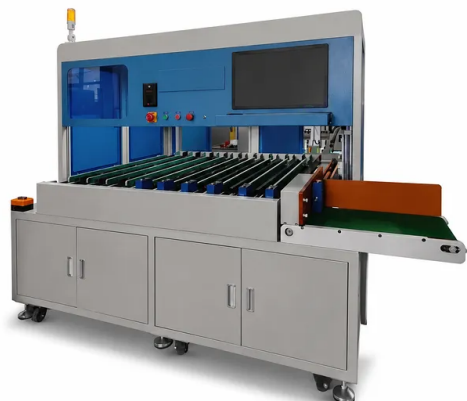


Prismatic Aluminum Shell Cell Automatic Sorting Machine

Item Number: FX11



Introduction

Automated prismatic aluminum shell cell sorting machine combines barcode traceability, precision voltage and internal resistance testing, and ten-grade classification to raise throughput, pairing consistency, and data control for battery manufacturing operations with reliable PLC handling, alarming, and local production records.

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Application	Description	Key Benefit
Prismatic lithium-ion cell grading	Sort aluminum-shell cells by programmed voltage and internal-resistance windows before cell grouping or downstream assembly.	Improves electrical consistency within selected cell groups.
Battery module preparation	Screen and classify cells before they are issued to module-production workstations.	Supports more controlled cell allocation for module build processes.
Cell manufacturing end-of-line inspection	Apply automated barcode scanning and electrical testing after cell production to separate qualified grades from nonconforming output.	Combines identification, testing, and routing in a single workflow.
Incoming cell inspection	Evaluate purchased or transferred prismatic cells before they enter controlled inventory or production.	Provides recorded voltage and resistance results for each scanned cell.
Battery R&D pilot lines	Classify development cells produced in small or medium batches where repeatable electrical grouping is required.	Reduces manual test-and-sort work while retaining parameter control.
Cell matching for pack preparation	Create multiple electrical bands for cells that will be manually collected into turnover boxes for subsequent handling.	Enables practical grouping across up to nine OK categories.
Manufacturing data collection	Capture barcode, voltage, internal resistance, time, and operating status during each sorting cycle.	Establishes a local production record and offers optional MES upload customization.

Parameter	Specification
Site-facing identifier	FX11
Equipment type	Automatic prismatic aluminum-shell cell barcode scanning, voltage testing, internal-resistance testing, and sorting equipment
Process flow	Manual cell loading into hopper -> belt transport -> automatic barcode scanning -> automatic voltage and internal-resistance testing -> routing to the corresponding grade slot according to set parameters -> industrial PC data recording and saving -> manual collection into corresponding turnover box
Control architecture	PC industrial computer plus PLC control
PLC responsibilities	Battery feeding and transport
Industrial PC responsibilities	Barcode scanner data collection, battery tester data collection, voltage and internal-resistance grade sorting
Input power, standard	3.6KW, 220V AC input, 50Hz/60Hz
Input power, export customized version	3.6KW, 110V AC input, 50Hz/60Hz (export only, customization required)
Operating air pressure	0.4-0.8Mpa
Compatible cell length	60-260MM

Parameter	Specification
Compatible cell thickness	20-80MM
Compatible cell height	100-220MM
Scanning device	Hikvision
Barcode compatibility	QR code and barcode compatible
Scan pass rate	99.5%
Standard tester configuration	FX11 standard high-speed tester
Standard tester voltage accuracy	plus or minus 0.00001V
Standard tester internal-resistance accuracy	plus or minus 0.01 milliohm
Optional tester configuration	FX11 optional Japanese tester configuration, additional cost required
Optional tester variants	FX11 optional tester configuration A or FX11 optional tester configuration B
Sorting module drive	400W servo motor
Sorting module characteristics	Accurate positioning and fast speed
Sorting channels	9 OK grade positions, 1 NG grade position
Maximum sorting grades	10 grades
Voltage setting range	0.00000V-6.00000V
Voltage test reading accuracy	plus or minus 0.00001V
Internal-resistance setting range	000.00 milliohm-999.99 milliohm
Internal-resistance test reading accuracy	plus or minus 0.01 milliohm
Production efficiency	no less than 550 cells/hour
Test effect	Repeated testing, excellent effect
Industrial PC processor	Intel N100 chip
Industrial PC operating system	Windows 10 system
Motion controller	Xinje PLC
Real-time production data display	Barcode / voltage / internal resistance / time / operating status
Data storage	Test data saved to industrial PC local disk
MES capability	MES data upload can be customized
Setup and operation	Simple commissioning; easy to learn and understand; built-in fault alarm
Power interruption protection	UPS power supply for unexpected power outages
Alarm and handling functions	Audible and visual alarm, automatic stop after sorting, clearing function, full-material alarm, fault alarm
Operating parameter configuration	Parameters can be set according to actual customer requirements
Structural materials	Quality thick cold-rolled sheet metal and aluminum-profile frame
Mobility	Universal movable casters
Machine dimensions	L1840W1810H1900MM
Dimensions with feeding conveyor removed	L1840W1420H1900MM

Parameter	Specification
Packing dimensions	L2000W1550H2050MM
Equipment weight	Approximately 680KG
Indoor temperature	-30°C~70°C
Indoor humidity	Below 75%
Factory-site requirement	No pollution and no strong electromagnetic interference