

Translation Motorized Stages, Flat Z axis - 5 Phase Stepping Motor | ATMS-ZF Stage size □40/□60/□80mm



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Z axis stepping motor driven stages for measurement and inspection, offering high stiffness and high precision.
The table that travels up and down is horizontal and offers smooth travel.



- Originally designed horizontal plane Z axis stages in which a motor is incorporated in its main body for space-saving.
- Minimized protrusions make these stages ideal for system assembly.

Attention

► The SGSP40-5ZF is fixed at three points.

Specifications		ATMS40-5ZF	ATMS60-5ZF	ATMS60-10ZF	ATMS80-20ZF	
Part Number						
Mechanical Specifications	Travel [mm]	5	5	10	20	
	Table Size [mm]	40×40	60×60	60×60	80×80	
	Feed Screw [mm]	Ball screw diameter φ5mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ8mm, 2mm 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]	0.35	0.6	0.6	1.6	
Accuracy Specifications	Resolution	(Full) [μm/pulse]	1.0	2.0	2.0	0.2
		(Half) [μm/pulse]	0.5	1.0	1.0	0.1
	MAX Speed [mm/sec]	2	4	4	2	
	Positional Repeatability [μm]	10	10	10	10	
	Load Capacity [N]	19.6 (2.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)	147 (15.0kgf)*1	
	Moment Stiffness	Pitch [°/N·cm]	2.0	0.4	0.4	0.2
		Yaw [°/N·cm]	2.0	1.0	1.0	1.0
		Roll [°/N·cm]	1.0	1.0	1.0	1.0
	Lost Motion [μm]	5	5	5	5	
	Parallelism [μm]	50	50	50	50	
Running Parallelism [μm]	15	15	15	15		
Pitch [°]	25	20	20	25		
Sensor	Sensor Part Number	Micro photo sensor: EE-SX4134 (OMRON Corporation): Limit sensor, origin sensor Micro photo sensor: PM-U24 (SUNX Co., Ltd.): Slit origin sensor				
	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	

*1 If you use a controller or driver with a mark of ②.

Motor / Sensor Specifications					
Motor	Type	5-phase stepping motor 0.35A/phase (Oriental Motor Co., Ltd.)		5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)	
	Motor Part Number	PK513PB-C9 (□20mm)	C9863-90215P (□28mm)	C9863-90215P (□28mm)	PMM33BH-MG20 (□28mm)
	Step Angle	0.72°			
Sensor	Power Voltage	DC5 - 24V ±10% or lower			
	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)			

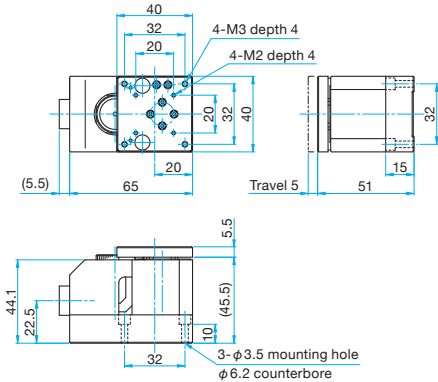
Compatible Driver / Controller					
Control System	Compatible Driver	SD-5MA, SD-55MA	①: SD-5M, SG-5MA ②: SD-55M, SD-55MA, SD-514MSC, SD-5151, SD-525M		
	Compatible Controller	①: ASC-01, ASC-102, ASC-02 ②: ASC-702, ASC-302GS, ASC-304GS, ESC-M/ESC-S			

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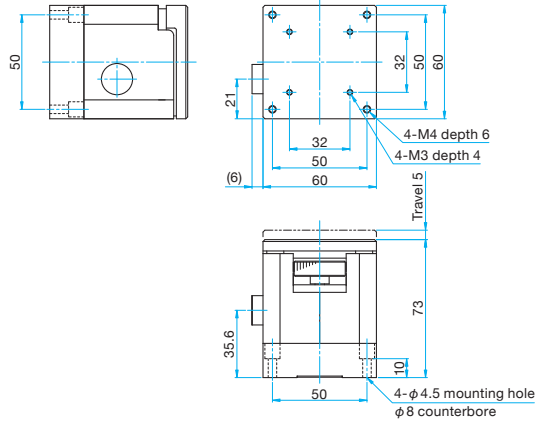


Outline Drawing

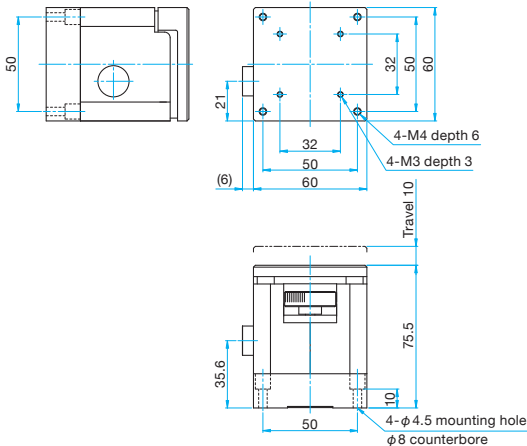
ATMS40-5ZF Hexagonal socket head cap screw M3x15...3 screws



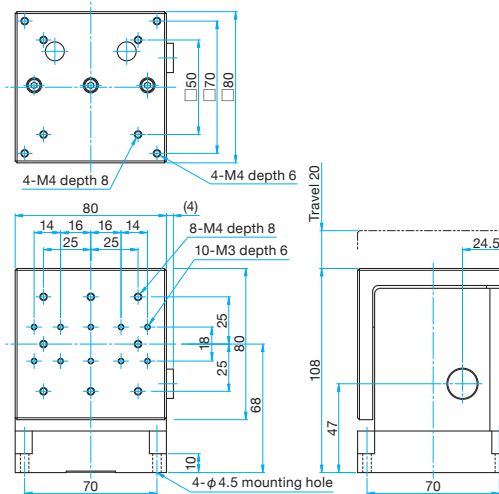
ATMS60-5ZF Hexagonal socket head cap screw M4x15...4 screws



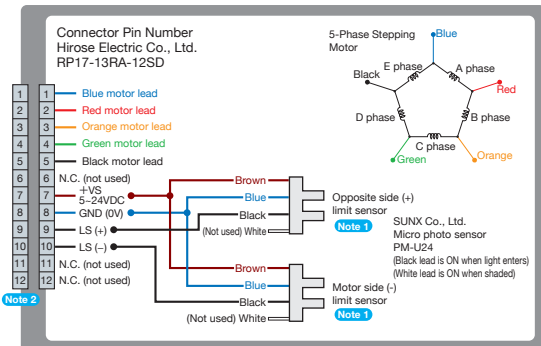
ATMS60-10ZF Hexagonal socket head cap screw M4x15...4 screws



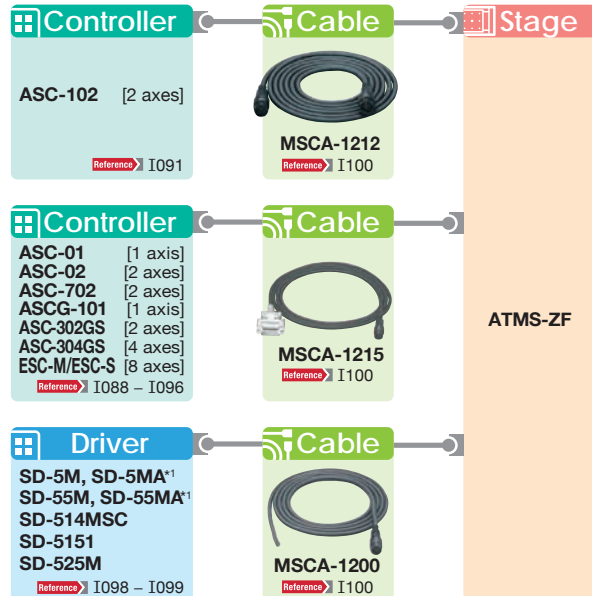
ATMS80-20ZF Hexagonal socket head cap screw M4x15...4 screws



Connection Diagram



Compatible Controllers / Drivers and Cables



*1 ATMS40-5ZF (0.35A/phase) is compatible only with SD-5MA and SD-55MA.

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