

[High Precision] Motorized X-Axis, Linear Ball Slide Stages

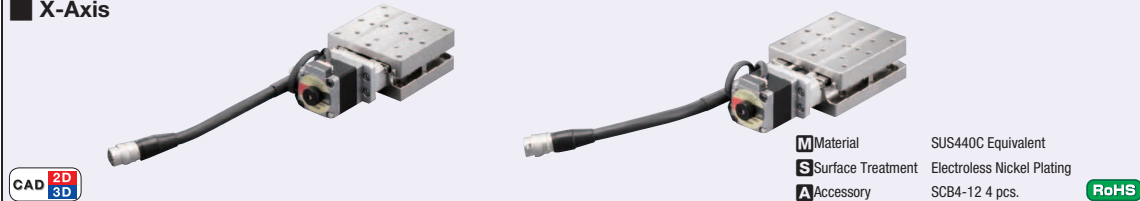
Similar Products Comparison Points | Travel Accuracy One Side Positioning Accuracy: 5µm

Features: Motor is selectable and can be easily upgraded. Clean grease is applied to the drive section.

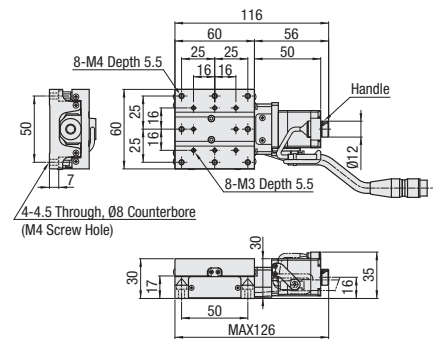
When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example: ① Part Number: XCV620 - ② Motor: C - ③ Cable: N

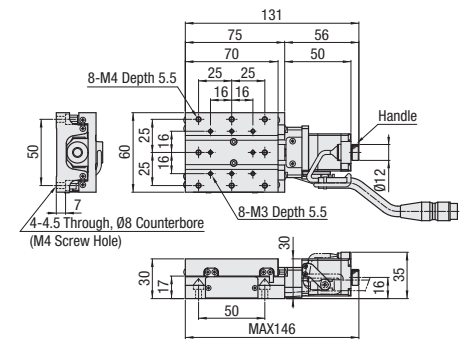
X-Axis



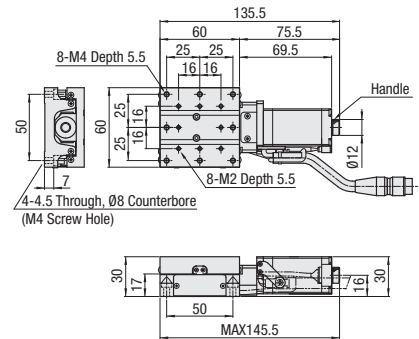
XCV620-C-N



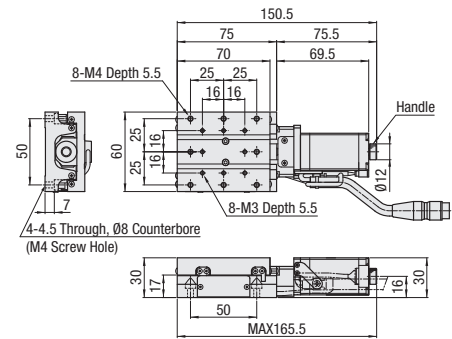
XCV630-C-N



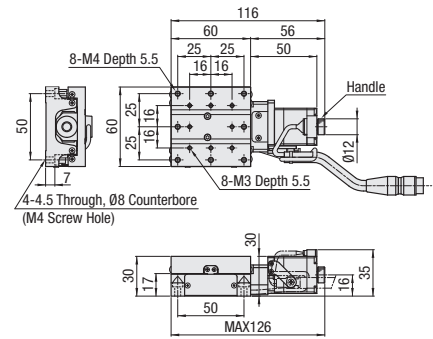
XCV620-F-N



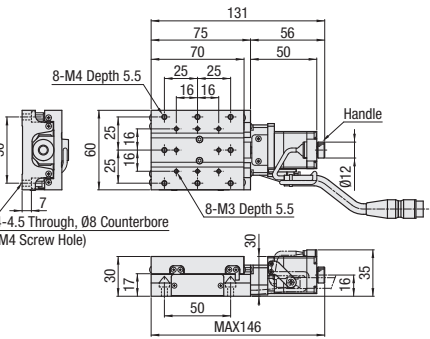
XCV630-F-N



XCV620-G-N



XCV630-G-N



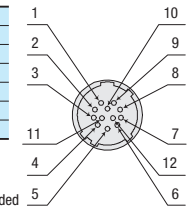
Part Number	Motor	Cable	Mechanical Specification			Accuracy Standards					
			Stage (mm)	Travel Distance (mm)	Weight (kg)	One-Way Positioning Accuracy	Moment Rigidity (1°/N-cm)			Pitching	Yawing
XCV620	C (Standard) F (High Torque) G (High Resolution)	N (None) Cable is sold separately. Please refer to P.1462 MSCB Selection.	60x60	20	0.78 (0.87*)	5µm	0.08	0.05	0.05	20"	15"
XCV630			60x70	30	0.9 (0.99*)	5µm	0.08	0.05	0.05	20"	15"

*1 When Motor F (High Torque) is selected
* A value varies depending on the motor.

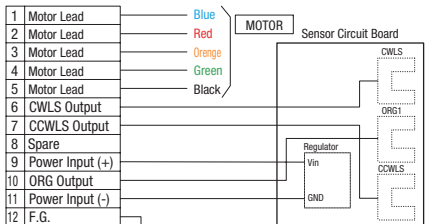
Common Specifications

Feed Screw	Ball Screw Ø8, Lead 1	Repeatability	±0.5µm
Guide	Linear Ball Guide	Load Capacity	49N
Resolution ²	Full	Lost Motion	1µm
	Half	Backlash	1µm
Motion Straightness	2µm/Pulse (1µm/Pulse) ^{*3}	Motion Straightness	3µm
	1µm/Pulse (0.5µm/Pulse) ^{*3}	Parallelism	15µm
Max. Speed ^{*4}	0.1µm(0.05µm)	Motion Parallelism	10µm
	20mm/sec (30mm/sec) ^{*5}		

Connector Pin Configuration



Wiring Diagram

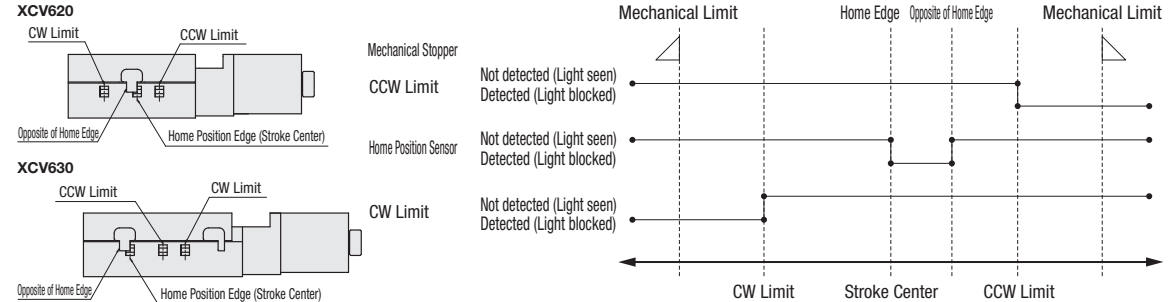


*2 Stage travel distance per one pulse.
*3 Values in () are for values when Motor Option G (High Resolution) is selected.
*4 Max. speed capable with recommended controller driving in Full Step mode, when stage loaded at a max load capacity.
*5 Value in () is when Motor Option F (High Resolution) is selected.
* A value varies depending on motors.

Electrical Specifications

Motor	C	F	G
Motor	Type: 5-Phase Stepping Motor 0.75A/Phase (Oriental Motor Co., Ltd.)		
	Step Angle: 0.72°		
Connector	HR10A-10P-12S (73) (Hirose Electric Co., Ltd.)		
Sensor	Limit Sensor: Provided		
	Home Sensor: Photomicro Sensors EE-SX4134 (OMRON Corp.)		
	Near Home Sensor: -		
	Power Supply Voltage: DC5~24V ±10%		
	Current Consumption: Total 60mA or less		
Control Output	NPN Open Collector Output DC5 ~ 24V, 8mA or less Residual Voltage 0.3V or less (when load current is 2mA)		
Output Logic	When Detecting (Dark), Output Transistor is OFF. (Non-Conducting)		

Timing Chart



Recommended Homing Method

Type	Method
Type3	Inspection in CCW direction is conducted, and inspection process of CCW side of ORG Signal is performed.
Type4	Inspection in CW direction is conducted, and inspection process of CW side of ORG Signal is performed.
Type9	After completion of inspection of Type 3, inspection process of CCW side of TIMING Signal is performed.
Type10	After completion of inspection of Type 4, inspection process of CW side of TIMING Signal is conducted.

Homing is: When MSCTL102 controller is used, and Homing of Type 4 is executed.
* The coordinates shown are design values. There may be approx. ±0.5mm on the physical dimensions.