

Features

Achieves "demodulation-less" motor control that does not stop even with a high load or rapid acceleration/deceleration is applied, providing smooth operation with a resolution of 200,000 P/R. The simple structure of the resolver also contributes to durability against the outside environment. Robust manufacturing supports a motor drive with extremely stable accuracy in harsh environments such as heat, dust, shock and vibration.

Benefits of Resolver Servo Control

1. High Torque Functionality: No demodulation margin required with servo control

Servo control via resolver eliminates the need for a demodulation margin and maximizes available torque. A usable torque 2-3 times more than from conventional products.

2. Low current consumption and low heat generation: Torque controlled with minimal current

Torque control is performed with minimal required current, reducing power consumption and allowing for current to be cut while on stand-by. Contributes to the energy efficiency of your overall setup.

3. High accuracy: 200,000 P/R resolution

Achieves a resolution of 200,000 P/R, repeatedly providing a high level of positional accuracy and smooth drive.

4. Environmental Resistance: Resistant to dust, oil, heat, shock, and vibration disturbances

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The resolver is simple in structure and is resistant to disturbances such as dust, oil, heat, shock and vibration.

5. Miniaturization: demodulation-less and no torque margin required

A torque margin is not required given a lack of demodulation. This leads to a smaller motor size.

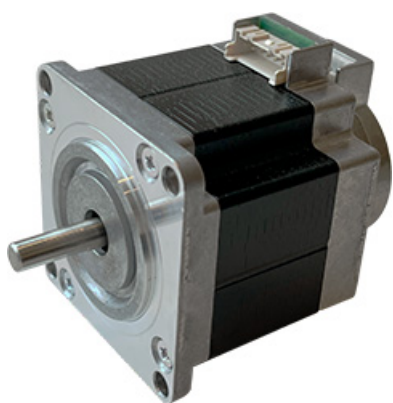
6. Contributes to fewer components: Gear-less, simplified cooling system, and simplified vibration control

Gear-less (decelerator), simplified cooling measures, and simplified vibration control (dampers). Helps reduce cost and design a more efficient use of space.

7. Low noise and vibration: drive control that responds to load

This device can minimize noise and vibration by providing drive control in response to the applied load.

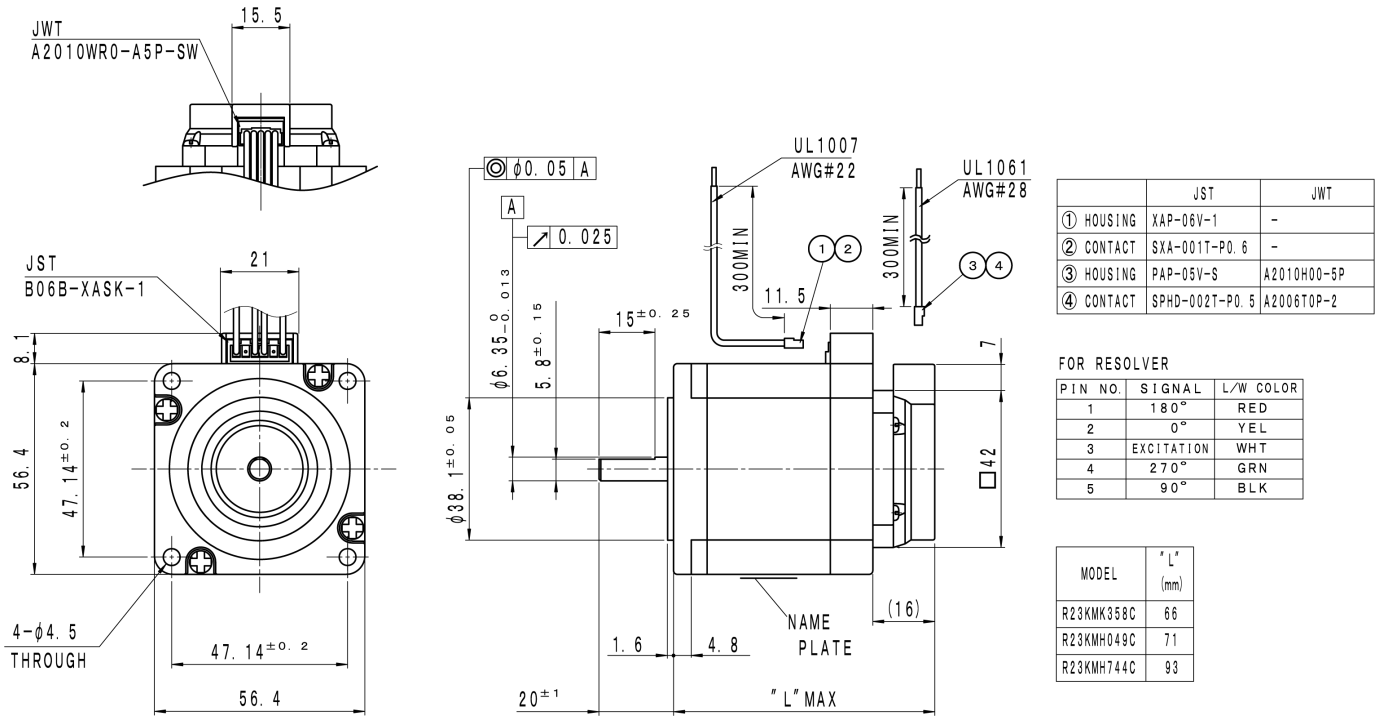
Appearance



Overall View

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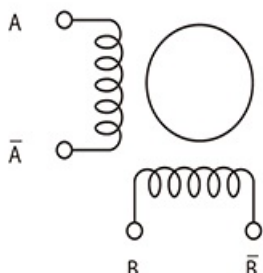


Wiring Diagram

PHASE	A	A COM	A/	B	B COM	B/
PIN NO.	3	-	1	4	-	6

Wiring Diagram Image

BI POLAR Wiring Connection Diagram



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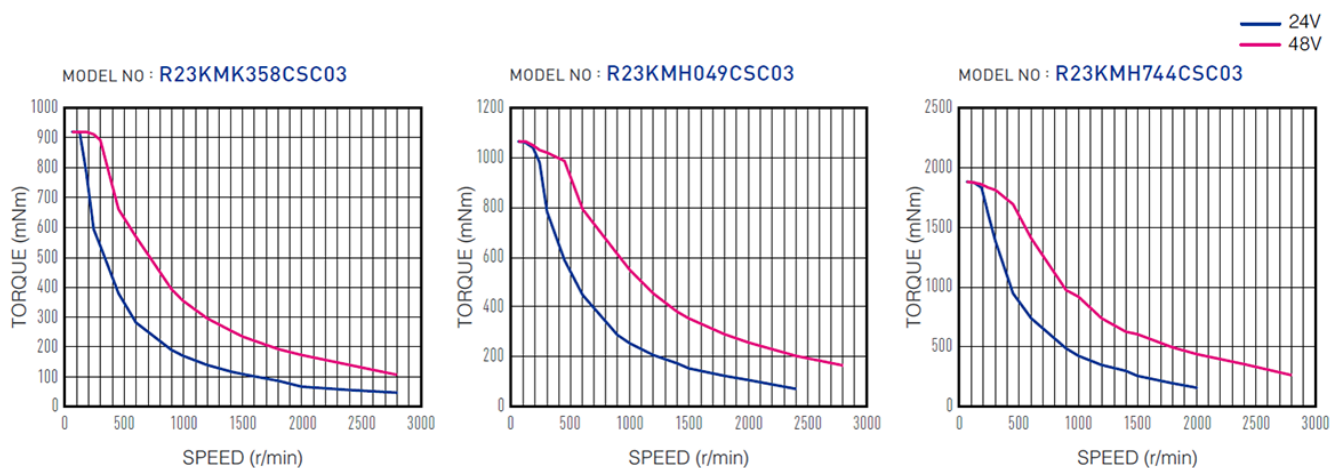
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Specifications

Model	Outer Diameter [mm]	Length [mm]	Step Angle [°]	Drive Sequence	Rated Current [A]	Resistance [ohms]
R23KMK358CSC03	56.4	66.0	1.800	BI-POLAR	1.70	1.90
R23KMH049CSC03	56.4	71.0	1.800	BI-POLAR	2.00	0.90
R23KMH744CSC03	56.4	93.0	1.800	BI-POLAR	3.00	0.70

Model	Holding Torque [mN · m]	Inductance [mH]	Rotor Inertia [g · cm ²]	Detent Torque [mN · m]	Mass [g]
R23KMK358CSC03	800	7.8	183.0	29.0	670
R23KMH049CSC03	1330	3.7	323.0	54.0	760
R23KMH744CSC03	1800	2.8	493.0	93.0	1130

Torque/Speed Characteristics



Guidance

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To control the stepping motor with resolver, Digital converter (RDC) from Renesas Electronics Corporation
And control driver software is required. For details, please see the link below.

[Motor control solution with resolver](#)

[Stepping motor control kit with resolver](#)

Case Studies

We can customize to meet your various requests! [Stepping motors]