

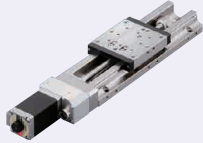
[Motorized] X-Axis - Linear Ball, CAVE-X POSITIONER

Stroke 100~300



■Features: Have high rigidity and are compact in width. Support 100~300mm of travel distance.

■XCVL (w/o Cover)

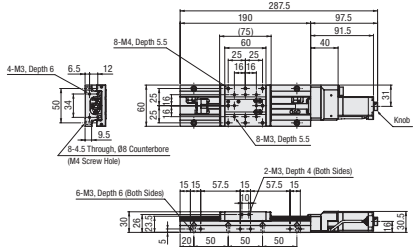


■XC VLC (with Cover)

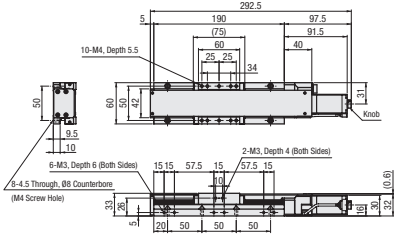


- M Material: SUS440C Equivalent
S Surface Treatment: Electroless Nickel Plating
A Accessory: SUS Hex Socket Screw M4-14 (in pcs.)
- XCVL6100/XC VLC6100: 8 pcs.
 - XCVL6150/XC VLC6150: 14 pcs.
 - XCVL6200/XC VLC6200: 12 pcs.
 - XCVL6300/XC VLC6300: 16 pcs.

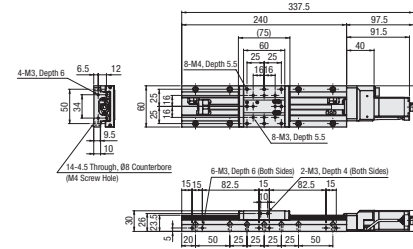
XCVL6100



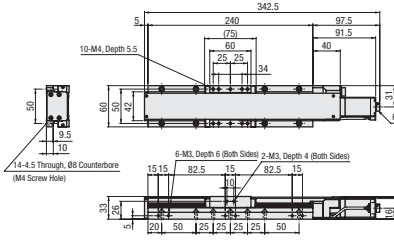
XC VLC6100



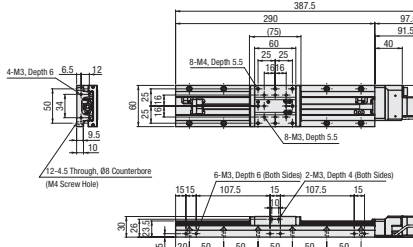
XCVL6150



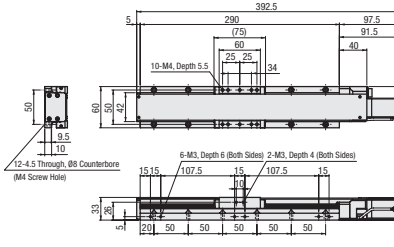
XC VLC6150



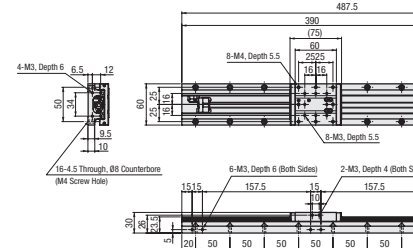
XCVL6200



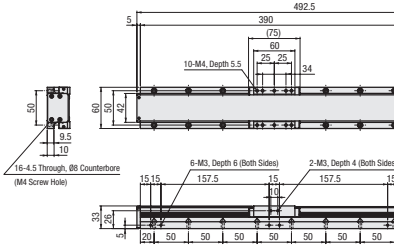
XC VLC6200



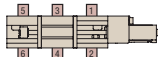
XCVL6300



XC VLC6300



■Origin Sensor Mounting Position



⚠The above diagrams are for stages incorporating Motor F. For detailed dimensions about stages incorporating Motor G, MA, PA, UA, see the relevant CAD data.

⚙ For CAD data, see the MISUMI website.

Part Number	Lead	Sensor	Motor	Cable	Mechanical Standards			Accuracy Standards					
					Stage Surface (mm)	Travel Distance (mm)	Weight (kg)	Unidirectional Positioning Accuracy	Motion Straightness	Motion Parallelism	Pitching	Yawing	
XCVL6100 (w/o Cover)	2 (Lead 2mm)	N (W/o Sensor)	F (High Torque)	N (Cable not included (separately sold))	60×60	100	1.8(1.86 ¹⁾)	10μm or less	5μm	10μm	25" or less	20" or less	
XCVLC6100 (with Cover)		1 (CCW Right)	G (High Resolution)	M (For Motor with Electromagnetic Brake)		150	2.1(2.16 ¹⁾)	15μm or less	5μm	15μm	25" or less	20" or less	
XCVL6150 (w/o Cover)		2 (CCW Left)	MA (With Electromagnetic Brake)	P (For α-Step)		200	2.42(2.48 ¹⁾)	15μm or less	7μm	20μm	30" or less	20" or less	
XCVL6200 (w/o Cover)		3 (Right-center)	4 (Left-center)	PA (α-Step)		U (For combination of motors and cables, see the table below.)	300	3.02(3.12 ¹⁾)	25μm or less	7μm	25μm	35" or less	20" or less
XCVL6300 (w/o Cover)		5 (CW Right)	6 (CW Left)	UA (Servo Motor, Amplifier)									
XCVLC6200 (with Cover)													
XCVLC6300 (with Cover)													

*1. When the "With Cover" option is selected ⚠ When the Motor Option MA or PA is selected, the driver is included with as the Set. When the Option UA is selected, the Amplifier is included with. The cable is available for Option M, P, U and is unavailable for Option N.
⚠ The value differs depending on the type of motor. The above values are for stages incorporating Motor F (High Torque).



Ordering Example

Part Number - Lead - Sensor - Motor - Cable
XCVL6100 - 2 - N - F - N



Days to Ship

Configure Online

■Motor/Cable Application Table

The available cable differs depending on the type of motor.

Motor/Cable Application Table	Motor	Cable
	F, G	N (Not Provided)
	MA	M
	PA	P
	UA	U

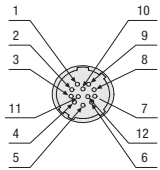
⚠ For the cable for F or G, see P 2014-3

■Max. Speed

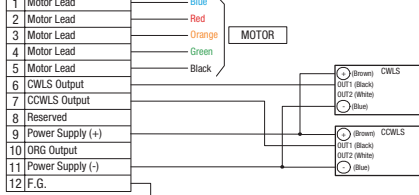
Motor	(mm/sec)
F	35
G	25
MA	25
PA	40
UA	50

⚠ Note that the speed and positioning time will vary depending on the usage conditions. The values shown here are MISUMI's reference values. Operation at these values is not guaranteed.

■Connector Pin Configuration



■Wiring Diagram



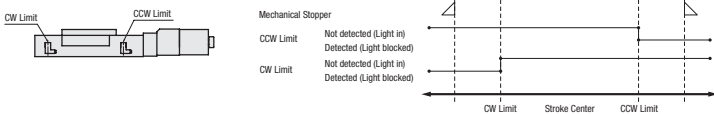
⚠ The above is the connector pin configuration / wiring diagram for F, G.

■Electrical Specifications

Motor Option		F High Torque	G High Resolution	MA With brake	PA Tuningless	UA High Speed
Motor	Type	5-Phase Stepping Motor 0.75A/Phase (Oriental Motor Co., Ltd.)			α-Step Motor	AC Servo Motor
	Step Angle	0.72°	0.36°	0.72°	0.36° (When set to 1000 P/R)	22-bit Encoder (4194304P/R)
Connector	Applicable Receptacle Connector	HR10A-10P-12S (73) (Hirose Electric Co., LTD.)			43020-1000 (MOLEX)	Motor Cable JN4FT04SJ1-R (Japan Aviation Electronics Industry, Ltd.) Encoder 1674320-1 (Tyco Electronics Japan G.K.)
	Limit Sensor	Provided				
Sensor	Home Sensor	Not Provided by standard (Photomicrosensor PM-L25 (Panasonic Industrial Devices SUNX Co., Ltd.) is available as the option.)				
	Near Home Sensor	-				
	Power Supply Voltage	DC5~24V ±10%				
	Current Consumption	45mA or less (15mA or less per sensor)				
	Control Output	NPN Open Collector Output DC30V or less, 50mA or less Residual Voltage 2V or less (when load current is 50mA) Residual Voltage 1V or less (when load current is 16mA)				
Output Logic		Detecting (Dark): Output Transistor OFF (Non-Conducting)				

⚠ Sensors with Part Number PM-□24 are to be discontinued and replaced by next-generation products with Part Number PM-□25 from April 2017.

■Timing Chart



(Unit: mm) CW Direction ← → CCW Direction

	Reference Position	Mechanical Limit	CW Limit	CCW Limit	Mechanical Limit
XCVL 6100	Stroke Center	52.5	50.5	50.5	52.5
XCVL 6150	Stroke Center	77.5	75.5	75.5	77.5
XCVL 6200	Stroke Center	102.5	100.5	100.5	102.5
XCVL 6300	Stroke Center	152.5	150.5	150.5	152.5

• The coordinates shown are design values. There may be approx. ±0.5mm misalignment on the physical dimensions.

■Recommended Homing Method

Type5	After detection is executed in the CCW direction, the process of detecting in the CW direction is begun based on the CWLS signal.
Type6	After detection is executed in the CW direction, the process of detecting in the CCW direction is begun based on the CCWLS signal.
Type11	After Type 5 is executed, the process of detecting in the CCW direction is begun based on the TIMING signal.
Type12	After Type 6 is executed, the process of detecting in the CW direction is begun based on the TIMING signal.