

ATMS Series Translation Motorized Stages - 5 Phase Stepping Motor | ATMS20-(XY) Stage size □60mm



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. (except for ATMS20-20(XY)).
Reference I019, I085 (Question Sheet)
- ▶ Dust-proof cover reel (except for ATMS20-20(XY)), 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.

Attention

- ▶ There is no bearing on the opposite motor side of ATMS20-20(XY). If you desire to use this product exerting load in the shaft direction, contact out International Sales Division.

Specifications			ATMS20-20(XY)	ATMS20-35(XY)	ATMS20-85(XY)
Mechanical Specifications	Part Number				
	Travel [mm]		20	35	85
	Table Size [mm]		60×60	60×60	60×60
	Feed Screw [mm]		Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead
	Positioning Slide		Outer rail structure	Outer rail structure	Outer rail structure
	Stage Top Material		Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized
Weight [kg]		1.0	1.4	2.0	
Accuracy Specifications	Resolution	(Full) [μm/pulse]	2	2	2
		(Half) [μm/pulse]	1	1	1
	MAX Speed [mm/sec]		15	25	25
	Load Capacity [N]		39.2 (4.0kgf)	68.6 (7.0kgf)	68.6 (7.0kgf)
	Orthogonality of Motion [μm]		5	5	5
Sensor	Sensor Part Number		Micro photo sensor: PM-U24 (SUNX Co., Ltd.)	Micro photo sensor: PM-L24 (SUNX Co., Ltd.)	Micro photo sensor: PM-L24 (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 ±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)

(Reference) Precision Specifications of Single Axis Stage					
Part Number		ATMS20-20(X)	ATMS20-35(X)	ATMS20-85(X)	
Accuracy Specifications	Positioning Accuracy [μm]		10	5	7
	Positional Repeatability [μm]		5	3	3
	Moment Stiffness	Pitch [°/N·cm]	3	0.4	0.4
		Yaw [°/N·cm]	3	0.25	0.25
		Roll [°/N·cm]	3	0.35	0.35
	Lost Motion [μm]		5	3	3
	Parallelism [μm]		30	30	30
Running Parallelism [μm]		10	10	10	

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

ATMS Series Translation Motorized Stages - 5 Phase Stepping Motor | ATMS20-(XY) Stage size □60mm



Application Systems

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

F A 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

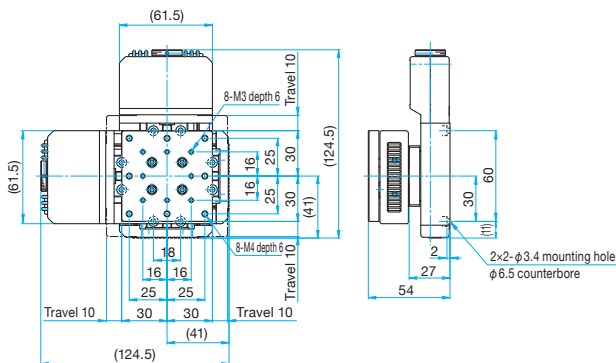
Industrial Robot

Controller & Driver & Cable

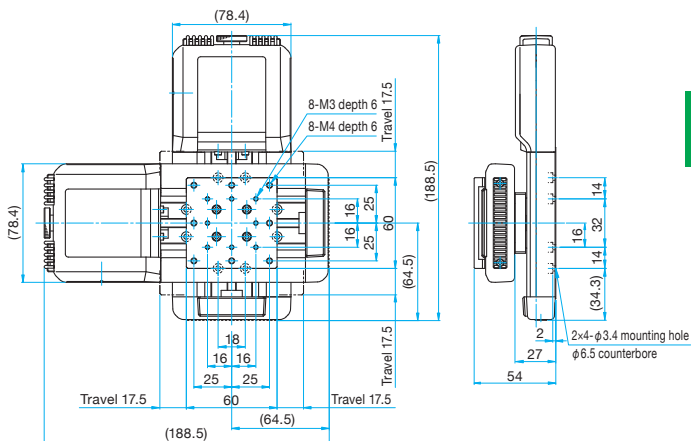
Custom-Built MS

Outline Drawing

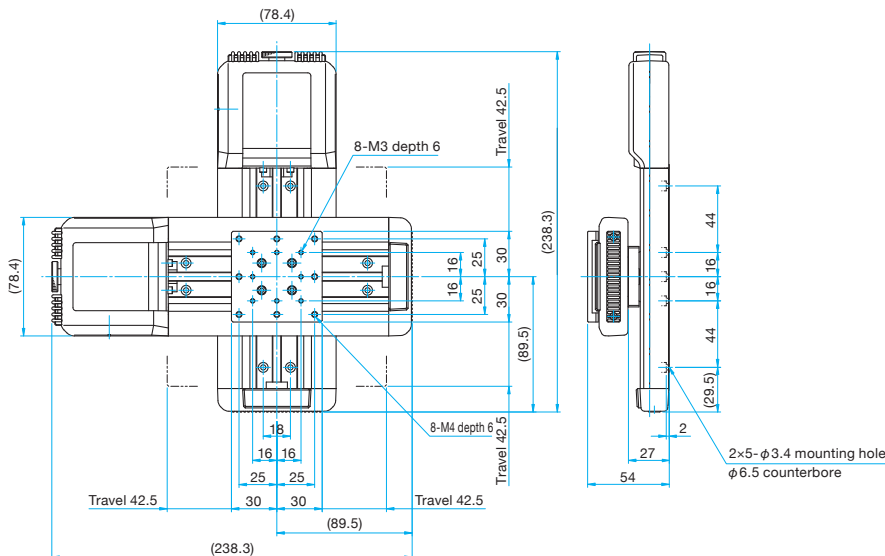
ATMS20-20(XY) Hexagon socket head cap screw M3x6...4 screws



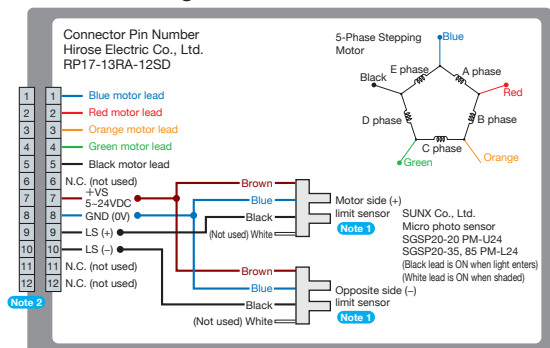
ATMS20-35(XY) Hexagon socket head cap screw M3x6...4 screws



ATMS20-85(XY) Hexagon socket head cap screw M3x6...6 screws



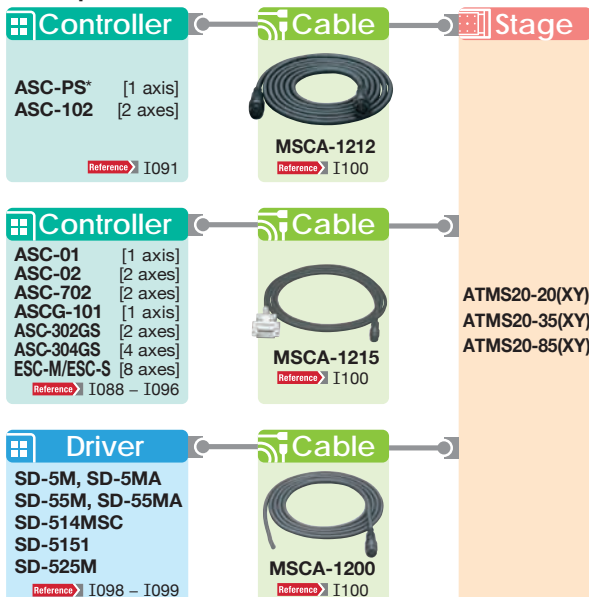
Connection Diagram



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: Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

Compatible Controllers / Drivers and Cables



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