Intertek Legal Entity: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Address: Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China, 510663
Telephone/Fax: 86-20-8213 9688/86-20-3205 7538

Test Verification of Conformity

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address	:	**GUANGDONG BE-TECH SECURITY SYSTEMS CO., LTD. No. 17, Keyuan 3 Road, Ronggui, Shunde High-Tech Zone, Foshan, Guangdong, P.R.China**
Product(s) Tested	:	**Electronic Lock**
Ratings and principal characteristics	:	3 S 5 0 0 J 3 1 2
Model(s)	:	**G1**
Brand name	:	BE-TECH必达
Relevant Standard(s)/Specification(s)	:	**EN 14846: 2008 Building hardware - Locks and latches – Electromechanically operated locks and striking plates - Requirements and test methods**
Verification Issuing Office Name & Address	:	**Same as Legal Entity**
Verification/Report Number(s)	:	**GZ10031007-1**

NOTE 1: This verification is part of the full test report(s) and should be read in conjunction with it.
NOTE 2: This verification superseded previous verification GZ09090708-1 dated October 14, 2009.

Signature

Name: Baud Qiu
Position: Manager
Date: March 26, 2010

Intertek

TEST REPORT

EN 14846

Building hardware – Locks and latches –

Electromechanically operated locks and striking plates – Requirements and test methods

Report No	GZ10031007-1
Tested by (name and signature)	Happy Chen
Approved by (name and signature)	Clark Liu
Date of issue	March 26, 2010
Contents	Total test report 11 pages including: Report text: 9 pages Appendix A for product photos and drawings: 2 pages
Testing Laboratory name	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Address	Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Applicant's name	GUANGDONG BE-TECH SECURITY SYSTEMS CO., LTD.
Address	No. 17, Keyuan 3 Road, Ronggui, Shunde High-Tech Zone, Foshan, Guangdong, P.R.China
Test specification:	
Standard	EN 14846:2008 (E)
Non-standard test method	N/A
Test Report Form No	TTRF EN 14846:2008 (E) A
TTRF Originator	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Master TTRF	Dated 2009-03
Test item description	Electronic Lock
Trade Mark	BE-TECH必达
Model and/or type reference	G1
Manufacturer	GUANGDONG BE-TECH SECURITY SYSTEMS CO., LTD.

Rating(s)									
	3	S	5	0	0	J	3	1	2

Copy of marking plate (information/comments):

Marking on the package

Summary of testing

The submitted samples were tested and found to **COMPLY WITH** applicable requirements of EN 14846: 2008 (E).

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement .....: P(Pass)
- test object does not meet the requirement .....: F(Fail)

Testing

Date of receipt of test item.....: September 16, 2009

Date (s) of performance of tests.....: September 16, 2009 to October 13, 2009

General remarks:

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

"(see remark #)" refers to a remark appended to the report.
"(see Appendix #)" refers to an appendix appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

When determining the test result, measurement uncertainty has been considered.

General product information:

Model G1 in this report was similar with model G0, which tested in previous report GZ09090708-1R1, dated on March 26, 2010. They were same in circuit components, lock body and cover plates except for the shape of lever and outside plastic cover. These variations would not significantly affect the performance. The test data were based on model G0.

Function description:

Normal operation: Unlock by correctly card, and then, turn handle to retract latch bolt or both latch bolt and deadbolt. Lock out side handle automatically. Deadbolt of the lock was projected by inside turn only.
In the emergency operation, it can be unlocked by key.

Detail "Ratings" information listed as following:

First digit (Category of use): Grade 3– For use by the public where there is little incentive to exercise care and where there is a high chance of misuse, e.g. doors in public buildings.

Second digit (Durability and load on latchbolt): Grade S – 200 000 test cycles; 50N load on latch bolt.

Third digit (Door mass and closing force): Grade 5– Up to 200kg door mass 25N maximum closing force.

Fourth digit (Suitability for use on fire/smoke doors): Grade 0– Not approved for use on fire/smoke door.

Fifth digit (Safety): Grade 0– no safety requirement.

Sixth digit (Corrosion resistance, temperature and humidity) Grade J – Very high corrosion resistance, -10°C to +55°C temperature resistance, Level 1 Humidity resistance.

Seventh digit (Security resistance): Grade 3– Medium security and no drill resistance.

Eighth digit (Security–electrical function): Grade 1 – status indication according to 5.9

Ninth digit (Security-electrical manipulation): Grade 2 – See Table 7

**********End of page**********

EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
4	Classification		—
4.1	General		
4.2	The product shall be classified according to the following thirteen digit coding system:		—
4.3	Category of use	3	—
4.4	Durability and load on latchbolt	S	
4.5	Door mass and closing force	5	
4.6	Suitability for use on fire/smoke doors	0	
4.7	Safety	0	
4.8	Corrosion resistance, temperature and humidity	J	
4.9	Security	3	
4.10	Security–electrical function	1	
4.11	Security-electrical manipulation	2	
5	Requirements		—
5.1	General		—
5.1.1	Compatibility between cooperating parts The manufacturer shall state which cooperating parts have been designed to be used in combination..... :	All cooperating parts were included.	P
5.1.2	Dangerous substance Materials in products shall not contain or release any dangerous substances in excess of the maximum levels specified in existing European material standards or any national regulations in the country of intended use..... :	Per manufacturer information, no dangerous substance used	P
5.1.3	Operation time for locking and unlocking Operation time in both directions between the end positions shall not exceed 3 s..... :	Locking and unlocking time less than 1 s	P
5.2	Category of use		—
5.2.1	Resistance to side load on latch The lock shall resist a side load of 3 KN ..... :	3 KN	P
5.2.2	Torque to operate deadbolt The torque on the key to operate the deadbolt shall not exceed M3 = 0,8 Nm..... :	The torque on turn: 0,4 Nm	P
5.2.3	Strength of normal latch action and stops The latch components and travel limit stops shall resist a torque of 60 Nm ..... :	The latch action function correctly after this test. Torque on the follower: 0,4 Nm	P
5.2.4	Torque resistance of lockable follower The lockable follower shall resist a torque of 80 Nm:	80 Nm Functioned normally.	P
5.3	Durability		—

EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
5.3.2	Durability of latch action		—
5.3.2.1	Durability of latch action mechanically operated The latch action shall function correctly fulfilling the requirements after the cycle test of 200 000 cycles..:	Tested with electrical operation	P
5.3.2.2	Durability of latch action electrically operated The latch action shall complete the cycles of 200 000 cycles.....:	The latch action function correctly after 200 000 cycles. The torque on the follower was less than 0,4 Nm The closing force: 12,4 N	P
5.3.3	Durability of deadbolt mechanism		P
5.3.3.1	Durability of deadbolt mechanism mechanically operated The latch action shall function correctly fulfilling the requirements after the cycle test of 50 000cycles.....:	The deadbolt action function correctly after 50 000cycles. The torque on key: 0,4 Nm The torque on handle: 0,4 Nm	P
5.3.2.2	Durability of deadbolt mechanism electrically operated:	Operated deadbolt manually only	N/A
5.4	Door mass and closing force Up to 100 kg door mass and 25 N maximum closing force .....:	Door mass: 200 kg Closing force: 14,7 N	P
5.5	Suitability for use on fire/ smoke doors.....:	Not approved for use on fire/smoke doors	N/A
5.6	Safety	No safety requirement	N/A
5.7	Corrosion resistance, temperature and humidity requirements		
5.7.1	Corrosion resistance The grade of corrosion resistance achieved shall be included in the classification coding as specified in EN 1670. The corrosion resistance shall be tested in accordance with 6.7.1. NOTE The ability to operate after the test is the only criterion being assessed here; appearance is not covered by this requirement The energy required to operate the deadbolt or latch bolt for the last three shall not exceed the operation energy for normal operations by more than 20 %.:	EN 1670:2007 Grade 4: 240 hours Torque to operate deadbolt on key: 1,0 Nm Torque to operate deadbolt on follower: 0,9 Nm Torque to withdraw latch bolt with handle: 0,4 Nm	P

EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
5.7.2	Resistance to a range of temperatures The product shall continue to operate as declared during and after the test. During any individual test, performance shall not drop by more that 25 % below the level achievable at the start of the test. After the test the product shall operate as declared. Grade J temperatures range: -10°C to +55°C ..... :	Initial test: Torque to operate deadbolt on key: 0,7 Nm Torque to operate deadbolt on follower: 0,4 Nm Torque to withdraw latch bolt with handle: 0,4 Nm After -10°C Cold test: Torque to operate deadbolt on key: 0,8 Nm Torque to operate deadbolt on follower: 0,3 Nm Torque to withdraw latch bolt with handle: 0,4 Nm After +55°C Dry heat test: Torque to operate deadbolt on key: 0,7 Nm Torque to operate deadbolt on follower: 0,3 Nm Torque to withdraw latch bolt with handle: 0,4 Nm	P
5.7.3	Resistance to cyclic humidity The product shall endure humidity at elevated temperatures with requirement of level 1 ..... :	No defect was found after this test. Level 1: +40°C with initial relative humidity of 95%.	P
5.8	Security requirements		—
5.8.1	Torque resistance of knob		—
5.8.1.1	Torque resistance of knob or lever handle on bored lock and latch sets ..... :	Not applicable for mortice lock	N/A
5.8.1.2	Torque resistance of knob or lever handle on rim night latch ..... :	Not applicable for mortice lock	N/A
5.8.2	Requirements for side load		—
5.8.2.1	Resistance to side load on deadbolt The dead bolt shall resist a side load of 5 kN..... :	5kN	P
5.8.2.2	Resistance to drilling and side load on deadbolt..... :	Not applicable for grade 3	N/A
5.8.3	Deadbolt projection The deadbolt shall not less than 14 mm ..... :	20 mm	P
5.8.4	Requirements for end load on deadbolt		—
5.8.4.1	Resistance to end load The deadbolt shall resist a end load of 4kN and resulting projection shall not less than 11 mm ..... :	4KN 16 mm	P

EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
5.8.4.2	Resistance to endload with drilling ..... :	Not applicable for grade 3	N/A
5.8.5	Resistance to pulling of hook/claw bolt..... :	No hook or claw bolt	N/A
5.8.6	Resistance to disengaging of hook/claw bolt ..... :	No hook or claw bolt	N/A
5.8.7	Resistance to forcing of locating device in sliding door lock ..... :	Applicable for sliding door lock only	N/A
5.8.8	Resistance to pulling off of knob on bored lock and latch set..... :	Not applicable for mortice lock	N/A
5.8.9	Security requirements of the component locking plate		—
5.8.9.1	Resistance to end load on box protected locking plate:	No protecting box	N/A
5.8.9.2	Resistance to side load on locking plate The locking plate shall resist a side load of 5kN ..... :	5 kN No security function lost	P
5.8.9.3	Resistance to pulling on locking plate ..... :	Applicable for lock with hook bolt only	N/A
5.8.9.4	Resistance to lifting force on locking plate ..... :	Applicable for sliding door lock only	N/A
5.9	Security – Electrical function – status indication There shall be an audio or visual signal from the lock that can be used as an indication that the bolt is fully thrown and deadlocked or, in the case of electric strikes, that movement of the electric strike is blocked. The security of the electrical function shall be tested according to 6.9.	A visual signal with different color and beep voice were used to indicate the status. Before and after the test 200 000 cycles, the electrical function was still correct.	P
5.10	Security – Electrical manipulation		—
5.10.1	General		—
5.10.2	Voltage drop protection When tested in accordance with 6.10.1 with supply voltage dips and short interruptions, the locking mechanism and its operational parts shall maintain its status..... :	The test levels and durations were 70% 10ms, 40% 100ms and 0% 5s The lock deadlocked correctly during the test.	P
5.10.3	Protection against the effects of cutting cables When tested in accordance with 6.10.2 by cutting or short-circuiting of all the wires of one cable linking the electromechanical lock or strike to other units, the locking mechanism and its operational parts shall maintain its status. This requirement applies to any cable linking the electromechanical lock or strike to other units ..... :	After cutting power and short-circuiting, the lock deadlocked correctly during the test.	P
5.10.4	Protection against the effects of wire manipulation When tested in accordance with 6.10.3 by manipulating in the form of an electrical or magnetic pulse (or sequence of pulses) applied to any wires linking the electromechanical lock or strike to other units, the locking mechanism and its operational parts shall maintain its status ..... :	Not required for electrical manipulation grade 2	P

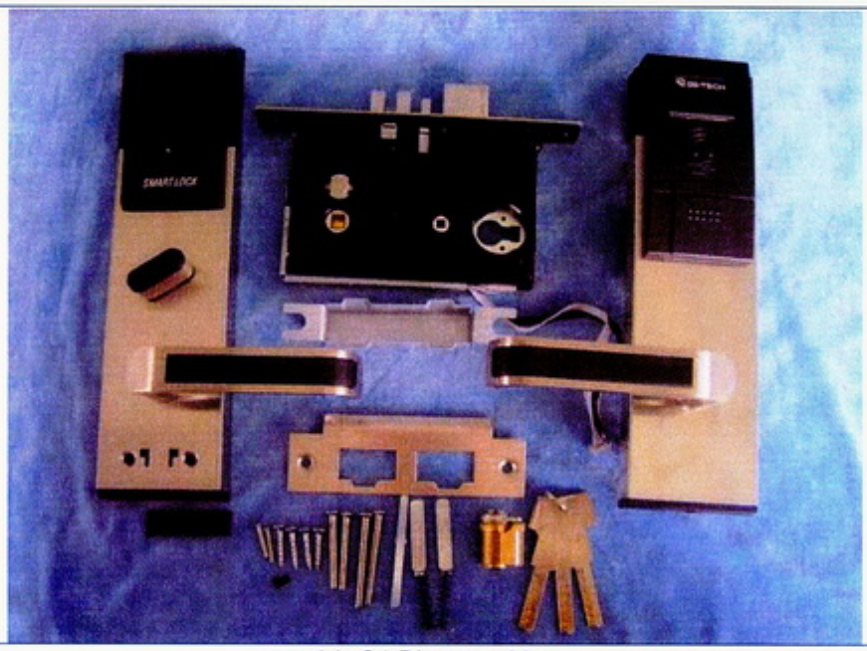
EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
5.10.5	Resistance to electromagnetic manipulation When tested in accordance with 6.10.4, by strong electromagnetic fields, the locking mechanism and its operational parts shall maintain its status.....:	Level 3 and Level 4 Frequency range 80 to 1000 MHz Exposed side: Front and Rear Field strength: 10V/m; 30V/m The lock deadlocked correctly during the test.	P
5.10.6	Resistance to electrostatic discharge When tested in accordance with 6.10.5, with electrostatic discharges the locking mechanism and its operational parts shall maintain its status.....:	Applied ±8 kV voltage 10 times of Direct Contact Discharge, ± 15 kV voltage 10 times of Direct Air Discharge, ±8 kV voltage 10 times of Indirect discharge (HCP), ±8 kV voltage 10 times of Indirect discharge (VCP), The lock was operable after the test.	P
5.10.7	Resistance to electrostatic manipulation When tested in accordance with 6.10.6, with a minimum of 200 electrostatic discharges at the energy levels specified in EN 61000-4-2:1995, level 4, except that the discharge frequency shall not exceed 10 Hz, the locking mechanics and its operational parts shall maintain its status.....:	Applied ±8 kV voltage 200 times of Direct Contact Discharge, ± 15 kV voltage 200 times of Direct Air Discharge, ±8 kV voltage 200 times of Indirect discharge (HCP), ±8 kV voltage 200 times of Indirect discharge (VCP), The lock deadlocked correctly during the test.	P
6	Test methods		—
7	Marking		—
	The following information shall be quoted in the labeling, packaging or literature. a) manufacturer's name or trademark or other means of positive identification; b) clear product identification c) classification according to clause 4 of this European Standard; d) number and date of this European Standard.	Complied with this requirements See 'Marking on the package'	P
8	Evaluation of conformity		—
8.1	Initial type test Samples, representative of the series, selected in accordance with annex C, shall be subjected to the full sequence of tests described in clause 6, and where relevant, to annex A. .....:	The samples were tested for applicable item of clause 6.	P

EN 14846			
Clause	Requirement - Test	Result - Remark	Verdict
8.2	Factory production control The manufacturer shall document, operate and maintain an adequate factory production control system. The factory production control system shall achieve an appropriate level of confidence in the conformity of the product ..... :	Factory operates in accordance with ISO 9001, and is deemed to satisfy the requirement of FPC	P
8.3	Further testing of samples At intervals of not more than six months, sample taken from finished product stock, selected in accordance with annex C, and representative of the series, shall be subjected to the full sequence of tests described in clause 6 ..... :	Not intended included in this report	—

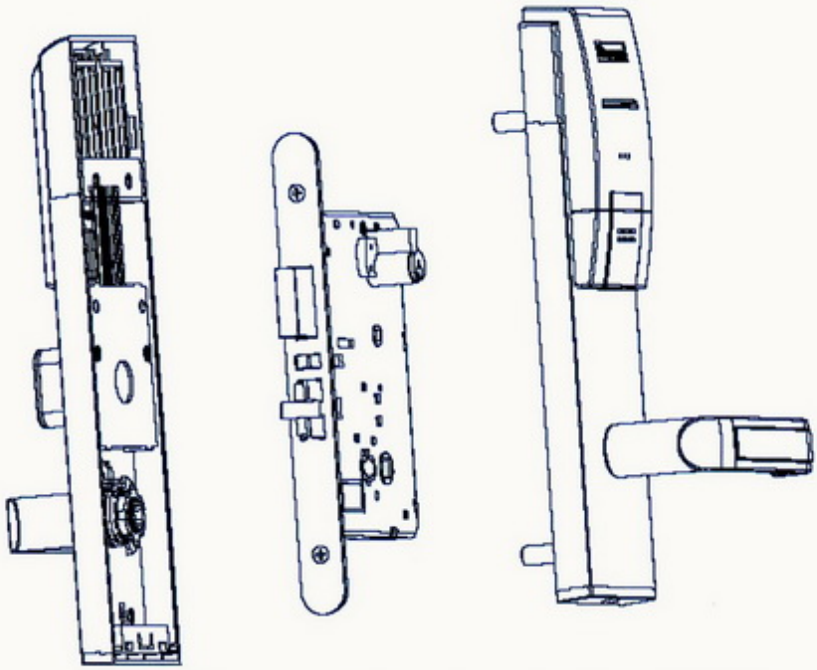
**********End of page**********

Appendix A

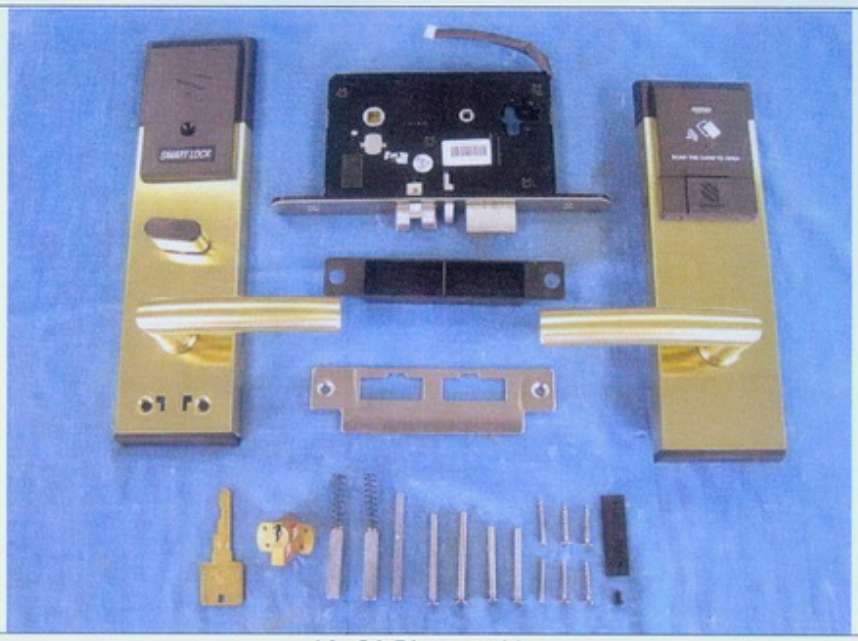
Product photos and drawing



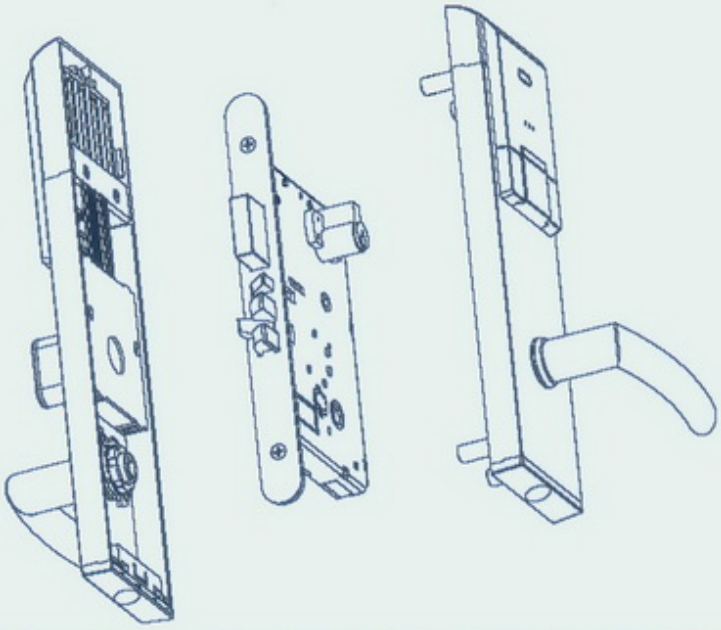
A1. G1 Disassembly



A1.G1 Drawing



A3. G0 Disassembly



A4.G0 Drawing

**********End of report**********