

Application Systems

Machine Vision

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Piezo Stage

Precision Linear MS

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Motorized Goniometer

Motorized Rotation

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Industrial Robot

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Custom-Built MS

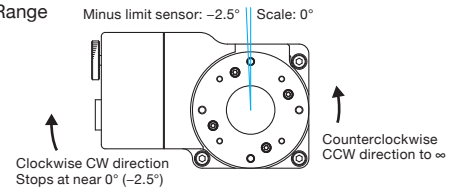
Stepping motor driven rotation stages fitted with bearing guide and worm gear feed mechanism.



- Motorized stages suitable for positioning for measuring, inspection and evaluation instruments.

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			ARMS-40	ARMS-60-0B	ARMS-60-W-0B
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]		$\phi 40$	$\phi 60$	$\phi 60$
	Travel Mechanism (reduction ratio)		Worm gear (1:144)	Worm gear (1:144)	Worm gear (1:144)
	Positioning Slide		Bearing method	Bearing method	Bearing method
	Stage Material		Aluminum / Aluminum bronze	Aluminum / Aluminum bronze	Aluminum / Aluminum bronze
	Weight [kg]		0.35	0.45	1.0
Accuracy Specifications	Resolution	(Full) [$^{\circ}$ /pulse]	0.005	0.005	0.005
		(Half) [$^{\circ}$ /pulse]	0.0025	0.0025	0.0025
	MAX Speed [$^{\circ}$ /sec]		30	30	30
	Positioning Accuracy [$^{\circ}$]		0.1	0.1	—
	Positional Repeatability [$^{\circ}$]		0.02	0.02	0.02
	Load Capacity [N]		19.6 (2.0kgf)	29.4 (3.0kgf)	29.4 (3.0kgf)
	Moment Stiffness [$^{\circ}$ /N·cm]		2	1	—
	Lost Motion [$^{\circ}$]		0.05	0.05	0.05
	Backlash [$^{\circ}$]		0.1	0.1	0.1
	Parallelism [μ m]		50	50	—
	Concentricity [μ m]		30	30	—
	Wobble [mm]		0.02	0.02	—
	Sensor	Sensor Part Number		Micro Photoelectric Sensor: PM-F24 (SUNX Co., Ltd.)	Micro Photoelectric Sensor: PM-R24 (SUNX Co., Ltd.)
Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
Origin Sensor		None	None	None	
Proximity Origin Sensor		None	None	None	

Motor / Sensor Specifications		
Motor	Type	5-phase stepping motor 0.66A/phase (Tamagawa Seiki Co., Ltd.)
	Motor Part Number	TS3664N4 (□24mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 - 24V $\pm 10\%$
	Current Consumption	15mA or lower
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction)

Compatible Driver / Controller		
Control System	Compatible Driver	SD-5M, SD-5MA, SD-55M, SD-55MA, SD-514MSC, SD-5151, SD-525M
	Compatible Controller	ASC-PS, ASC-01, ASC-102, ASC-02, ASC-702, ASCG-101, ASC-302GS, ASC-304GS, ESC-M/ESC-S

Rotation Motorized Stages

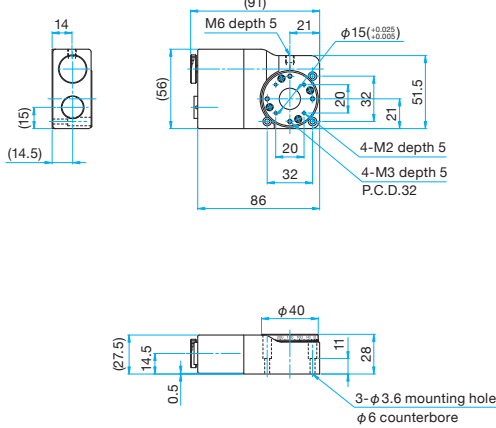
ARMS

RoHS CE

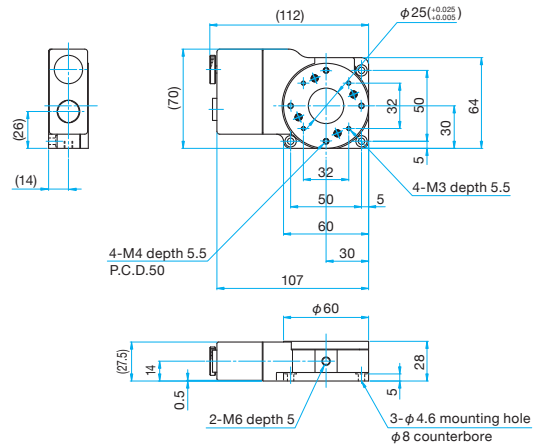


Outline Drawing

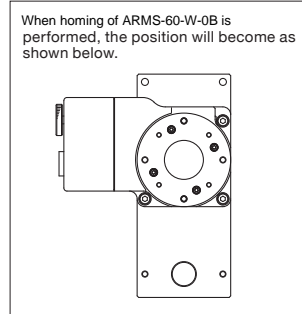
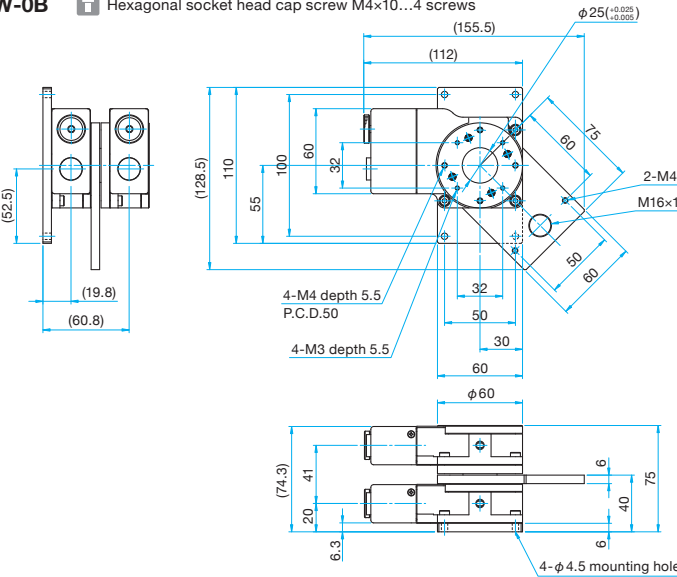
ARMS-40 Hexagonal socket head cap screw M3x15...3 screws



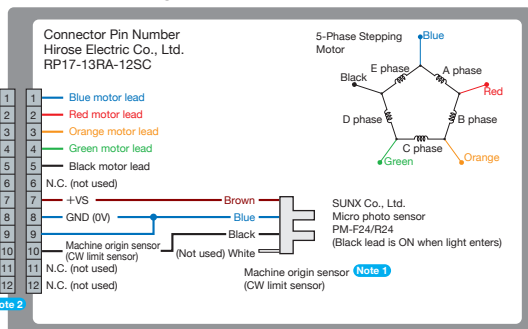
ARMS-60-0B Hexagonal socket head cap screw M4x10...3 screws



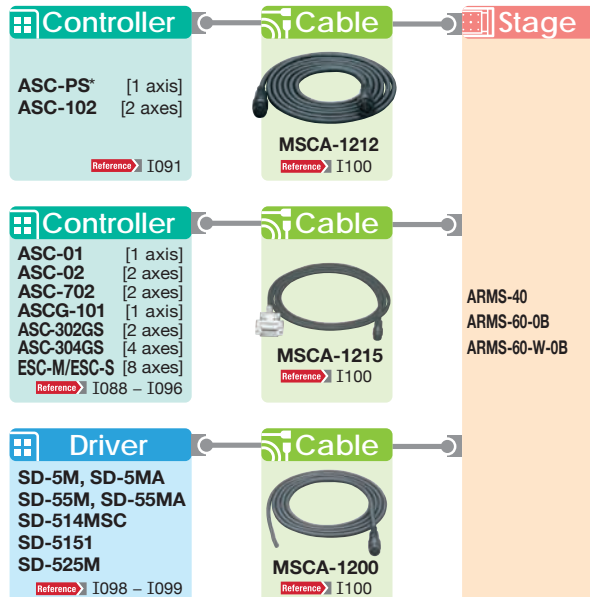
ARMS-60-W-0B Hexagonal socket head cap screw M4x10...4 screws



Connection Diagram



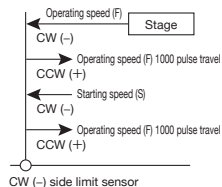
Compatible Controllers / Drivers and Cables



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.



* PASC-PS will be discontinued in September 2012, and will be replaced by ASC-01.

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