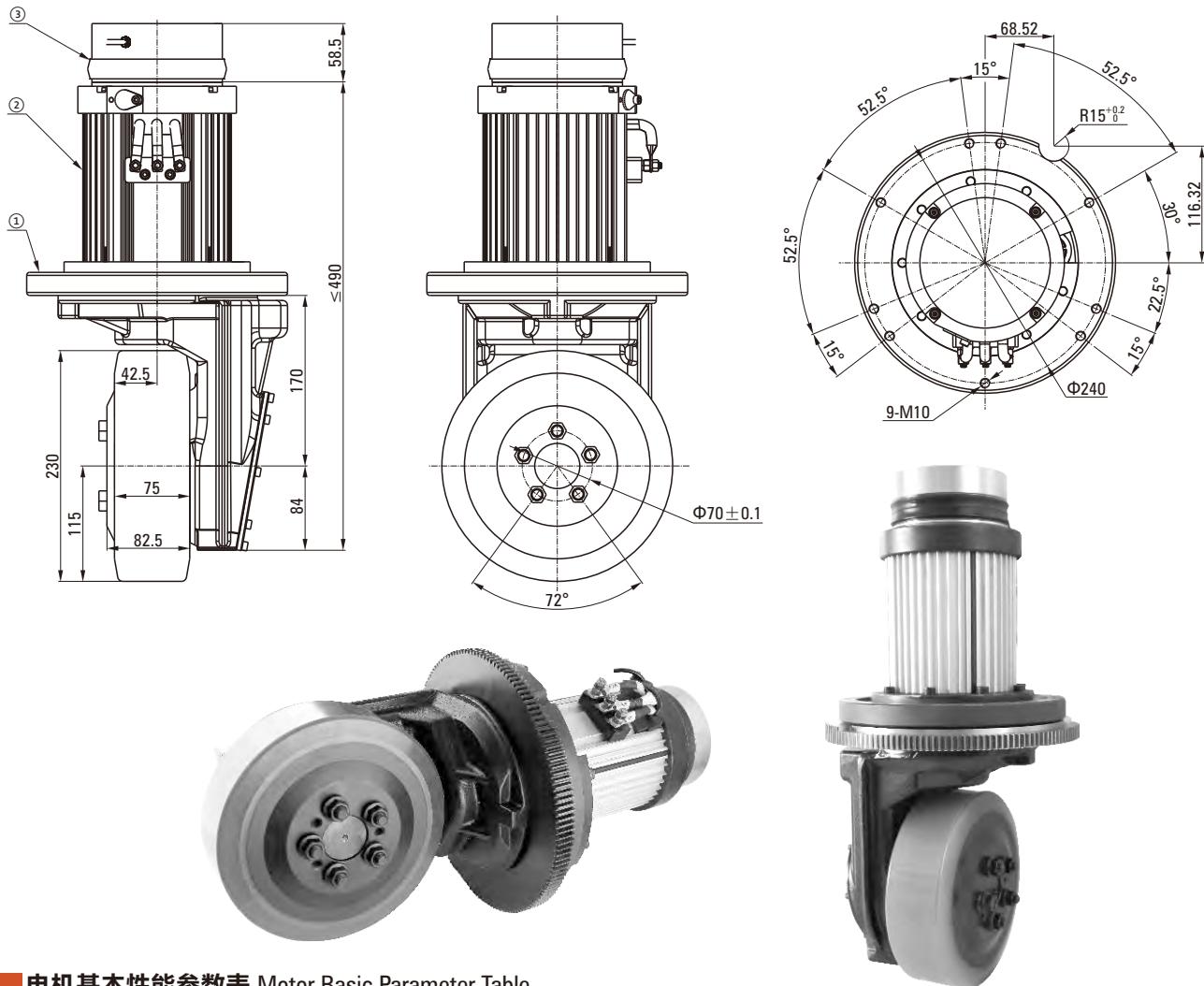
传感器型号 Sensor type: KTY84-150 (PHILIPS)

● 判断产品合格 Qualified Product Guideline

- 产品通过客户提供驱动机能正常启动运行；
The product can start and run normally through the driver provided by the customer ;
- 产品无明显异音；
The product has no obvious abnormal sound;
- 产品外观无明显划伤、磕碰等不良；
The appearance of the product has no obvious scratches, bumps, etc.
- 如有追加条件，由销售订单说明。
If there are additional conditions, it will be explained by the sales order.

立式230低压交流 230 VERTICAL LOW VOLTAGE AC

ZDL1.5KW-S16V/ZV230-004



电机基本性能参数表 Motor Basic Parameter Table

①减速驱动轮基本性能参数表 Geared drive wheel basic performance specs	
型号 Type	ZV-230-004
速比 Ratio	21.5K/25.59K
轮径 Wheel diameter	230mm
减速器额定承载 Reducer rated load	1300Kg
驱动轮输出扭矩 Drive wheel output torque	96.3N.m/114.6N.m
有无助力转向 Drived steer or not	无助力转向 No drived steer

③刹车基本性能参数表 Brake basic performance specs	
型号 Type	CDC-C10(24V15)16G
额定电压 Rated voltage	24V DC
额定功率 Rated power	30W
制动扭矩 Brake torque	16N.m
释放电压 Release voltage	> 1.5V DC
吸引电压 Clutch voltage	< 16.8V DC

②减速轮电机基本性能参数表 Table of basic performance parameters of gearbox motor	
型号 Type	ZDL-1.5KW-S16V
额定电压 Rated voltage	16V/90Hz AC (控制器 Controller 24V DC)
额定功率 Rated power	1.5KW
额定电流 Rated current	76A
额定转速 Rated speed	2590rpm
额定力矩 Rated torque	5.5N.m
工作制 Work duty	S2-60min
绝缘等级 Insulation resistance	F
防护等级 Protection grade	IP42
使用环境温度 Ambient temperature	-10°C ~ +40°C
噪音 Noise	< 75dB(L = 100cm)
温控传感器 Temperature sensor	KTY84-150 + 黑色AMP两芯插座 Black AMP two core terminal seat
编码器 Encoder	48位 + 黑色AMP四芯插座 48 bites + black AMP four core terminal seat
(a)	VCC (黄色 YEL)
(b)	OUT A (白色 WHT)
(c)	OUT B (蓝色 BLU)
(d)	GND (黑色 BLK)
速度检测 Speed sensor	

立式250低压交流

VERTICAL 250 LOW VOLTAGE AC

ZDL-1500W-S16V/ZV21-NL01

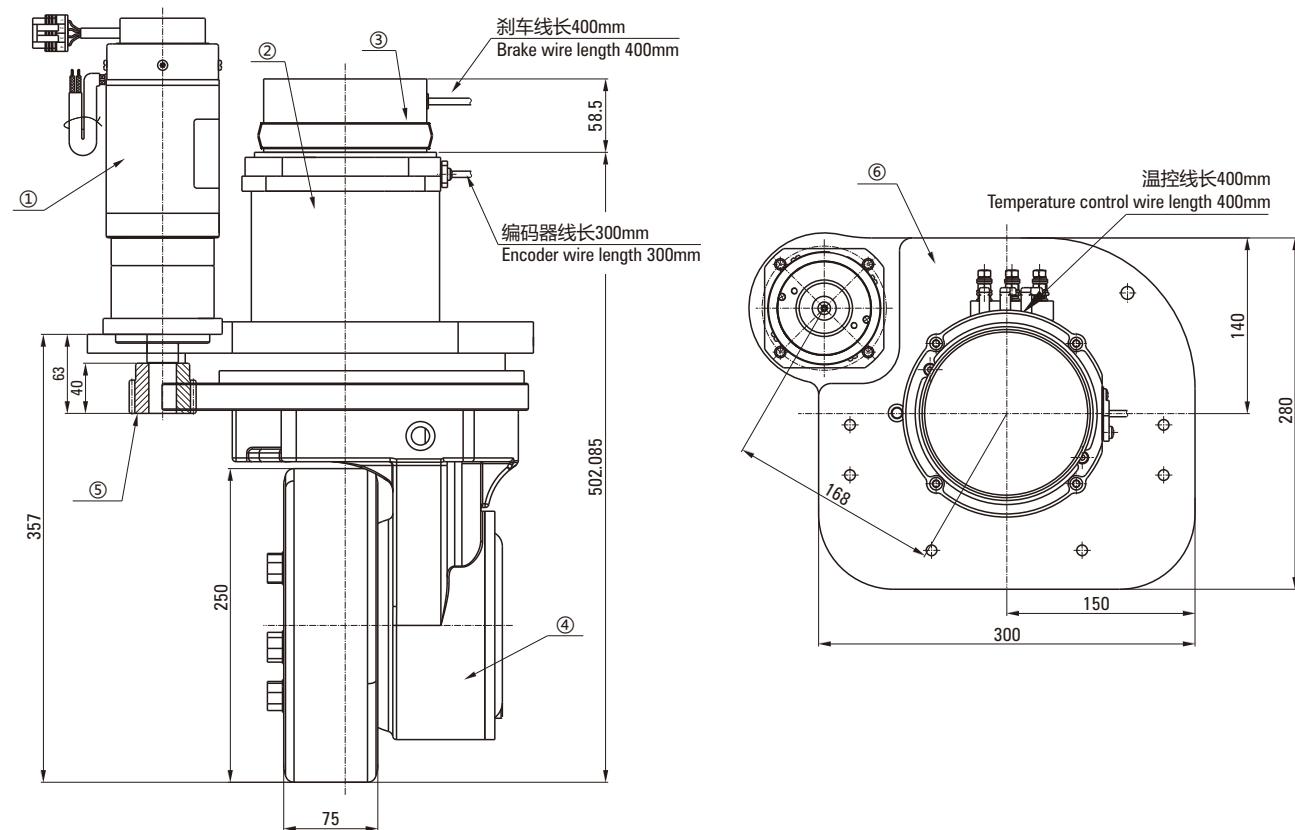


电机基本性能参数表 Motor Basic Parameter Table

①助力转向电机基本性能参数表 Basic parameter			
型号 Type	ZD-CDY20190114001	齿轮箱与电机输出轴旋向 Gearbox direction	相同 Same as motor
额定电压 Rated voltage	24V DC	编码器 Encoder	64位 Bites
额定功率 Rated power	400W	齿轮箱结构 Gearbox structure	一体式 Integrated
额定电流 Rated current	24A±10%	传动效率 Efficiency	81%
额定转速 Rated speed	3000rpm±10%	齿轮箱额定力矩 Gearbox rated torque	35N.m
额定力矩 Rated torque	1.27N.m	齿轮箱最大力矩 Gearbox max torque	1.5倍于额定 1.5 x rated
空载电流 Noload current	≤3.5A	使用环境温度 Ambient temperature	-10°C~+40°C
空载转速 Noload speed	3600rpm±10%	噪音 Noise	< 65dB(L=100cm)
工作制 Work duty	S2(10分钟 10mins)	电机接线图 Wire diagram	
绝缘电阻 Insulation resistance	>20MΩ		
电刷寿命 Brush life	2000h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Reducer model	82PN33.92K		
减速级数 Reduction stage	2		

立式250低压交流 VERTICAL 250 LOW VOLTAGE AC

ZDL-1500W-S16V/ZV21-NL01



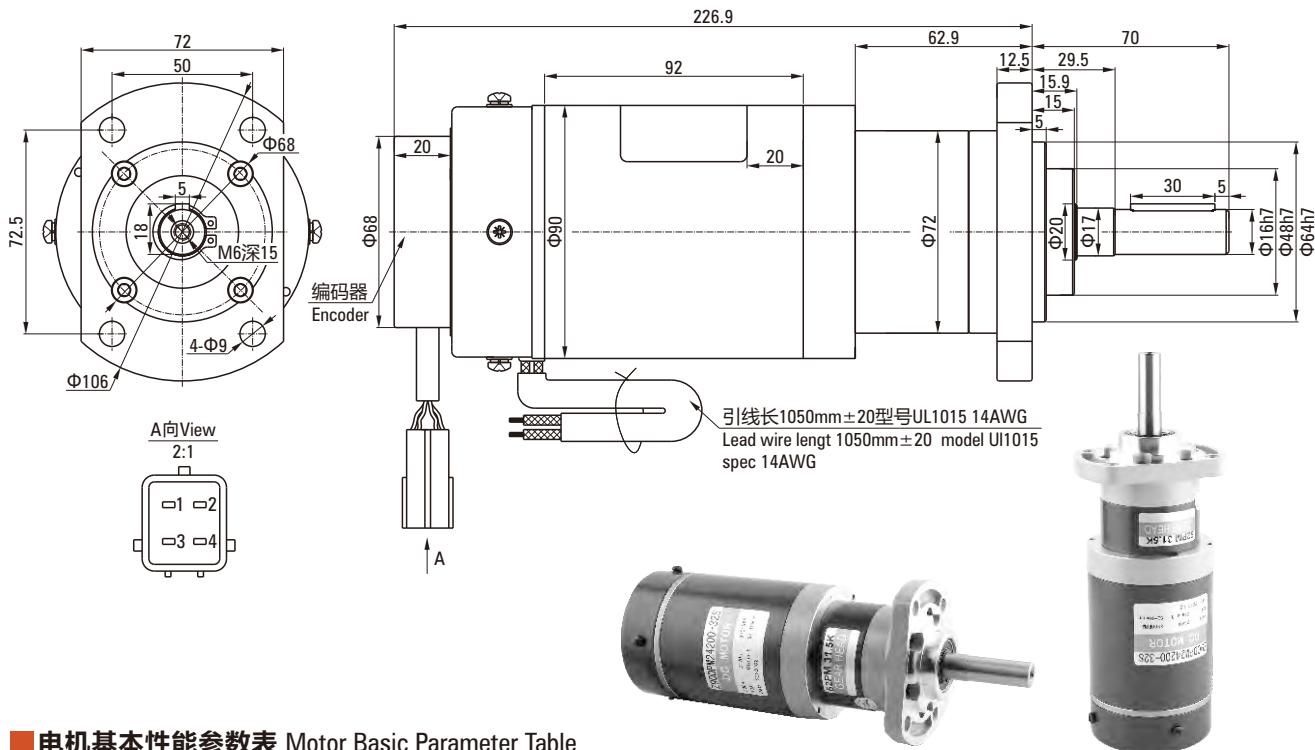
电机基本性能参数表 Motor Basic Parameter Table

②驱动轮电机基本性能参数表 Table of basic performance parameters of gearbox motor									
型号 Type	ZDL-1500W-S16V-001-00001								
额定电压 Rated voltage	16V/90Hz AC (控制器 Controller 24V DC)								
额定功率 Rated power	1500W								
额定电流 Rated current	76A								
额定转速 Rated speed	2600rpm								
额定力矩 Rated torque	5.5N.m								
工作制 Work duty	S2-60min								
绝缘等级 Insulation class	F								
防护等级 Protection grade	IP42								
使用环境温度 Ambient temperature	-10°C ~ +40°C								
噪音 Noise	< 65dB(L=100cm)								
温控传感器 Temperature sensor	KTY84-150 + 黑色AMP两芯插座 Black AMP two core terminal seat								
编码器 Encoder	48位+黑色AMP四芯插座 48 bites+black AMP four core terminal seat								
<table border="1" style="width: 100%; text-align: center;"> <tr> <td>(a)</td><td>VCC (黄色 YEL)</td></tr> <tr> <td>(b)</td><td>OUT A (白色 WHT)</td></tr> <tr> <td>(c)</td><td>OUT B (蓝色 BLU)</td></tr> <tr> <td>(d)</td><td>GND (黑色 BLK)</td></tr> </table>		(a)	VCC (黄色 YEL)	(b)	OUT A (白色 WHT)	(c)	OUT B (蓝色 BLU)	(d)	GND (黑色 BLK)
(a)	VCC (黄色 YEL)								
(b)	OUT A (白色 WHT)								
(c)	OUT B (蓝色 BLU)								
(d)	GND (黑色 BLK)								
速度检测 Speed sensor									

③刹车基本性能参数表 Brake basic performance specs	
型号 Type	CDC-C10(24V15)16G
额定电压 Rated voltage	24V DC
额定功率 Rated power	30W
制动扭矩 Brake torque	16N.m
释放电压 Release voltage	> 1.5V DC
吸引电压 Clutch voltage	< 16.8V DC
④减速驱动轮基本性能参数表 Geared drive wheel basic performance specs	
型号 Type	ZV-001
速比 Ratio	21:1
轮径 Wheel diameter	250mm
⑤助力转向齿轮基本性能参数表 Steer drive basic specs	
速比 Ratio	24:144
⑥驱动支架 Drive holder	
图号 Drawing number	-

90DP+72PN助力转向 90DP+72PN POWER STEERING

ZDXB-DC20201118



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	Z90DPN24200-32S	齿轮箱与电机输出轴旋向 Gearbox direction	相同 Same as motor
额定电压 Rated voltage	24V DC	轴承型式 Bearing type	滚珠轴承 Ball bearing
额定功率 Rated power	200W	齿轮箱结构 Gearbox structure	一体式 Integrated
额定电流 Rated current	13.0A±10%	传动效率 Efficiency	81%
额定转速 Rated speed	3200rpm±10%	齿轮箱可承受最大力矩 Gearbox rated torque	12.1N.m
额定力矩 Rated torque	0.597N.m	齿轮箱瞬间可承受最大力矩 Gearbox max torque	2倍于最大 2 x rated
空载电流 Noload current	≤3.5A	使用环境温度 Ambient temperature	-10°C ~ +40°C
空载转速 Noload speed	3600rpm±10%	噪音 Noise	< 60dB(L=100cm)
工作制 Work duty	S2(10min)	电机接线图 Wire diagram	CW red + 24VDC black - CCW red - 24VDC black +
绝缘电阻 Insulation resistance	>20MΩ		
电刷寿命 Brush life	2000h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Gearbox spec	72PN24.975K		
减速级数 Reduction stage	2		

技术要求 Technical Requirement

- 电机基本参数如图纸中的铭牌数据；
Motor basic parameters are as nameplate in drawing shows;
- 红色引线接正和黑色引线接负，从轴的伸出端看电机顺时针转，引线位置对调，电机的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
- 电刷工作寿命为2000个小时；The working life of the brush is 2000 hours;
- 引出线长度：1050mm±20，型号：UL1015，规格：AWG14、铭牌粘贴；
Lead wire lengt: 1050mm±20, model: UL1015, spec: AWG14, the nameplate is sticky;
- 减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶；
The reducer should be compact with screws, and threadproof anti-rosin should be applied before fixation;
- 电机配合用定位销和减速器表面配合用定位销均在光电机和整机装配测试完成之后。
Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening.

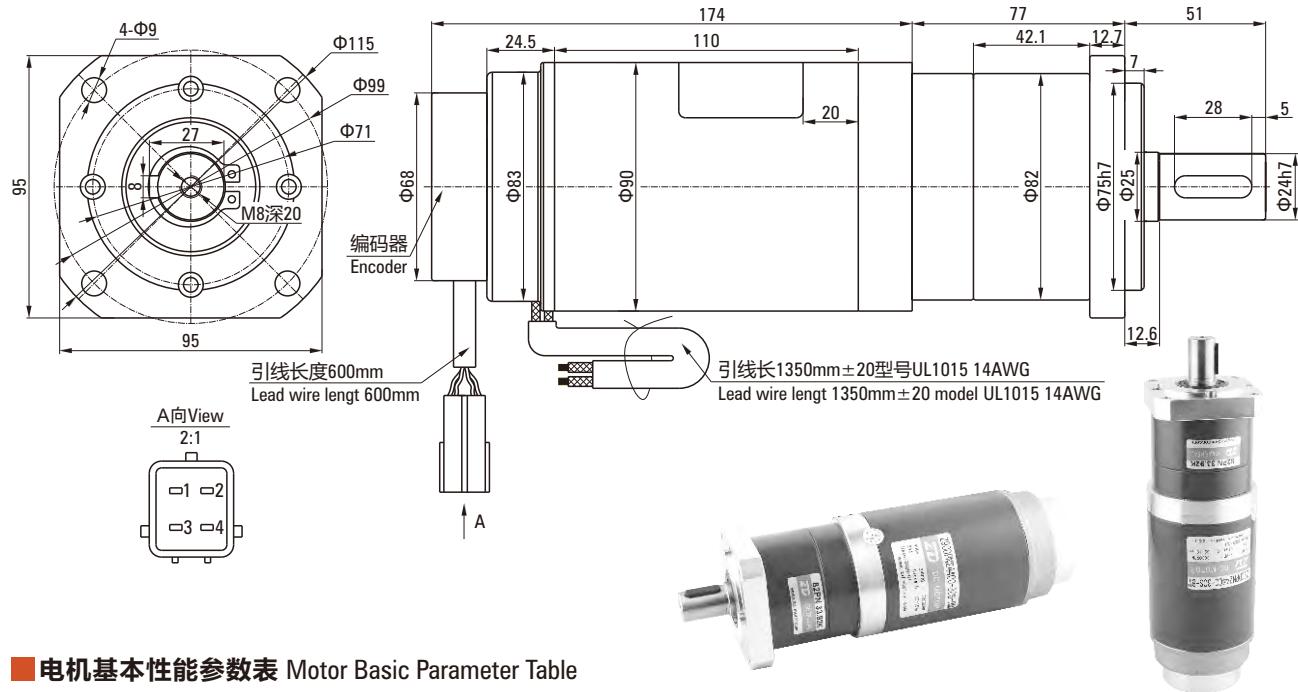
64位编码器接线定义

64-bit Encoder Wiring Definition

序号 No.	颜色 Color	功能 Function
1	红色 Red	VCC+5V
2	黑色 Black	GND
3	蓝色 Blue	A相 Phase
4	黄色 Yellow	B相 Phase

90DP+82PN助力转向 90DP+82PN POWER STEERING

Z90DPN24400-30S-BM/82PN33.92



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	Z90DP24400-30S-BM	齿轮箱与电机输出轴旋向 Gearbox direction	相同 Same as motor
额定电压 Rated voltage	24V DC	轴承型式 Bearing type	滚动轴承 Ball bearing
额定功率 Rated power	200W	齿轮箱结构 Gearbox structure	一体式 Integrated
额定电流 Rated current	24A±10%	传动效率 Efficiency	81%
额定转速 Rated speed	3200rpm±10%	整机额定输出扭矩 Gearbox rated torque	35N.m
额定力矩 Rated torque	1.27N.m	瞬间最大允许扭矩 Gearbox max torque	1.5倍于额定 1.5 x rated
空载电流 Noload current	≤3.5A	使用环境温度 Ambient temperature	-10°C~+40°C
空载转速 Noload speed	3600rpm±10%	噪音 Noise	< 60dB(L=100cm)
工作制 Work duty	S2(10min)	电机接线图 Wire diagram	CW red + 24VDC black - CCW red - 24VDC black +
绝缘电阻 Insulation resistance	>20MΩ		
电刷寿命 Brush life	2000h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Gearbox spec	82PN33.92K		
减速级数 Reduction stage	2		

技术要求 Technical Requirement

- 电机基本参数如图纸中的铭牌数据；Motor basic parameters are as nameplate in drawing shows;
- 红色引线接正和黑色引接负，从轴的伸出端看电机顺时针转，引线位置对调，电机的转向相反；The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
- 电刷工作寿命为2000个小时；The working life of the brush is 2000 hours;
- 引出线长度：1350mm±20，型号：UL1015，规格：AWG14、铭牌粘贴，如图所示，距离前端盖20mm处；Lead wire lengt: 1350mm±20, model: UL1015, spec: AWG14, the nameplate is sticky, as shown in the figure, 20mm from the front cover;
- 减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶；Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening;

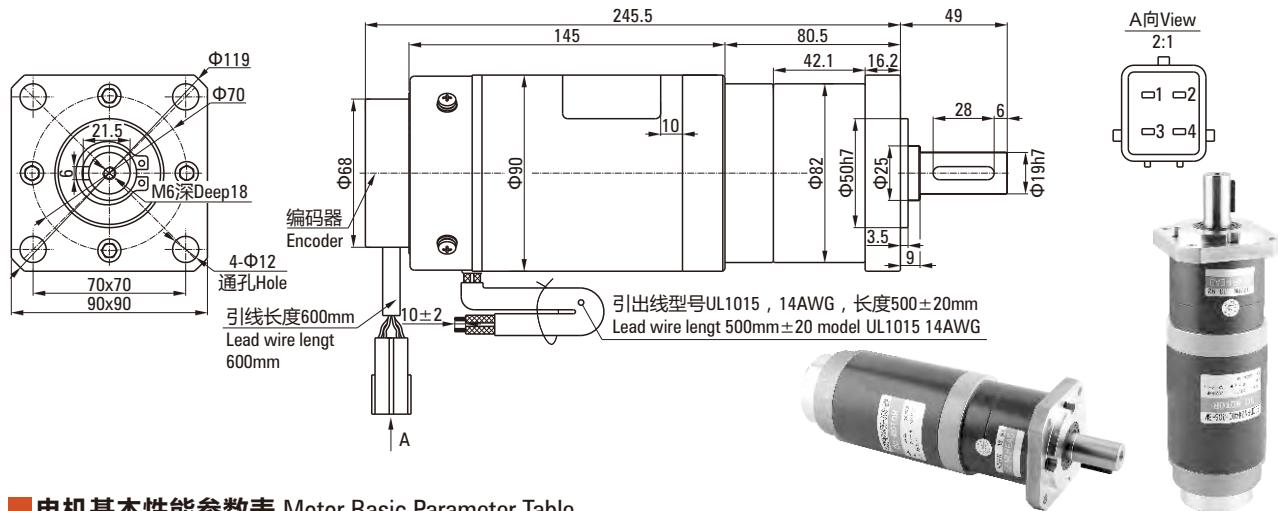
- 电机配合用定位销和减速器表面配合用定位销均在光电机和整机装配测试完成之后；Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening;
- 64位编码器外购，中大自行安装；64-bit encoder purchased, installed by ZD itself;
- 按客户要求使用中性铭牌。Use neutral nameplates according to customer requirements.

64位编码器接线定义 64-bit Encoder Wiring Definition

序号 No.	颜色 Color	功能 Function
1	红色 Red	VCC +5V
2	黑色 Black	GND
3	蓝色 Blue	A相 Phase
4	黄色 Yellow	B相 Phase

90DP+82PN助力转向 90DP + 82PN POWER STEERING

Z90DPN24200-32S-BM/82PN33.92



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	Z90DP24200-32S-BM	齿轮箱与电机输出轴旋向 Gearbox direction 轴承型式 Bearing type 齿轮箱结构 Gearbox structure 传动效率 Efficiency 整机额定输出扭矩 Gearbox rated torque 瞬间最大允许扭矩 Gearbox max torque 使用环境温度 Ambient temperature 噪音 Noise 电机接线图 Wire diagram	相同 Same as motor
额定电压 Rated voltage	24V DC		
额定功率 Rated power	200W		滚动轴承 Ball bearing
额定电流 Rated current	13A±10%		一体式 Integrated
额定转速 Rated speed	3200rpm±10%		81%
额定力矩 Rated torque	0.597N.m		16.4N.m
空载电流 Noload current	≤3.5A		
空载转速 Noload speed	3600rpm±10%		1.5倍于额定 1.5 x rated
工作制 Work duty	S2(10min)		
绝缘电阻 Insulation resistance	>20MΩ		-10°C~+40°C
电刷寿命 Brush life	2000h		< 60dB(L=100cm)
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Gearbox spec	82PN33.92K		
减速级数 Reduction stage	2		

电机基本性能参数表 Motor Basic Parameter Table

1	编码器 Encoder	ZDDC-BMQ-005	编码器64位 64-bit encoder
2	整机 Machine	Z90DPN24200-32S/82ZPN33.92K-OWZ-00100	-

技术要求 Technical Requirement

- 电机基本参数如图纸中的铭牌数据；
Motor basic parameters are as nameplate in drawing shows;
- 红色引线接正和黑色引线接负，从轴的伸出端看电机顺时针转，引线位置对调，电机的转向相反；The red lead is connected to the positive and the black lead is connected to the negative. Seen from the brake installation end, the drive wheel turns clockwise. When the lead position is reversed, the drive wheel turns in the opposite direction;
- 电刷工作寿命为2000个小时；The working life of the brush is 2000 hours;
- 引出线长度：500mm±20，型号：UL1015，规格：AWG14、铭牌粘贴。
如图所示，距离前端盖20mm处；
Lead wire lengt: 1350mm±20, model: UL1015, spec: AWG14, nameplate position is as the picture shows, 20mm from the front cover;
- 减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶；
Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening;

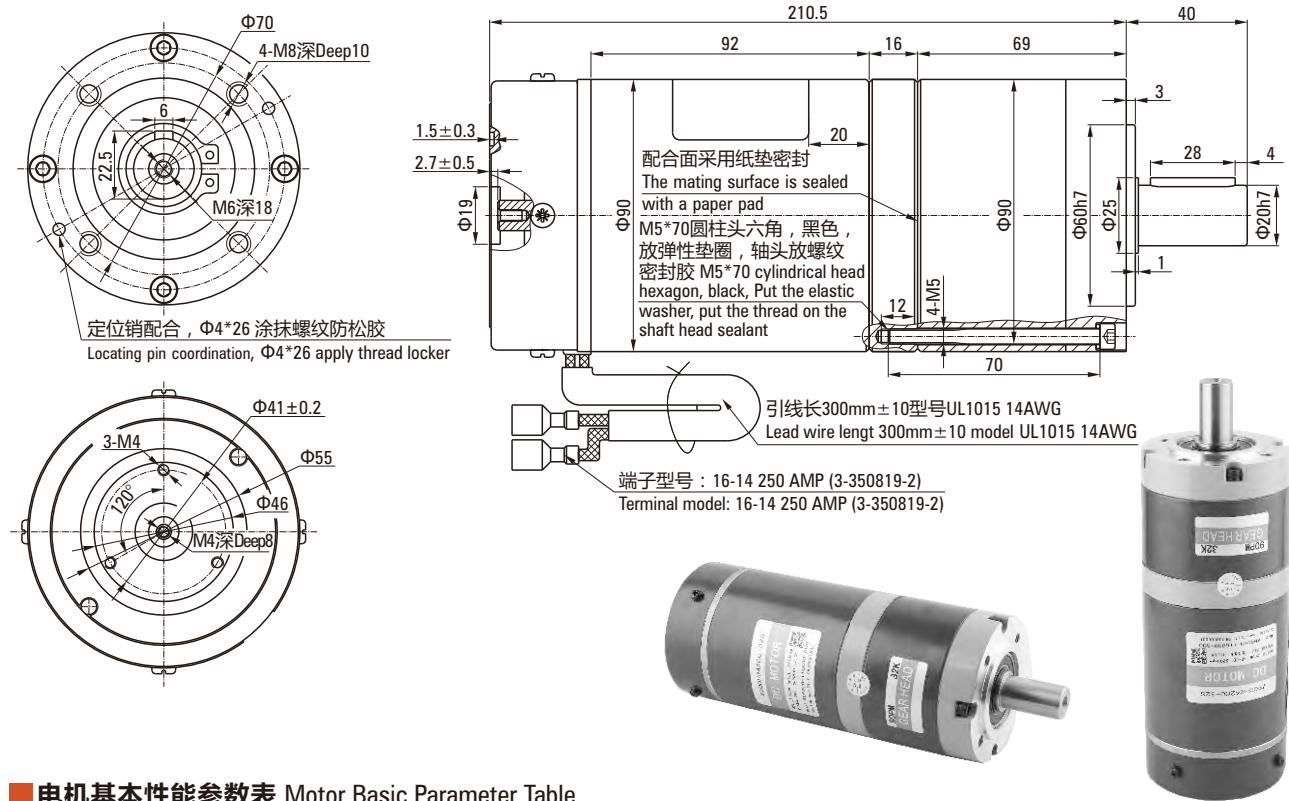
- 电机配合用定位销和减速器表面配合用定位销均在光电机和整机装配测试完成之后；
Insert dowel pin of motor and gearbox separately after testing motor and machine;
- 64位编码器外购，中大自行安装。
64-bit encoder purchased, installde by ZD itself.

64位编码器接线定义 64-bit Encoder Wiring Definition

序号 No.	颜色 Color	功能 Function
1	红色 Red	VCC +5V
2	黑色 Black	GND
3	蓝色 Blue	A相 Phase
4	黄色 Yellow	B相 Phase

90DP+90PM助力转向 90DP+90PM POWER STEERING

■ 12441418W



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	Z90DP24200-32S	齿轮箱与电机输出轴旋向 Gearbox direction	相同 Same as motor
额定电压 Rated voltage	24V DC	轴承型式 Bearing type	滚动轴承 Ball bearing
额定功率 Rated power	200W	齿轮箱结构 Gearbox structure	一体式 Integrated
额定电流 Rated current	13A ± 10%	传动效率 Efficiency	94%
额定转速 Rated speed	3200rpm ± 10%	齿轮箱输出力矩 Gearbox output torque	17.954N.m
额定力矩 Rated torque	0.597N.m	齿轮箱额定力矩 Gearbox rated torque	120N.m
空载电流 Noload current	≤ 3.5A	齿轮箱最大力矩 Gearbox max torque	2倍于额定 2 x rated
空载转速 Noload speed	3600rpm ± 10%	使用环境温度 Ambient temperature	-10°C ~ +40°C
工作制 Work duty	S2(10min)	噪音 Noise	< 60dB(L=100cm)
绝缘电阻 Insulation resistance	> 20MΩ	电机接线图 Wire diagram	CW red + 24VDC black -
电刷寿命 Brush life	2000h		CCW red - 24VDC black +
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Gearbox spec	90PM32K		
减速级数 Reduction stage	2		

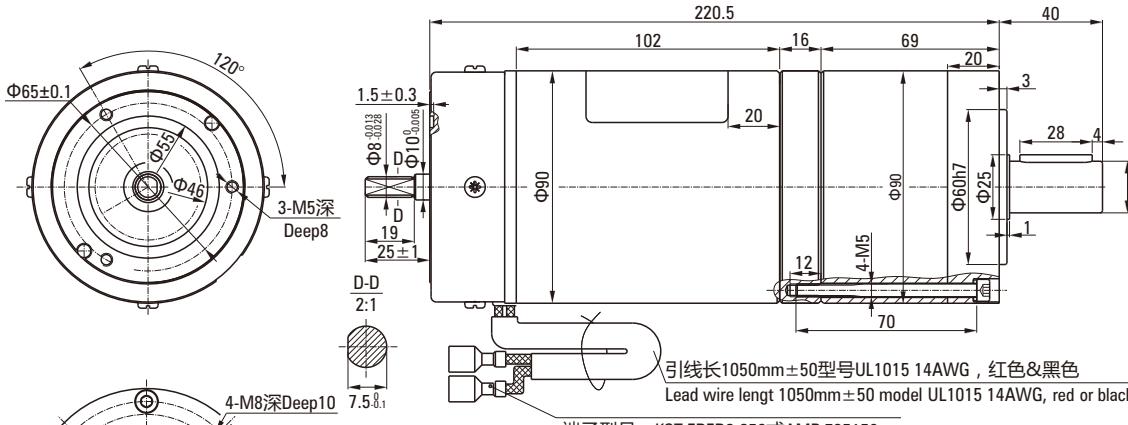
技术要求 Technical Requirement

- 电机基本参数如图纸中的铭牌数据；
Motor basic parameters are as nameplate in drawing shows;
- 红色引线接正和黑色引线接负，从轴的伸出端看电机顺时针转，引线位置对调，电机的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the output shaft, motor turns clockwise. When the lead position is reversed, the motor turns in the opposite direction;
- 电刷工作寿命为2000个小时；The working life of the brush is 2000 hours;
- 引出线长度：300mm ± 10, 型号：UL1015, 规格：AWG14、铭牌粘贴。如图所示，距离前端盖20mm处；
Lead wire length: 300mm ± 50, model: UL1015, spec: AWG14, nameplate position is as the picture shows, 20mm from the front cover;

- 减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶；
Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening;
- 电机配合用定位销和减速器表面配合用定位销均在光电机和整机装配测试完成之后；
Insert dowel pin of motor and gearbox separately after testing motor and machine;
- 电机及整机所有性能测试完成后压装端子，端子应能承受5KG拉力，1分钟内不得有脱落或松动等不良现象发生。
Connect terminal to lead wire after testing motor and machine. terminal should be able to support 5kgs pull and won't drop or loosen in 1min.

90DP+90PM助力转向 90DP+90PM POWER STEERING

Z90DPM24400-32S/90ZPM32K



电机基本性能参数表 Motor Basic Parameter Table

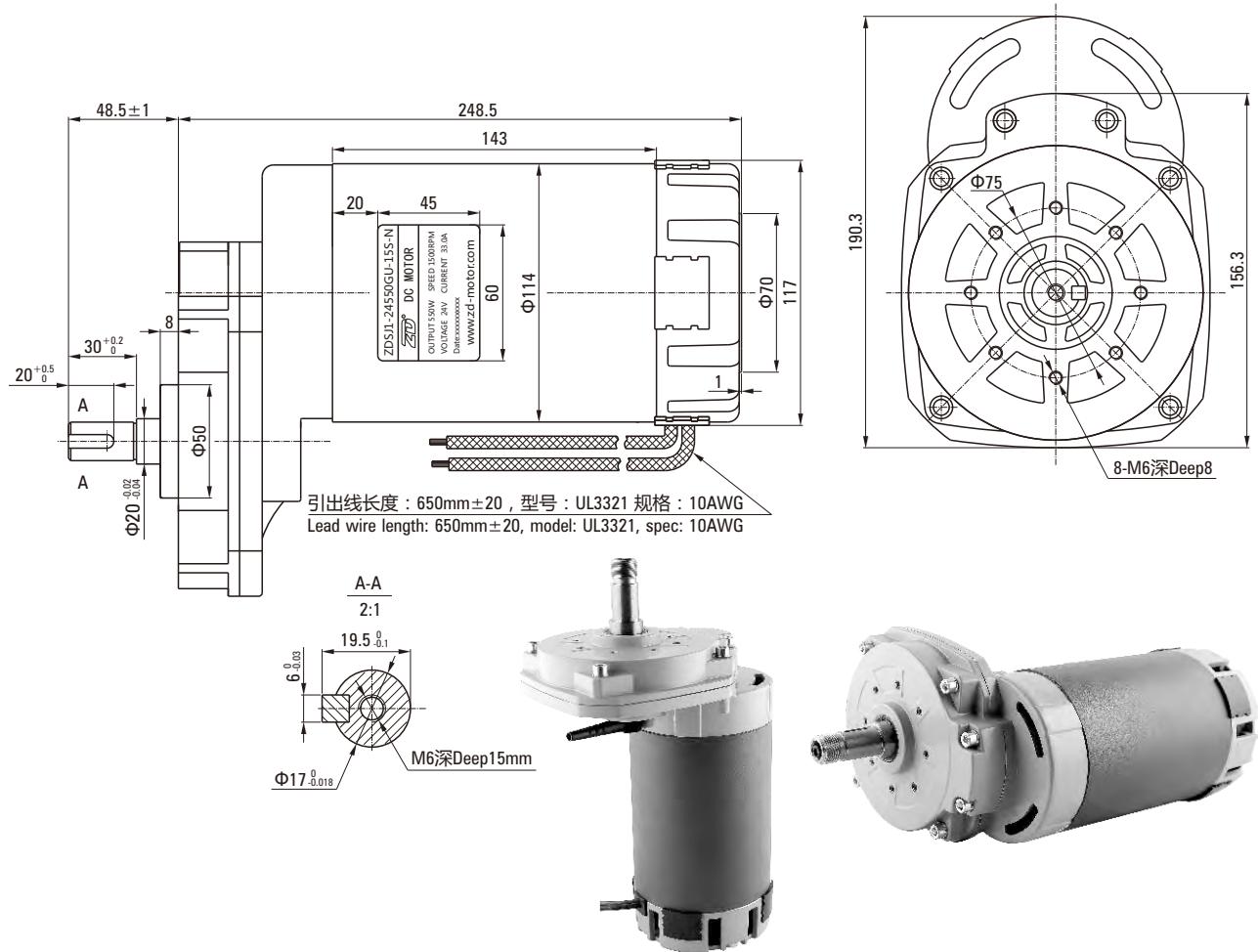
型号 Type	Z90DPM24400-32S	齿轮箱与电机输出轴旋向 Gearbox direction	相同 Same as motor
额定电压 Rated voltage	24V DC	轴承型式 Bearing type	滚珠轴承 Ball bearing
额定功率 Rated power	400W	齿轮箱结构 Gearbox structure	一体式 Integrated
额定电流 Rated current	24A±10%	传动效率 Efficiency	81%
额定转速 Rated speed	3200rpm±10%	齿轮箱输出力矩 Gearbox output torque	30.5N.m
额定力矩 Rated torque	1.19N.m	齿轮箱额定力矩 Gearbox rated torque	120N.m
空载电流 Noload current	≤5.0A	齿轮箱最大力矩 Gearbox max torque	2倍于额定 2 x rated
空载转速 Noload speed	3700rpm±10%	使用环境温度 Ambient temperature	-10°C ~ +40°C
工作制 Work duty	S2(10min)	噪音 Noise	< 60dB(L=100cm)
绝缘电阻 Insulation resistance	> 20MΩ	电机接线图 Wire diagram	CW (G/M) red + 24VDC black - CCW (G/M) red - 24VDC black +
电刷寿命 Brush life	1500h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		
防护等级 Protection grade	IP20		
齿轮箱规格 Gearbox spec	90PM32K		
减速级数 Reduction stage	2		

技术要求 Technical Requirement

- 电机基本参数如图纸中的铭牌数据；
Motor basic parameters are as nameplate in drawing shows;
- 红色引线接正和黑色引线接负，从轴的伸出端看电机顺时针转，引线位置对调，电机的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the output shaft, motor turns clockwise. When the lead position is reversed, the motor turns in the opposite direction;
- 电刷工作寿命为1500个小时； The working life of the brush is 1500 hours;
- 引出线长度：1050mm±50，型号：UL1015，规格：AWG14、铭牌粘贴。如图所示，距离前端盖20mm处；
Lead wire length: 1050mm±50, model: UL1015, spec: AWG14, nameplate position is as the picture shows, 20mm from the front cover;
- 减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶；
Gearbox screws should be firmly tightened and threaded glue should be applied before tightening;
- 电机配合用定位销和减速器表面配合用定位销均在光电机和整机装配测试完成之后；
Insert dowel pin of motor and gearbox separately after testing motor and machine;
- 电机及减速器配合螺钉要紧凑，固定前需涂抹螺纹防松胶。
Screws of gearbox and motor should be firmly tightened and threaded glue should be applied before tightening.

洗地机刷盘 GROUND WASHING MACHINE BRUSH

ZDSJ1-24550GU-15S-N-0WX-00001



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	ZDSJ1-24550GU-15S-N-00001	防护等级 Protection grade	IP00
额定电压 Rated voltage	24V DC	使用环境温度 Ambient temperature	-10°C~+40°C
额定功率 Rated power	550W	噪音 Noise	<65dB(L=100cm)
额定电流 Rated current	33A	速比 Ratio	10 : 1
额定转速 Rated speed	1500rpm±10%	齿轮箱允许最大连续运转扭矩 Gearbox rated torque	31.5N.m
额定力矩 Rated torque	3.5N.m		
空载电流 Noload current	≤5.5A	传动效率 Efficiency	90%
空载转速 Noload speed	1900rpm±10%	电机接线图 Wire diagram	
工作制 Work duty	S1		
绝缘电阻 Insulation resistance	>20MΩ		
电刷寿命 Brush life	1500h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		

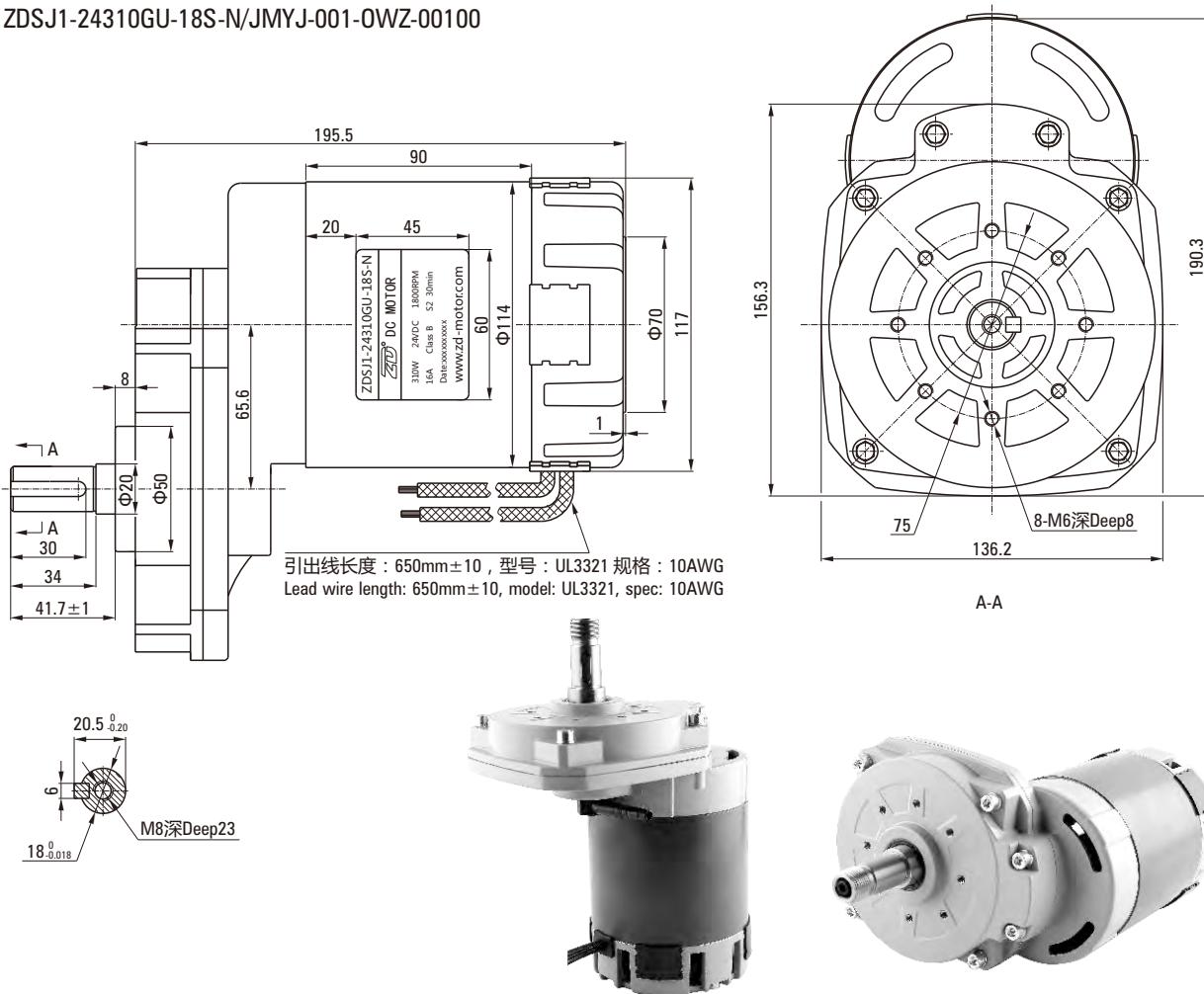
技术要求 Technical Requirement

- 电机基本参数如参数表所示；
Motor basic parameters are as the parameter table shows;
- 当红色引线接正黑色引线接负，从轴的伸出端看整机逆时针转，引线位置对调整机的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the output shaft, motor turns clockwise. When the lead position is reversed, the motor turns in the opposite direction;
- 电刷工作寿命为1500个小时；The working life of the brush is 1500 hours;
- 出轴部分键配C型6*6*20；Key at the output shaft C-shape 6*6*20;
- 引出线长度：650mm±10，型号：UL3321，规格：10AWG。Lead wire length: 650mm±50, model: UL3321, spec: 10AWG.

洗地机刷盘

GROUND WASHING MACHINE BRUSH

ZDSJ1-24310GU-18S-N/JMYJ-001-OWZ-00100



电机基本性能参数表 Motor Basic Parameter Table

型号 Type	ZDSJ1-24310GU-18S-N	防护等级 Protection grade	IP00
额定电压 Rated voltage	24V DC	使用环境温度 Ambient temperature	-10°C ~ +40°C
额定功率 Rated power	310W	噪音 Noise	< 60dB(L=100cm)
额定电流 Rated current	16A	速比 Ratio	10 : 1
额定转速 Rated speed	1800rpm ± 10%	整机额定输出扭矩 Rated output speed	14.8N.m
额定力矩 Rated torque	1.64N.m	传动效率 Efficiency	90%
空载电流 Noload current	≤ 4A	电机接线图 Wire diagram	
空载转速 Noload speed	2300rpm ± 10%		CW red + 24VDC black -
工作制 Work duty	S2-30min		CCW red - 24VDC black +
绝缘电阻 Insulation resistance	> 20MΩ		
电刷寿命 Brush life	1000h		
电气强度 Electrical strength	660V/S		
绝缘等级 Insulation class	B		

技术要求 Technical Requirement

- 电机基本参数如参数表所示；
Motor basic parameters are as the parameter table shows;
- 当红色引线接正黑色引线接负，从轴的伸出端看整机逆时针转，引线位置对调整机的转向相反；
The red lead is connected to the positive and the black lead is connected to the negative. Seen from the output shaft, motor turns clockwise. When the lead position is reversed, the motor turns in the opposite direction;
- 电刷工作寿命为1000个小时；The working life of the brush is 1000 hours;
- 引出线长度：650mm ± 20，型号：UL1015，规格：10AWG。
Lead wire length: 650mm ± 20, model: UL1015, spec: 10AWG.

BONDY

INDUSTRIAL EQUIPMENT SUPPLIER



Transmission



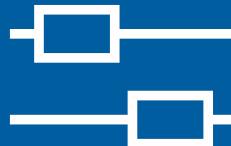
Handling



Motor & Gear



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Linear



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