

## Precision Rotation Motorized Stages

PRMS



Application Systems

Machine Vision

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Motion Control Products

Optical & Mirror Holder

FA Parts

Measurement & Control

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Cleanroom & AntiStatic

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Piezo Stage

Precision Linear MS

High Speed MS

Motorized Goniometer

Motorized Rotation

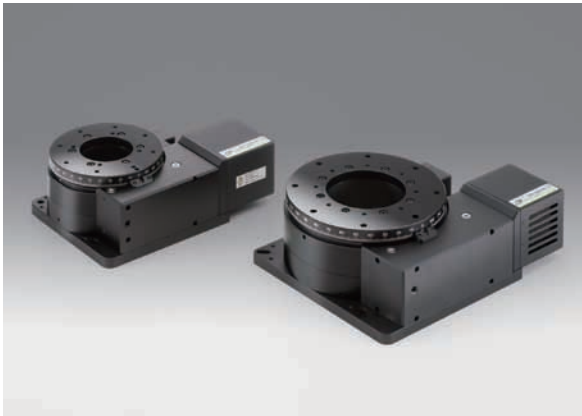
Multiaxis Motorized

Industrial Robot

Controller & Driver & Cable

Custom-Built MS

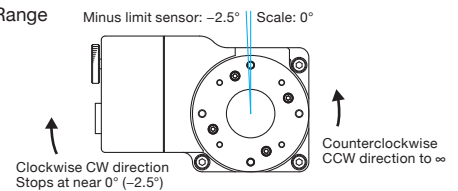
### High precision and high stability rotation motorized stages fitted with bearing positioning slide.



- 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



- ▶ 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			PRMS-120	PRMS-160
Part Number				
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		
	Travel Mechanism (reduction ratio)	Worm gear (1:144)		
	Positioning Slide	Bearing method		
	Stage Material	Aluminum / Aluminum bronze		
	Weight [kg]	5		
Accuracy Specifications	Resolution	(Full) [°/pulse]	0.005	0.005
		(Half) [°/pulse]	0.0025	0.0025
	MAX Speed [°/sec]	30		
	Positioning Accuracy [°]	0.1		
	Positional Repeatability [°]	0.01		
	Load Capacity [N]	343 (35.0kgf)		
	Moment Stiffness [°/N·cm]	0.015		
	Lost Motion [°]	0.01		
	Backlash [°]	0.003		
	Parallelism [μm]	50		
	Concentricity [μm]	20		
	Wobble [mm]	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)		
	Origin Sensor	None		
	Proximity Origin Sensor	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

# Precision Rotation Motorized Stages

PRMS

RoHS

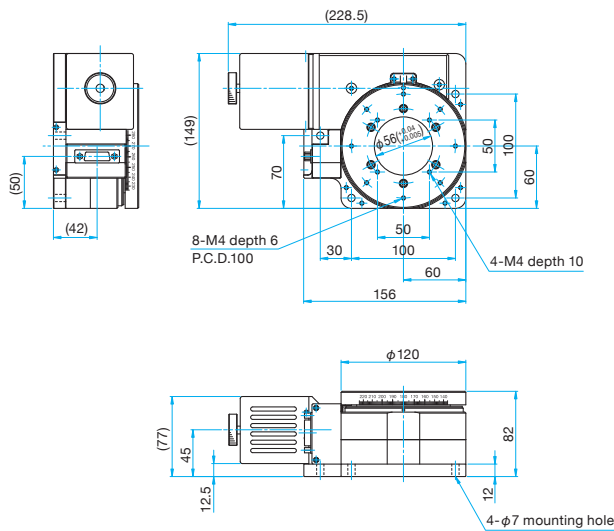
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## Outline Drawing

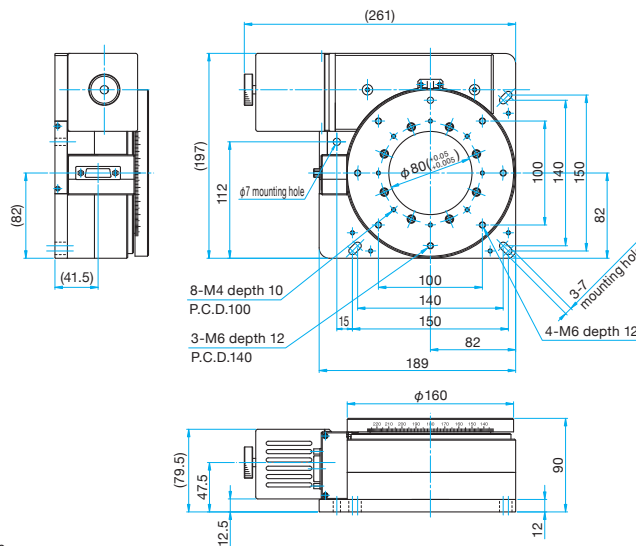
### PRMS-120

Hexagon socket head cap screw M6x20...4 screws

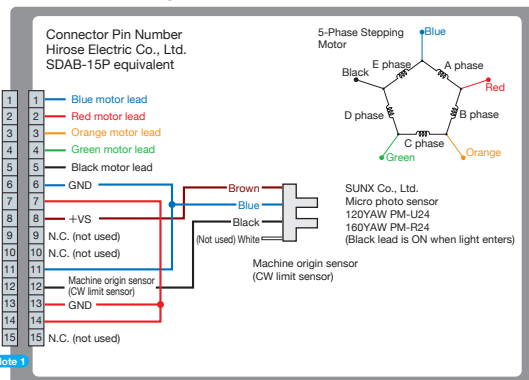


### PRMS-160

Hexagon socket head cap screw M6x20...4 screws



## Connection Diagram



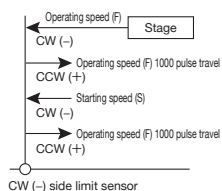
Note 1 Compatible cable connector: DDK Ltd. 17JE-13150

## Machine Origin Detection

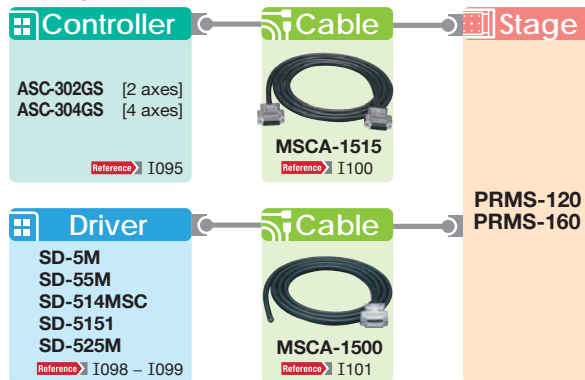
### MINI System

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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