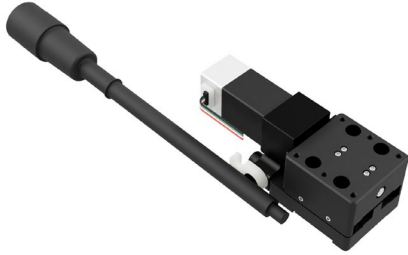


Ultracompact X axis motorized stage (2-phase motor) UCMS25-10X



A lineup of compact motorized stages driven by 2-phase motors is available. The compact overall length allows installation in space-saving locations. The ball screw drive provides excellent durability.

- High-precision stepping 2-phase motors are used to achieve high positioning accuracy.



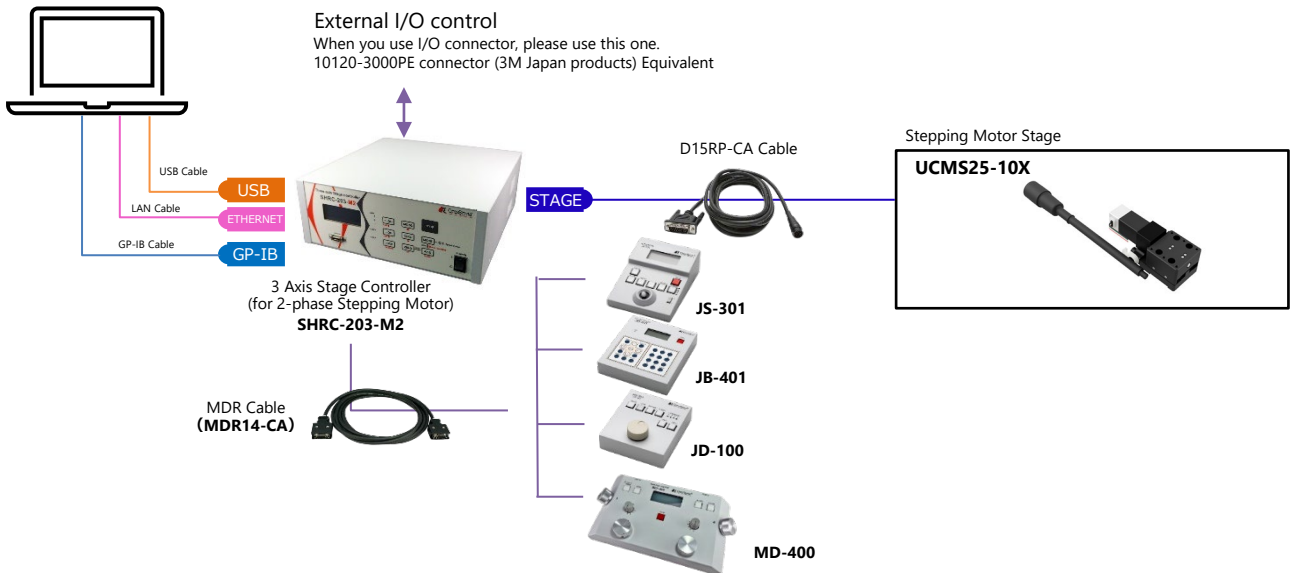
Guide

- When driving with a 3-axis stage controller (SHRC-203-M2) for 2-phase stepping motors, use the D15RP-CA cable (D15RP-CA-*).

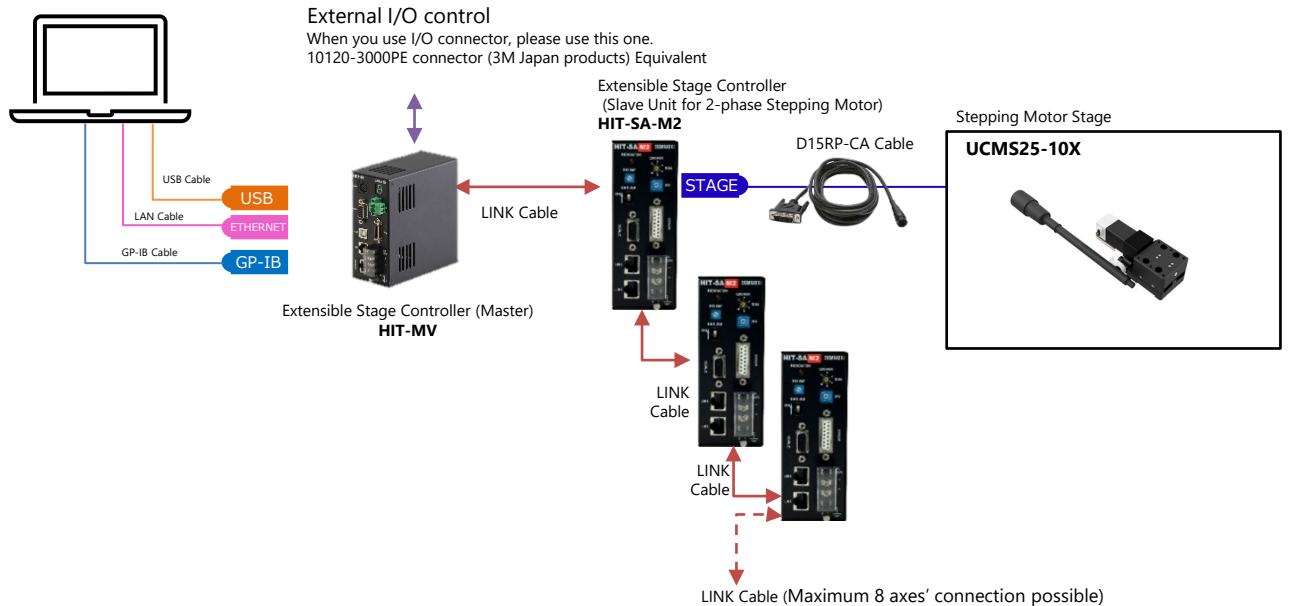
Attention

- Use a controller dedicated to 2-phase stepping motors. Other controllers will not work properly.
- Contact our sales department if you intend to use the motor in the Z-axis direction.

System diagram using SHRC-203-M2




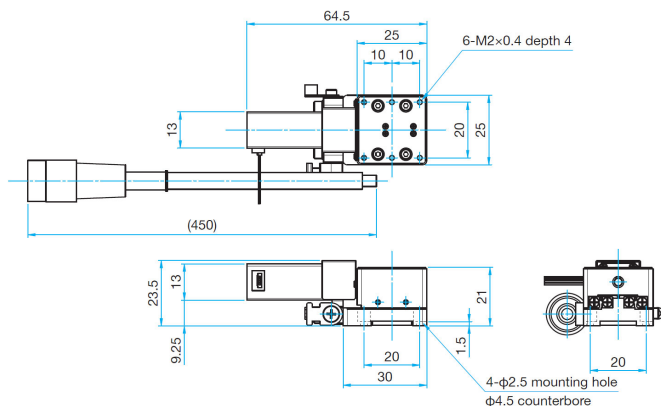
System diagram using HIT-MV/HT-SA-M2



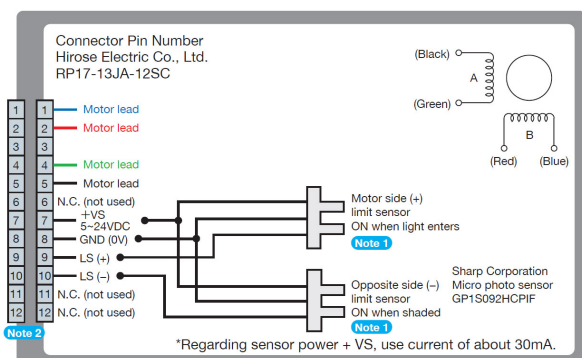
Outline Drawing

UCMS25-10X

 Hexagonal socket head cap screw M2x5...4 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

Specifications				
Part Number		UCMS25-10X-M2		
Mechanical Specifications	Travel [mm]	10		
	Stage Size[mm]	25×25		
	Feed Screw	Ball screw diameter φ3mm, 1mm lead		
	Positioning Slide	Crossed roller		
	Stage Material	Steel		
	Finish	Black chrome		
	Weight [kg]	0.14		
Accuracy Specifications	Resolution	Full [μm/pulse]	5	
		Half [μm/pulse]	2.5	
	MAX Speed [mm/sec]		10	
	Positioning Accuracy [μm]		15	
	Positional Repeatability [μm]		3	
	Load Capacity		19.6 (2.0kgf)	
	Moment Stiffness	Pitch ["/N · cm]		10
		Yaw ["/N · cm]		10
		Roll ["/N · cm]		5
	Lost Motion [μm]		5	
	Backlash [μm]		1	
	Parallelism [μm]		30	
	Running Parallelism [μm]		20	
Pitch ["/] / Yaw ["/]		100/60		
Sensor	Sensor Part Number	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
	Limit Sensor	Equipped (NORMAL CLOSE)		
	Origin Sensor	None		
Motor/Sensor Specifications				
Motor	Type	2-phase stepping motor 0.35A/phase (Oriental Motor Co., Ltd.)		
	Motor Part Number	PKP203D06A		
	Step Angle	1.8°		
Sensor	Power Voltage	DC5 - 24V±10%		
	Current Consumption	40mA or lower		
	Control Output	NPN open collector output DC30V or lower, 50mA or lower		
	Output Logic	When shaded: Output transistor OFF (no conduction)		
Compatible Cable/Driver/Controller				
Compatible Cable	Driver Cable	D15RP-CA/D15RPA-CA		
Control System	Compatible Driver	-		
	Compatible Controller	HIT-MV · HIT-SA-M2、SHRC-203-M2		

For 2-phase stepping motors

OSMS(RE)-M2

Motorized Stages with Rotary Encoder

The OSMS(RE)-M2 series motorized stage and the OSMS(RE)-YAW-M2 series motorized rotation stage with 2-phase stepping motors with rotary encoders are also available.

Linear stage OSMS(RE)-(X)-M2 Series Lineup List

Part Number		Stage Size	Width	Stage Height	Travel	Load Capacity	Weight
METRIC	INCH						
OSMS(RE)20-35(X)-M6-M2	OSMS(RE)20-35(X)-INCH-M2	85x85mm	85mm	35.7mm	35mm	78.4N (8.0kgf)	1.3kg
OSMS(RE)20-85(X)-M6-M2	OSMS(RE)20-85(X)-INCH-M2	85x85mm	85mm	35.7mm	85mm	78.4N (8.0kgf)	1.5kg
OSMS(RE)26-50(X)-M6-M2	OSMS(RE)26-50(X)-INCH-M2	120x120mm	120mm	43mm	50mm	117N (12.0kgf)	3.0kg
OSMS(RE)26-100(X)-M6-M2	OSMS(RE)26-100(X)-INCH-M2	120x120mm	120mm	43mm	100mm	117N (12.0kgf)	3.4kg
OSMS(RE)26-200(X)-M6-M2	OSMS(RE)26-200(X)-INCH-M2	120x120mm	120mm	43mm	200mm	117N (12.0kgf)	4.5kg
OSMS(RE)26-300(X)-M6-M2	OSMS(RE)26-300(X)-INCH-M2	120x120mm	120mm	43mm	300mm	117N (12.0kgf)	5.5kg
OSMS(RE)33-300(X)-M6-M2	OSMS(RE)33-300(X)-INCH-M2	120x120mm	120mm	56.7mm	300mm	196N (20.0kgf)	7.4kg
OSMS(RE)33-500(X)-M6-M2	OSMS(RE)33-500(X)-INCH-M2	120x120mm	120mm	56.7mm	500mm	196N (20.0kgf)	10.2kg

Lineup list of OSMS(RE)-YAW series rotating stages

Part Number		Stage Size	Rotation Range*	Load Capacity	Travel Mechanism (reduction ratio)	Positioning Slide	Stage Material	Weight
METRIC	INCH							
OSMS(RE)-40YAW-M2	OSMS(RE)-40YAW-INCH-M2	φ 40mm	360°	19.6N (2.0kgf)	Worm gear(1:144)	Bearing method	Aluminum / Aluminum bronze	0.4kg
OSMS(RE)-65YAW-M6-M2	OSMS(RE)-65YAW-INCH-M2	φ 65mm	360°	29.4N (3.0kgf)	Worm gear(1:144)	Bearing method	Aluminum / Aluminum bronze	0.6kg
OSMS(RE)-80YAW-M6-M2	OSMS(RE)-80YAW-INCH-M2	φ 80mm	360°	98.0N (10.0kgf)	Worm gear(1:144)	Bearing method	Aluminum / Aluminum bronze	1.2kg
OSMS(RE)-120YAW-M6-M2	OSMS(RE)-120YAW-INCH-M2	φ 120mm	360°	196.0N (20.0kgf)	Worm gear(1:144)	Crossed roller	Aluminum / Aluminum bronze	2.1kg
OSMS(RE)-160YAW-M6-M2	OSMS(RE)-160YAW-INCH-M2	φ 160mm	360°	196.0N (20.0kgf)	Worm gear(1:144)	Crossed roller	Aluminum / Aluminum bronze	2.6kg

* The table can rotate infinitely in both direction.

Dedicated controllers and other devices are also available. Please note that a connection cable is required.

3 Axis Stage Controller (for 2-phase Stepping Motor)
SHRC-203-M2



Various peripherals are also available.



Extensible Stage Controller (Master)
HIT-SA-M2



Extensible Stage Controller (Slave Unit for 2-phase Stepping Motor)
HIT-SA-M2