

Precision Rotation Motorized Stages

PRMS

RoHS

CE

Application Systems

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

F A Parts

Measurement &Control

FA Electrical Parts

Tool & Measure

Cleanroom & AntiStatic

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Piezo Stage

Precision Linear MS

High Speed MS

Motorized Goniometer

Motorized Rotation

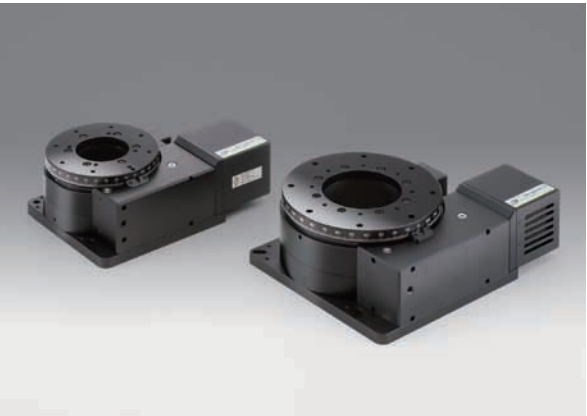
Multiaxis Motorized

Industrial Robot

Controller & Driver & Cable

Custom-Built MS

High precision and high stability rotation motorized stages fitted with bearing positioning slide.



- Rotation motorized stages suitable for when high load capacity is required.
- Back up various inspection instruments according to usage such as the type, size, and measurement range of the measuring object.

Guide

- Rotation Range
- Minus limit sensor: -2.5° Scale: 0°
-
- Homing of rotation motorized stages is performed using the CW limit sensor as the origin sensor.
- Origin detection is adjusted so that the stage stops at 0 degree when homing is performed in the MINI system at half step.

Attention

- Attention is required when mounting in upside down orientation or on a vertical plane.
- Precision and load capacity specifications may be partly not satisfied depending on the mounting orientation.

Specifications			
Part Number		PRMS-120	PRMS-160
Mechanical Specifications	Rotation Range	Move in the counterclockwise CCW direction to ∞, and stop at near 0 degree (-2.5°) in the clockwise CW direction.	
	Table Size [mm]	φ120	φ160
	Travel Mechanism (reduction ratio)	Worm gear (1:144)	Worm gear (1:144)
	Positioning Slide	Bearing method	Bearing method
	Stage Material	Aluminum / Aluminum bronze	Aluminum / Aluminum bronze
	Weight [kg]	5	8.5
Accuracy Specifications	Resolution	(Full) [°/pulse]	0.005
		(Half) [°/pulse]	0.0025
	MAX Speed [°/sec]	30	30
	Positioning Accuracy [°]	0.1	0.1
	Positional Repeatability [°]	0.01	0.01
	Load Capacity [N]	343 (35.0kgf)	392 (40.0kgf)
	Moment Stiffness [°/N·cm]	0.015	0.01
	Lost Motion [°]	0.01	0.01
	Backlash [°]	0.003	0.003
	Parallelism [μm]	50	50
	Concentricity [μm]	20	20
	Wobble [mm]	0.01	0.01
Sensor	Sensor Part Number	Micro Photoelectric Sensor: PM-U24 (SUNX Co., Ltd.)	Micro Photo Sensor: PM-R24 (SUNX Co., Ltd.)
	Limit Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sensor	None	None
	Proximity Origin Sensor	None	None

Motor / Sensor Specifications		
Motor	Type	5-phase stepping motor 1.4A/phase (Tamagawa Seiki Co., Ltd.)
	Motor Part Number	TS3624N42E (□60mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 – 24V ±10%
	Current Consumption	15mA or lower
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF

Compatible Driver / Controller		
Control System	Compatible Driver	SD-5M, SD-55M, SD-514MSC, SD-5151, SD-525M
	Compatible Controller	ASC-302GS, ASC-304GS

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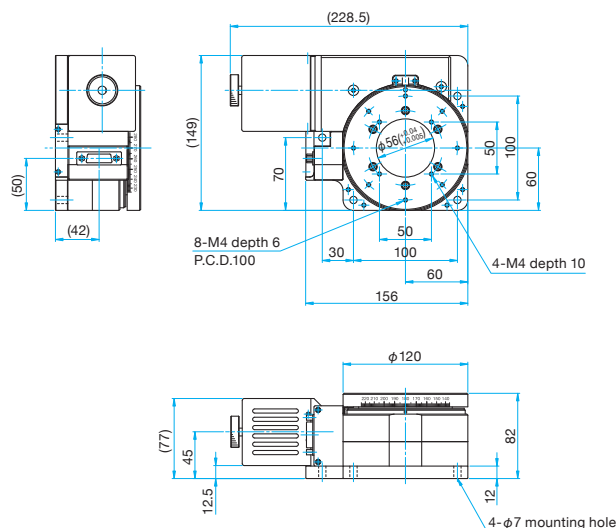
CE



Outline Drawing

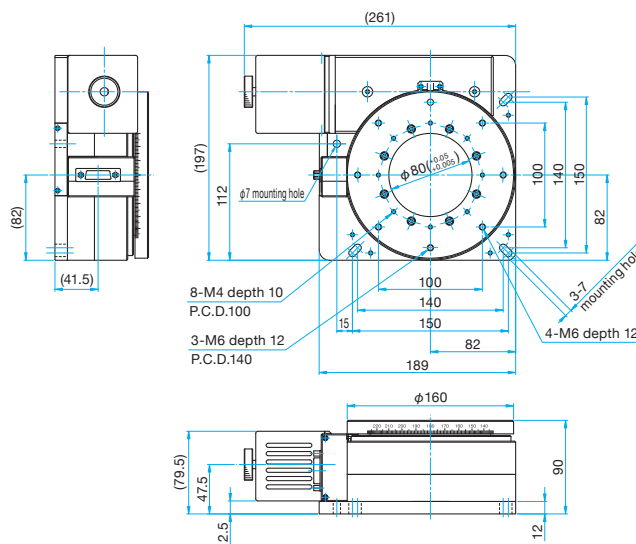
PRMS-120

Hexagon socket head cap screw M6×20...4 screws

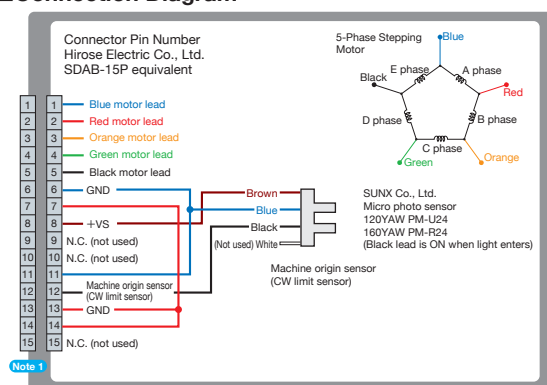


PRMS-160

Hexagon socket head cap screw M6×20...4 screws



Connection Diagram



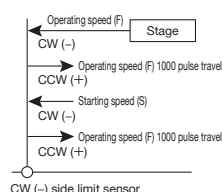
Note 1 Compatible cable connector: DDK Ltd. 17JE-13150

Machine Origin Detection

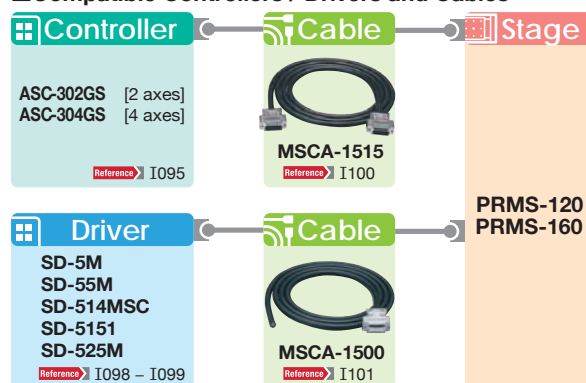
MINI System

When the machine origin detection command is issued, the stage starts traveling in the CW (-) direction at the operating speed (F) set with the memory switch, and stops by the CW (-) side limit sensor. Then it travels in the CCW (+) direction at the operating speed (F) for 1000 pulses.

After stop, it starts traveling in the CW (-) direction again at the starting speed (S), and stops by the CW (-) side limit sensor. After that, it travels in the CCW (+) direction at the operating speed (F) for 1000 pulses. This position is regarded as the machine origin.



Compatible Controllers / Drivers and Cables



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