

## ATMS Series Translation Motorized Stages - 5 Phase Stepping Motor | **ATMS46-(X)** **RoHS** **CE**

- Application Systems
- Machine Vision
- Manual Positions
- Motion Control Products**
- Optical & Mirror Holder
- FA Parts
- Measurement & Control
- FA Electrical Parts
- Tool & Measure
- Cleanroom & AntiStatic
- Index
- Piezo Stage
- Precision Linear MS**
- High Speed MS
- Motorized Goniometer
- Motorized Rotation
- Multiaxis Motorized
- Industrial Robot
- Controller & Driver & Cable
- Custom-Built MS

**Stepping motor driven stages, ideal for positioning of measuring instruments or inspection tools from which high stiffness and high precision are required.**



- U-shaped rail offers light weight, and minimized deflection to achieve high stiffness.

### Guide

- ▶ Contact our International Sales Division if you desire to change motors, etc. **Reference** I019, I085 (Question Sheet)
- ▶ Dust-proof cover reel and grease change are optionally available. **Reference** I017, I018
- ▶ We will assemble your X axis stage with a newly purchased X axis stage at a separate cost.
- ▶ For the ATMS46-800(X), carry-in fees will be charged separately. (Refer to the table on the right)

### Attention

- ▶ Two X axis stages cannot be assembled into an XY axis stage. A special mounting plate is required. **Reference** I014

Specifications			ATMS46-300(X)	ATMS46-400(X)	ATMS46-500(X)	ATMS46-800(X)	
Part Number							
Mechanical Specifications	Travel [mm]		300	400	500	800	
	Table Size [mm]		120×124	120×124	120×124	120×124	
	Feed Screw [mm]		Ball screw diameter φ15mm, 10mm lead	Ball screw diameter φ15mm, 10mm lead	Ball screw diameter φ15mm, 10mm lead	Ball screw diameter φ15mm, 10mm lead	
	Positioning Slide		Outer rail structure	Outer rail structure	Outer rail structure	Outer rail structure	
	Stage Top Material		Aluminum	Aluminum	Aluminum	Aluminum	
	Finish		Black anodized	Black anodized	Black anodized	Black anodized	
	Weight [kg]		10.8	12.4	14	19	
Accuracy Specifications	Resolution	(Full) [μm/pulse]	20	20	20	20	
		(Half) [μm/pulse]	10	10	10	10	
	MAX Speed [mm/sec]		120	120	120	120	
	Positioning Accuracy [μm]		25	25	25	150	
	Positional Repeatability [μm]		6	6	6	10	
	Load Capacity [N]		294 (30.0kgf)	294 (30.0kgf)	294 (30.0kgf)	294 (30.0kgf)	
	Moment Stiffness	Pitch ["/N·cm]		0.05	0.05	0.05	0.05
		Yaw ["/N·cm]		0.04	0.04	0.04	0.04
		Roll ["/N·cm]		0.04	0.04	0.04	0.04
	Lost Motion [μm]		5	5	5	20	
	Backlash [μm]		3	3	3	3	
	Parallelism [μm]		50	50	50	50	
	Running Parallelism [μm]		15	15	15	20	
Pitch ["/] / Yaw ["/]		30/25	30/25	30/25	30/25		
Sensor	Sensor Part Number		Micro photo sensor: PM-L24 (SUNX Co., Ltd.)				
	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sensor		None	None	None	None	
	Proximity Origin Sensor		None	None	None	None	

Motor / Sensor Specifications		
Motor	Type	5-phase stepping motor 1.4A/phase (Tamagawa Seiki Co., Ltd.)
	Motor Part Number	TS3624N42E4 (□60mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 - 24V ±10%
	Current Consumption	30mA or lower (15mA or lower per sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction)

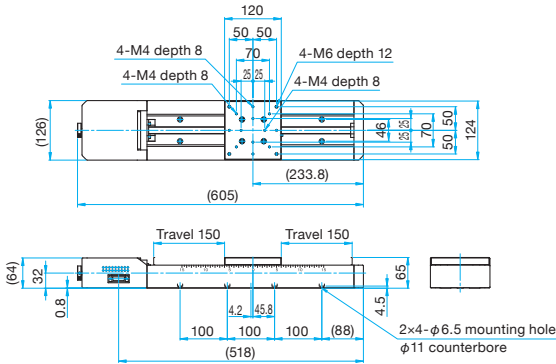
Compatible Driver / Controller		
Control System	Compatible Driver	SD-5M, SD-55M, SD-514MSC, SD-5151, SD-525M
	Compatible Controller	ASC-302GS, ASC-304GS

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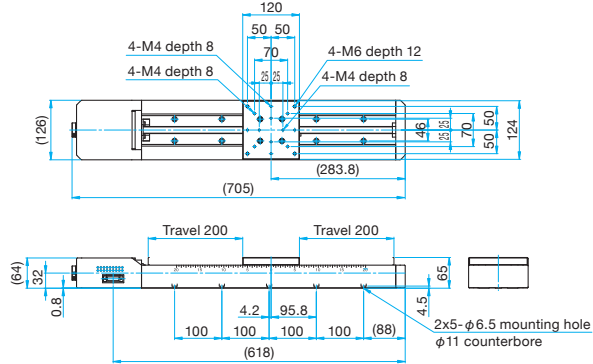


Outline Drawing

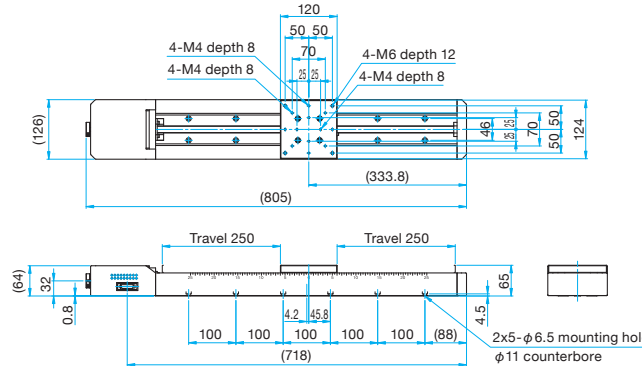
ATMS46-300(X) Hexagon socket head cap screw M6x12...8 screws



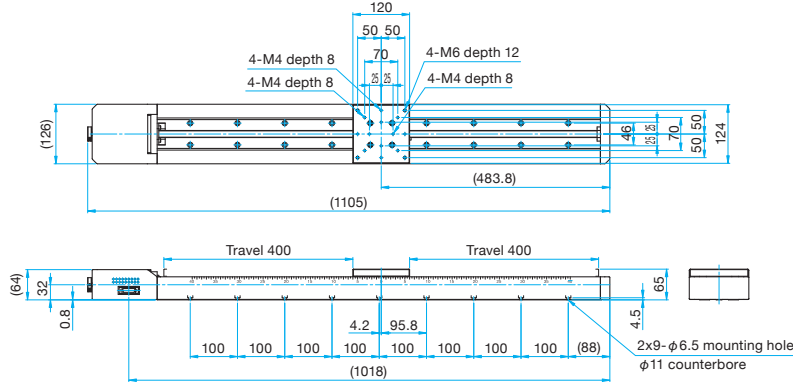
ATMS46-400(X) Hexagon socket head cap screw M6x12...8 screws



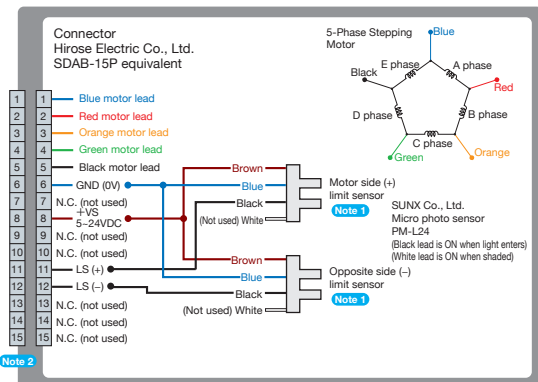
ATMS46-500(X) Hexagon socket head cap screw M6x12...10 screws



ATMS46-800(X) Hexagon socket head cap screw M6x12...10 screws



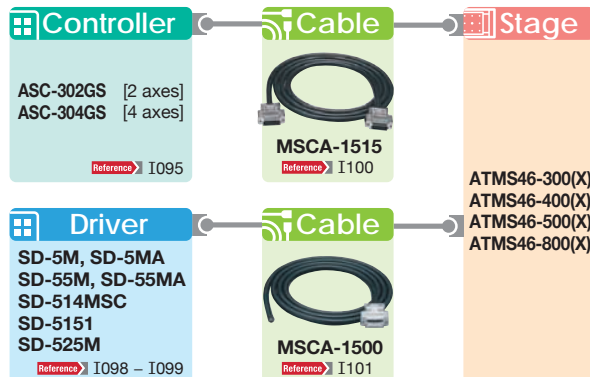
Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with origin and proximity origin sensors. Limit sensors are used as origin detection sensors.

Note 2 Compatible cable connector: DDK Ltd. 17JE-1350

Compatible Controllers / Drivers and Cables



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