



Committed to the development of intelligent conveying and distribution
to become a global supplier of core drive components.

Power Roller Product Specification

Committed to the development of intelligent conveying and distribution
To become a global supplier of core drive components



Suzhou ZHAOWEI Industrial Science & Technology Co.,Ltd
No.180 Lvliangshan Road, Suzhou New Zone, Suzhou City, Jiangsu Province
Power Roller R&D and Production Base
Dongguan ZHAOWEI Machinery & Electronics Co., Ltd
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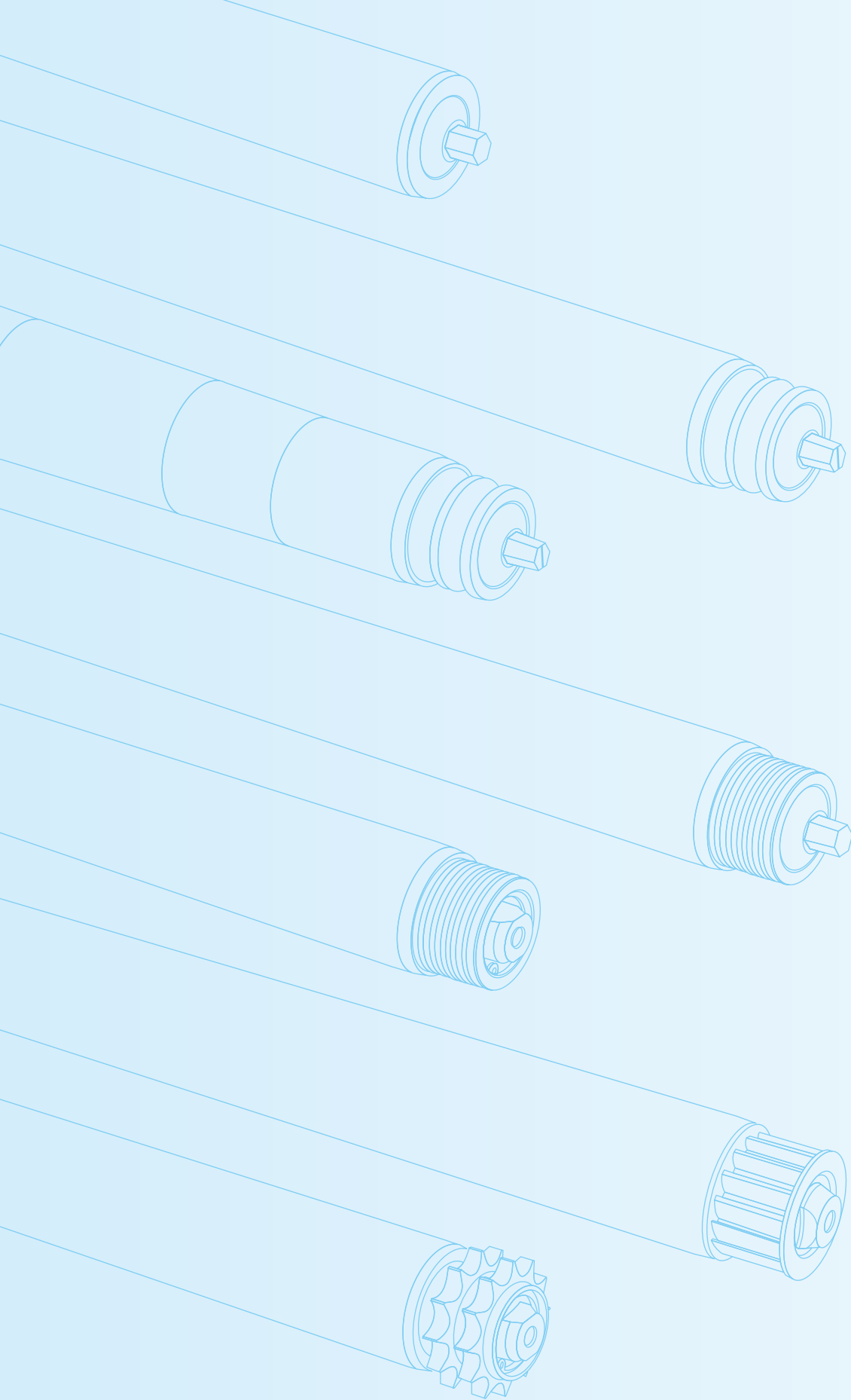
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About ZHAOWEI



Suzhou Zhaowei Industrial Technology Co.,Ltd. is a subsidiary of ZHAOWEI. It is committed to the field of intelligent transportation, providing customers with cost-effective DC electric roller modules. The company focuses on the R&D, design, and production of the core drive parts of intelligent transportation, specializes in the independent development of the entire industry chain. ZHAOWEI industrial DC power roller solutions mainly serve the automated transportation of goods in ecommerce, airports, pharmaceuticals, factories and other fields, aiming to improve operational efficiency and reduce logistics costs.

Shenzhen Zhaowei Machinery & Electronics Co.,Ltd is a micro-drive system manufacturer that designs, develops and manufactures precision transmission systems. ZHAOWEI was listed on the Shenzhen Stock Exchange in 2020. Headquartered in the beautiful coastal city of Shenzhen, we have established branches and offices in Dongguan, Suzhou, HongKong, Germany, Shanghai, and the United States, strategically expanding Zhaowei global presence.



National Enterprise
Technology Center



Individual Championship
For National Manufacturing Industry



Micro drive Industry
China Industry Awards (CIA)



China Patent Award
Outstanding Award

Quality Managemnt System

- The management system of Zhaowei serves as the core component of the enterprise's operational framework. All Zhaowei employees strictly adhere to the ISO management system, ensuring that every process—from product design and research & development (R&D) to manufacturing—is conducted in strict compliance with the established system standards.
- We are committed to controlling product risks to enhance reliability under harsh and demanding environmental conditions.
- Our mission is to provide clients with innovative products tailored to their needs.

Product Certification



ISO13485 (CN18/42018)



ISO9001:2015 (CN11/30731)



IATF16949 (CN11/30730.01)



ISO14001 (U006616E0153R3M)

Award and Honors

700+

Intellectual Property Applied

150+

Patent for
Invention Applied

42+

Software
Copyright

72+

Enterprise
Trademark

24+

PCT



- | | | |
|--|---|---|
| 01 National Enterprise
Technology Center | 02 Individual Championship For
National Manufacturing Industry | 03 National Science and
Technology Award
Second Prize |
| 04 Guangdong Science and
Technology Award Top Prize | 05 National Intellectual Property
Advantageous Enterprise | 06 Science and Technology of
China's Machinery Industry
Grand Prize |
| 07 Shenzhen Engineering
Technology Research Center | 08 Robot Industry in Guangdong
Backbone Enterprise | 09 China Patent Award
Excellence Award |
| 10 China Grand Awards for
Industry Commendation Award | 11 Strategic Emerging Industries
Seed Enterprise | 12 China Good Design(CGD)
Gold Award |



Power Roller Model Number Description

No.	ZWGT2450-0300-108-C1-A0-P1-T1-H1
ZWG Roller	
Product Type R / S / Q / A / B / T	
Rated Voltage 24: 24V、48: 48V、AC: 220V AC、AD: 380V AC	
Diameter(mm) Φ50 / Φ60 / Φ76 / Φ80 / Φ89	
Effective Roller Length(RL) 250~1500 mm(RL)	
Ratio 5 / 7 / 13 / 18 / 24 / 25 / 30 / 42 / 54 / 65 / 72 / 78 / 90 / 96 / 108	
Rated Output Power C: Magnetic Coding、D: Hall、E: Non-inductive 1: 35W, 2: 50W, 3: 80W, 4: 220W, 5: 255W, 6: 450W, 7: 750W, 8: 120W	
Tube Material A: Carbon Steel (default galvanized), B: 304 Stainless Steel, F: 201 Stainless Steel 0: No treatment, 1: Knurling, 2: Grooving, 3: Crowned drum, 4: 2 mm PVC sleeve, 5: 5 mm PVC sleeve, 6: 2 mm PU sleeve, 7: Rubber Lagging, 8: PP tapered sleeve, 9: Shoulder sleeve(50- 70mm/60-90mm/76-96mm)	
Drive Mode Z: Direct-drive(Hex 11)、P: Poly-V、O:Round belt、N: Timing Belt、L: Single Sprocket(08B11T/08B14T/10A13T)、M: Cam U: Double Sprocket(10B17T)、Y: Double Sprocket(10B19T)、W: Double Sprocket(10B21T)、X: (Non-standard) 1: Plastic, 2: Carbon steel, galvanized, 3: Carbon steel, blackened, 4: Stainless steel metal, 5: Aluminum alloy, 6: Powder metallurgy, 7: Carbon steel, chrome plated	
Cable Outlet Configurations T1: With M12×1 threaded HEX, T2: HEX11 without thread, T2: HEX11、T3: Double D, T4: Dual-bearing hexagonal shaft (stainless steel), T5: Double-D shaft with dual bearings (76 mm)	
Non-cable end mounting options H: Galvanized Carbon Steel, K: Stainless Steel, M: Carbon Steel Black Oxide 1: Spring return Hex11, 2: Fixed Hex11 , 3: M8 female thread, 4: M10 female thread (60MM), 5: M12 female thread (76MM), 6: Double D	

Example: ZWGR2450-520-18-C3-B0-P1-T1-H1

ZWG: SUZHOU ZHAOWEI, R: Standard products, 24:24V DC, 50:Dia.50mm, 520: RL520mm, 18: Ratio 18, C3:Rated Output Power 80W, Magnetic Coding, B: SUS304, P1: PolyVee Belt Drive Mode, T1: M12*HEX-Power End Installation, H1: Drive End Installation-Spring return HEX11

Φ50mm Power Roller Model Number Description

No.	ZWGR2450-0300-018-C1-A0-P1-T1-H1
ZWG Roller	
Gearbox Material R: Powder metallurgy, IP54 S: Ground gear, IP54 Q: Powder metallurgy, IP66 T: Ground gear, IP66 A: Plastic gear, IP54 B: Plastic gear, IP66	
Rated Voltage 24V DC / 48V DC	
Diameter (mm): 50	
Effective Roller Length (RL) 250~1500 mm (Tube dimension)	
Gear Ratios 5 / 7 / 13 / 18 / 25 / 30 / 42 / 65 / 78 / 90 / 108	
Drive Power Configurations C: Magnetic encoder, D: Hall 1:35 W, 2:50 W, 3:80 W, 8:120 W	
Tube Material A: Carbon steel (default galvanized), B: Stainless steel, F: SUS201 stainless steel 0: No Treatment, 1: Knurling, 2: Grooving, 3: Crowned drum, 4: 2 mm PVC sleeve, 5: 5 mm PVC sleeve, 6: 2 mm PU sleeve, 7: Rubber Lagging, 8: PP tapered sleeve, 9: Shoulder sleeve (50 → 70 mm)	
Drive Mode Z: Direct drive; P: Poly-V pulley; 0: O-type pulley; N: Timing pulley; L: Double-strand sprocket; M: Cam; X: Non-standard 1: Plastic; 2: Carbon steel, galvanized; 3: Carbon steel, blackened; 4: Stainless steel; 5: Aluminum alloy; 6: Powder metallurgy; 7: Carbon steel, chrome plated	
Cable outlet configurations T1: With M12×1 threaded HEX; T2: HEX11 without thread; T3: Double-D; T4: Dual-bearing hexagonal shaft (stainless steel); TX: Non-standard	
Non-cable end mounting options H: Carbon steel, galvanized; K: Stainless steel; M: Carbon steel, blackened 1: Spring-loaded press-fit HEX11; 2: Fixed hexagonal shaft; 3: M8 internal thread; 6: Double-D	

Φ60mm Power Roller Model Number Description

No.	ZWGS4860-1200-108-D2-B2-Z2-T2-K3
ZWG Roller	
Gearbox Material	
R: Powder metallurgy, IP54	
S: Ground gear, IP54	
Q: Powder metallurgy, IP66	
T: Ground gear, IP66	
Rated Voltage	
24V DC / 48V DC	
Diameter (mm): 60	
Effective Roller Length (RL)	
250~1500 mm (Tube dimension)	
Gear Ratios	
5 / 7 / 13 / 18 / 25 / 30 / 42 / 65 / 78 / 90 / 108	
Drive Power Configurations	
C: Magnetic encoder; D: Hall	
1:35 W、 2:50 W、 3:80 W、 8:120 W	
Tube Material	
A: Carbon steel (default galvanized); B: Stainless steel;	
1: Knurling; 3: Crowned drum; 7: Rubber Lagging; 9: Shoulder sleeve (60 → 70 mm)	
Drive Mode	
Z: Direct drive; P: Poly-V pulley; 0: O-type pulley; L: Double-strand sprocket (08B14T); X: Non-standard	
1: Plastic; 2: Carbon steel, galvanized; 3: Carbon steel, blackened; 4: Stainless steel; 5: Aluminum alloy;	
7: Carbon steel, chrome plated	
Cable outlet configurations	
T1: With M12×1 threaded HEX; T2: HEX11 without thread; T3: Double-D; T4: Dual-bearing hexagonal shaft (stainless steel)	
Non-cable end mounting options	
H: Carbon steel, galvanized; K: Stainless steel;	
3: M8 internal thread; 4: M10 internal thread; 6: Double-D	

Φ 76/80/90 mm Power Roller Model Number Description

No.	ZWGT4876-1200-096-C5-A0-L3-T3-M5
ZWG Roller	
Gearbox Material	
R: Powder metallurgy, IP54	
S: Ground gear, IP54	
Q: Powder metallurgy, IP66	
T: Ground gear, IP66	
Rated Voltage	
48V DC / AC: 220V	
Diameter (mm): 76 / 80 / 89	
Effective Roller Length (RL)	
480~1500 mm (Tube dimension)	
Gear Ratios	
17 / 18 / 24 / 48 / 70 / 72 / 96	
Drive Power Configurations	
C: Magnetic encoder	
4: 220 W、 5: 225 W、 6: 450 W、 7: 750 W	
Tube Material	
A: Carbon steel (default galvanized); B: Stainless steel;	
0: No Treatment; 3: Crowned drum;	
Drive Mode	
Z: Direct drive; L: Double-strand sprocket (10A13T); U: Double sprocket (10B17T); Y: Double sprocket (10B19T);	
W: Double sprocket (10B21T); X: Non-standard	
3: Carbon steel, blackened; 4: Stainless steel	
Cable outlet configurations	
T3: Double-D; T5: Double-D shaft with dual bearings (76 mm); TX: Non-standard	
Non-cable end mounting options	
H: Carbon steel, galvanized; K: Stainless steel; M: Carbon steel, blackened	
5: M12 internal thread (76 mm); 6: Double-D	

Drive Controller Model Number Description

No. ZWG24-C3-P1-A1

SUZHOU ZHAOWEI

Supply Voltage

24: 24V、48: 48V、AC: 220V AC、AD: 380V AC

Drive Mode

C: Magnetic Coding, D: Hall, E: Non-inductive

Power

1: 35W、2: 50W、3: 80W、4: 220W、5: 450W、6: 750W

Protection Class

N: IP20、P: IP66

Number of Driveable

1: 1V1、2: 1V2、4: 1V4

Communication

A: Manual speed control、B: IO、C: RS485、D: Pronet、F: Ethercat、G: Ethernet、H: Modbus(Can)
0: None、1: Digital PNP、2: Digital NPN、3: Analog PNP、4: Analog NPN

Example: ZWG24-C3-N1-B1

ZWG: SUZHOU ZHAOWEI PRODUCT, 24: 24V Power Supply, C3: Magnetic Coding 80W, N1: IP20/1V1, B1: IO-Digital PNP



Box Conveying Power Roller Series

Intelligent Conveying Solution

ZHAOWEI Group has launched a new power roller platform ZWG, using self-developed high-performance gearboxes, micromotors and controllers to bring customers stable and efficient power roller solutions. Moreover, ZHAOWEI R&D integrates R&D, design and sales, which effectively address conveying needs.



Box Conveying Power Roller

Zhaowei Industry is a global manufacturer of advanced micro drive solution, specializing in the research and development as well as production of miniature and electric rollers and precision reducers. ZWG products contribute to the transformation and upgrading of the Intralogistics and production automation of enterprises.



Drive Controller :

ZWG offers a wide range of drive controllers to satisfy customers' diverse application scenarios.

High-Load Conveying

ZWG Products adopt self-developed tensioning sleeve

- 50mm Metal Tensioning Structure >150N.m
- 60mm Metal Tensioning Structure >180N.m
- 76/80/89mm Metal Tensioning Structure >300N.m

Chinese Utility Model Patent Number: ZL2023202977237

Installation and Control

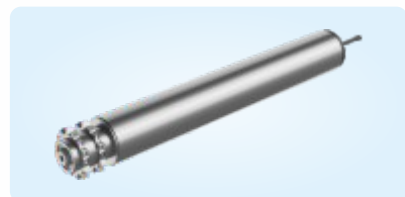
- Diversity and flexibility, widely compatible with common conveyor lines.
- All-in-one integration. Easy to assemble & disassemble.

Efficiency Conveying

- Inner gear parts of the gear box are processed by high-precision technology, and the unipolar efficiency reaches more than 97%.
- Product efficiency is achieved at a leading global level.
- More power options: 35W - 750W
- Motor design life improved: from 20K+ hours to 30K+ hours.

ZWG Power Roller Quick View

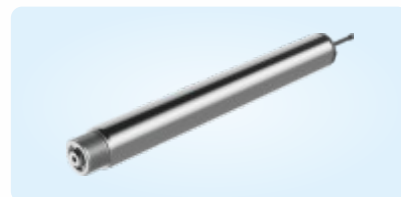
Power Roller Series



Dia 50, Cylinder
Temp. range -40 °C to 55 °C
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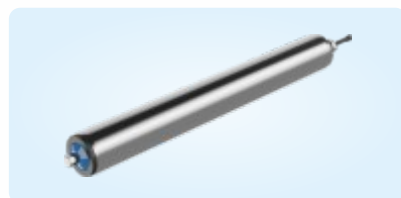
Dia 50, Cylinder
Temp. range -40 °C to 55 °C
Page 12



Dia 50, Cylinder
Temp. range -40 °C to 55 °C
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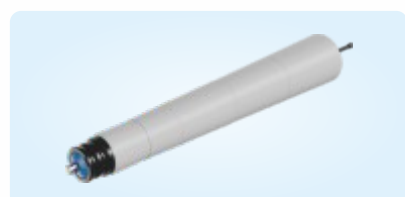
Dia 50, Cylinder
Temp. range -40 °C to 55 °C
Page 12



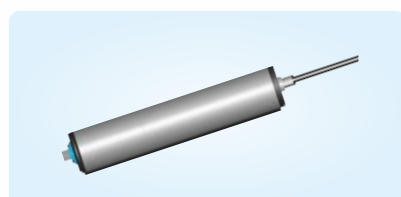
Dia 50, Cylinder
Temp. range -40 °C to 55 °C
Page 12



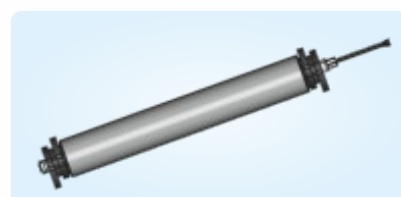
Dia 50, Cylinder
Temp. range -40 °C to 55 °C
Page 12



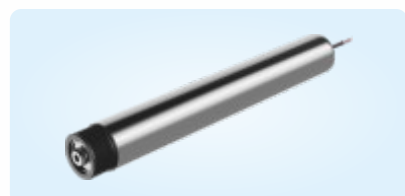
Dia 50, Cone
Temp. range -40 °C to 55 °C
Page 12



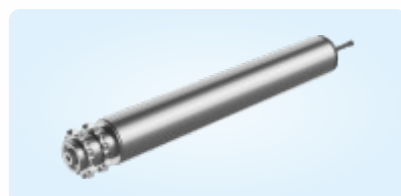
Dia 50, Drum
Temp. range -40 °C to 55 °C
Page 16



For right angle transfer, Cylinder
Temp. range -40 °C to 55 °C
Page 18



Dia 60, Cylinder
Temp. range -40 °C to 55 °C
Page 20



Dia 60, Cylinder
Temp. range -40 °C to 55 °C
Page 20



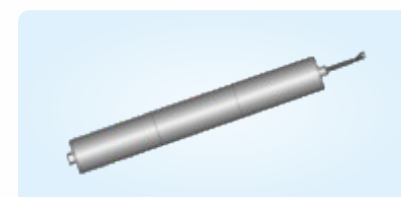
Dia 76, Cylinder
Temp. range -40 °C to 55 °C
Page 24



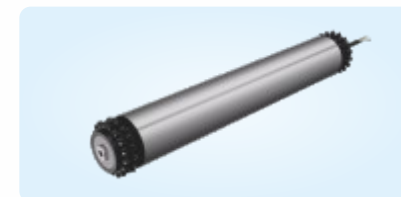
Dia 80, Cylinder
Temp. range -40 °C to 55 °C
Page 24



Dia 89, Cylinder
Temp. range -40 °C to 55 °C
Page 24



Dia 80, Drum
Temp. range -40 °C to 55 °C
Page 27



Power Roller-Driving Chain Machine
Temp. range -40 °C to 55 °C
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Drive Controller Series



Hall Controller: Mini Controller
Page 32



Hall Controller: 35W/50W/80W (Standard Model)
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Hall Controller: 120W (Standard Model)
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Hall Controller: ZPA Accumulation Controller
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Magnetic Encoder Drive Controller (80W)
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RS485 Drive Controller
Page 37



IP54 Drive Controller (80W)
Page 38



IP54 Drive Controller (220W)
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IP20 Drive Controller (255W)
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IP20 Drive Controller (450W)
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Drive Controller-750W
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1 Drive 2 (External Motor Control) ECT
Bus Controller
Page 43



1 Drive 4 (Internal Motor Control) ECT
Bus Controller
Page 44



1 Drive 4 (Internal Motor Control) PN
Bus Controller
Page 45

Φ50mm Series



Applications

For box conveyor lines such as cartons, bins, platens or tires. Suitable for linear conveyors, small belt conveyors, especially zero pressure accumulation conveyors. Also for shuttle systems, mating conveyor sections or transplanters with other conveyors.

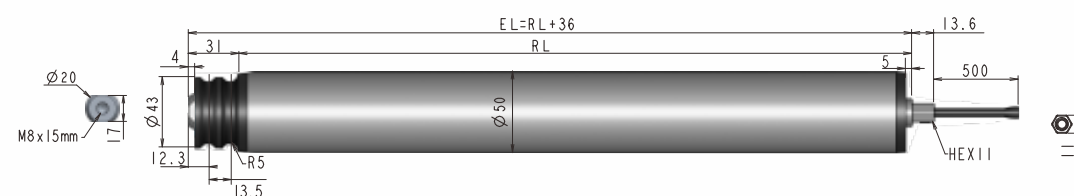
Performance Benefits

- ① **Energy-saving and Efficiency** : Based on the outstanding overall design, the efficiency of the whole power roller is higher than that of competing products.
- ② **Flexibility and Diversity** : Supports regular Poly-V, round belt and timing belt or sprockets. the motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.
- ③ **Quiet** : Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

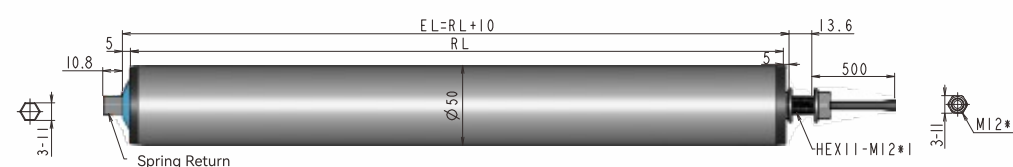
Basic Parameter

Rated Voltage	24V			48V		
Rated Current (A)	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current (A)	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power (W)	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	Hall Power Roller: 1m (extendable by 1m) Magnetic Encoder Power Roller: 0.5m standard (extendable by 2m)					
Protection Class	IP54/IP66					
Tube Material	Galvanized Steel, Stainless Steel					
Tube Size	φ50x1.5mm					
Shafts	M12 male thread hex , Hex 11 , Double D					
Operating Temperature	-40℃ ~ 55℃					

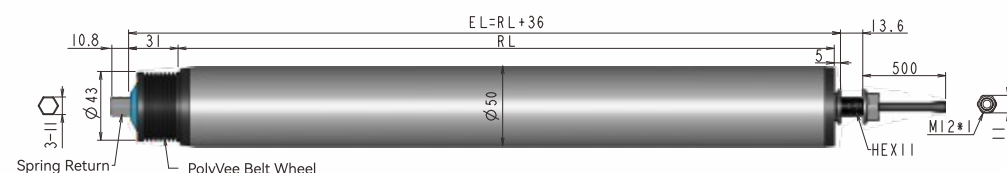
O: Rong Belt



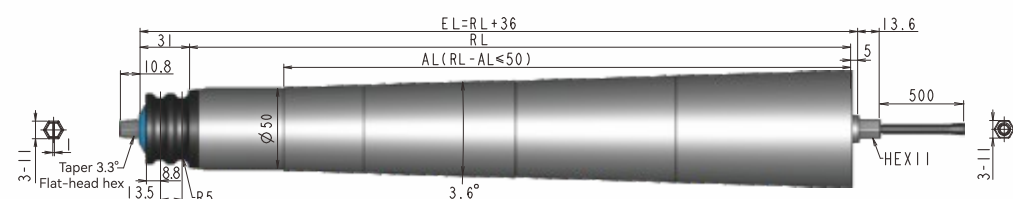
Z: Direct-Drive Hex11



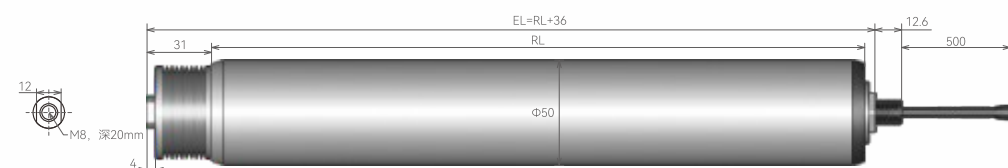
P: PolyVee Belt



Tapered:



IP66:



Tapered Reference Dimensions

Length	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Min. Dia.	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5
Max. Dia.	71.2	77.6	77.6	84.0	84.0	90.4	90.4	96.8	96.8	103.2	103.2	109.9	109.9	116.0	116.0

Φ50mm Drum Series



Applications

Application for small and medium-sized belt conveyors with 50-diameter drum Power Roller. Flexible and efficient in bulk lines with irregular sizes of goods

Performance Benefits

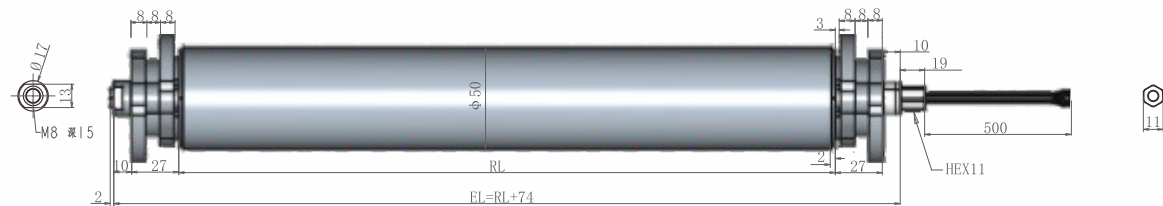
- ① Energy-saving and Efficiency :** Based on the outstanding overall design, the efficiency of the whole power roller is higher than that of competing products.
- ② Drum:** Drum-shaped steel tube design ensures belt tension and friction for precise and stable conveying.
- ③ Flexibility:** Motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.
- ④ Quiet :** Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

Basic Parameter

Rated Voltage	24V			48V		
Rated Current (A)	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current (A)	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power (W)	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	Hall Power Roller:1m(extendable by 1m) Magnetic Encoder Power Roller:0.5m standard(extendable by 2m)					
Protection Class	IP54/IP66					
Tube Material	Galvanized Steel, Stainless Steel					
Tube Size	φ52x2.5mm					
Shafts	M12 male thread hex , Hex 11 , Double D					
Operating Temperature	-40℃ ~ 55℃					

Power Roller-Right Angle Transfer Series External Dimensions

Power Roller



Free Roller



Φ60mm Series



Applications

Medium sized pallet conveyor with up to 600KG load. Industry excellence in white goods, truck tires, EV, and other areas of the industry.

Performance Benefits

- ① **Energy-saving and Efficiency** : Based on the outstanding overall design, the efficiency of the whole power roller is higher than that of competing products.
- ② **Similar Designs**: From the same platform as the ZWG 50mm RollerMotor, both 50mm and 60mm series can be controlled by the same type of controller.
- ③ **Flexibility and Diversity**: Supports regular Poly-V, round belt and timing belt or sprockets. The motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more applications.
- ④ **Quiet**: Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

Basic Parameter

Rated Voltage	24V			48V		
Rated Current (A)	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current (A)	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power (W)	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	Hall Power Roller: 1m （extendable by 1m） Magnetic Encoder Power Roller: 0.5m standard (extendable by 2m)					
Protection Class	IP54/IP66					
Tube Material	Galvanized Steel, Stainless Steel					
Tube Size	φ60x2mm					
Shafts	M12 male thread hex , Hex 11 , Double D					
Operating Temperature	-40℃ ~ 55℃					

Φ60mm Series Performance Options Table

120 W

Speed Code	Rated Voltage (V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Start-up Turque (N.m)	Playload* (μ=0.05)KG
S3	48	13	769.23	2.42	1.55	3.88	65
S4	48	18	555.56	1.75	2.10	5.25	85
S5	48	25	400.00	1.26	2.91	7.28	120
S6	48	30	333.33	1.05	3.49	8.73	145
S7	48	42	238.10	0.75	4.89	12.23	200
S8	48	65	154.32	0.48	7.35	14.70	300
S9	48	78	128.21	0.40	8.85	17.70	360
S10	48	90	111.11	0.35	10.21	20.42	420
S11	48	108	92.59	0.29	12.26	24.52	500

80 W

Speed Code	Rated Voltage (V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Start-up Turque (N.m)	Playload* (μ=0.05)KG
S1	24/48	5	1380.00	4.34	0.60	1.49	25
S2	24/48	7	985.71	3.10	0.84	2.09	35
S3	24/48	13	530.77	1.67	1.55	3.88	65
S4	24/48	18	383.33	1.20	2.10	5.24	85
S5	24/48	25	276.00	0.87	2.91	7.28	120
S6	24/48	30	230.00	0.72	3.49	8.73	145
S7	24/48	42	164.29	0.52	4.89	12.22	200
S8	24/48	65	106.48	0.33	7.35	14.71	300
S9	24/48	78	88.46	0.28	8.85	17.70	360
S10	24/48	90	76.67	0.24	10.21	18.00	420
S11	24/48	108	63.89	0.20	12.26	18.00	500

50 W

Speed Code	Rated Voltage (V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Start-up Turque (N.m)	Playload* (μ=0.05)KG
S1	24/48	5	1380.00	4.34	0.36	0.90	15
S2	24/48	7	985.71	3.10	0.49	1.23	20
S3	24/48	13	530.77	1.67	0.91	2.28	40
S4	24/48	18	383.33	1.20	1.27	3.18	50
S5	24/48	25	276.00	0.87	1.76	4.40	75
S6	24/48	30	230.00	0.72	2.13	5.33	90
S7	24/48	42	164.29	0.52	2.96	7.40	125
S8	24/48	65	106.48	0.33	4.58	11.45	185
S9	24/48	78	88.46	0.28	5.07	12.68	225
S10	24/48	90	76.67	0.24	5.89	14.73	260
S11	24/48	108	63.89	0.20	7.07	17.68	310

35 W

Speed Code	Rated Voltage (V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Start-up Turque (N.m)	Playload* (μ=0.05)KG
S1	24/48	5	1380.00	4.34	0.26	0.65	10
S2	24/48	7	985.71	3.10	0.34	0.85	15
S3	24/48	13	530.77	1.67	0.64	1.60	25
S4	24/48	18	383.33	1.20	0.89	2.23	35
S5	24/48	25	276.00	0.87	1.24	3.10	50
S6	24/48	30	230.00	0.72	1.49	3.73	60
S7	24/48	42	164.29	0.52	2.07	5.18	85
S8	24/48	65	106.48	0.33	2.95	7.38	130
S9	24/48	78	88.46	0.28	3.55	8.88	155
S10	24/48	90	76.67	0.24	4.10	10.25	180
S11	24/48	108	63.89	0.20	4.95	12.38	215

Φ76/80/89mm Series Performance Options Table

Φ76mm Power Roller - Direct Current								
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)	Playload* (μ=0.05)KG
220W	48	17	264.71	1.05	8.48	6.00	12	350
	48	70	64.29	0.26	34.20	6.00	12	1500
255W	48	18	300.00	1.19	8.98	7.00	14	350
	48	24	225.00	0.90	11.73	7.00	14	500
	48	48	112.50	0.45	23.94	7.00	14	1000
	48	72	75.00	0.30	35.18	7.00	14	1500

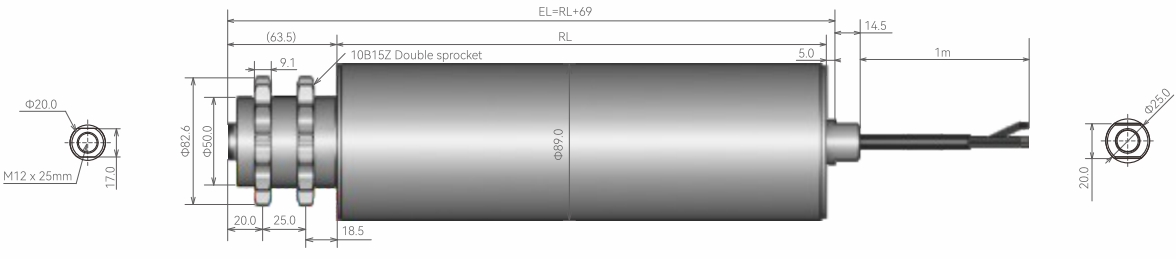
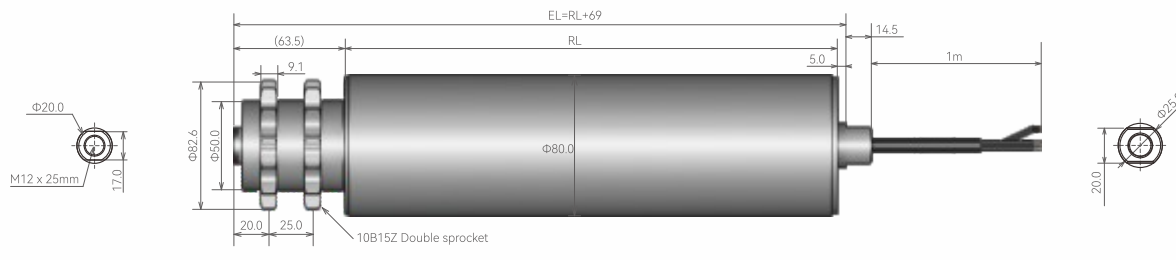
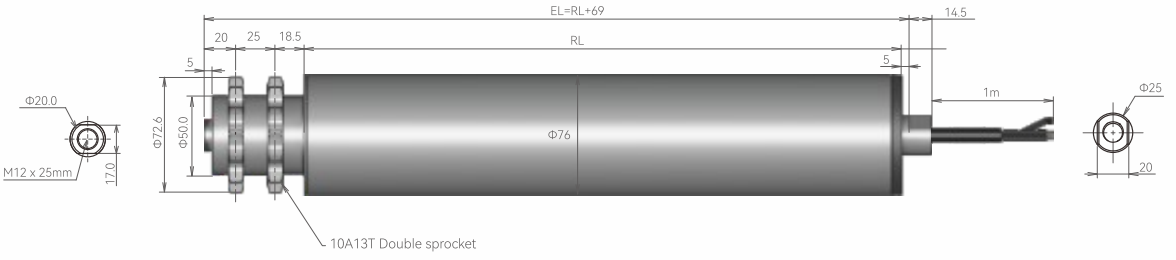
Φ80mm Power Roller - Direct Current								
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)	Playload* (μ=0.05)KG
220W	48	17	264.71	1.11	8.48	6.00	12	320
	48	70	64.29	0.27	34.20	6.00	12	1400
255W	48	18	300.00	1.26	8.98	7.00	14	320
	48	24	225.00	0.94	11.73	7.00	14	450
	48	48	112.50	0.47	23.94	7.00	14	500
	48	72	75.00	0.31	35.18	7.00	14	1400

Φ89mm Power Roller - Direct Current								
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)	Playload* (μ=0.05)KG
220W	48	17	264.71	1.23	8.48	6.00	12	280
	48	70	64.29	0.30	34.20	6.00	12	1200
255W	48	18	300.00	1.40	8.98	7.00	14	280
	48	24	225.00	1.05	11.73	7.00	14	400
	48	48	112.50	0.52	23.94	7.00	14	800
	48	72	75.00	0.35	35.18	7.00	14	1200

Φ89mm Power Roller - Alternating Current

Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)
750W	220	72	69.44	19.42	103.18	4.51	9.02
		96	52.08	14.56	137.58	4.51	9.02

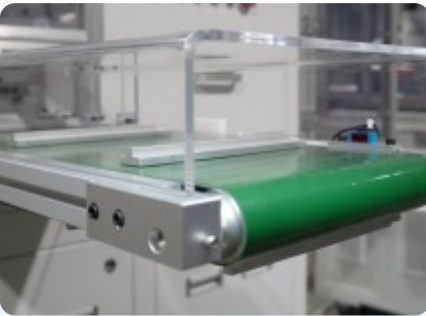
Φ76/80/89mm Series External Dimensions



Φ80mm Drum Power Roller Series

Applications

Application for large and medium-sized belt conveyors with 80-diameter drum power rollers. Flexible and efficient in bulk lines with irregular sizes of goods.



Performance Benefits

- ① **Energy-saving and Efficiency:** Based on the outstanding overall design, the efficiency of the whole power roller is higher than th at of competing prod ucts.
- ② **Drum:** Drum-shaped steel tube design ensures belt tension and friction for precise and stable conveying.
- ③ **Flexibility:** Motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.
- ④ **Quiet:** Achieve a noise level (55dB) lower than that of competing products (60dB), ensuring the quietness and stability at the usage site.

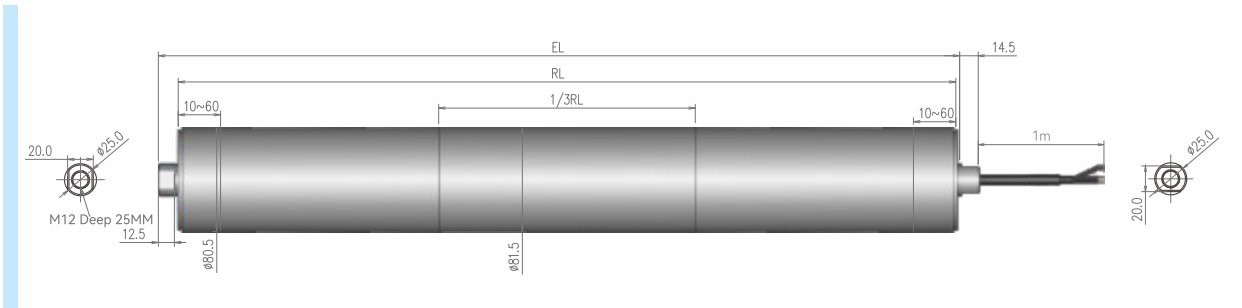
Basic Parameter

Rated Voltage	48V
Rated Current (A)	7
Start-up Current (A)	15.0
Rated Power (W)	255
Maximum Noise	55dB
Cable Length	1M
Protection Class	IP54/IP66
Tube Material	Carbon Steel Galvanized, Carbon Steel Chrome Plated, Stainless Steel
Tube Size	φ81.5x3.75mm
Shafts	Double D(φ25X20)
Operating Temperature	-40℃ ~ 55℃

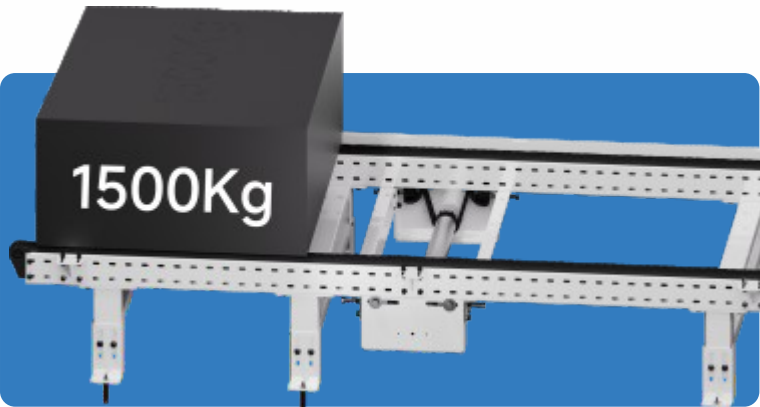
Φ80 Drum Series Performance Options Table

Rated Output Power	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Start-up Turque (N.m)	Rated Current (A)	Start-up Current (A)
220W	17	264.71	1.13	8.48	16.96	6.00	12
	70	64.29	0.27	34.20	68.40	6.00	12
255W	18	300.00	1.28	8.98	17.96	7.00	14
	24	225.00	0.96	11.73	23.45	7.00	14
	48	112.50	0.48	23.94	47.89	7.00	14
	72	75.00	0.32	35.18	70.35	7.00	14

Φ80 Drum Series External Dimensions



Power Roller-Driving Chain Machine



Applications

Double sprocket structure design at both ends, with the use of chain machine, suitable for pallet conveying, can realize heavy-duty cargo conveyance.

Performance Benefits

- ① **Space-saving Quick Installation:** Highly integrated design with no redundant structure ensures easy and time-saving installation, while reducing equipment height and saving space layout.
- ② **Zero Maintenance Efficiency:** The power roller requires no lubrication or maintenance, combined with Class 1 energy efficiency design, significantly reducing long-term maintenance and energy costs.
- ③ **Low Noise & High Load Capacity:** Noise level below 50dB, maximum load capacity up to 1.5T.
- ④ **Durability:** Designed for low-speed heavy-load, high-temperature, oil/water exposure, and low-temperature cold chain (IP66 protection) conditions, ensuring reliability and service life in complex working environments.
- ⑤ **Intelligent Precision Control:** Supports constant speed/fixed speed/stepless speed regulation; equipped with high-precision braking and magnetic encoder semi-servo control for precise start-stop.

Basic Parameter

Rated Voltage	48V		
Rated Current (A)	12		
Start-up Current (A)	25		
Rated Power (W)	450		
Maximum Noise	55dB		
Cable Length	1m		
Protection Class	IP66		
Tube Material	Carbon Steel Galvanized, Stainless Steel		
Tube Size	φ76x3mm	φ80x3mm	φ89x3mm
Shafts	φ25*20mm(Cable Outlet End)、M12 Thread(Drive End)		
Operating Temperature	-40℃ ~ 55℃		

Power Roller-Driving Chain Machine Performance Options Table

Φ76mm Power Roller - Direct Current							
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)
220W	48	17	264.71	1.05	8.48	6.00	12
	48	70	64.29	0.25	34.20	6.00	12
255W	48	18	300.00	1.19	8.98	7.00	14
	48	24	225.00	0.89	11.73	7.00	14
	48	48	112.50	0.45	23.94	7.00	14
	48	72	75.00	0.29	35.18	7.00	14
450W	48	54	92.59	0.36	50.87	12.27	24
	48	72	69.44	0.27	67.82	12.27	24
	48	96	52.08	0.20	90.43	12.27	24

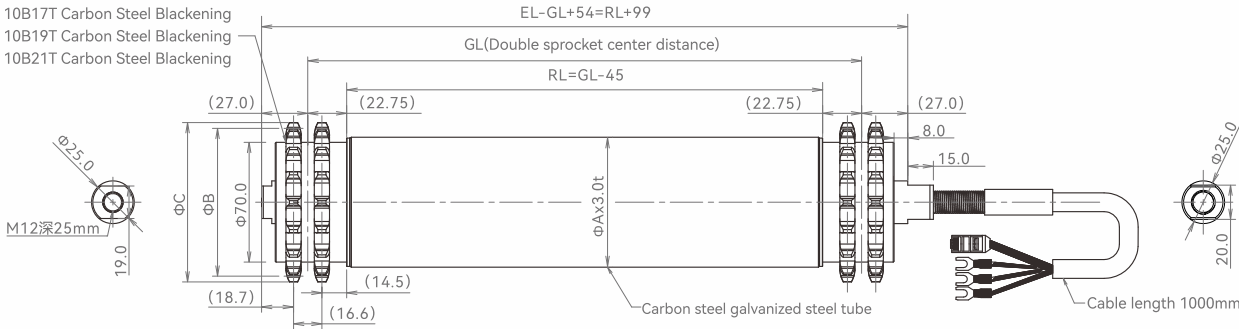
Φ80mm Power Roller - Direct Current							
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)
220W	48	17	264.71	1.10	8.48	6.00	12
	48	70	64.29	0.26	34.20	6.00	12
255W	48	18	300.00	1.19	8.98	7.00	14
	48	24	225.00	0.89	11.73	7.00	14
	48	48	112.50	0.47	23.94	7.00	14
	48	72	75.00	0.29	35.18	7.00	14
450W	48	54	92.59	0.36	50.87	12.27	24
	48	72	69.44	0.27	67.82	12.27	24
	48	96	52.08	0.20	90.43	12.27	24

Φ89mm Power Roller - Direct Current							
Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)
220W	48	17	264.71	1.23	8.48	6.00	12
	48	70	64.29	0.29	34.20	6.00	12
255W	48	18	300.00	1.13	8.98	7.00	14
	48	24	225.00	1.04	11.73	7.00	14
	48	48	112.50	0.52	23.94	7.00	14
	48	72	75.00	0.34	35.18	7.00	14
450W	48	54	92.59	0.43	50.87	12.27	24
	48	72	69.44	0.32	67.82	12.27	24
	48	96	52.08	0.24	90.43	12.27	24

Φ89mm Power Roller - Alternating Current

Rated Output Power	Rated Voltage(V)	Ratio	Rated Output (rpm)	Rated Line Speed (m/s)	Rated Turque (N.m)	Rated Current (A)	Start-up Current (A)
750W	220	72	69.44	0.32	110	4.5	11.3
	220	96	52.08	0.24	140	4.5	11.3

Dimension



Hall Controller: Mini Controller

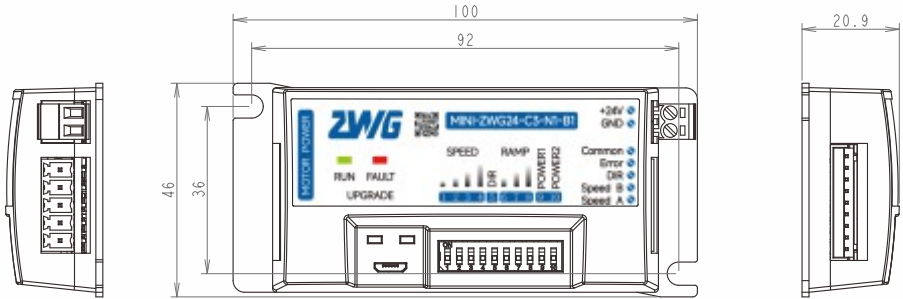


Feature

- 1. Closed-loop speed control
- 2. 15-level DIP switch speed setting
- 3. 4-level digital speed adjustment
- 4. 8-step acceleration/deceleration time setting
- 5. Bi-directional operation (2-wire forward / reverse)
- 6. Servo brake function
- 7. Dual-LED status indication
- 8. Fault output functionality
- 9. IO input control (PNP)
- 10. Signal common terminal grounded with power supply

The I/O controller features DIP switches for configuring up to 15 speed levels. It provides digital inputs and outputs, and can also accept control signals from an external PLC.

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External Drive (50/60 Power Roller)
Rated Input Voltage DC	Rated Voltage 48V: 42-52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C ~ 55°C
Ambient Humidity	85% Below

Hall Controller: 35W/50W/80W (Standard Model)

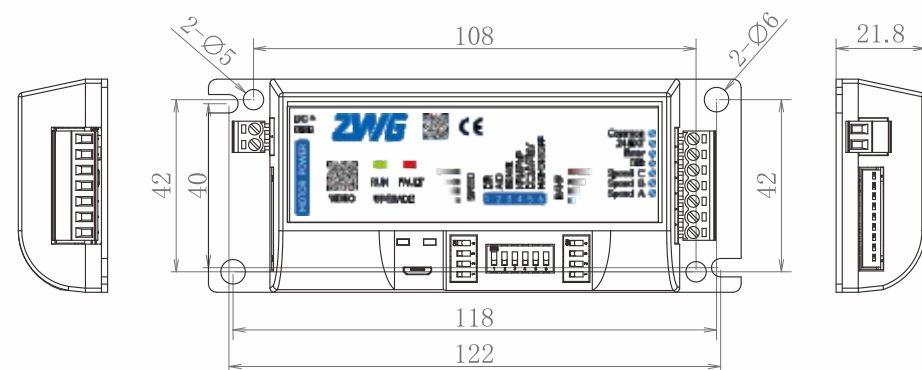


The IO drive controller features two sets of dip switches, enabling the setting of 15 speed levels with distinct start/stop ramp acceleration and deceleration for each level. It also provides digital inputs and outputs to receive control signals from external PLC.

Feature

1. Speed Closed-Loop Control
2. 15-Speed DIP Switch Adjustment
3. Stepless Speed Control (2-10VAnalogInput)
4. 4-Step Digital Speed Preset
5. 16-StepAccel/Decel Time Adjustment
6. 2-Wire Forward/Reverse Operation
7. Sensorless Operation Support
8. Electronic Brake / Servo Brake
9. Dual LED Status Indicators
10. Fault Signal Output
11. Built-In Braking Resistor (Zero-Pressure Release)
12. PNP/NPN Switchable IO Inputs
13. 24V/48VQuick Voltage Switching

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External drive (50 / 60 Power Roller)
Rated Input Voltage DC	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

Hall Controller: 120W (Standard Model)

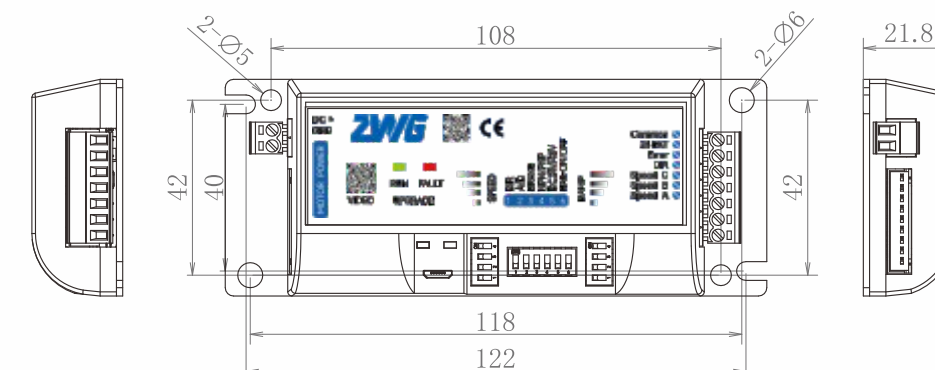


The IO drive controller features two sets of dip switches, enabling the setting of 15 speed levels with distinct start/stop ramp acceleration and deceleration for each level. It also provides digital inputs and outputs to receive control signals from external PLC.

Feature

1. Closed-loop speed control
2. 15-level DIP switch speed setting
3. 4-level digital speed adjustment
4. 16-step acceleration/deceleration time setting
5. Bi-directional operation (2-wire forward / reverse)
6. Servo brake function
7. Dual-LED status indication
8. Fault output functionality
9. IO input control (PNP/NPN selectable)
10. Speed priority: DIP switch > Digital input
11. 48V DC power supply for optimized thermal management of rollers

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External drive (60 Power Roller)
Rated Input Voltage	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

Hall Controller: ZPA Accumulation Controller

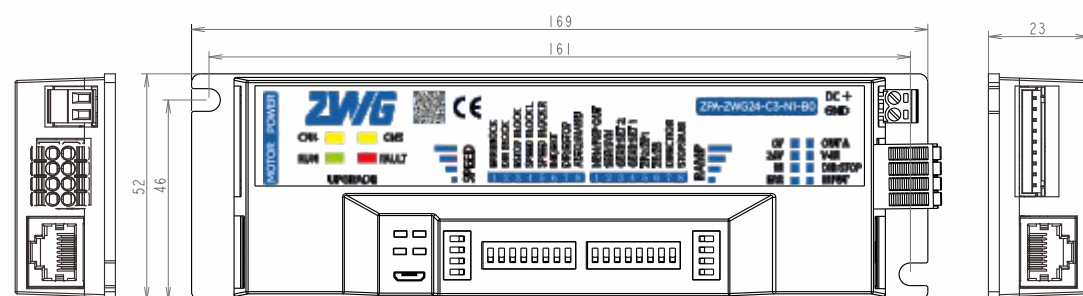


Feature

1. Closed-loop speed control
2. 15-level DIP switch speed setting
3. 2~10V analog voltage stepless speed regulation
4. 4-level digital speed adjustment
5. 16-step acceleration/deceleration time setting
6. Bi-directional operation (2-wire forward/reverse)
7. Dual-LED status indication
8. Fault output functionality
9. IO input control, PNP/NPN switchable
10. 24V / 48V quick switching
11. Built-in ZPA logic (ZA/ZP functions)
12. Integrated timer and counter functions

ZPA Control Cards can be connected in series. In multi-card configurations, this greatly reduces PLC I/O occupation, while card-to-card daisy-chaining significantly minimizes wiring requirements, effectively lowering both cabling and labor costs.

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External drive (60 Power Roller)
Rated Input Voltage DC	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

Magnetic Encoder Drive Controller (80W)

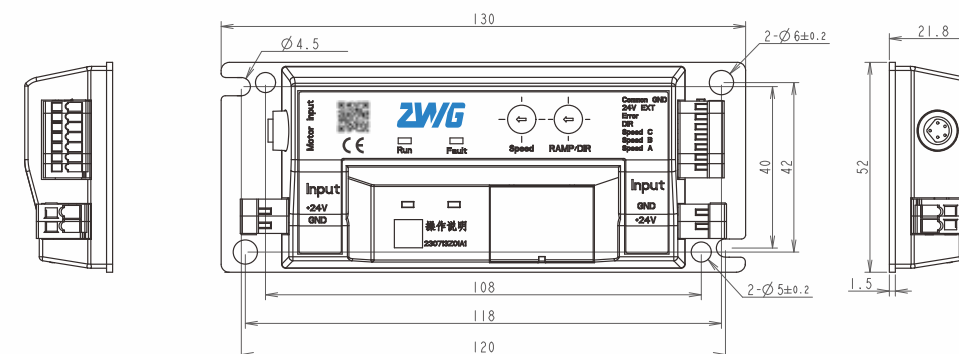


Feature

1. Speed Setting (Rotary switch code-15 gears, IO input-7 gears)
2. Rotation Direction Options(Rotary switchcode / IO Input)
3. Acceleration and Braking Ramp Adjustment
4. Switch between NPN and PNP
5. Switch between Digital to Analog
6. LED Light Status Indicator
7. Braking Resistor
8. RS485 Communication

The IO controller is equipped with 2 rotary code switches, which can be used to set the rotation direction, 8 different start-stop ramps, and 15 levels of speed. It also provides digital inputs and outputs, which can receive signals for external PLC control.

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal (50/60 Power Roller)
Rated Input Voltage	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

RS485 Drive Controller

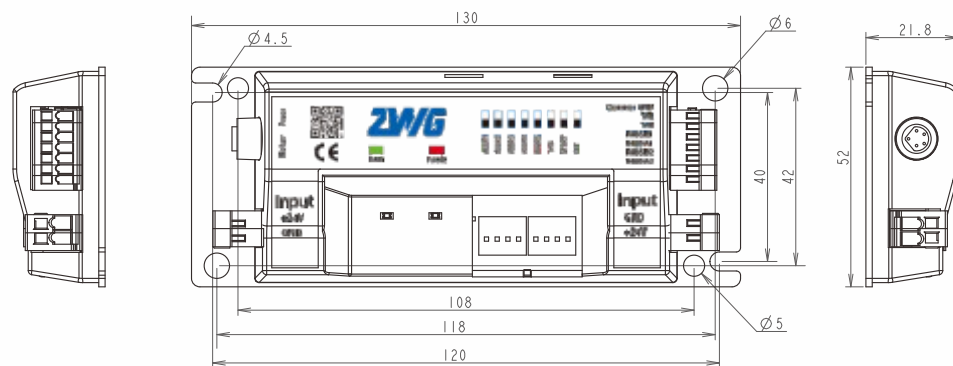


Feature

1. LED light status display
2. Support RS485 communication
3. Supports multiple controllers in series

The DIP switch supports 32 physical address configurations, features a 120Ω terminal resistor, enables offline debugging, and supports both RS-485 communication serial connection and NPN/PNP activation.

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal Drive (50/60 Power Roller)
Rated Input Voltage	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

IP54 Drive Controller (80W)

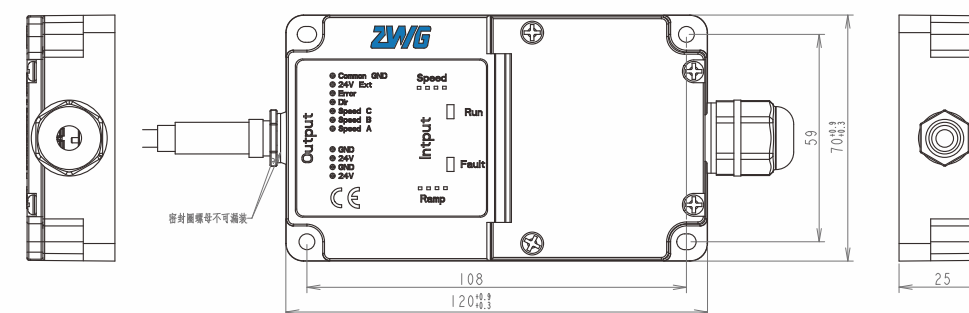


Feature

1. Speed Setting(DIP switch -15 gears, IO input-7 gears)
2. Rotation Direction Control (DIP switch / IO Input)
3. Acceleration and Braking Ramp Adjustment
4. LED Light Status Indicator
5. Braking Resistor

The IO controller has two DIP switches that are used to set the rotation direction, 8 different start-stop ramps, and 15 speed levels. It also provides digital inputs and outputs, which can receive signals for external PLC control. With an IP54 rating, it is suitable for humid or ultra-low temperature environments.

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal Drive(50/60 Power Roller)
Rated Input Voltage (DC)	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP54
Operating Temp. Range	-40°C ~ 55°C
Ambient Humidity	85% Below

IP54 Drive Controller (220W)

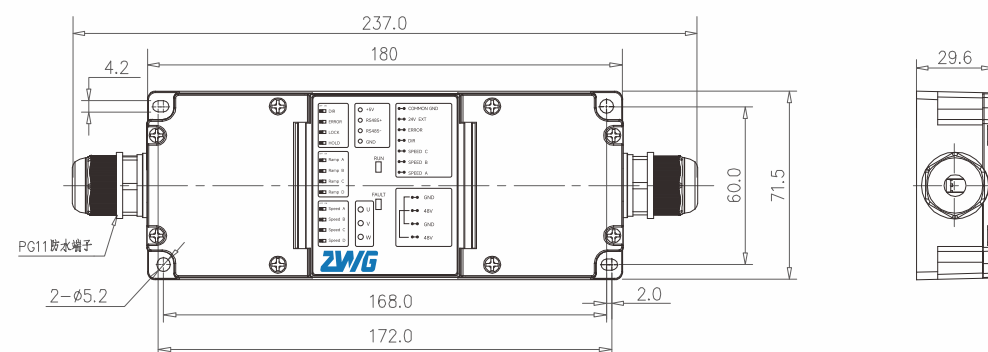


The IO controller features DIP code switches for setting rotation direction, 16 start-stop ramps, and 15 speed levels. With digital inputs/outputs, it accepts signals for external PLC control. Rated IP54, it suits humid environments or ultra-low temperature conditions.

Feature

1. Speed Setting(DIP switch-15 gears, IO input-7 gears)
2. Rotation Direction Control (DIP switch/ IO input)
3. Acceleration and Braking Ramp Adjustment
4. LED Light Status Indicator
5. Braking Resistor
6. E-brake activation
7. Switch between NPN and PNP
8. Switch between Digital and Analog

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External Drive (76/80/89 Power Roller)
Rated Input Voltage (DC)	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP54
Operating Temp. Range	-40°C ~ 55°C
Ambient Humidity	85% Below

IP20 Drive Controller (255W)

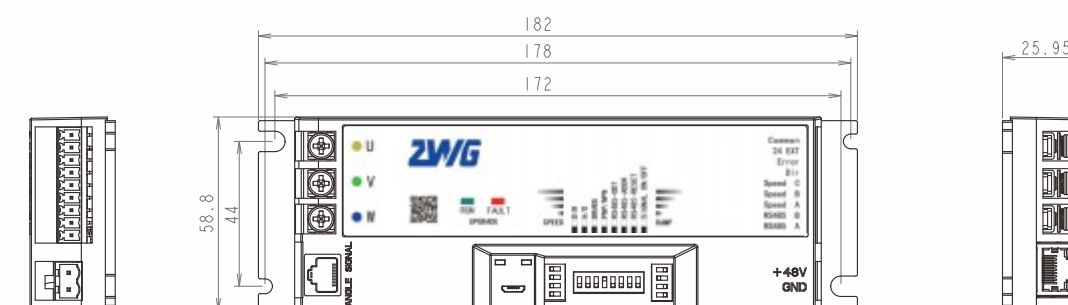


The IO controller features two DIP switches for setting 15 different start-stop ramps and 15 speed levels. It also provides digital inputs and outputs to receive signals for external PLC control.

Feature

1. Speed Setting(DIP switch-15 gears, IO Input-7 gears)
2. Rotation Direction Control (IO input)
3. Acceleration and Braking Ramp Adjustment(8-step DIP switch)
4. LED Light Status Indicator
5. Braking Resistor

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External Drive (76/80/89 Power Roller)
Rated Input Voltage DC	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40°C ~ 55°C
Ambient Humidity	85% Below

IP20 Drive Controller (450W)

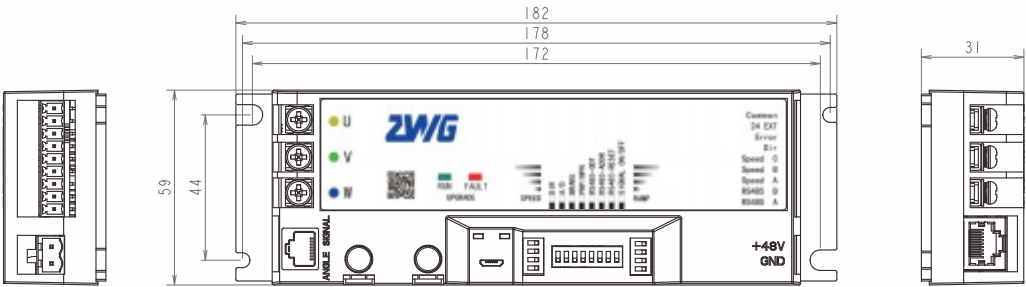


The IO controller is equipped with two DIP switches for setting 15 start-stop ramps and 15 speed levels. It provides digital inputs/outputs to accept control signals from external PLC.

Feature

- 1. Speed Closed-Loop Control
- 2. 15-Step DIP Switch Speed Adjustment
- 3. Stepless Speed Control via 2-10V Analog Input
- 4. 4-Step Digital Speed Preset
- 5. 16-Step Accel/Decel Time Adjustment
- 6. T2-Wire Forward/Reverse Operation
- 7. Electronic Brake / Servo Brake
- 8. Dual LED Status Indicators
- 9. Fault Output Signal
- 10. PNP/NPN Switchable IO Inputs
- 11. 48V Power Supply(Withstands>60V)
- 12. RS485 Communication

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal Drive (76/80/89 Power Roller)
Rated Input Voltage DC	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40~55℃
Ambient Humidity	85% Below

Drive Controller-750W

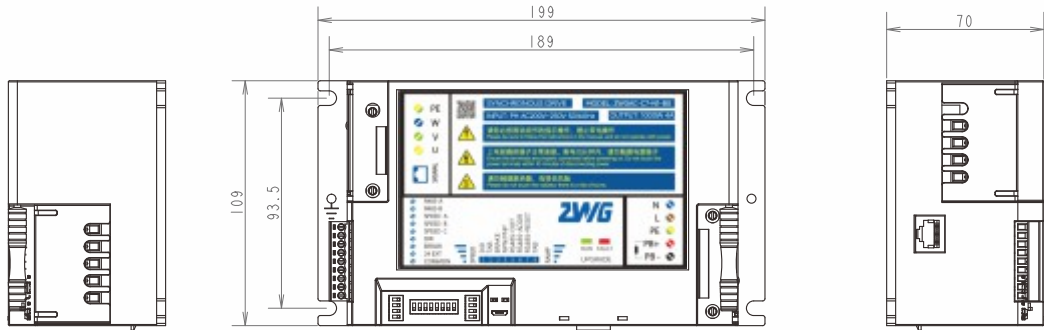


IO Controller uses 220V AC power supply, eliminating the need for an external power source. Dedicated controller design for simplified wiring and easy commissioning.

Feature

- 1. Speed Closed-Loop Control
- 2. 15-Step DIP Switch Speed Adjustment
- 3. Stepless Speed Control via 2-10V AnalogInput
- 4. 4-Step Digital Speed Preset
- 5. 16-Step Accel / Decel Time Adjustment
- 6. T2-Wire Forward / Reverse Operation
- 7. Electronic Brake / Servo Brake
- 8. Dual LED Status Indicators
- 9. Fault Output Signal
- 10. PNP / NPN Switchable IO Inputs
- 11. RS485 Communication

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External Drive (89 Power Roller)
Rated Input Voltage DC	Rated Voltage 220V: 220~250V 50/60Hz
Drive Communication Mode	IO
Protection Class	IP20
Operating Temp. Range	-40 ~ 55℃
Ambient Humidity	85% Below

1 Drive 2 (External Motor Control) ECT Bus Controller

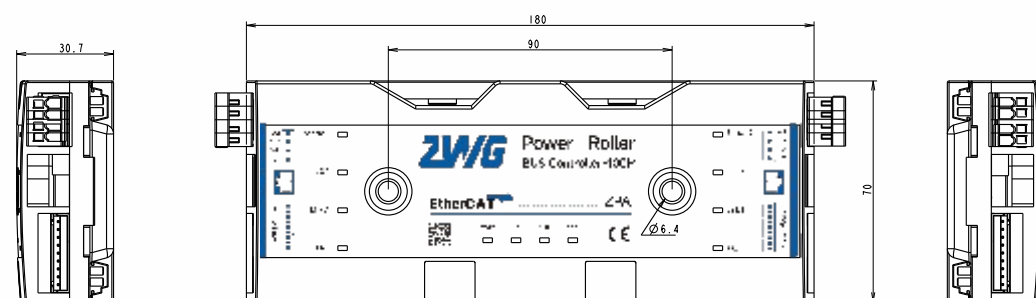


Supports EtherCAT communication and ZPA offline function. It allows for motor operation debugging without damaging the drive controller and motor drives. It is easy to use with one-stop configuration, No need to adjust parameters.

Feature

1. Plug and use after replacement, no addressing or configuration required
2. LED light status indicator for all function
3. Integrated logic for zero-pressure accumulation conveyance
4. Configuration via PLC, PC tools (Currently developed models of power roller)
5. Built-in 100M Ethernet switch
6. Clamp voltage through braking chopper
7. Functional grounding connection of the shielding layer of the communication line
8. Reverse polarity protection for input and output voltage supply
9. Speed closed-loop Control

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	External Drive (50/60 Power Roller)
Rated Input Voltage DC	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	EtherCAT
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

1 Drive 4 (Internal Motor Control) ECT Bus Controller



Supports EtherCAT communication and ZPA offline function.

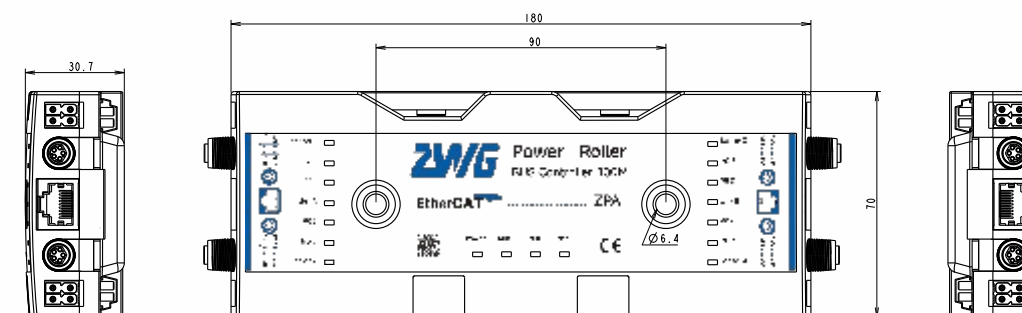
It can work without PLC control, and control the operation of the roller through photoelectric sensor signals.

The control circuit and power circuit are powered separately, enabling the power roller to be shut down safely while still allowing the use of bus communication and sensors.

Feature

1. Plug and use after replacement, no addressing or configuration required
2. LED light status indicator for all function
3. Integrated logic for zero-pressure accumulation conveyance
4. Configuration via PLC, PC tools (Currently developed models of power roller)
5. Built-in 100M Ethernet switch
6. Clamp voltage through braking chopper
7. Functional grounding connection of the shielding layer of the communication line
8. Reverse polarity protection for input and output voltage supply
9. Speed closed-loop Control

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal Drive (50/60 Power Roller)
Rated Input Voltage DC	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	EtherCAT
Protection Class	IP20
Operating Temp. Range	-40°C~55°C
Ambient Humidity	85% Below

1 Drive 4 (Internal Motor Control) PN Bus Controller



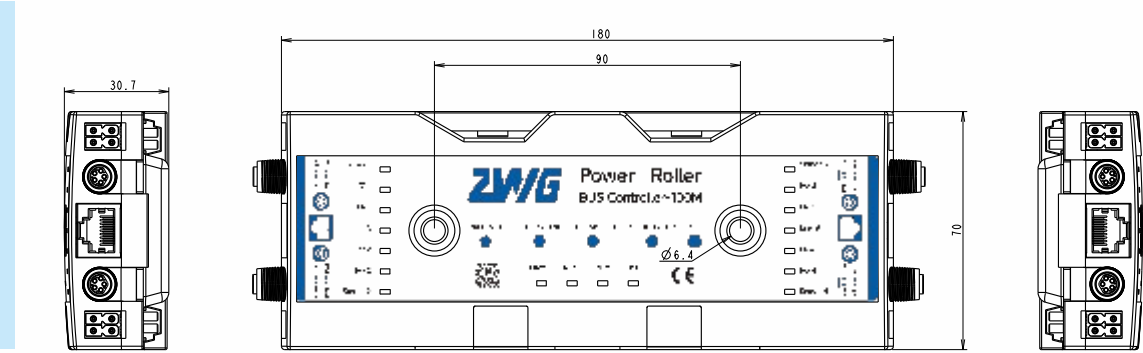
Supports PROFINET, EtherNet/IP, CC-Link IEFB, and Modbus TCP bus communication protocols. It can control up to 4 power rollers.

It supports offline operation with built-in ZPA logic. It allows for motor operation debugging without damaging the drive controller and motor drives.

Feature

- 1. Plug and use after replacement, no addressing or configuration requierd
- 2. LED light status indicator for all function
- 3. Integrated logic for zero-pressurea ccumulation conveyance
- 4. Configuration via PLC, PC tools (Currently developed models of power roller)
- 5. Built-in 100M Ethernet switch
- 6. Clamp voltage through braking chopper
- 7. Functional grounding connection of the shielding layer of the communication line
- 8. Reverse polarity protection for input and output voltage supply
- 9. Speed closed-loop Control

Drive Controller Dimension Drawing



Basic Parameters

Item	Specification
Drive Type	Internal Drive (50/60 Power Roller)
Rated Input Voltage DC	Rated Voltage 24V: 20~26V DC
	Rated Voltage 48V: 42~52V DC
Drive Communication Mode	PROFINET、EtherNet/IP、CC-Link IEFB、Modbus TCP
Protection Class	IP20
Operating Temp. Range	-40℃~55℃
Ambient Humidity	85% Below

Belt Conveying Power Roller Series

Product Overview

Zhaowei power roller series is a new-generation conveying component featuring an internally integrated brushless DC motor, gearbox, and electronic control system. Compared with traditional geared motors used in belt conveyors, it offers significant advantages: simple structure, easy installation, stepless speed regulation, and high operational efficiency. Built on a 50mm power roller platform, it is available with diverse roller surface treatments—including sleeved rubber, rubber coating, knurling, and tapered sleeves—to adapt to various application scenarios. With standard lengths of 300/400/500mm, it meets the requirements of most conveyor line setups, making it widely applicable in the packaging industry, assembly lines, automated manufacturing, and other industrial environments.

Product Feature

Speed Control

Enable speed regulation via the I/O interface. Through the external knob controller card, realize the function of direction change and infinitely variable speed regulation.

Constant Speed

Constant speed drive function can be achieved under rated load.

Rotation Control

Control the product forward and reverse by industrial controller or wiring.

Closed-Loop Control

Closed-loop speed control with high stability

Protection

Overload protection through built-in control

Model Number Description

ZWGA2450-300-34-C3-A1-Z1-T3-H6-01

ZWG: SUZHOU ZHAOWEI; A: Plastic Gear IP54; 2 4: 24V DC; 50: Dia. 50mm; 300: RL 300mm (Standard Length 300mm、400mm、500mm); 34: Ratio 34; C3: Rated Output Power 80W, Magnetic Code ;A: Carbon steel knurled galvanized; Z: Hex11; T3: Doulbe D; H6: Double D

Drive Controller Description

1. IO Interface

Dir reversing signal line: 0-24V high and low level to realize direction switching.

Speed signal line: 2-10V analog voltage speed regulation.

2. Function Coverage

Motor type: BLDC motor.

Working mode: constant speed operation, forward and reverse direction operation, infinitely variable speed regulation and other functions;

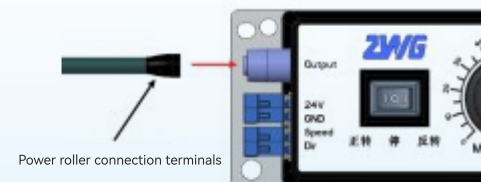
Fault protection: under-voltage, over-voltage, over-current, blocked rotation.

3. Controller Description

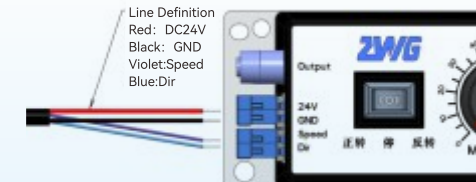


4. Wiring Instructions

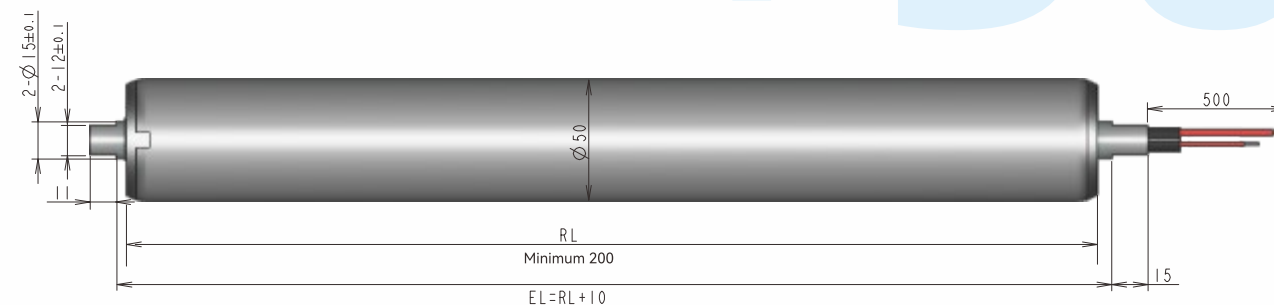
Connector Terminal



Discrete - wire Terminal



Φ50mm Series



Basic Parameters:

Rated Voltage: 24V

Rated Current: 4.5A

Start-up Current: 11A

Rated Power: 80W

Maximum Noise: 50dB

Cable Length: 500mm

Protection Class: IP54

Tube Materials: Galvanized steel

Tube Size: 50x1.5mm

Gluing Form: PVC 2mm, 5mm PU 2mm (TAB)

Tapered Option: Standard roller (plastic taper sleeve)

Shate: Double D

Operating Temp.: 0°C~40°C/-30°C~0°C

Advantages of Zhaowei Power Roller Compared to Traditional Speed-Regulating Motors

ZWG Belt Conveyor Power Roller		Speed-Regulating Motors
Compact Mechanism All in one, integrates complex core components directly into the Power Roller.	Product Sturcture	Complex Mechanisms Assembled from a large motor, gearbox, chain wheel, free roller, protective cover, speed controller, and power supply.
Easy Installation Can be used with fixed brackets at both ends. Good sealing performance.	Installation	Complex Installation The product occupies a significant space with a bulky size, making assembly and debugging of multiple components challenging and not conducive to operation.
Stepless Speed Regulation Speed control can be connected for coordinated operation with automated equipment.	Speed Control	Stepwise Speed Control The drive settings are complex with four-speed steps: 20 Hz low speed, 30 Hz medium speed, 40 Hz high speed, and 50 Hz custom zable.
High Efficiency 62%-70%, 24% high efficiency than traditional speedcontrol motors(under the same load conditions).	Efficiency	Low Efficiency 45%-50%. Low precision within the multiple transmission components, leading to low efficiency.