Topdoley

SHENZHEN TOPDOLEY TECHNOLOGY CO., LTD

Your Reliable Partner of Motion Control Parts

ABOUT US

A Professional and Reliable Motion Control Manufacturer

Our Company, Shenzhen Topdoley Technology Co., Ltd, is a high-tech enterprise with core motion control technology.

Our company is headquartered in Shenzhen, Guangdong Province — a global innovation powerhouse known for its thriving high-tech ecosystem and advanced manufacturing infrastructure. As the “Silicon Valley of China,” Shenzhen provides an ideal environment for technological advancement and industrial collaboration.

Our technique team is composed of exceptional talent from China’s leading universities, including Tsinghua University, Huazhong University of Science and Technology, South China University of Technology, and Harbin Institute of Technology. United by a commitment to innovation and engineering excellence, we focus on the research, development, and production of high-performance servo systems and AGV wheels.

Our product portfolio includes a full range of low-voltage servo drives and motors, as well as integrated motion solutions such as drive wheels and steering wheels designed for mobility applications. These solutions are widely used in Automated Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs), and robotic arms, delivering high efficiency, precision control, and exceptional reliability.

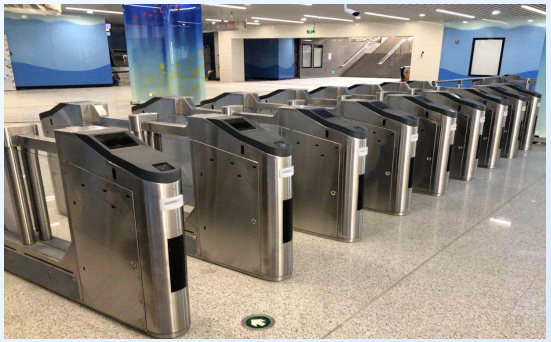
With a strong emphasis on performance, integration, and intelligent automation, we are dedicated to enabling our customers to build smarter, more agile systems for the future of industrial automation.




DC Servo System Introduction

The DC servo system adopts advanced servo control technology, with a high-performance processor to provide users with a cost-effective servo control solution, pursuing the closest functionality and performance to the application while ensuring stability and reliability.

- High-speed Capabilities
- Campact size design
- powerful and efficient
- Support RS-485,Modbus, CAN/CANopen, Ethercat protocols and equipped with advanced technology.



JD Series servo system

- CSP multi-axis synchronization can be realized to meet the needs of special scenes.

- Using advanced noise suppression technology, the product has low noise, low heat, and high efficiency.

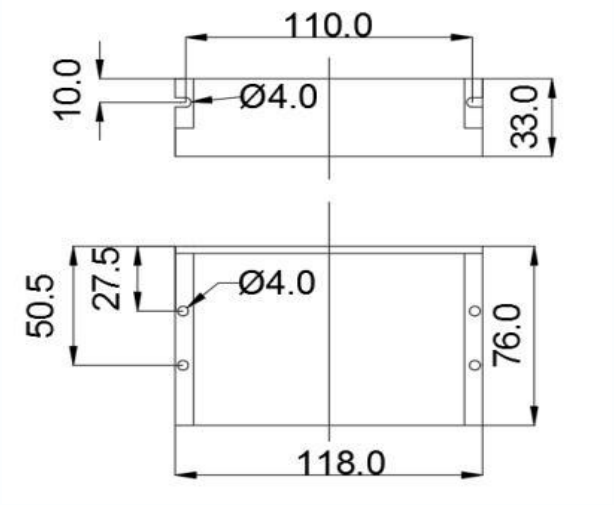
- Approximate zero workpiece trajectory tracking.

- The constant torque output is stable, the speed is controllable and the position is accurate.

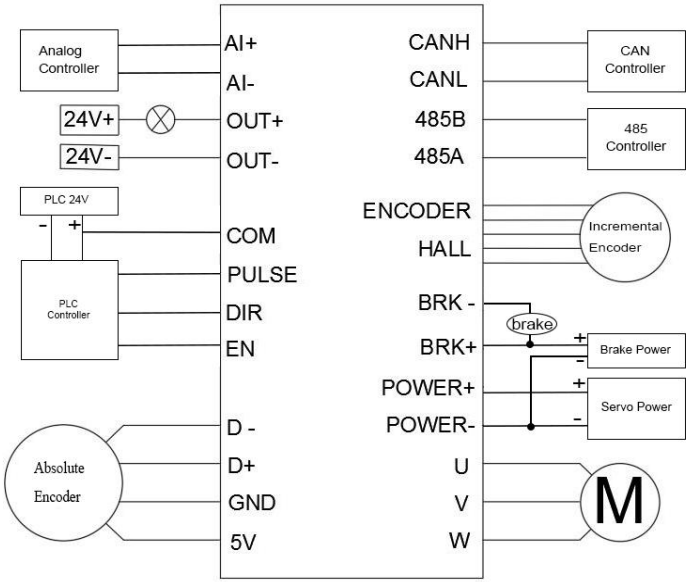
JD-3A Servo Driver Technical Parametes

Model	JD-3A
Input Voltage Range	18-60VDC
Continuous Current	3A
Peak Current	9A
Motors Supported	Three phase BLDC motor with encoder
Feedback Supported	Incremental Encoder,Abosolte encoder
Control Interface	Pulse,Analog， RS485
Inputs & Outputs	Analogy Input: AI, -10V~+10V Digital Input: 3 DI, 12-30V Digital Output: 1 DO, 12-30V
Protection	Overspeed / undervoltage/overcurrent/overload/encoder error/over position,etc.
Ambient Temperature	.-20~50℃ (non-freezing), The average load should not exceed 80% of the rated, Above 40℃, please reduce the amount of use, the maximum temperature is 60℃(normal temperature version no load operation)
Working Environment Humidity	Less than 90% RH (no Dewing)

Dimension



Drive Wiring



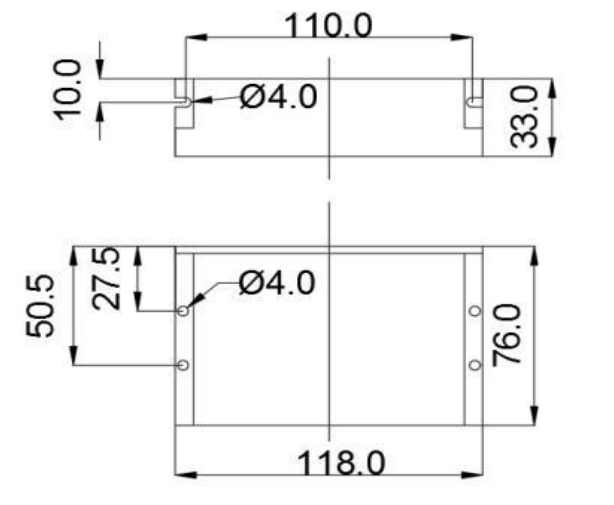
Order Information

Model	Voltage (V)	Peak Current (A)	Adaptable Motor	Encoder Option	Control Interface	Brake
JD-3A	18-60	9A	• DC Servo Motor • Brushless Motor with encoder	• Incremental Encoder • Absolute encoder	• RS485 • Pulse • Analog	• No brake • with brake

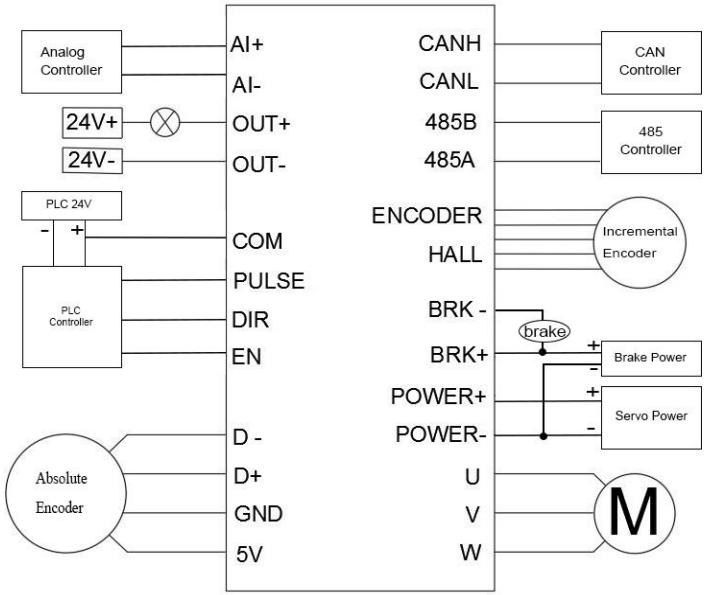
JD-6A Servo Driver Technical Parametes

Model	JD-6A
Input Voltage Range	18-60VDC
Continuous Current	6A
Peak Current	18A
Motors Supported	Three phase BLDC motor with encoder
Feedback Supported	Incremental Encoder,Abosolte encoder
Control Interface	Pulse,Analog， RS485,Canopen
Inputs & Outputs	Analogy Input: AI, -10V~+10V Digital Input: 3 DI, 12-30V Digital Output: 1 DO, 12-30V
Protection	Overspeed / undervoltage/overcurrent/overload/encoder error/over position,etc.
Ambient Temperature	.-20~50℃ (non-freezing), The average load should not exceed 80% of the rated, Above 40℃, please reduce the amount of use, the maximum temperature is 60℃(normal temperature version no load operation)
Working Environment Humidity	Less than 90% RH (no Dewing)

Dimension



Drive Wiring



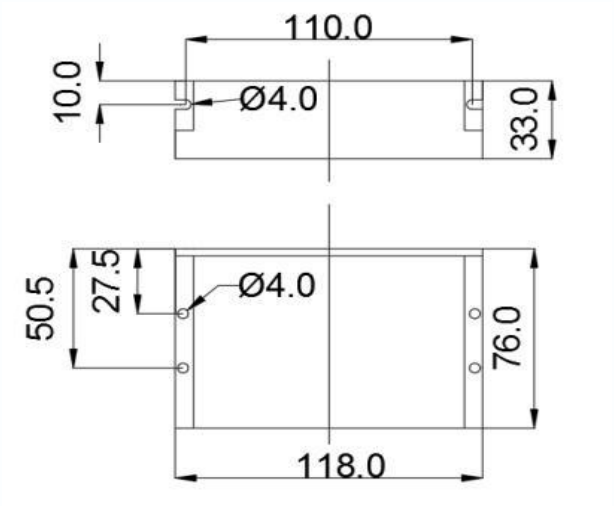
Order Information

Model	Voltage (V)	Peak Current (A)	Adaptable Motor	Encoder Option	Control Interface	Brake
JD-6A	18-60	18A	• DC Servo motor • Brushless motor with encoder	• Incremental encoder • Absolute encoder	• RS485 • Pulse • Analog • Canopen	• No brake • With brake

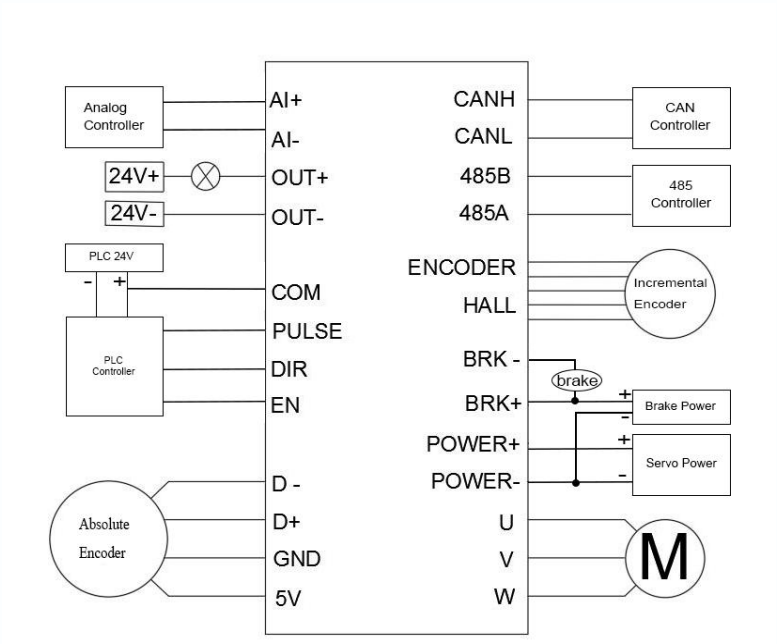
JD-15A Servo Driver Technical Parametes

Model	JD-15A
Input Voltage Range	18-60VDC
Continuous Current	15A
Peak Current	30A
Motors Supported	Three phase BLDC motor with encoder
Feedback Supported	Incremental Encoder,Abosolte encoder
Control Interface	Pulse,Analog， RS485,Canopen
Inputs & Outputs	Analogy Input: AI, -10V~+10V Digital Input: 3 DI, 12-30V Digital Output: 1 DO, 12-30V
Protection	Overspeed / undervoltage/overcurrent/overload/encoder error/over position,etc.
Ambient Temperature	.-20~50℃ (non-freezing), The average load should not exceed 80% of the rated, Above 40℃, please reduce the amount of use, the maximum temperature is 60℃(normal temperature version no load operation)
Working Environment Humidity	Less than 90% RH (no Dewing)

Dimension



Drive Wiring

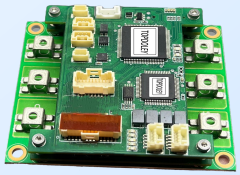


Order Information

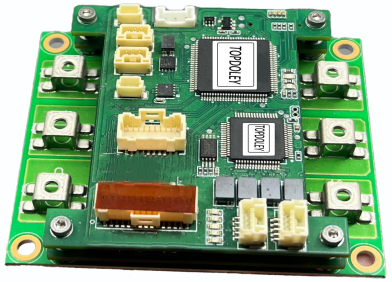
Model	Voltage (V)	Peak Current (A)	Adaptable Motor	Encoder Option	Control Interface	Brake
JD-15	18-60	30A	• DC Servo Motor • Brushless Motor with encoder	• Incremental encoder • Absolute encoder	• RS485 • Pulse • Analog • Canopen	• No brake • with brake

Topdoley

TD Series Servo system

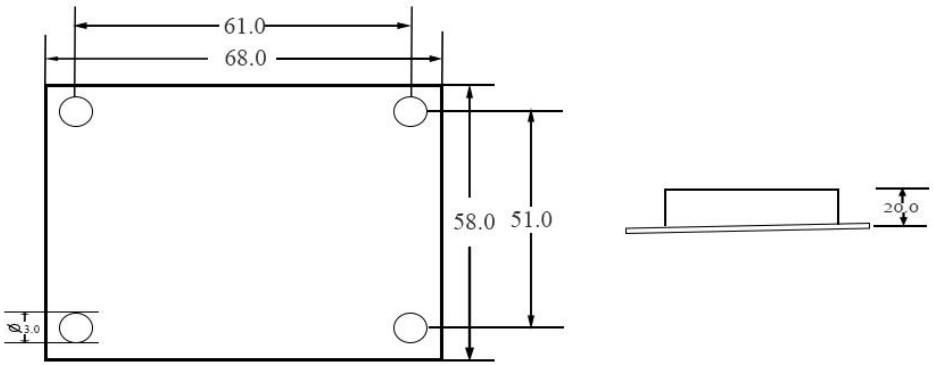


TD 40A Servo Driver Technical Parametes

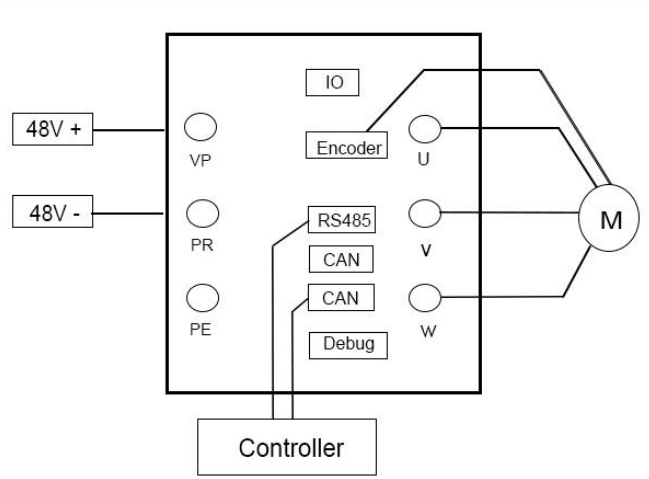


Model	TD-40A
Input Voltage Range	18-60VDC
Continuous Current	40A
Peak Current	80A
Motors Supported	Three phase BLDC motor with encoder
Feedback Supported	Incremental Encoder,Abosolte encoder
Control Interface	Pulse,Analog， RS485,Canopen， Ethercat
Inputs & Outputs	Analogy Input: AI, -10V~+10V Digital Input: 3 DI, 12-30V Digital Output: 1 DO, 12-30V
Protection	Overspeed / undervoltage/overcurrent/overload/encoder error/over position,etc.
Ambient Temperature	.-20~50℃ (non-freezing), The average load should not exceed 80% of the rated, Above 40℃, please reduce the amount of use, the maximum temperature is 60℃(normal temperature version no load operation)
Working Environment Humidity	Less then 90% RH (no Dewing)

Dimension



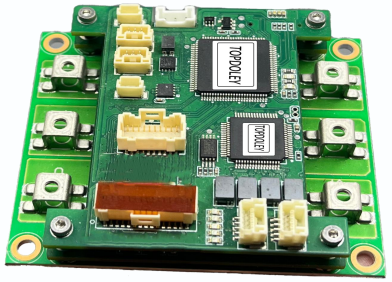
Drive Wiring



Order Information

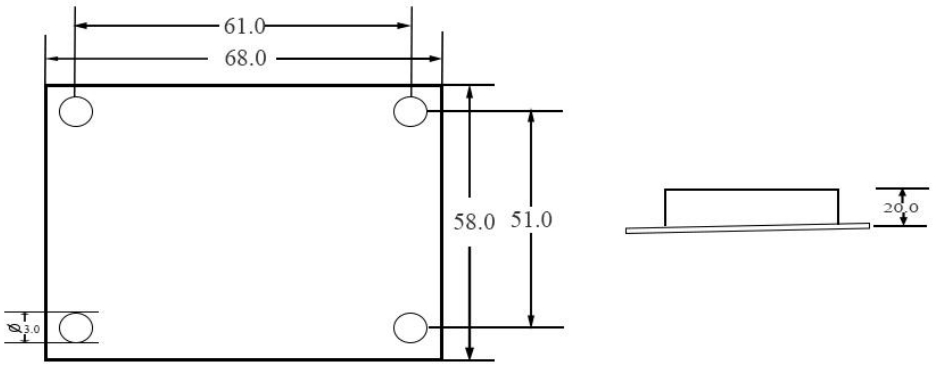
Model	Voltage (V)	Peak Current (A)	Adaptable Motor	Encoder Option	Control Interface	Brake
TD-40	18-60	80A	• DC Servo Motor • Brushless Motor with encoder	• Incremental encoder • Absolute encoder	• RS485 • Pulse • Analog • Canopen • Ethercat	• No brake • with brake

TD 50A Servo Driver Technical Parametes

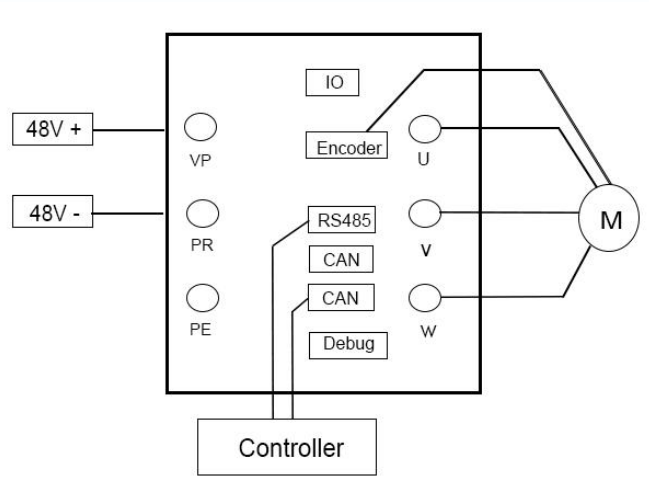


Model	TD-50A
Input Voltage Range	18-60VDC
Continuous Current	50A
Peak Current	100A
Motors Supported	Three phase BLDC motor with encoder
Feedback Supported	Incremental Encoder,Abosolte encoder
Control Interface	Pulse,Analog， RS485,Canopen， Ethercat
Inputs & Outputs	Analogy Input: AI, -10V~+10V Digital Input: 3 DI, 12-30V Digital Output: 1 DO, 12-30V
Protection	Overspeed / undervoltage/overcurrent/overload/encoder error/over position,etc.
Ambient Temperature	.-20~50℃ (non-freezing), The average load should not exceed 80% of the rated, Above 40℃, please reduce the amount of use, the maximum temperature is 60℃(normal temperature version no load operation)
Working Environment Humidity	Less then 90% RH (no Dewing)

Dimension



Drive Wiring



Order Information

Model	Voltage (V)	Peak Current (A)	Adaptable Motor	Encoder Option	Control Interface	Brake
TD-40	18-60	100A	• DC Servo Motor • Brushless Motor with encoder	• Incremental encoder • Absolute encoder	• RS485 • Pulse • Analog • Canopen • Ethercat	• No brake • with brake

DC Servo Motor Introduction

Our Servomotors have a higher torque density,they are together with our drive to serve the purpose of automation, which in turn is used in industrial processes to reduce cost and errors while improving accuracy and efficiency. The Servomotor runs stably and has low noise and vibration.

They are made for high performance applications where the most power in the smallest package size is critical. Various encoder feedback options are available for our servomotors, based on the needs of the applications. Options include incremental encoders, with a variety of resolutions, and absolute encoders, both single-turn and multi-turn.

High-torque brushless servo motors. SM series motors come in 40, 60, and 80 mm frame sizes with 10,000-count incremental commutating encoders and IP65 ratings on the motor body.

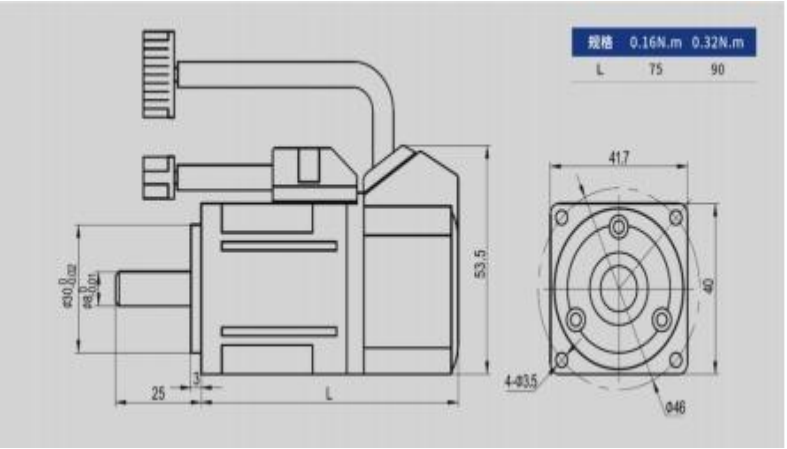
Name Ruling

SM	60	J	750	-48	30	O	I	A	5
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

①	**Product mode**	SM	HM
②	**Frame size**	60=60(mm)	80=80(mm)
③	**Interior series**	J	Z
④	**Rated power**	400	600
⑤	**Rated voltage**	24	48

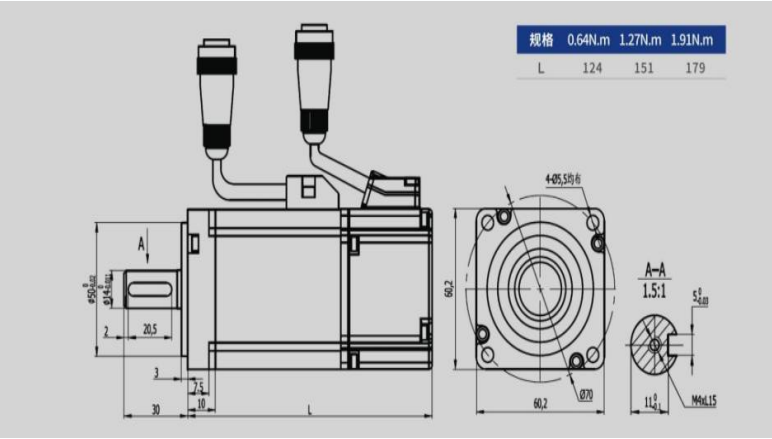
⑥	**Maximum speed (*100rpm)**	15=1500 rpm	30=3000rpm
⑦	**Encoder type**	M=Magnetic encoder	O=Optical encoder
⑧	**Encoder**	I=Incremental 2500	A=Absolute encoder
⑨	**Brake**	A=No brake	B=With brake
⑩	**Pole pairs**	4	5

40 SERIES DC SERVO MOTORS



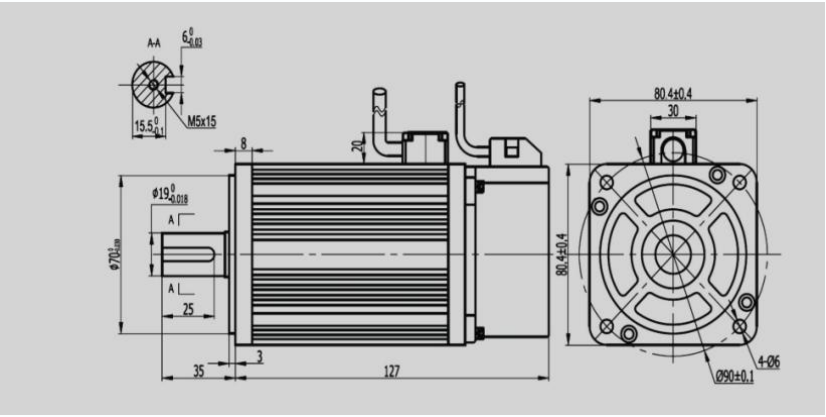
Motor Model	SM40X0050-2430OIA4	SM40X0100-2430OIA4	SM40X0050-4830OIA4	SM40X0100-4830OIA4
Rated Power(W)	50	100	50	100
Rated Voltage(V)	24	24	48	48
Rated Current(A)	2.6	5.2	1.1	2.5
Rated Speed(RPM)	3000	3000	3000	3000
Rated Torque(N.m)	0.16	0.32	0.16	0.32
Voltage Constant (V/1000r/min)	4	4	9.2	8.2
Torque Coefficient(N.m/A)	0.067	0.061	0.145	0.128
Rotor Inertia(KG.M2)	0.025 x 10-4	0.051 x 10~4	0.025 x 10-4	0.051 x 10-4
Line-line Resistance(Q)	1.39	0.49	6.75	2.2
Line-line Inductance(mH)	1.52	0.71	7.5	3
Electrical Time-constant(ms)	1.09	1.45	1.11	1.36
Encoder Line Number(PPR)	2500	2500	2500	
Insulation Class	ClassB(130°C)	ClassB(130°C)	ClassB(130°C)	
Safety Class	IP65	IP65	IP65	
Environment	Temperature: -20°C ∽+50°C Humidity Below 90%rh No Dewing			

60 SERIES DC SERVO MOTORS



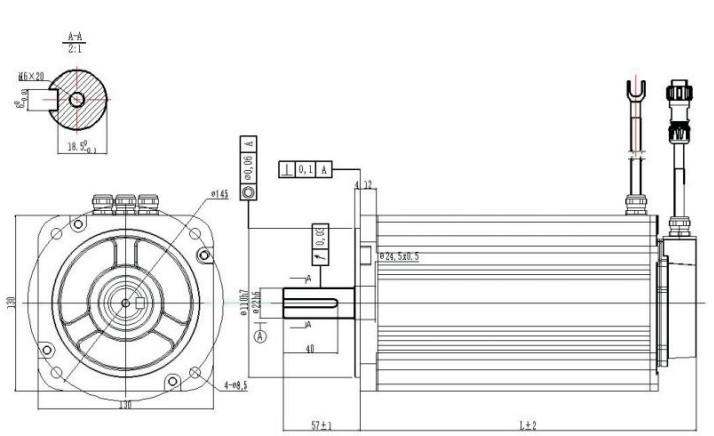
Motor Model	SM60X0200-4830OIA4	SM60X0400-4830OIA4	SM60X0600-4830OIA4	SM60X0200-2430OIA4
Rated Power(W)	200	400	600	200
Rated Voltage(V)	48	48	48	24
Rated Current(A)	5.7	11	14.5	12
Rated Speed(RPM)	3000	3000	3000	3000
Rated Torque(N.m)	0.64	1.27	1.91	0.637
Voltage Constant (V/1000r/min)	8	8	8.5	4
Torque Coefficient(N.m/A)	0.112	0.115	0.132	0.053
Rotor Inertia(KG.M2)	0.175x10-4	0.29x10-4	0.39 x 10-4	0.175x 10-4
Line-line Resistance(Q)	0.3	0.15	0.138	0.11
Line-line Inductance(mH)	1.378	0.708	0.64	0.42
Electrical Time-constant(ms)	4.59	4.72	4.64	3.81
Encoder Line Number(PPR)	2500	2500	2500	2500
Insulation Class	ClassB(130°C)	ClassB(130°C)	ClassB(130°C)	ClassF
Safety Class	IP65			
Environment	Temperature: -20°C ∽+50°C Humidity Below 90%rh No Dewing			

80 SERIES DC SERVO MOTORS



Motor Model	SM80X0400-2430OIA4	SM80X0750-2430OIA4	SM80X0400-4830OIA4	SM80X0750-4830OIA4	SM80X1000-4825OIA4
Rated Power(W)	400	750	400	750	1000
Rated Voltage(V)	24	24	48	48	48
Rated Current(A)	20	34	10.9	19.5	27
Rated Speed(RPM)	3000	3000	3000	3000	2500
Rated Torque(N.m)	1.27	2.39	1.27	2.39	4
Voltage Constant (V/1000r/min)	4.5	4.6	7.2	7.4	9.2
Torque Coefficient(N.m/A)	0.063	0.07	0.115	0.123	0.148
Rotor Inertia(KG.M2)	1.05x10-4	1.82 x 10-4	1.05x 10-4	1.82 x 10-4	2.97x 10-4
Line-line Resistance(Q)	0.06	0.028	0.15	0.066	0.053
Line-line Inductance(mH)	0.093	0.054	0.27	0.151	0.131
Electrical Time-constant(ms)	1.55	1.93	1.8	2.29	2.47
Encoder Line Number(PPR)	2500	2500	2500	2500	2500
Insulation Class	ClassF	ClassF	ClassB(130°C)		
Safety Class	IP65				
Environment	Temperature: -20°C ∽+50°C Humidity Below 90%rh No Dewing				

130 SERIES DC SERVO MOTORS



Motor Model	SM130X1500-4830OIA4	SM130X1500-4815OIA4	SM130X2000-4830OIA4	SM130X2500-4820OIA4	SM130X2500-4830OIA4	SM130X3000-4830OIA4
Rated Power(W)	1500	1500	2000	2500	2500	3000
Rated Voltage(V)	48	48	48	48	48	48
Rated Current(A)	35	38	50	60	60	88
Rated Speed(RPM)	3000	1500	3000	2000	3000	3000
Rated Torque(N.m)	5	10	6.3	12	7.9	10
Voltage Constant (V/1000r/min)	9.8	17	9.4	12	10	7.6
Torque Coefficient(N.m/A)	0.143	0.263	0.126	0.181	0.132	0.11
Rotor Inertia(KG.M2)	1.06x 10-3	1.94 x 10-3	1.26x 10-3	2.77 x 10-3	1.53 x 10-3	1.94 x 10-3
Line-line Resistance(Q)	0.03	0.043	0.029	0.013	0.02	0.0077
Line-line Inductance(mH)	0.087	0.161	0.089	0.046	0.463	0.021
Electrical Time-constant(ms)	2.9	3.74	3.2	3.59	2.31	2.72
Encoder Line Number(PPR)	2500	2500	2500	2500	2500	2500
Insulation Class	ClassB					
Safety Class	IP65					

AGV Drive Wheel Introduction

The AGV wheel is a critical component of Automated Guided Vehicles (AGVs), responsible for supporting, driving, and ensuring smooth movement. Our AGV wheels are designed with high-performance materials and advanced manufacturing techniques to ensure durability and stability. They are widely used in smart logistics, factory automation, and warehouse robotics.

· High Load Capacity – Made from high-strength materials such as polyurethane, rubber, or nylon to meet various load requirements.

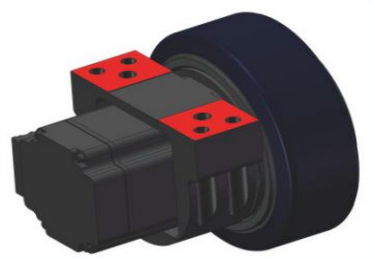
· Low Noise Operation – Optimized wheel structure reduces noise levels, making it ideal for quiet environments.

· Wear-Resistant & Impact-Resistant – High-quality materials ensure excellent durability for long-term operation.

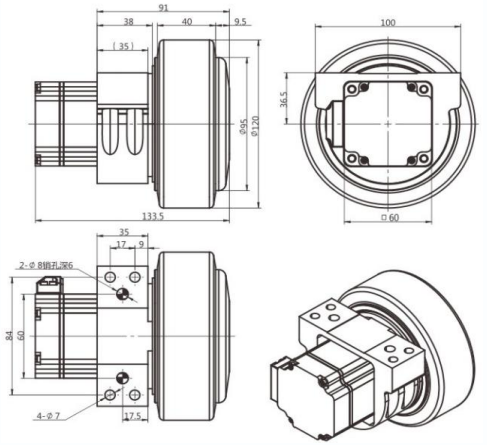
· Precision Driving – Integrated with precision bearings and motor-driven designs for accurate and efficient movement.

· Adaptability to Complex Surfaces – Designed with anti-slip and shock-absorbing features, making them suitable for smooth floors, metal surfaces, epoxy-coated floors, and other environments.

95 Series AGV Wheel Parameters

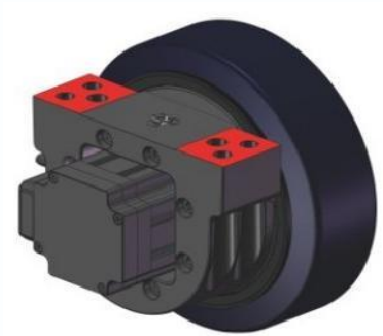


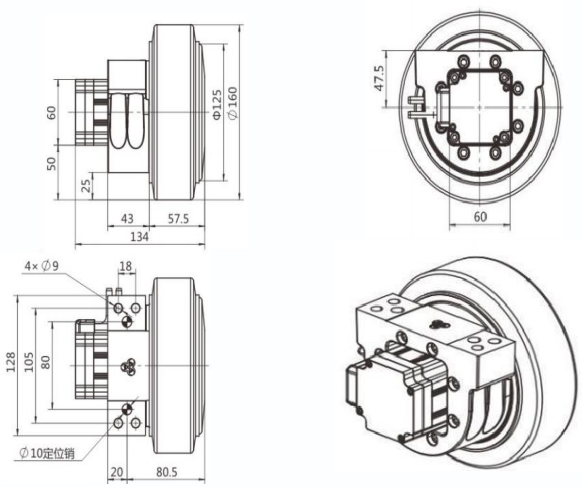
The installation method can be selected.



AGV Wheel	TD-AGVS-95-400-120	TD-AGVS-95-400-140
Power(W)	400	400
Rate Voltage(V)	48	48
Rate Current(A)	11.95	10.6
Rate Speed (r/min)	3000	3000
Rate Torque (N.m)	1.27	1.27
Wheel Diameter(mm)	120	120
Reducer Ratio	16/20/25/28/35/40/50/70	

125 Series AGV Wheel Parameters

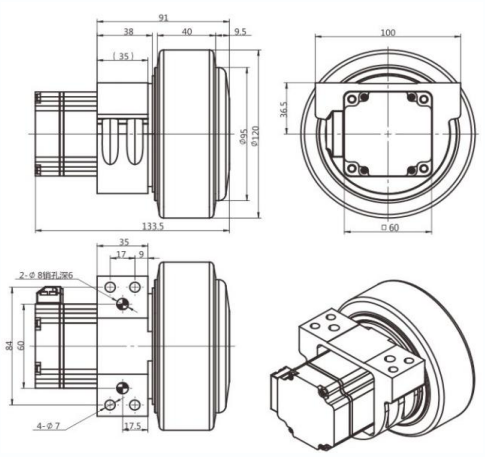




The installation method can be selected.

AGV Wheel	TD-AGVS-125-400-150	TD-AGVS-125-400-160	TD-AGVS-125-750-150	TD-AGVS-125-750-160
Power(W)	400	400	750	750
Rate Voltage(V)	48	48	48	48
Rate Current(A)	11.95	11.95	22.4	22.4
Rate Speed (r/min)	3000	3000	3000	3000
Rate Torque (N.m)	1.27	1.27	2.39	2.39
Wheel Diameter(mm)	125	125	125	125
Reducer Ratio	16/20/25/28/35/40/50/70			

150 Series AGV Wheel Parameters

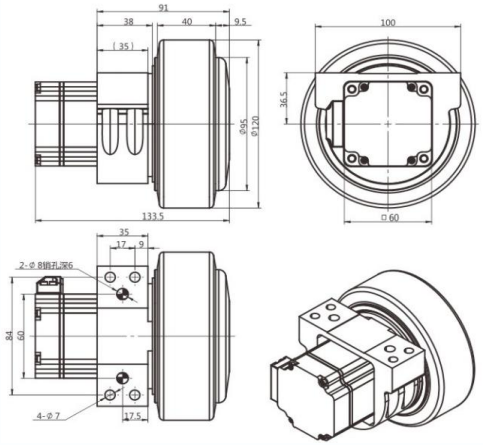


The installation method can be selected.

AGV Wheel	TD-AGVS-150-400-180	TD-AGVS-150-400-200	TD-AGVS-150-750-180	TD-AGVS-150-750-200
Power(W)	400	400	750	750
Rate Voltage(V)	48	48	48	48
Rate Current(A)	11.95	11.95	22.4	22.4
Rate Speed (r/min)	3000	3000	3000	3000
Rate Torque (N.m)	1.27	1.27	2.39	2.39
Wheel Diameter(mm)	150	150	150	150
Reducer Ratio	16/20/25/28/35/40/50/70			

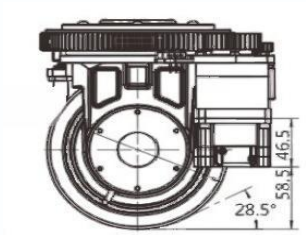
165 Series AGV Wheel Parameters

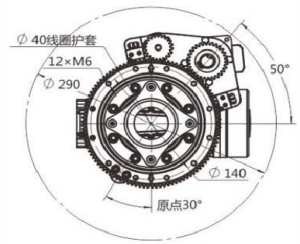
The installation method can be selected.

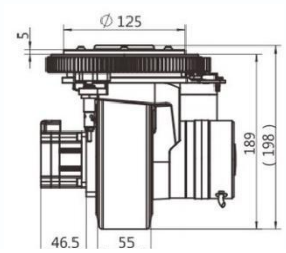


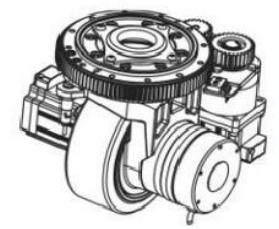
AGV Wheel	TD-AGVS-165-1500A-220	TD-AGVS-165-1500A-250
Power(W)	1500	1500
Rate Voltage(V)	48	48
Rate Current(A)	39	39
Rate Speed (r/min)	3000	3000
Rate Torque (N.m)	4.77	4.77
Wheel Diameter(mm)	220	220
Reducer Ratio	16/20/25/28/35/40/50/70	

150 Series AGV Steering Wheel Parameters









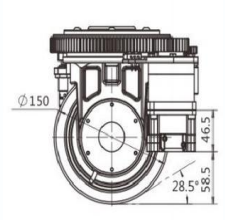
Parameter of walking motor

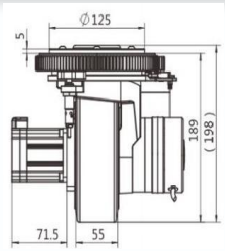
Motor type		Servo motor		
Motor power	w	200		
Motor voltage	V(DC	48		
Motor current	A	5.98		
Motor speed	rpm	3000		
Motor Torque	N ·m	0.637		
Protection level	IP	54		
Motor encoder		Magnetic coding		
Walking reducer		20	34	68
Walking speed	m/min	70.65	41.55	20.77
Output Torque	N-m	12	20	40
Traction	N	160	266	533
Reference Traction weight	Kg	240	400	800
Polyurethane load-bearing	Kg	550		
Rubber bearing	Kg	300		

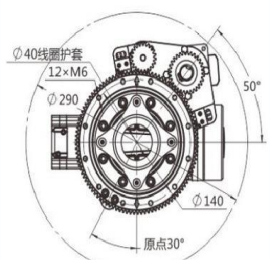
Parameter table of traction reducer

Steering Motor parameters	Motor type		Servo motor
	Motor power	W	200
	Motor voltage	V(DC	48
	Motor current	A	5.98
	Motor speed	rpm	3000
	Motor Torque	N·m	0.637
	Protection level	IP	54
	Motor encoder		Magnetic coding
	Speed ratio of reducer	i	35
	Slewing gear	105	3.5:1 Gear ratio3.5:1
	Number of steering gear teeth	30	
	Total steering ratio	i	122.5
	Number of teeth of encoder gear	z	21
	Steering Angle	°	±140
Brake	Working voltage	V(DC)	48
	Braking torque	Nm	4
Limit Switch	Working voltage	v	0~48

150 Series AGV Steering Wheel Parameters







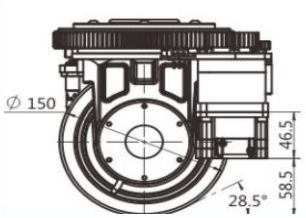
Parameter of walking motor

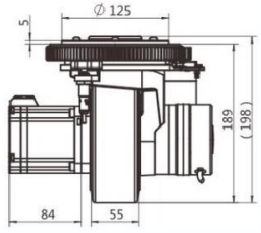
Motor type		Servo motor		
Motor power	w	400		
Motor voltage	V(DC	48		
Motor current	A	12		
Motor speed	rpm	3000		
Motor Torque	N ·m	1.27		
Protection level	IP	54		
Motor encoder		Magnetic coding		
Walking reducer		20	34	68
Walking speed	m/min	70.65	41.55	20.77
Output Torque	N-m	22	38	77
Traction	N	322	547	1000
Reference Traction weight	Kg	547	929	1500
Polyurethane load-bearing	Kg	550		
Rubber bearing	Kg	300		

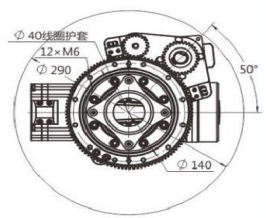
Parameter table of traction reducer

Steering Motor parameters	Motor type		Servo motor
	Motor power	W	200
	Motor voltage	V(DC	48
	Motor current	A	5.98
	Motor speed	rpm	3000
	Motor Torque	N·m	0.637
	Protection level	IP	54
	Motor encoder		Magnetic coding
	Speed ratio of reducer	i	35
	Slewing gear	105	3.5:1 Gear ratio3.5:1
	Number of steering gear teeth	30	
	Total steering ratio	i	122.5
	Number of teeth of encoder gear	z	21
	Steering Angle	°	±140
Brake	Working voltage	V(DC)	48
	Braking torque	Nm	4
Limit Switch	Working voltage	v	0~48

150 Series AGV Steering Wheel Parameters







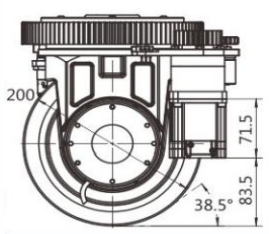
Parameter of walking motor

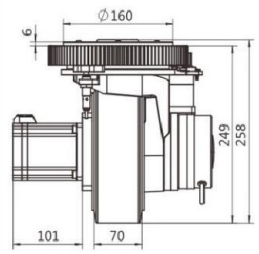
Motor type		Servo motor		
Motor power	w	750		
Motor voltage	V(DC	48		
Motor current	A	22.5		
Motor speed	rpm	3000		
Motor Torque	N ·m	2.38		
Protection level	IP	54		
Motor encoder		Magnetic coding		
Walking reducer		20	34	68
Walking speed	m/min	70.65	41.55	20.77
Output Torque	N-m	43	73	120
Traction	N	605	1000	1000
Reference Traction weight	Kg	1029	1500	1500
Polyurethane load-bearing	Kg	550		
Rubber bearing	Kg	300		

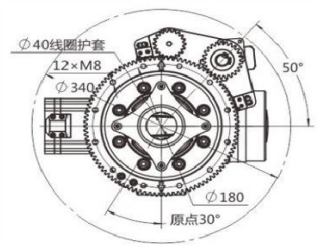
Parameter table of traction reducer

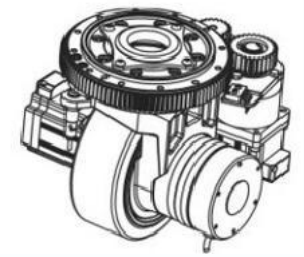
Steering Motor parameters	Motor type		Servo motor
	Motor power	W	200
	Motor voltage	V(DC	48
	Motor current	A	5.98
	Motor speed	rpm	3000
	Motor Torque	N·m	0.637
	Protection level	IP	54
	Motor encoder		Magnetic coding
	Speed ratio of reducer	i	35
	Slewing gear	105	3.5:1 Gear ratio3.5:1
	Number of steering gear teeth	30	
	Total steering ratio	i	122.5
	Number of teeth of encoder gear	z	21
	Steering Angle	°	±140
Brake	Working voltage	V(DC)	48
	Braking torque	Nm	4
Limit Switch	Working voltage	v	0~48

200 Series AGV Steering Wheel Parameters









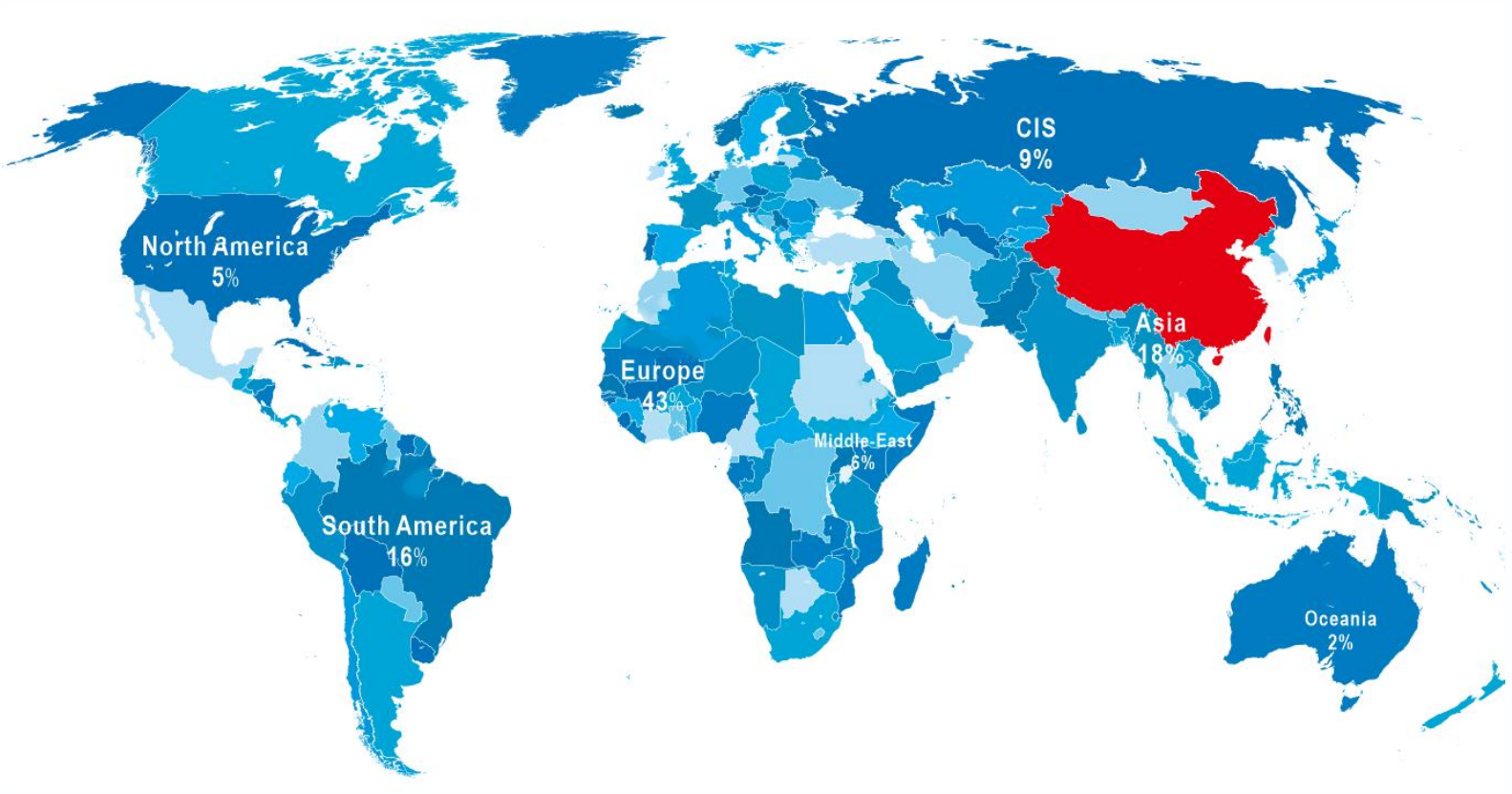
Parameter of walking motor

Motor type		Servo motor		
Motor power	w	100		
Motor voltage	V(DC	48		
Motor current	A	29.9		
Motor speed	rpm	3000		
Motor Torque	N ·m	3.18		
Protection level	IP	54		
Motor encoder		Magnetic coding		
Walking reducer		21	41	85
Walking speed	m/min	88	45	22
Output Torque	N-m	64	125	250
Traction	N	640	1250	1333
Reference Traction weight	Kg	1140	1780	2000
Polyurethane load-bearing	Kg	900		
Rubber bearing	Kg	500		

Parameter table of traction reducer

Steering Motor parameters	Motor type		Servo motor
	Motor power	W	400
	Motor voltage	V(DC	48
	Motor current	A	11.95
	Motor speed	rpm	3000
	Motor Torque	N·m	1.27
	Protection level	IP	54
	Motor encoder		Magnetic coding
	Speed ratio of reducer	i	35
	Slewing gear	105	4:1
	Number of steering gear teeth	30	
	Total steering ratio	i	140
	Number of teeth of encoder gear	z	20
	Steering Angle	°	±140
Brake	Working voltage	V(DC)	48
	Braking torque	Nm	4
Limit Switch	Working voltage	v	0~48

Topdoley



SHENZHEN TOPDOLEY TECHNOLOGY CO., LTD

Email：info@topdoley.com
Web: www.topdoley.com
Add：No. 2, Madi Street, Liuyue Community, Henggang Street, Longgang District, Shenzhen

Your Reliable Partner of Motion Control Parts