

GM124

- ✔ High Stability, High Precision, And High Productivity
- ✔ Advanced Multi-joint Robotic Arm Design
- ✔ High-speed Synthesis Function
- ✔ No Travel Axis Required, Supports 4 Load Ports Per Row



Robot Specifications

PROJECT		SPECIFICATION	
Robotic Arm	Applicable Wafer Size	300mm (200mm) ⁽¹⁾	
	Wafer Handling Methods	Vacuum Adsorption Or Edge Clamping	
	Standard End Effector Length ⁽²⁾	345mm	
	Number Of Drive Shafts	5 Axis	
	Arm Type	One Arm	
	Range Of Motion	R Axis (extension) ⁽³⁾	1215mm
		θ Axis (rotation)	330°
		Z Axis (lift/relief)	480mm
		B Axis (rotation)	440°
	Minimum Turning Radius	510mm	
	Maximum Speed	Extension	260°/s
		Rotation	330°/s
		Lift/Relief	550mm/s
		B Axis rotation	350°/s
Linearity	2000mm/s		
Repeat Positioning Accuracy	0.1mm (P-P)		
Quality	76kg		

PROJECT		SPECIFICATION	
Pre-calibration Machine	Applicable Wafer Size	300mm	
	Wafer Handling Methods	Vacuum Adsorption	
	Detection Object	Gap	
	Wafer Material	Silicon ⁽⁴⁾	
	Wafer Edge Detection Sensor	LED+CCD Linear Sensor	
	Range Of Motion	Rotation	Unrestricted
		Maximum Speed (Acceleration/Deceleration Time)	1000°/s (0.1s/0.1s)
	Calibration Accuracy	±0.03°	
	Calibration Time	Less Than 1.7 Seconds	
	Quality	5.8kg	
Set up The Environment	Cleanliness Level ⁽⁵⁾	ISO Class 1	
	Operating Temperature · Humidity	20~30 C, 35~55%RH (No Condensation)	
	Storage Temperature · Humidity	0~40 C, 20~80%RH (No Condensation)	
	Altitude	Below 1000m	
	Environment	No Explosive, Corrosive, Or Flammable Gases	
	MCBF	More Than 15 Million Cycles	

Controller Specifications

PROJECT	SPECIFICATION
Structure	Self-installation and placement methods (corresponding to vertical/horizontal placement); Forced air cooling (air intake from the front, sides, top, and bottom; air exhaust from the rear)
External Dimensions (W×D×H)	425×430×160mm (Capacity Below 29.3 Liters)
Quality	19.5kg
Installation Direction	Vertical Or Horizontal
Connectors, Switch Accessories	Only The Front
Shell	Spraying
Operating Temperature	0~+40°C, Below 90%RH (No Condensation)
Storage Temperature - Humidity	-10°C to +60°C, Below 90%RH (No Condensation)
Altitude	Below 1000m
Environment	No Explosive, Corrosive, Or Flammable Gases
Vibration resistant, Impact Resistant	9.8m/sec ² , 49m/sec ²
Power Supply Voltage	Three-phase AC 200~230V, +10%/-15%, 50/60Hz Single-phase AC 200~230V, +10%/-15%, 50/60Hz
Grounding	Type D Grounding (below 100Ω)
Communication (host connection)	Ethernet 10BASE-T/100BASE-TX, 2-port HUB

PROJECT	SPECIFICATION
Optional Substrate	Optional Board Options: 2-slot · RS232C Communication Board (1-slot Size) · Digital I/O Board (32 Inputs / 32 Outputs), (1-slot Size)
AC Servo Driver	6 Axis
Position Control	Serial Communication (absolute encoder)
Acceleration And Deceleration Control	Software Servo Control
Applicable Motors	Yaskawa Σ -V Series AC Servo Motors
Battery	CPU Memory Data Backup
Stop Function When Power Is Off	Stop Via Terminal Brake
Instantaneous Stop Delay	20ms
SEMI F47 Correspond To	Software Compatibility (limited)
Security Features	ISO13849-1, Category 3 (PL=d) Benchmark
Position Adjuster Correspond To	Corresponding To A 1-axis Position Adjuster (position adjuster base plate is standard)
Teach Pendant Programmer	Select Matching (controller comes with terminal connector)
MTBF	More Than 100,000 Hours (calculated value)

Supporting Components



Pre-calibration Machine

(PVR1130)



Controller

(SR100)

Product Layout

