Test Report

EVOLUTION SERIES | SWITCH UP SWING HANDLES - POLYAMIDE

Including: Evolution Series Integrated and Evolution Series Switch Up Modular Swing Handle

Sample Name:	Swing Handle Lock
P/N Range:	**1107S-EV2-SPBB0, 1107S-EV1-SPBB-0# - Polyamide**
Report No#:	EN1025A0306R
Report Date:	2025/01/07
Test Item:	Loading Test, Operating Life Test (Lock), Torsional Stress Test (Screw/Nut),
Audited By:	
Approved By:	黃志鑫 黃志鑫

TEST REPORT

Report No#: EN1025A0306R
Report Date: 2025/01/07

1. Test Information

Sample Name	Swing Handle Lock	**Part Number**	1107S-EV2-SPBB0 1107S-EV2-ZB-IN01 1107S-EV2-SS-INPAD
Material	**PA6**/Zinc Alloy/SUS304	**Finish**	Powder Coated (Zinc Alloy Only)
Sample Status	Finished product (in good condition)	**Quantity**	5
Entrusting Department	Process Department	**Production Date/ Batch Number**	2025/01/03
Commission Number	EN1025A0306	**Sample Reception Date**	2025/01/03
Test Date	2025/01/07		
Test Item	Loading Test, Operating Life Test (Lock), Torsional Stress Test (Screw/Nut)		

2. Test Conclusion

Test Item	Test Standard/ Judgment Basis	Test Requirement	Conclusion
1. Loading Test	GB/T 25293-2010 GB/T 228.1-2021	Handle opening (tripping) tension meets 23±5N; handle breaking tension: >170N	OK
2. Loading Test	GB/T 25293-2010 GB/T 228.1-2021	Test the minimum tensile force required to damage the padlock seat, which should be ≥1000N	OK

3. Operating Life Test (Lock)	GB/T 25293-2010	The lock is required to undergo 5,000 locking and unlocking operations, means key insertion and extraction and key rotation life tests. After the test, the key and door lock are required to have no obvious damage and not affect the normal use of the product.	OK
4. Operating Life Test (Lock)	GB/T 25293-2010	The lock handle is required to rotate at least 5,000 times, and one rotation of the handle after 90 degrees and then returning to its original position is counted as one rotation. After the test, the door lock is required to have no obvious damage and does not affect the normal use of the product.	OK
5. Torsional Stress Test (Screw/Nut)	GB/T 3098.1-2010 GB/T 16823.3-2010	Test the minimum torque required to damage the M22 thread of the housing, which should be ≥ 3N.m	OK

3. See the following page for Test Results

3.1. Loading Test

Test Equipment Information：

Device Name	Part Number	Serial Number	Calibration Date	Next Calibration Date
Push Pull Force Gauge Dynamometer	SN-500	YK-LAB-27-001	2024.8.8	2025.8.7
Servo Computer Universal Material Testing Machine	TH-82001S	YK-LAB-21-001	2024.8.8	2025.8.7

Sample Quantity：1Pc

Test Method/Standard：

GB/T 25293-2010 Mechanical door lock for cabinets of electrotechnical and electronic equipment

GB/T 228.1-2021 Metallic materials—Tensile testing— Part 1 ： Method of test at room temperature

Test Requirement：

Handle opening (tripping) tension meets 23±5N; handle breaking tension: > 170N

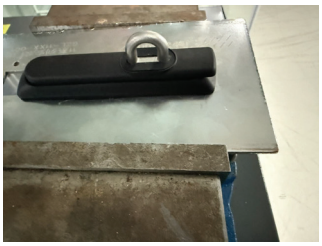
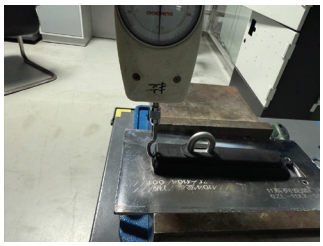
Experimental Environment：

Temperature: 22℃, Humidity: 51%RH, Atmospheric Pressure: /

Test Results：

Sample No.	Test Result	Conclusion
EN1025A0306-01	The handle is opened (tripped) with a pulling force of 27N; The handle broke after being subjected to a tensile force of 178N.	OK

Test Record Pictures：

Installation Status	Test Status	Tension Value	Status After Test
			

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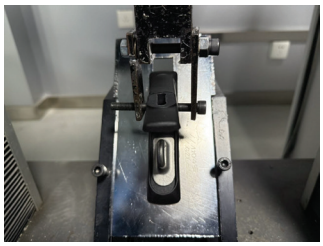
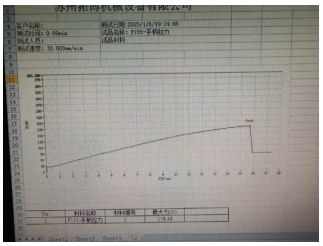
Sample Picture	Test Status	Tension Diagram	Status After Test
			

3.2. Loading Test

Test Equipment Information：

Device Name	Part Number	Serial Number	Calibration Date	Next Calibration Date
Servo Computer Universal Material Testing Machine	TH-82001S	YK-LAB-21-001	2024.8.8	2025.8.7

Sample Quantity：1Pc
Test Method/Standard：

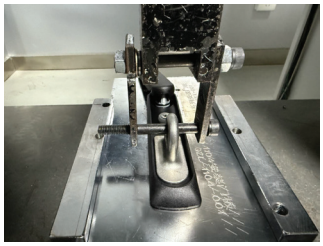
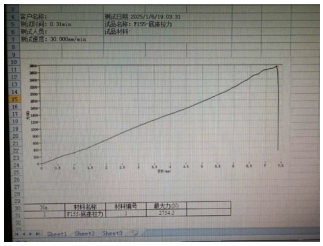
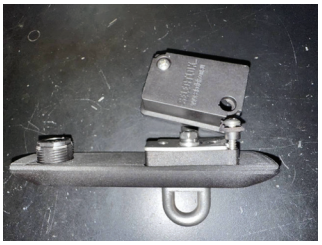
GB/T 25293-2010 Mechanical door lock for cabinets of electrotechnical and electronic equipment
GB/T 228.1-2021 Metallic materials—Tensile testing— Part 1 ： Method of test at room temperature

Test Requirement：
Test the minimum tensile force required to damage the padlock seat, which should be ≥1000N
Experimental Environment：
Temperature: 22℃, Humidity: 51%RH, Atmospheric Pressure: /

Test Results：

Sample No.	Test Results	Conclusion
EN1025A0306-02	After the padlock seat was subjected to a tensile force of 2754N, the back cover of the lock was damaged.	OK

Test Record Pictures：

Sample Picture	Test Status	Tension Diagram	Status After Test
			

3.3. Operating Life Test (Lock)

Test Equipment Information：

Device Name	Part Number	Serial Number	Calibration Date	Next Calibration Date
Cabinet lock key insertion and extraction torsion testing machine	OX-3811A	YK-LAB-25-013	2024.11.21	2025.11.20

Sample Quantity：1Pc
Test Method/Standard：

GB/T 25293-2010 Mechanical door lock for cabinets of electrotechnical and electronic equipment 11.4

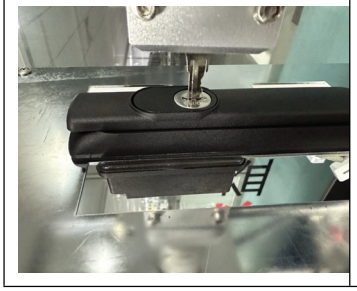
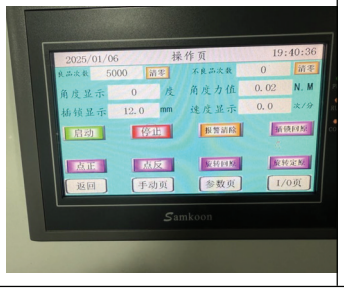
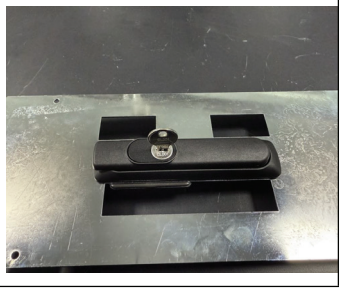
Test Requirement：
The lock is required to undergo 5,000 locking and unlocking operations, means key insertion and extraction and key rotation life tests. After the test, the key and door lock are required to have no obvious damage and not affect the normal use of the product.

Experimental Environment：
Temperature: 22℃, Humidity: 46%RH, Atmospheric Pressure: /

Test Result：

Sample No.	Test Results	Conclusion
EN1025A0306-03	The lock is intact after 5000 locking and unlocking operations.	OK

Test Record Pictures：

Picture Before Test	Installation Status	5000 Times	Picture After Test
			

3.4. Operating Life Test (Lock)

Test Equipment Information：

Device Name	Part Number	Serial Number	Calibration Date	Next Calibration Date
Handle rotation and button testing machine	OX-3812A	YK-LAB-25-014	2024.11.21	2025.11.20

Sample Quantity：1Pc

Test Method/Standard：

GB/T 25293-2010 Mechanical door lock for cabinets of electrotechnical and electronic equipment 11.4

Test Requirement：

The lock handle is required to rotate at least 5,000 times, and one rotation of the handle after 90 degrees and then returning to its original position is counted as one rotation. After the test, the door lock is required to have no obvious damage and does not affect the normal use of the product.

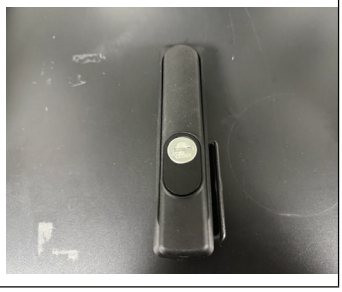
Experimental Environment：

Temperature: 22℃, Humidity: 46%RH, Atmospheric Pressure: /

Test Results：

Sample No.	Test Results	Conclusion
EN1025A0306-04	The lock is intact after 5000 handle rotation operations.	OK

Test Record Pictures：

Picture Before Test	Installation Status	5000 Times	Picture After Test
			

3.5. Torsional Stress Test (Screw/Nut)

Test Equipment Information：

Device Name	Part Number	Serial Number	Calibration Date	Next Calibration Date
Dial Torque Wrench	SDB-20	YK-LAB-12-002	2024.8.7	2025.8.6

Sample Quantity：1Pc

Test Method/Standard：

GB/T 3098.1-2010 Mechanical properties of fasteners— bolts, screws and studs
GB/T 16823.3-2010 Fasteners - Torque/clamp force testing

Test Requirement：

Test the minimum torque required to damage the M22 thread of the housing, which should be ≥3N.m

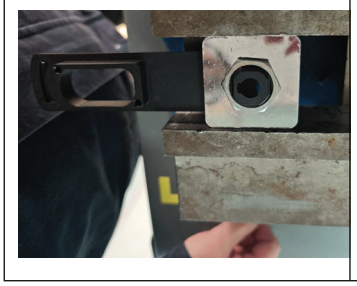
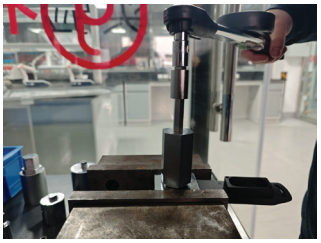
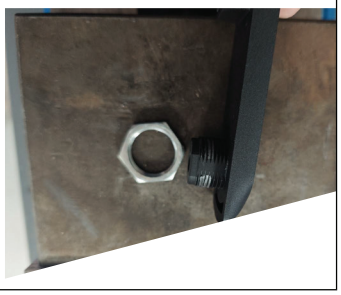
Experimental Environment：

Temperature: 19 °C, Humidity: 39% RH

Test Results：

Sample No.	Test Results	Conclusion
EN1025A0306-05	After the housing thread was subjected to a torque of 9.1 N.m, the housing was damaged and slipping.	OK

Test Record Pictures：

Installation Status	Test Status	Torque Value	Status After Test
			

4. Opinions And Explanations：N/A

*** END OF REPORT ***

