

Wheel Drive

A compact and modular solution for mobility application



如有问题请联系
maxontech.cn@maxonmotor.com

Overview

Modular mobility solution

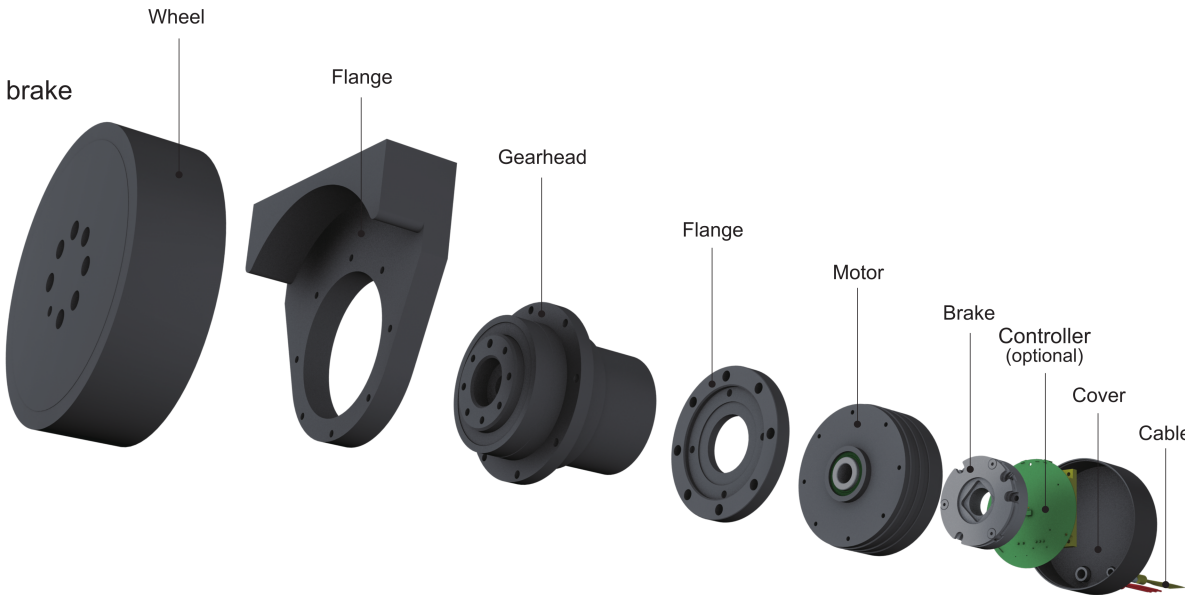
Wheel drives are widely used in various industries (medical, automation and mobility applications...), relying on its good performance and high level of integration.

A compact wheel drive consists of motor, gearhead, controller and wheel. All WD series integrated with motors of high power and gearheads of high efficiency provide high torque of output. Precise control of position and speed ensures the stability of system by maxon EPOS4 controller while customers can easily configure the parameters by EPOS Studio. In addition, customers will be able to use wheel drive with the communication interface of CANopen (standard) or EtherCAT (optional). It is noted that the wheel will not be designed or installed by any customer but integrated into the drive system in consideration of application convenience.

- Robust
- Modular
- Easy to use

Components

- Positioning and speed controller
- Brushless EC motor
- Gearhead
- Flange
- Wheel
- Holding brake
- Cable



Ordering information

WD

Type:
50, 80

Ratio
10, 25

Voltage:
24, 48

Brake:
01

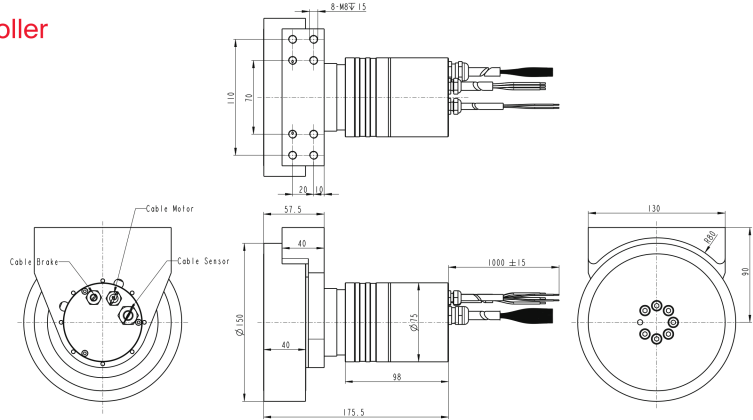
Controller:
00 : None
CA: CANopen
EC: EtherCAT

→ e.g. WD50-10-24-01-00

Wheel Drive 50

Integrated without controller

NEW



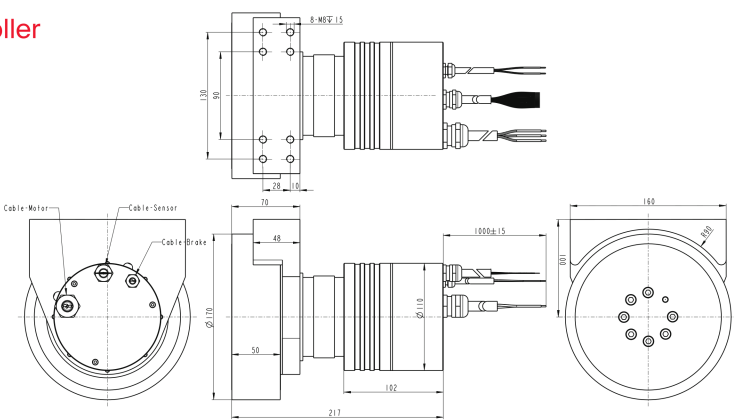
Gear-motor data					
1	Gear Ratio	X:1	10	25	25
2	Nominal voltage	VDC	24	24	48
3	Nominal speed	rpm	92	36.8	184
4	Maximum speed	rpm	135	51	302
5	Nominal current	A	6	6	6
6	Maximum current	A	12	12	12
7	Nominal torque	Nm	4.9	12	4.9
8	Maximum acceleration torque	Nm	12	26	12
9	Torque constant	Nm/A	0.91	2.04	0.91
10	Speed constant	rpm/V	10	4	10
11	Speed torque gradient	rpm/Nm	14	5.6	14
12	Phase to Phase resistance	Ω	1.42	1.42	1.42
13	Phase to Phase inductance	mH	1.5	1.5	1.5
14	Pole pairs	--	7	7	7
Incremental encoder			Other specifications		
15	Resolution, counts per turn	CPT	1024	Operating temperature	°C
16	Number of channels		3	Storage temperature	°C
17	Maximum frequency	kHz	100	IP class	IP65
18	Supply voltage	VDC	5±10%	Cable length	mm
19	Typical supply current	mA	20	Cable direction	axial
20	Output signal		RS422	Wheel material	polyurethane
Brake			Hardness of wheel		
21	Supply voltage	VDC	24±10%	Typical lifetime	hour
22	Duty cycle	%	100	Mechanical specifications	
23	Resistance	Ω	35	Maximum radial force	N
24	Reaction time (coupling)	ms	50	Maximum axial force	N
25	Reaction time (opening)	ms	20	Backlash	arcmin
Optional			Operating range		

Note: if ratio is 25:1, the length will be 198mm except cable

Wheel Drive 80

Integrated without controller

NEW

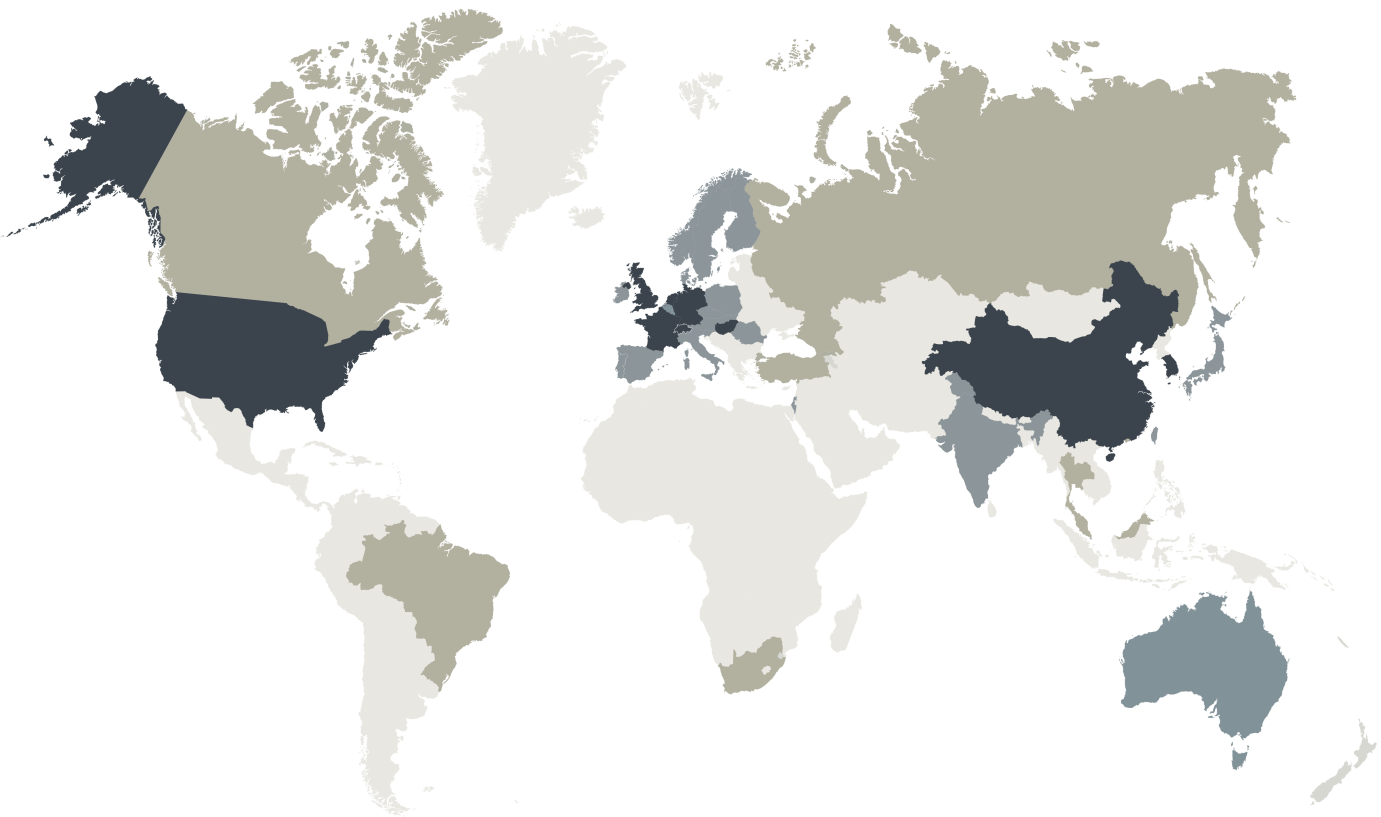


Gear-motor data					
1	Gear Ratio	X:1	10	25	10
2	Nominal voltage	VDC	24	24	48
3	Nominal speed	rpm	115	46	230
4	Maximum speed	rpm	128	51	280
5	Nominal current	A	15	15	15
6	Maximum current	A	30	30	30
7	Nominal torque	Nm	16	38	16
8	Maximum acceleration torque	Nm	38	94	38
9	Torque constant	Nm/A	1.18	2.67	1.18
10	Speed constant	rpm/V	5.8	2.3	5.8
11	Speed torque gradient	rpm/Nm	1.68	0.67	1.68
12	Phase to Phase resistance	Ω	0.33	0.33	0.33
13	Phase to Phase inductance	mH	0.056	0.056	0.056
14	Pole pairs	--	8	8	8
Incremental encoder			Other specifications		
15	Resolution, counts per turn	CPT	1024	Operating temperature	°C
16	Number of channels		3	Storage temperature	°C
17	Maximum frequency	kHz	100	IP class	IP65
18	Supply voltage	VDC	5±10%	Cable length	mm
19	Typical supply current	mA	20	Cable direction	axial
20	Output signal		RS422	Wheel material	polyurethane
Brake			Hardness of wheel		
21	Supply voltage	VDC	24±10%	Typical lifetime	hour
22	Duty cycle	%	100	Mechanical specifications	
23	Resistance	Ω	35	Maximum radial force	N
24	Reaction time (coupling)	ms	50	Maximum axial force	N
25	Reaction time (opening)	ms	20	Backlash	arcmin
Optional			Operating range		

Note: if ratio is 10:1, the length will be 185mm except cable

A global network

maxon



maxon Manufacturing Companies

Switzerland (Headquarters)	South Korea	USA
Germany	France	China
Hungary	Netherlands	Great Britain

maxon Sales Companies

Austria	Great Britain	Serbia
Australia	Hungary	Sweden
Benelux	India	Switzerland
Bulgaria	Ireland	Slovakia
China	Israel	Singapore
Croatia	Italy	Slovenia
Denmark	Norway	Spain
Finland	Poland	Taiwan
France	Portugal	USA
Germany	Romania	

maxon Sales Agents

Brazil	Malaysia	Thailand
Canada	Russia	Turkey
Hong Kong	South Africa	