

Robot Actuator

DYNAMIXEL



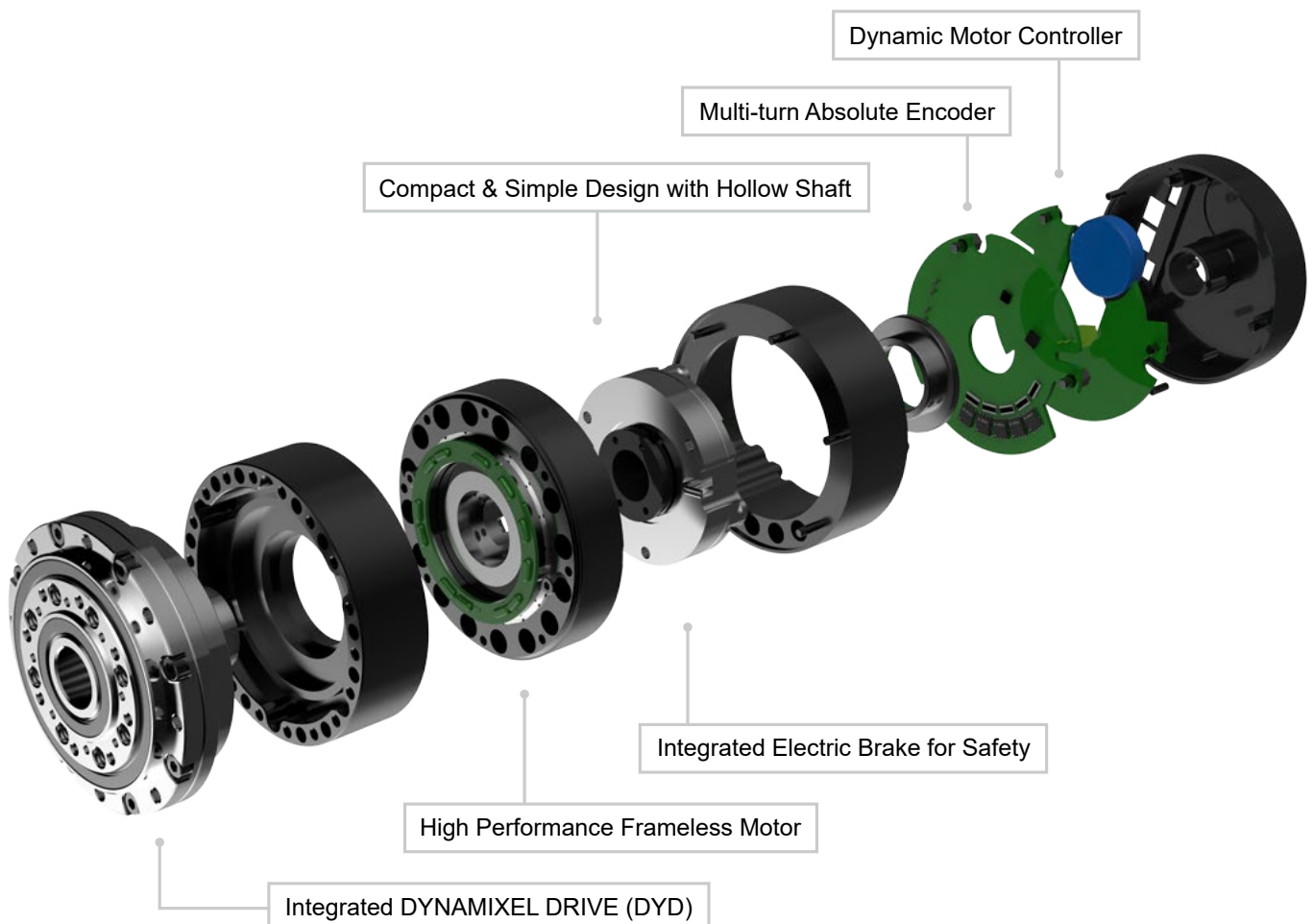
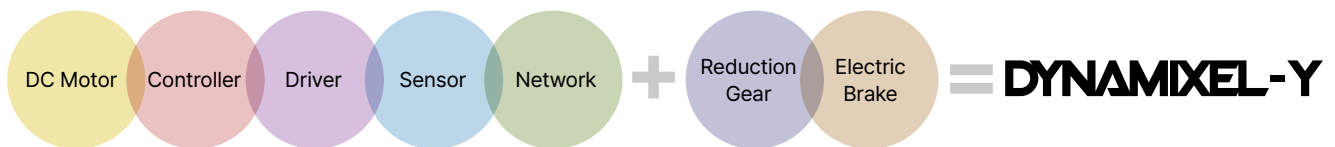
ROBOTIS

DYNAMIXEL-Y



Features

- High Performance Frameless Motor
- Multi-turn Absolute Encoder
- Integrated Electric Brake for Safety
- Integrated DYNAMIXEL DRIVE (DYD)
- Compact & Simple Design with Hollow Shaft
- Dynamic Motor Controller



YM Series

DYNAMIXEL-Y

Naming Convention



YM070-210-M001-RH
Motor Version



YM070-210-B001-RH
Brake Version



YM070-210-R099-RH
Reducer Version



YM070-210-A099-RH
All-in-one Version

Ordering Specification

Y M 0 7 0 - 2 1 0 - M 0 0 1 - R H

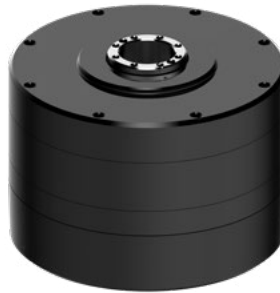
Classification	Dimension	Power Rating	Type	Gear Ratio	Interface	Voltage
H : High M : Mid L : Low	070 : ø70 080 : ø80 110 : ø110	210 W 230 W 400 W	M : Motor B : Brake R : Reducer A : All-in-one	001 : 1 051 : 1 099 : 1	R : RS-485 C : CAN	H : 24V E : 48V

Classification	Dimension	Power Rating	Type	Gear Ratio	Interface	Voltage
YH, YM, YL	070	210W	M, B, R, A	001, 051, 099	R, C	24V, 48V
YH, YM, YL	080	230W	M, B, R, A	001, 051, 099	R, C	24V, 48V

Selection Guide

YM070-210-M001-RH

Motor Version



Motor



Multi-turn Encoder

Motor Controller

YM070-210-B001-RH

Brake Version



Electric Brake



Motor



Multi-turn Encoder

Motor Controller

YM070-210-R099-RH

Reducer Version



DYNAMIXEL DRIVE (DYD)



Motor



Multi-turn Encoder

Motor Controller

YM070-210-A099-RH

All-in-one Version



DYNAMIXEL DRIVE (DYD)



Electric Brake



Motor



Multi-turn Encoder

Motor Controller

YM070 Series

DYNAMIXEL-Y

Product Line-up

Specifications	Unit	M001-RH	B001-RH	R051-RH	R099-RH	A051-RH	A099-RH
Input Voltage	V	24	24	24	24	24	24
Current	A	11.9	11.9	11.9	11	11.9	11
Rated Output Torque	N.m	0.32	0.32	8.2	14.6	8.2	14.6
Peak Output Torque	N.m	0.64	0.64	16.3	31.7	16.3	31.7
Rated Rotation Speed	rpm	4,664	4,664	39.2	20.2	39.2	20.2
Max Rotation Speed	rpm	5,675	5,675	111.3	57.3	111.3	57.3
Diameter	mm	70	70	70	70	70	70
Length	mm	50.9	71	71.1	71.1	91.2	91.2
Hollow Shaft	mm	14	14	14	14	14	14
Weight	g	340	530	790	790	980	980
Resolution(@Output)	pulse/rev	524,288	524,288	26,738,688	51,904,512	26,738,688	51,904,512
Multi-turn Backup	-	YES	YES	YES	YES	YES	YES
Protocol	-	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN
		Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU
Operating Mode	-	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position

DYNAMIXEL DRIVE (DYD) Specification

Type	-	-		DYD-14H-051	DYD-14H-099	DYD-14H-051	DYD-14H-099
Gear Ratio	-	-		51	99	51	99
Backlash	arcmin	-		<3.0	<3.0	<3.0	<3.0
Allowable Moment Load	N.m	-		44.5	54.4	44.5	54.4

ETC

Operating temperature	°C	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55
Storage temperature	°C	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70

YM080 Series

DYNAMIXEL-Y

Product Line-up

Specifications	Unit	M001-RH	B001-RH	R051-RH	R099-RH	A051-RH	A099-RH
Input Voltage	V	24	24	24	24	24	24
Current	A	12.6	12.6	12.6	10.7	12.6	10.7
Rated Output Torque	N.m	0.62	0.62	15.8	26	15.8	26
Peak Output Torque	N.m	1.24	1.24	31.6	61.4	31.6	61.4
Rated Rotation Speed	rpm	2,597	2,597	39.2	20.2	39.2	20.2
Max Rotation Speed	rpm	3,190	3,190	62.5	32.2	62.5	32.2
Diameter	mm	80	80	80	80	80	80
Length	mm	54.1	76.1	78.1	78.1	100.1	100.1
Hollow Shaft	mm	19	19	19	19	19	19
Weight	g	530	890	1,200	1,200	1,550	1,550
Resolution(@Output)	pulse/rev	524,288	524,288	26,738,688	51,904,512	26,738,688	51,904,512
Multi-turn Backup	-	YES	YES	YES	YES	YES	YES
Protocol	-	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN	RS-485, CAN
		Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU
Operating Mode	-	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position	Current Velocity Position

DYNAMIXEL DRIVE (DYD) Specification

Type	-	-		DYD-17H-051	DYD-17H-099	DYD-17H-051	DYD-17H-099
Gear Ratio	-	-		51	99	51	99
Backlash	arcmin	-		<3.0	<3.0	<3.0	<3.0
Allowable Moment Load	N.m	-		63	76.9	63	76.9

ETC

Operating temperature	°C	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55	-5 ~ 55
Storage temperature	°C	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70	-10 ~ 70

Development Environment



DYNAMIXEL SDK & Workbench

• SDK

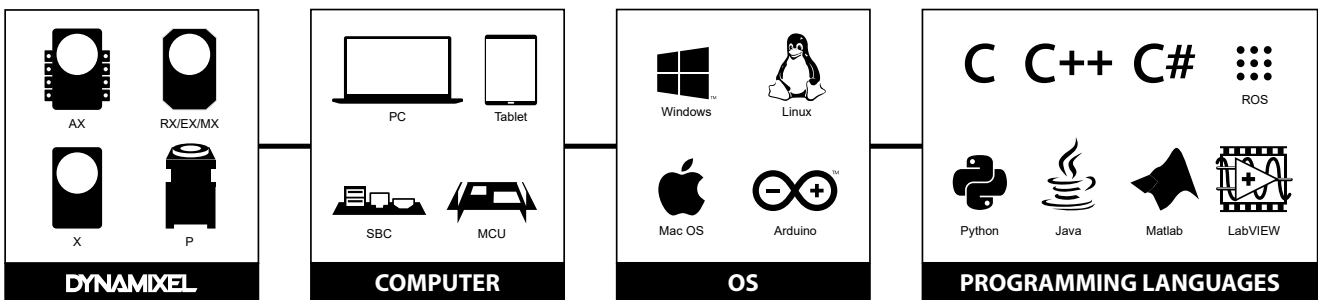
- A standard programming library for developing DYNAMIXEL control software
- Multi-port and cross-platform versions available at official GitHub

<https://github.com/ROBOTIS-GIT/DynamixelSDK>

• Workbench

- A library that makes DYNAMIXEL even simpler and easier to use
- Source codes available at official GitHub

<https://github.com/ROBOTIS-GIT/dynamixel-workbench>

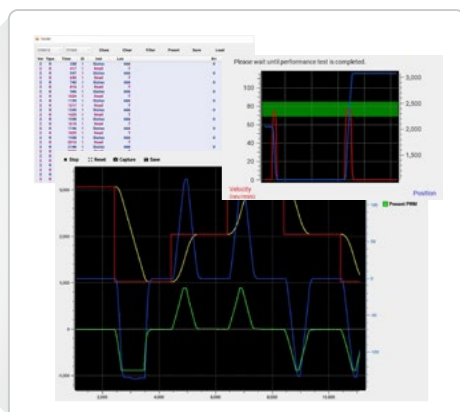
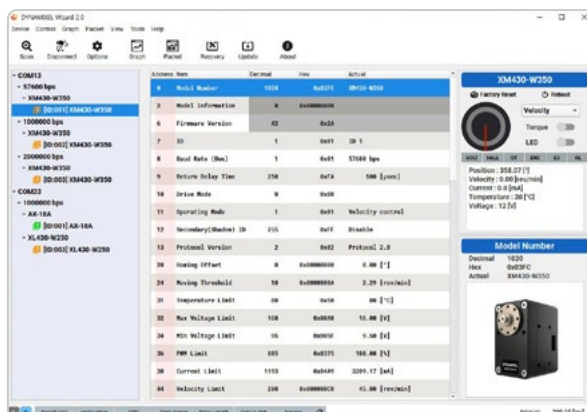


DYNAMIXEL Wizard 2.0

Optimized Tool for Managing DYNAMIXEL



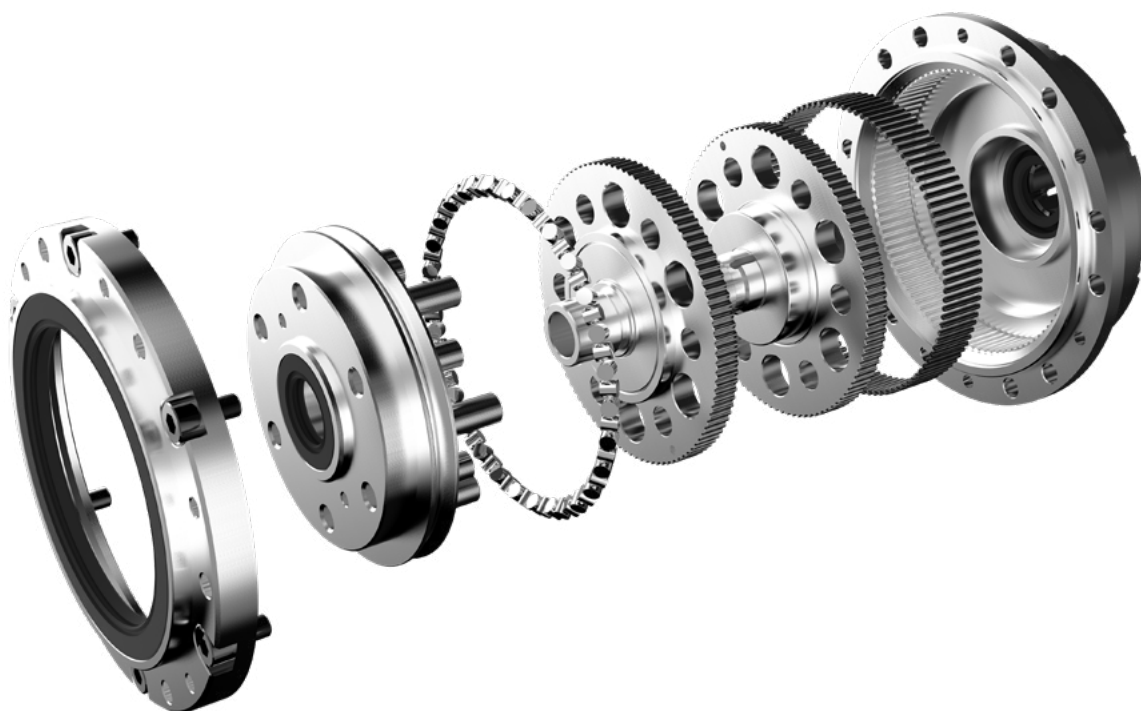
- Compatible with all DYNAMIXEL
- DYNAMIXEL Configuration and Test
- DYNAMIXEL Diagnosis
- DYNAMIXEL Firmware Update
- DYNAMIXEL Data Plotting in Real-time
- Graph and Packet Analysis
- Supports Multi-port Connection
- Supports Various Communications (Protocol 1.0, 2.0, Modbus RTU)
- Supports Various Operating Systems



DYNAMIXEL DRIVE (DYD)

High Precision Gear with Superior Impact Resistance

DYNAMIXEL DRIVE (DYD) is a cycloid-based compact reduction gear with superior impact resistance while realizing high torque, high efficiency and light weight.

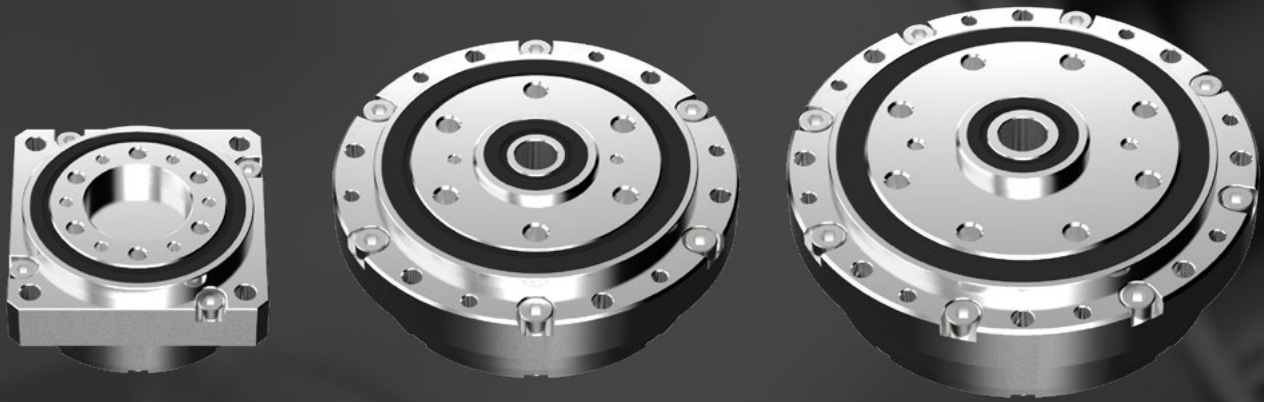


- Superior Impact Resistance
- High Precision
- High Efficiency & Low Backlash
- High Durability & Strong Rigidity
- Various Gear Ratios
- Lightweight & Compact Gear Module

	Characteristics	DYD	Strain Wave Gear	Planetary gear
1	Efficiency	◎	△	◎
2	Backdrivability	○	△	◎
3	Accuracy (Backlash)	◎	◎	△
4	Rigidity Under Impact (Shock)	◎	△	○
5	Service Life Under Extreme Operating Conditions	◎	△	○

Note [◎ : Excellent ○ : Good △ : Average]

Specifications



Properties	Unit	DYD-11		DYD-14		DYD-17	
		DYD-11-033	DYD-11-051	DYD-14-051	DYD-14-099	DYD-17-051	DYD-17-099
Gear ratio	-	33	51	51	99	51	99
Rated output torque (@ 2,000rpm)	Nm	2.2	3.5	3.7	5.4	11	16
Permissible peak torque at accel / decel	Nm	8.8	14	14.8	21.6	44	64
Permissible peak torque at E-stop	Nm	28	28	43.2	43.2	96	96
Backlash	arcmin	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Efficiency (@ 2,000rpm, 20°C)	%	65	65	60	60	70	70
Starting torque	cNm	5	3	5	3	4	3
Back-drive torque	Nm	1	1	3	3	5	5
Dimensions	mm	□43 × 23.5	□43 × 23.5	Ø68 × 30	Ø68 × 30	Ø78 × 34.2	Ø78 × 34.2
Weight	g	196	196	400	400	600	600

- Nominal input speed: 2,000 rpm
- Maximum input speed: 8,500 rpm
- Service life: 7,000 hours

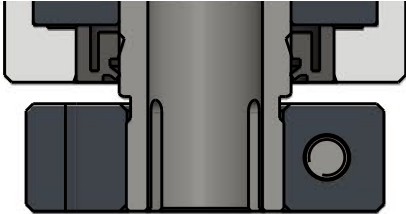
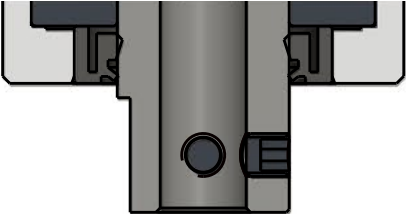
Naming Convention

DYD	14	099	C	SP
Product Name	Model Size	Gear Ratio	Input Shaft	Special Production
	11, 14, 17	33, 51, 99	C: Clamp-ring SD: Set-screw (D-cut)	Customization Code

Product Name	Model Size	Gear Ratio	Input Shaft	Special Production
DYD	11	33, 51	C, SD	SP
	14	51, 99	C, SD	SP
	17	51, 99	C, SD	SP

Input Shaft Options

2 different types of input shafts available

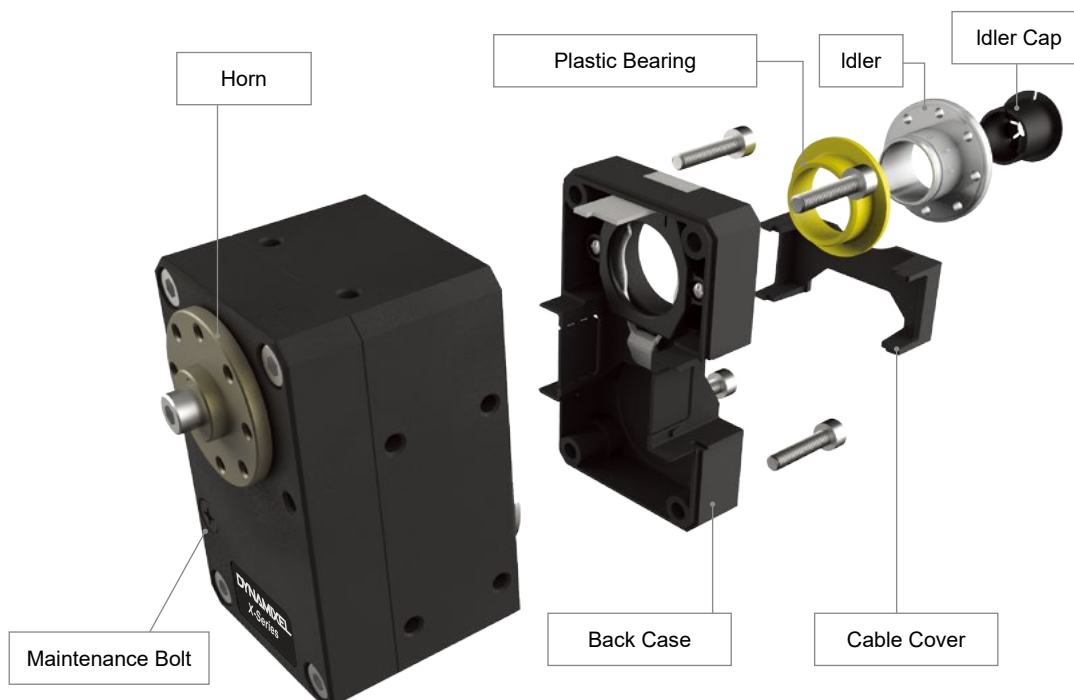
Type	Type - C	Type - SD
	Clamp-ring	Set-screw (D-cut)
Shape		

DYNAMIXEL-X



Features

- **6 Operating Modes**
- **Various Control Functions**
- **Sophisticated Control Architecture**
- **New H/W Features**
 - High torque and compact design
 - Improved durability and heat dissipation with aluminum case
 - Reduced cable stress with hollow back case (3-way-wiring)
 - No nuts needed to screw frames onto the case
- **Current-based Torque Control (4,096 steps, 2.69mA/step)**
- **Profile Control for Smooth Motion Planning**
- **Trajectory Data and Moving Status (In-Position, Following Error, etc.)**
- **Energy Saving (Standby current reduced from 100mA to 40mA)**
- **Contactless (Magnetic) Absolute Encoder (by AMS)**
- **Supports DYNAMIXEL Protocol 2.0**
- **Supports Various Development Environments**



X540 Series

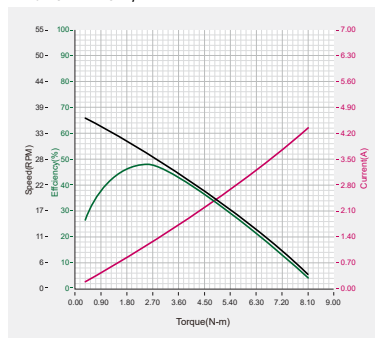
DYNAMIXEL-X

Specifications

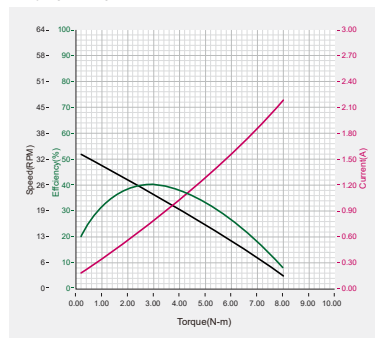
Properties	Unit	XH Series				XM Series	
		XH540-W270-T/R	XH540-W150-T/R	XH540-V270-R	XH540-V150-R	XM540-W270-T/R	XM540-W150-T/R
Stall Torque	Nm	9.9	7.1	9.2	6.4	10.6	7.3
No Load Speed	rpm	39	70	34	60	30	53
Input Voltage	V	12	12	24	24	12	12
Resolution	step/rev	4,096	4,096	4,096	4,096	4,096	4,096
Dimension (W × H × D)	mm	33.5 × 58.5 × 44	33.5 × 58.5 × 44	33.5 × 58.5 × 44	33.5 × 58.5 × 44	33.5 × 58.5 × 44	33.5 × 58.5 × 44
Weight	g	165	165	165	165	165	165
DC Motor	type	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless	Coreless
Gear	type	Spur	Spur	Spur	Spur	Spur	Spur
Gear Material	type	Metal	Metal	Metal	Metal	Metal	Metal
Case Material	type	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)
Gear Ratio	-	272.5	152.3	272.5	152.3	272.5	152.3
Network Interface	-	TTL / RS-485	TTL / RS-485	RS-485	RS-485	TTL / RS-485	TTL / RS-485
MCU	-	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)

Performance Graph

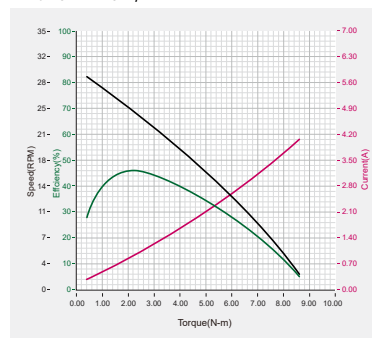
XH540-W270-T/R



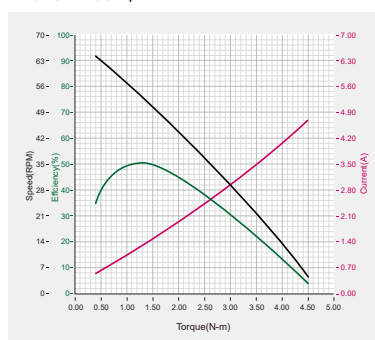
XH540-V270-R



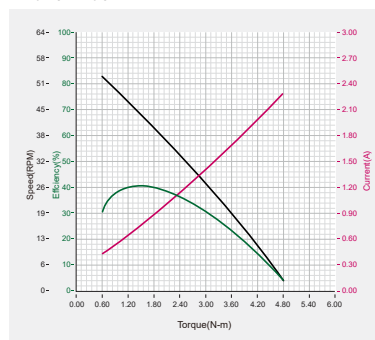
XM540-W270-T/R



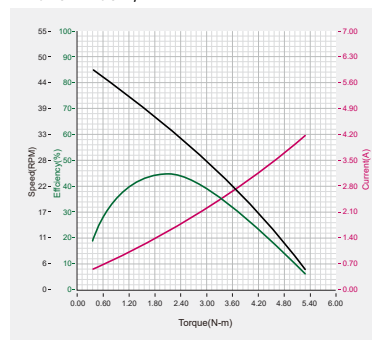
XH540-W150-T/R



XH540-V150-R



XM540-W150-T/R



X430 Series

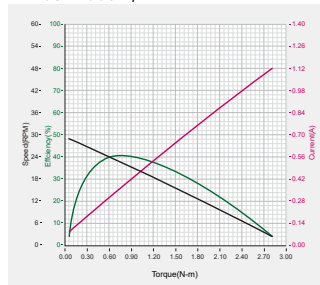
DYNAMIXEL-X

Specifications

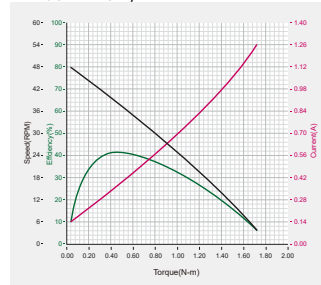
Properties	Unit	XH Series				XM Series		XC Series		XL Series
		XH430-W350-T/R	XH430-W210-T/R	XH430-V350-R	XH430-V210-R	XM430-W350-T/R	XM430-W210-T/R	XC430-W240-T	XC430-W150-T	XL430-W250-T
Stall Torque	Nm	3.4	2.5	3.3	2.6	4.1	3	1.9	1.6	1.5
No Load Speed	rpm	30	50	31	52	46	77	70	106	61
Input Voltage	V	12	12	24	24	12	12	12	12	12
Resolution	step/rev	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096
Dimension (W × H × D)	mm	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34	28.5 × 46.5 × 34
Weight	g	82	82	82	82	82	82	65	65	57.2
DC Motor	type	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless	Coreless	Coreless	Coreless	Cored
Gear	type	Spur	Spur	Spur	Spur	Spur	Spur	Spur	Spur	Spur
Gear Material	type	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Plastic
Case Material	type	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Plastic	Plastic	Plastic
Gear Ratio	-	353.5	212.6	353.5	212.6	353.5	212.6	245.2	159.5	258.5
Network Interface	-	TTL / RS-485	TTL / RS-485	RS-485	RS-485	TTL / RS-485	TTL / RS-485	TTL	TTL	TTL
MCU	-	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)

Performance Graph

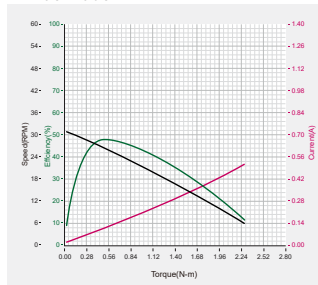
XH430-W350-T/R



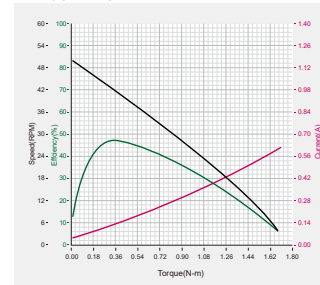
XH430-W210-T/R



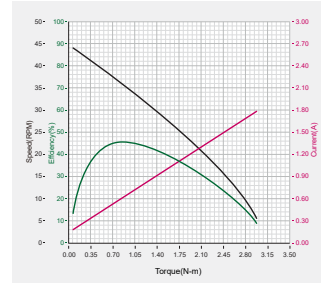
XH430-V350-R



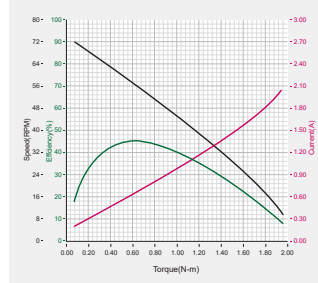
XH430-V210-R



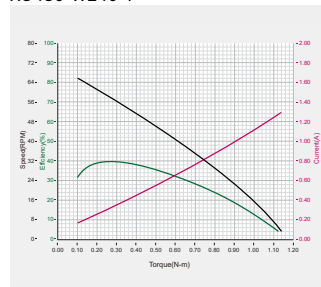
XM430-W350-T/R



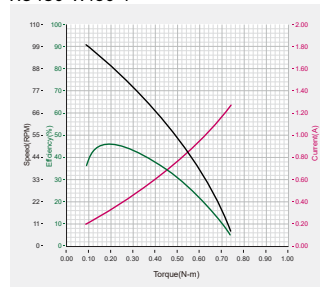
XM430-W210-T/R



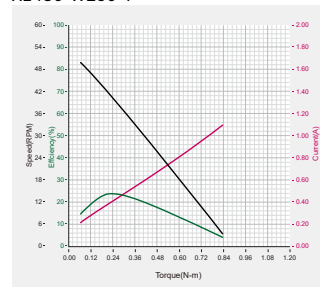
XC430-W240-T



XC430-W150-T



XL430-W250-T



X330 Series

DYNAMIXEL-X

Small yet Powerful

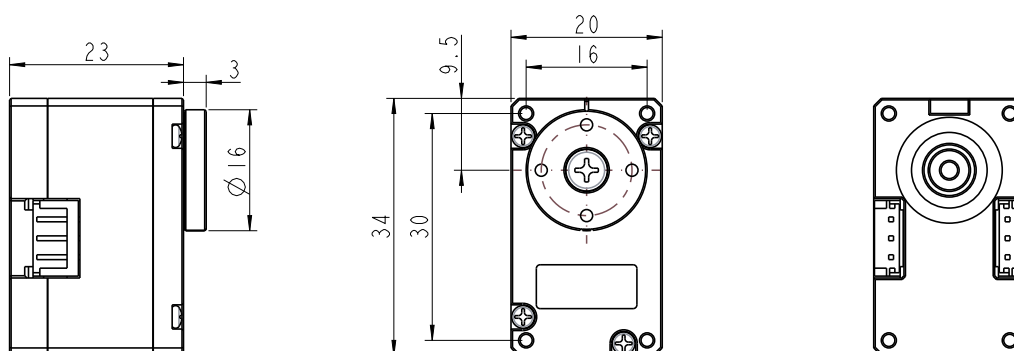
- 20 × 34 × 26 mm, ≥18g
- Input Voltage from 3.7V up to 12V
- Supports RC Protocol
- Metal Gears and Bearings (XC Series only)



Specifications

Properties	Unit	XC Series				XL Series	
		XC330-M288-T	XC330-M181-T	XC330-T288-T	XC330-T181-T	XL330-M288-T	XL330-M077-T
Stall Torque	Nm	0.93	0.6	0.92	0.76	0.5	0.215
No Load Speed	rpm	81	129	65	104	103	383
Input Voltage	V	5	5	11.1	11.1	5	5
Resolution	step/rev	4,096	4,096	4,096	4,096	4,096	4,096
Dimension (W × H × D)	mm	20 × 34 × 26	20 × 34 × 26	20 × 34 × 26	20 × 34 × 26	20 × 34 × 26	20 × 34 × 26
Weight	g	23	23	23	23	18	18
DC Motor	type	Coreless	Coreless	Coreless	Coreless	Cored	Cored
Gear	type	Spur	Spur	Spur	Spur	Spur	Spur
Gear Material	type	Metal	Metal	Metal	Metal	Plastic	Plastic
Case Material	type	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Gear Ratio	-	288.35	180.62	288.35	180.62	288.4	77.5
Network Interface	-	TTL	TTL	TTL	TTL	TTL	TTL
MCU	-	CORTEX-M0+ (64MHz, 32Bit)	CORTEX-M0+ (64MHz, 32Bit)	CORTEX-M0+ (64MHz, 32Bit)	CORTEX-M0+ (64MHz, 32Bit)	CORTEX-M0+ (64MHz, 32Bit)	CORTEX-M0+ (64MHz, 32Bit)

Drawings



XD Series

DYNAMIXEL-X

Up to 250% Longer Lifespan

- Same Performance but Longer Lifespan Compared to XH Series
- Reinforced Metal Gears Applied
- Supports RS-485 Serial Communication

XD430

XH430

250%

XD540

XH540

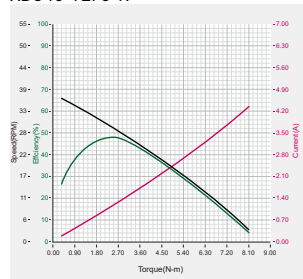
220%

Specifications

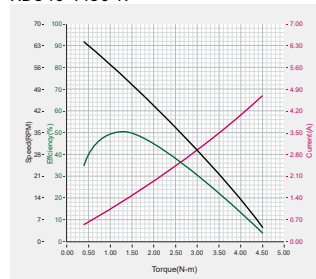
Properties	Unit	XD Series			
		XD540-T270-R	XD540-T150-R	XD430-T350-R	XD430-T210-R
Stall Torque	Nm	9.9	7.1	3.4	2.5
No Load Speed	rpm	39	70	50	30
Input Voltage	V	12	12	12	12
Resolution	step/rev	4,096	4,096	4,096	4,096
Dimension (W x H x D)	mm	33.5 x 58.5 x 44	33.5 x 58.5 x 44	28.5 x 46.5 x 34	28.5 x 46.5 x 34
Weight	g	170	170	85	85
DC Motor	type	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)
Gear	type	Spur	Spur	Spur	Spur
Gear Material	type	Metal	Metal	Metal	Metal
Case Material	type	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)	Metal (Front, Middle)
Gear Ratio	-	272.5	152.3	353.5	212.6
Network Interface	-	RS-485	RS-485	RS-485	RS-485
MCU	-	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)

Performance Graph

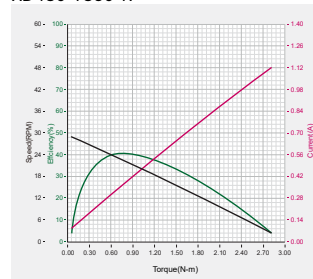
XD540-T270-R



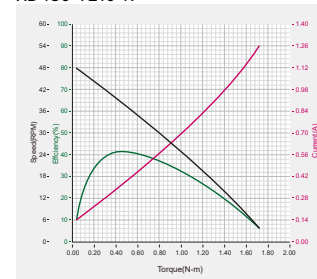
XD540-T150-R



XD430-T350-R



XD430-T210-R



IP68-rated Waterproof Actuator

- Certified IP68 Rating (1m, 24hr)
- Special Waterproof Connectors
- Basic and Extension Waterproof Cables

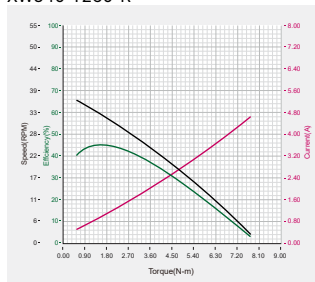


Specifications

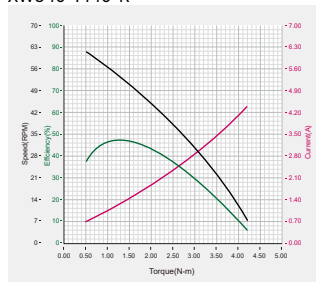
Properties	Unit	XW Series			
		XW540-T260-R	XW540-T140-R	XW430-T333-R	XW430-T200-R
Stall Torque	Nm	9.5	6.9	3.1	2.3
No Load Speed	rpm	40	72	31	53
Input Voltage	V	12	12	12	12
Resolution	step/rev	4,096	4,096	4,096	4,096
Dimension (W × H × D)	mm	33.5 × 58.5 × 45.9	33.5 × 58.5 × 45.9	28.5 × 46.5 × 34	28.5 × 46.5 × 34
Weight	g	185	185	96	96
DC Motor	type	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)	Coreless (Maxon)
Gear	type	Spur	Spur	Spur	Spur
Gear Material	type	Metal	Metal	Metal	Metal
Case Material	type	Metal	Metal	Metal	Metal
Gear Ratio	-	260.6	145.6	332.8	200.1
Network Interface	-	RS-485	RS-485	RS-485	RS-485
MCU	-	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)

Performance Graph

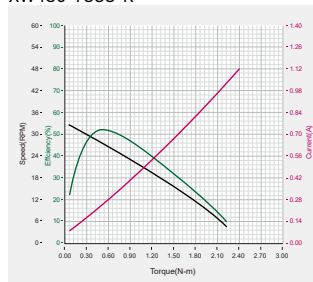
XW540-T260-R



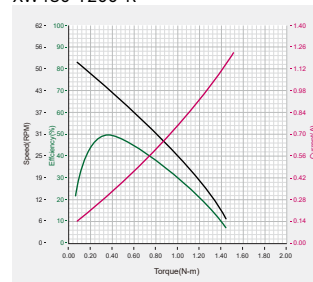
XW540-T140-R



XW430-T333-R



XW430-T200-R



2X Series

DYNAMIXEL-X

2-Axis Actuators



XL430

XL430

2XL430

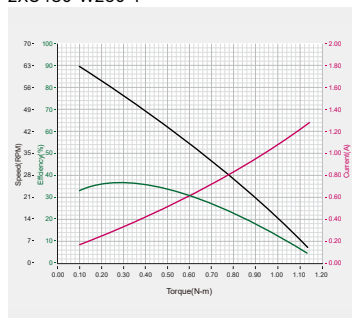
	XL430 + XL430	2XL430	Comparison to XL430 2EA
Weight	114.4g	98.2g	14% ↓
Volume	90.117 m ³	60.264 m ³	33% ↓

Specifications

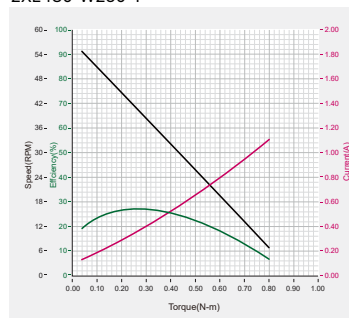
Properties	Unit	2X Series	
		2XC430-W250-T	2XL430-W250-T
Stall Torque	Nm	1.8	1.4
No Load Speed	rpm	64	57
Input Voltage	V	12	11.1
Resolution	step/rev	4,096	4,096
Dimension (W × H × D)	mm	36 × 46.5 × 36	36 × 46.5 × 36
Weight	g	102	98.2
DC Motor	type	Coreless	Cored
Gear	type	Spur	Spur
Gear Material	type	Metal	Metal
Case Material	type	Plastic	Plastic
Gear Ratio	-	257.4	257.4
Network Interface	-	TTL	TTL
MCU	-	CORTEX-M3 (72MHz, 32Bit)	CORTEX-M3 (72MHz, 32Bit)

Performance Graph

2XC430-W250-T



2XL430-W250-T



DYNAMIXEL-P



Features

• All-in-One Modular Design

- DC Motor + Controller + Driver + Sensor + Reduction Gear + Network

• Compact & Lightweight

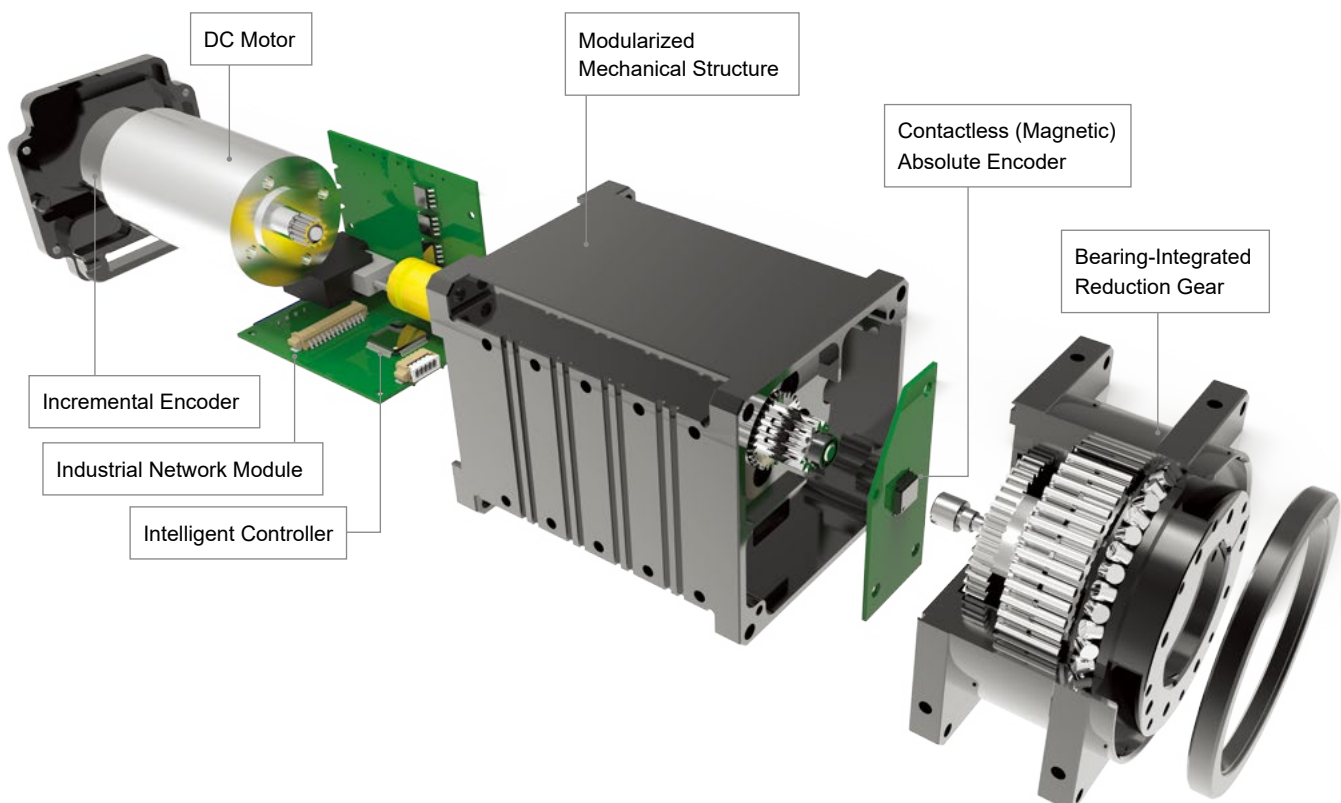
- Minimized module size with compact and lightweight cycloid reduction gear
- High weight-to-output ratio (0.05 N.m/g)
- High impact resistance (over 400%)

• High Precision & Low Backlash

- Contactless (magnetic) absolute encoder (by AMS) & incremental encoder for precise positioning
- Low backlash (<6 arcmin)
- Performance approved by Korea Laboratory Accreditation Scheme (KOLAS)

• Current-based Torque Control

- High speed current sensing algorithm and current feedback control
- Triple-loop control for current, speed and position feedback
- Supports DYNAMIXEL Protocol 2.0 and Modbus RTU

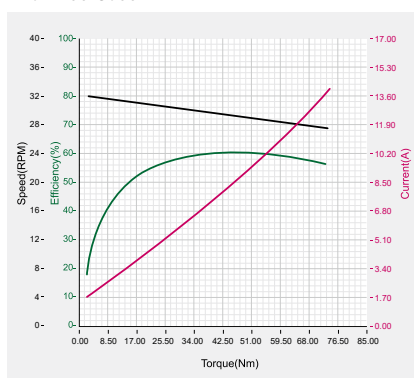


Specifications

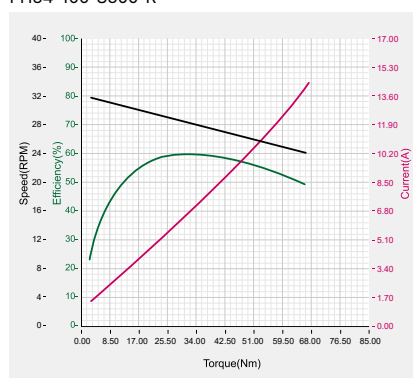
Properties	Unit	PH Series			PM Series		
		PH54-200-S500-R	PH54-100-S500-R	PH42-020-S300-R	PM54-060-S250-R	PM54-040-S250-R	PM42-010-S260-R
Continuous Torque	Nm	44.7	25.3	5.1	10.1	3.9	1.7
No Load Speed	rpm	33.1	33.3	32.7	33.1	28.4	28
Input Voltage	V	24	24	24	24	24	24
Resolution	step/rev	1,003,846	1,003,846	607,500	502,834	502,834	526,374
Dimension (W x H x D)	mm	54 x 126 x 54	54 x 108 x 54	42 x 84 x 42	54 x 126 x 54	54 x 108 x 54	42 x 72 x 42
Weight	g	855	740	340	855	710	270
DC Motor	type	BLDC (Maxon)	BLDC (Maxon)	Coreless (Maxon)	BLDC (Maxon)	BLDC (Maxon)	Coreless (Maxon)
Gear	type	Cycloid	Cycloid	Cycloid	Cycloid	Cycloid	Cycloid
Gear Material	type	Metal	Metal	Metal	Metal	Metal	Metal
Case Material	type	Metal	Metal	Metal	Metal	Metal	Metal
Power	W	200	100	20	60	40	10
Gear Ratio	-	501.9	501.9	303.8	251.4	251.4	257
Network Interface	-	RS-485	RS-485	RS-485	RS-485	RS-485	RS-485
MCU	-	CORTEX-M4 (168MHz, 32Bit)	CORTEX-M4 (168MHz, 32Bit)	CORTEX-M4 (168MHz, 32Bit)	CORTEX-M4 (168MHz, 32Bit)	CORTEX-M4 (168MHz, 32Bit)	CORTEX-M4 (168MHz, 32Bit)

Performance Graph

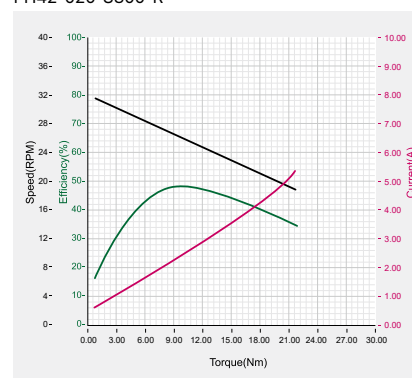
PH54-200-S500-R



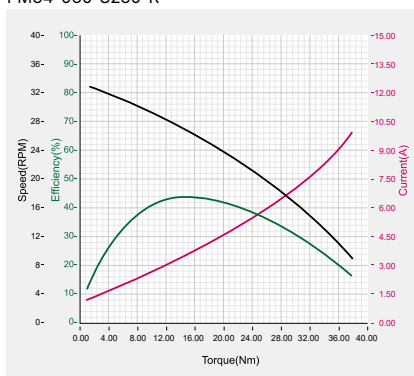
PH54-100-S500-R



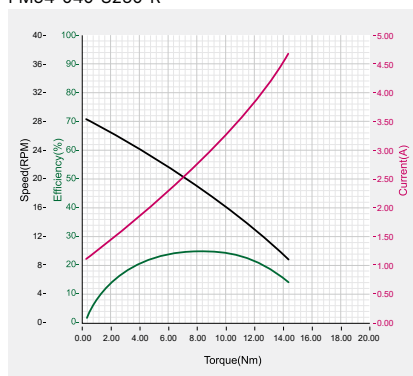
PH42-020-S300-R



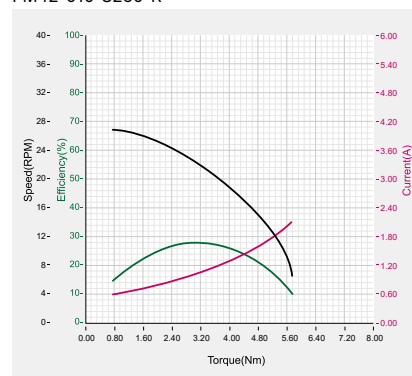
PM54-060-S250-R



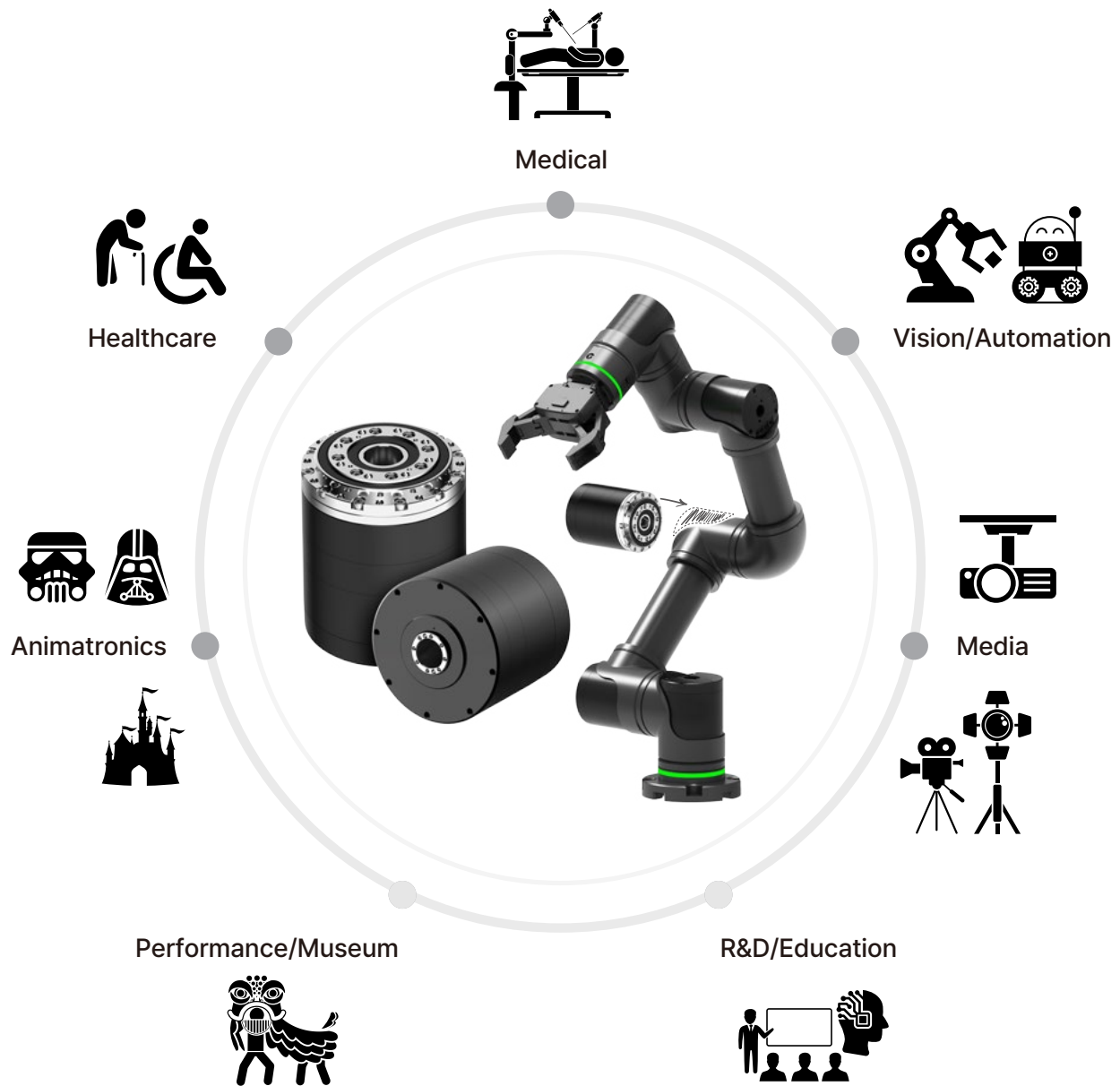
PM54-040-S250-R



PM42-010-S260-R



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