

DYNASERV

DR5H00



Eco-Friendly Hybrid Motor, Stable Wide Index Base, Minimize Machine Size

DYNASERV

DR5H00 Creating New Standards

DR5H00 is high-accuracy, high-torque motor with height that is 1/3 of other Yokogawa Motors with similar torque. *1

This motor is suited for various applications, such as inspection and manufacturing of LED, Solar Cell, CD/DVD/BD, Semi-conductor, Electric parts and so forth. It enables to reduce machine size in these applications.

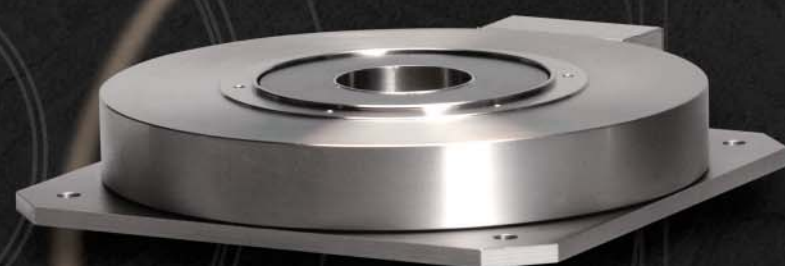
Driver Unit for DR5H00 is compatible with various kinds of Field Network.

*1 Comparing 15N·m DR5H00 motor with 10N·m and 20N·m motors of DR1B

Motor Height 42mm
(on 10N·m & 20N·m motors)

High Accuracy

All-in-One Construction



High Torque

High Servo Strength

Low Heat Emission & Low Energy Consumption

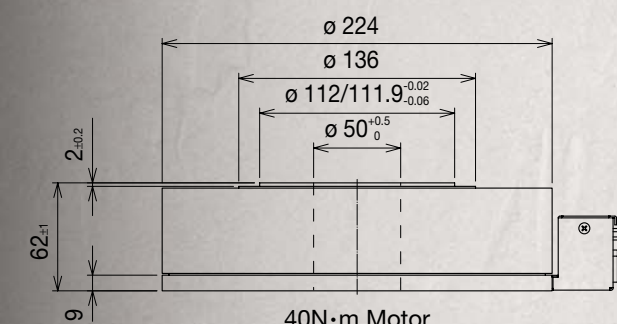
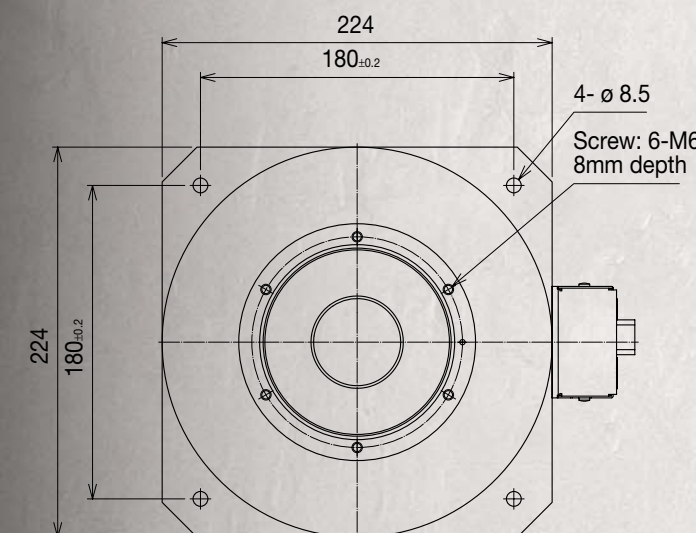
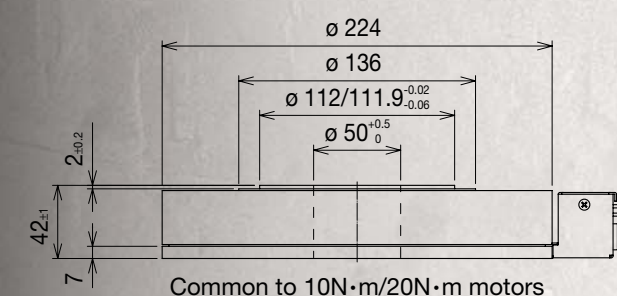
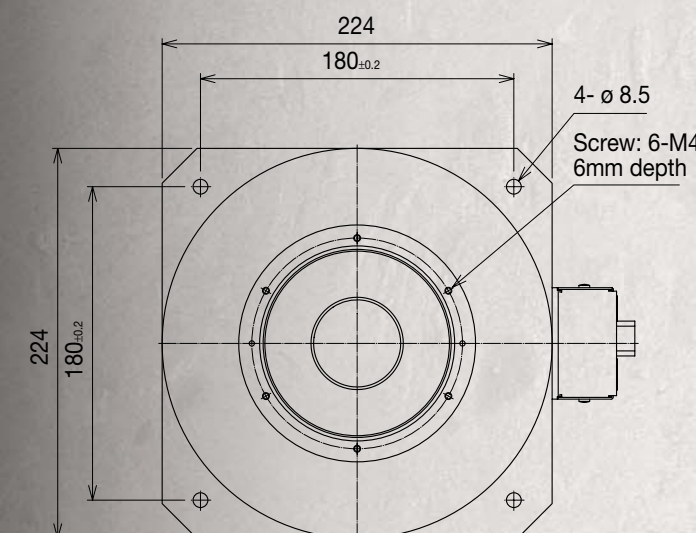
- Encoder Resolution: 3,407,872 pulses/rev
- Repeatable Accuracy: ± 0.4 arc second
- Large Centre Aperture $\phi 50\text{mm}$
Large and Convenient Aperture for any purpose
- Low Energy Consumption
Due to high efficiency of unique Hybrid magnetic circuit.
- Internal Origin Sensor
No need for complication of external sensor.
- CE Conformity
Both motor and driver conform to CE standard
- Compatible Driver Units
UR5HG3, UR5HP3
- Auto Tuning Function
Auto Tuning enables servo parameter setting to be adjusted automatically according to loading inertia.
- Supporting Software (DrvX3 Support Tool)
Including, Oscilloscope function, FFT, Error Log, Parameter Back-up function, etc.
- Compatible to various kinds of Field Network
(In addition to I/O contact)
MECHATROLINK-II CC-Link PROFIBUS-DP

Applications

- LED Inspection
- Solar Cell Manufacturing
- CD/DVD/BD Manufacturing
- Semi-Conductor/Electric Component Manufacturing
- High Precision Index Machines
- High Speed Material Handling
- Sputtering Machines

Advantages

- Reduction in Machine Size Cut Down in Cost
- Improving Index Accuracy and Variable Individual Index Setting
- Increase in Precision, Reduce Machine Stoppage, Tact Time Improvement



Motion Dynamics

Direct Drive Motor

Motor Specifications

DR5H00				-10	-20	-40	
Motor & Driver Unit	Maximum Peak Torque			N·m	10	20	40
	Maximum Constant Torque *1			N·m	6	12	30
	Maximum Velocity			rps	3.6 [2.5]	3.6 [2.5]	3.6 [3.6]
	Constant Velocity			rps	3.0 [1.5]	3.0 [1.6]	3.0 [2.7]
	Rotational Precision	Encoder Resolution		p/rev	3,407,872		
		Absolute Accuracy		arc sec	±80		
		Repeatable Accuracy *2		arc sec	±0.4		
Number of Z-pulse			p/rev	52			
Motor	Origin Sensor			-	Included		
	Rotational Inertia			kg·m ²	2.2×10 ⁻²		3.7×10 ⁻²
	Maximum Load	Max Axial Load	Forward Direction	N	2000		
			Reverse Direction	N	1000		
		Momentum Load		N·m	100		
		Loading Inertia		kg·m ²	2.2		3.7
	Mechanical Accuracy			μm	5 (for -A1) or 20 (for -A7) or 50 (for -A6) *3		
	Motor Weight			kg	10		13
	Driver Units			-	UR5HG3 or UR5HP3 500W		UR5HG3 or UR5HP3 2kW
	Environmental Condition	Temperature		-	0~40°C (for working)/ -20~85°C (for storage) (If not conform to CE Standard; 0~45°C (for working))		
		Humidity		-	20~85%RH Non Condensation		
Atmosphere		-	No corrosive gas, dust and dirt must be present. Altitude must be less than 1000 meters above sea level.				

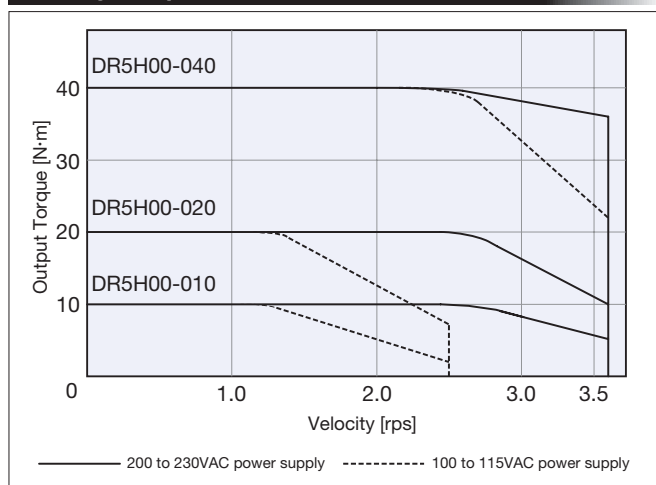
*1: In the condition where metal base with adequate heat absorption characteristic.

*2: The value was measured in the following setting using micro-meter: A metal arm with loading inertia of 0.04kg·m² was attached to a motor. The motor turned to stop at the same position seven times from the same direction.

*3: Depending on choice of mechanical accuracy

(Attention)
In case of no indication, it means 200-230V power supply.
However, in case of [] is indicated 100-115V.

Velocity/Torque Characteristics



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- Every proper name in this catalogue may be a registered trade mark.

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Model Code and Specification

Motor Type	Model Code	Comments
DR5H00		Direct Drive Motor with built-in Magnetic Encoder
Maximum Output Torque	-010	Maximum Output Torque 10N·m Drive Currency 6A
	-020	Maximum Output Torque 20N·m Drive Currency 6A
	-040	Maximum Output Torque 40N·m Drive Currency 20A
Basic Construction	F	With mounting base & connector box
Mechanical Accuracy	-A1	Axial & Radial Deflection to be less than 5μm
	-A7	Axial & Radial Deflection to be less than 20μm
	-A6	Axial & Radial Deflection to be less than 50μm
Additional Options	/CN	With a set of connectors
	/TC1	With (Standard) Quality Test Result
	/TC	With Absolute Accuracy Test Result

Standard Accessory

- Origin Sensor Connector 1

Related Products

- Intelligent Driver for DR5H00
UR5HG3-UR5HP3



- Motor Cables
C3M
- Encoder Cables
C3E

Caution



- For safety, please read Instruction Manual before using any Yokogawa product.
- Depending on specification and purpose of its usage, exporting the products may require approval from Japanese government.
- If the product is used in where health and safety of human life is directly affected, please contact Yokogawa, before the implementation.

Represented by :