



TEST REPORT	
EN 50133-1	
Alarm systems — Access control systems for use in security Applications	
Part 1: System requirements	
Report reference No.	140314044GZU-005
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Approved by (name and signature) . . .	Jeff Deng 
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Contents	Total test report 20 pages including: Report text: pages 4-16 Appendix A for product photos: page 17-20
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
Testing location	Same as above
Applicant's name	GUANGDONG BE-TECH SECURITY SYSTEMS LIMITED
Address	No. 17, Keyuan 3 Road, Ronggui, Shunde High-Tech Zone, Foshan, Guangdong, P.R.China
Test specification	
Standard	EN 50133-1:1996+A1: 2002
Non-standard test method	None
Test Report Form No.	TTRF EN 50133-1:1996+A1: 2002 (E) A
TTRF Originator	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Master TTRF	Dated 2013-5
Test item Description	
Trademark	
Model and/or type reference	DTM
Manufacturer	GUANGDONG BE-TECH SECURITY SYSTEMS LIMITED
Rating(s)	12V $\overline{=}$, 1A

Copy of marking plate:

The artwork below may be only a draft.



Summary of testing:

The submitted samples were tested according to applicant's requirement and found to **COMPLY WITH** applicable clauses of EN 50133-1:1996+A1: 2002

<p>Test item particulars</p> <p>Classification of installation and use : fixed equipment, Class III</p>
<p>Test case verdicts</p> <p>Test case does not apply to the test object: N/A</p> <p>Test item does meet the requirement: P (Pass)</p> <p>Test item does not meet the requirement: F (Fail)</p>
<p>Testing</p> <p>Date of receipt of test item: May 3, 2014</p> <p>Date(s) of performance of test: May 10, 2014 – Dec. 30, 2014</p>
<p>General remarks</p> <p>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.</p> <p>"(See remark #)" refers to a remark appended to the report.</p> <p>"(See Appendix #)" refers to an appendix appended to the report.</p> <p>Throughout this report a comma (point) is used as the decimal separator.</p> <p>When determining the test result, measurement uncertainty has been considered.</p>
<p>General product information:</p> <p>The elevator control was considered as an access control system, it is consisted of a card reader, a main control board, one to four relay control boards, and some mounting/wiring accessories. It is powered from an approved external AC/DC adaptor in compliance with EN 60950-1 of limited power source.</p> <p>The elevator controller is especially for hotel elevator with purposes of enhancing security and saving energy for the hotels. It is operated with BIS lock management software (BTLock V5.7.32.6) to attain the level management and authorization. Only authorized valid cards(Mifare S50 or S70) can access to the elevator up or down, which prevent irrelevant personnel from entering the elevators, and hence protect the hotel safety and extend the service lifetime of elevators.</p> <p>The elevator controller does not communicate with central controller of elevator itself, so there is no directly mutual control between them. Its function is to control the push-buttons of each floor. Therefore, all the existing safety features of the elevator itself are not affected.</p>

EN 50133-1			
Clause	Requirement – Test	Result - Remark	Verdict
5	General requirements		--
5.1	Security classification		--
	<p>The security of an access control system is based on the recognition classification and the access classification.</p> <p>The security classification can be defined for each access point for entry and exit individually.</p> <p>The security classification is an independent combination of the recognition classes and the access classes.</p>	The elevator control considered as an access control system, users with authorized valid cards are granted to access to the elevator up and down, and unauthorized users are prevented from entering the unauthorized floor.	P
5.1.1	Recognition classification		--
	The following classification for access control systems is based on the level of confidence in the identification of authorized users.		P
	The classification indicates the quality of relationship between the recognition used by a specific system and the actual user.	Recognition class 2, Mifare Card	P
	The classification also considers the risk of the user giving away duplication of his right without losing his own right to have access granted.		P
	Each access point of an access control system shall have a positive recognition in at least one direction.	For entry with access card reader recognition means	P
	For a specific access point, the 'recognition class' may vary with the time.	Recognition class 2	P
5.1.2	Access classification		--
	Access class A: The class refers to an access point used where the degree of security to be provided requires neither a time grid nor the logging of access transactions.	Access class A: logging of access	P
	Access class B: The class refers to an access point which includes time grids and logging functions. It includes a sub-classification Ba which relates to an access point which includes time grids, without logging functions.		N/A
5.2	Common functional requirements for access classes A and B		--
5.2.1	Processing		--
	- Applicable to all recognition classes		--

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Clause	Requirement – Test	Result - Remark	Verdict
a)	When processing rules are stored in an access point reader, and the settings are visible or the unit can be substituted without the participation of the system manager, then the manufacturer's literature shall clearly state that this product is not suitable for use on the lower security side of an access boundary.	The settings are not visible, and can not be substituted without the participation of the system manager.	P
b)	It shall be possible to allocate an access grid to a user.		P
c)	The rules shall provide as a minimum facilities to define: — two release times, one of 5 seconds and the other of 60 seconds; — two allowed apas opened times, one of 10 seconds and the other of 60 seconds.	The System Setting Procedures could be set the Work Standing Time which means how long the floor button is allowed to push down after touching opening card, the default time is 5s; no apas	P
d)	A system that automatically restarts after a power connection shall retain programmed access rules for a minimum period of 120 hours of power disconnection.	Programmed access rules retained good after 120h power disconnection	P
	— Applicable to recognition class 1		--
e)	For a system using memorized information, in the event of five sequential entries of incorrect information, it shall not be possible to grant access for a minimum period of 5 minutes afterwards.	Not recognition class 1, but suitable for class 2 function test	N/A
	— Applicable to recognition class 3		--
f)	A system using a combination of token or biometric and memorized information shall give an alert after a maximum of five sequential entries of invalid memorized information with the same token or biometric.	Not recognition class 3	N/A
5.2.2	Power supply		--
a)	There shall be no false release as a result of power connection or disconnection.		P
b)	The access control system is not required to supply power to the apas.	No apas in the system	N/A
5.2.3	Self-protection— Applicable to recognition classes 1 to 3		--
	It shall not be possible for an unauthorized person to grant access without the use of tools.		P
5.2.4	Programmability protection		--

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Clause	Requirement – Test	Result - Remark	Verdict
a)	There shall be secure means to prevent unauthorized change of the pre-set rules. This could be achieved by the use of more than one passcode. The ratio between the number of different possibilities of codes and the number of authorized persons shall be at least 1 000 to 1.	All pre-set rules and procedure setting only could be changed by login the system software by system administrator.	P
b)	The minimum of differs for this means shall be 10 000.	The min. differs is 1000,000	P
c)	It shall be possible for the system manager to change this passcode.	Could be changed the software system passcodes by administrator, min. 1000,000 keys(the passcode consisting of any six combination of numbers 0~9 and letters a-z)	P
5.2.5	Access point control		--
a)	The access control system shall provide an interface to the apas. This interface shall include control of the apas and monitoring of the security status of the apas.	The function of the access control system is to control the elevator floor buttons. Only users with authorized valid cards can be granted to access to push the elevator floors button for up or down. The system provide an interface to control the floors button, no apas involved in the system.	N/A
b)	Access point interface terminals shall be housed within a container which shall have facility for tamper detection if opened by normal means.	Point interface output terminals housed within a metal box which could not be opened without a key.	N/A
c)	When installed in accordance with manufacturer's instructions it shall not be possible to gain access to the release circuit connections at the side with the lower security level.	Per the instructions, impossible to gain access to any circuits connections or components.	N/A
d)	The access control system shall monitor the apas status regarding whether the apas is closed or not.	See above, no actual apas, no such function provided	N/A
e)	The access point interface control output shall be at least one galvanically isolated switch with a nominal load of at least 30 VA.	The system is powered from an approved external AC/DC adaptor in compliance with limited power source, and two relays provided to control the floor button signal	N/A

EN 50133-1			
Clause	Requirement – Test	Result - Remark	Verdict
f)	The access point interface control output shall be set when access is granted and reset when one of the following occurs: — the apas pre-set release time has expired; — the apas monitoring indicates that apas is opened.	no apas, after pre-set release time, the elevator floors button could not be pushed down again.	N/A
5.2.6	Recognition		--
	The level of security is influenced by many factors, the most important of which are the number of differs and ease of duplication.	Considered as below	P
	— Applicable to recognition class 1		--
a)	The ratio between the number of different possibilities of codes and the number of identifiable users shall be at least 1 000 to 1.	Not recognition class 1	N/A
b)	The minimum number of differs in the system shall be 10 000.		N/A
	— Applicable to recognition class 2 and above		--
c)	A unique identity in a single system shall be allocated to each user.	Each user with unique identity of cards	P
d)	The recognition coding structure shall provide a minimum of 1 000 000 combinations, and each recognition information presented to the system shall be compared with this structure.	Minimum of 1 000,000 combinations (mifare card with serial number more than 8 digital numbers)	P
e)	False acceptance rate shall not be greater than 0,01 %. False rejection rate shall be less than 1 %.	FA: 0; FR:0.009%	P
f)	Tokens with coding systems visible to the unaided human eye and therefore usually easy to duplicate under conditions of normal use shall not be used.	Tokens with coding systems, NOT visible to the unaided human eye.	P
g)	When the token is marked with an identity number it shall not be a direct representation of the entire coding borne by the token.	Token marked identity number not a direct representation of the entire coding borne	P
	NOTE It is important for the user to consider, for the tokens, the durability (for example: number of operations, life duration, environmental protection) and the security (such as separation of the encoded information from its carrier without destroying those elements).	informative	--
	— Applicable to recognition class 3		--
h)	The memorized information used in conjunction with the token or biometric shall have a minimum number of differs of 10 000.	Not recognition class 3	N/A
5.2.7	Display to user No requirement.		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
5.2.8	Annunciation		--
a)	The access control system shall provide means for annunciation in the form of an alert and display for events described in the list below: — tamper detection; — access point opened with no access granted; — access point open following allowed period after access granted.	No means for annunciation provided for the system only control the elevator floors button could be pushed or not and no such events occurred	N/A
b)	Any requested alert shall be annunciated within a maximum delay time of 10 seconds.		N/A
5.2.9	Communication with other systems — Applicable to all recognition classes		--
a)	The access control system shall include an output for each access point to advise when an authorized access has taken place.	The control system has no communication with other systems. The control system has one output terminal for each elevator floors button.	P
b)	When this output is a binary switch it shall be galvanically isolated and set when access is granted and reset when one of the following occurs: — the access point is opened and closed; — permitted apas release time has expired without the access point being opened; — the access point has remained open and the allowed apas open time period has expired.	One pair of relays provided in the access control PCB for each output terminal, no binary switch provided, and no such events occurred for the access control system of elevator floors button.	N/A
c)	If alternative means are used for this output, they shall provide the same logical information.		N/A
d)	When the connected systems have the facility to change the rules of the access control system they shall comply with access control system requirements described in 5.2.4 .	No communication with other systems.	N/A
e)	Connection and disconnection of communication links shall not grant access.		N/A
5.3	Complementary functional requirements for access class B		--
5.3.1	Processing		--

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Clause	Requirement – Test	Result - Remark	Verdict
	a) An access control system shall include an inbuilt real time clock giving a minimum cycle of one week, with a maximum drift of 5 seconds per day. b) It shall be possible to allocate an access level to a user. c) The time grid within the access level shall give a minimum resolution of the day of the week, and of the minute of the day.	Not access class B	N/A
5.3.2	Power supply No complementary requirement		N/A
5.3.3	Self-protection No complementary requirement.		N/A
5.3.4	Programmability protection It shall be possible to check pre-set rules.		N/A
5.3.5	Access point control No complementary requirement.		N/A
5.3.6	Recognition No complementary requirement.		N/A
5.3.7	Display to user No complementary requirement.		N/A
5.3.8	Annunciation		N/A
5.3.9	Communication with other systems No complementary requirement.		N/A
5.4	Access control components requirements		--
5.4.1	Environmental test requirements		--
	The relevant European Standards EN 50130-5, covering the environmental tests for components, and EN 50130-4, covering the electromagnetic compatibility, shall be applied regarding the tests described in this subclause.		P
	Details of equipment class (fixed, movable, portable) and environmental class (I, II, III, IV) shall be included in the manufacturer's documentation.	Fixed equipment per installation manual, environmental class II	P
	The tests, conditions and criteria of acceptance are described in the following subclauses.		P
5.4.1.1	Dry heat, operational test The test is described in 8 of EN 50130-5.		P

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Clause	Requirement – Test	Result - Remark	Verdict
5.4.1.2	Cold, operational test The test is described in 10 of EN 50130-5.		P
5.4.1.3	Water, operational test The test is described in 16 of EN 50130-5.		N/A
5.4.1.4	Impact, operational test This test is applicable only to recognition equipment and access point interface. The test is described in 20 of EN 50130-5.		P
5.4.1.5	Vibration, sinusoidal endurance test The test is described in 23 of EN 50130-5.		P
5.4.1.6	Supply voltage variations, operational test The test is described in 7 of EN 50130-4.		P
5.4.1.7	Supply voltage dips and interruptions, operational test The test is described in 8 of EN 50130-4.		P
5.4.1.8	Environmental tests conditions and pass/fail criteria		--
	In order to carry out the environmental tests, the following conditions shall be applied:		P
a)	the specimen shall be mounted in accordance with the instructions of the manufacturer in the normal condition of use;		P
b)	the impact operational test is only applicable for recognition equipment and access point interface. No impact shall be made on the display;	applicable for recognition equipment-card reader	P
c)	a reduced functional test based on the relevant functional test (6.2.3 of EN 50133-1) shall be carried out before the conditioning;		P
d)	the component shall be in the operating condition during the conditioning, with the exception of the vibration sinusoidal endurance test;"		P
e)	the output information and visual indications shall be monitored to detect any permanent variation during the conditioning;		P
f)	a functional test shall be carried out during the conditioning for dry heat and cold operational tests;		P
g)	for the final measurements, a reduced functional test [see 5.4.1.8c)] shall be carried out after the conditioning.		P
	The pass/fail criteria are:		--
a)	no mechanical damage shall occur which affects the operation or IP classification both inside and outside the container;	no mechanical damage	P

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Clause	Requirement – Test	Result - Remark	Verdict
b)	no change in any status of the system shall occur during conditioning (no annunciation, no release of apas, etc...);	no change in any status	P
c)	the relevant reduced functional test shall provide the same result before, during and after the conditioning;	function normally	P
d)	variations of specified values are acceptable if the value stays within the specified range, including the tolerance.		P
5.4.2	EMC requirements		--
5.4.2.1	Emission The access control components shall conform to one or several of the following standards EN 61000-6-3 EN 61000-6-4 EN 55022	In compliance with EMC requirements - Emission	P
5.4.2.2	Immunity The access control components shall conform to the following standard: EN 61000-6-1 EN 61000-6-2 or EN 50130-4.	In compliance with EMC requirements - Immunity	P
5.4.3	Electrical safety requirements The access control components shall conform to the following standard: EN 60950 or EN 60065	In compliance with Electrical safety requirements – EN 60950-1	P
5.4.4	Documents All documents needed for testing and user operations shall be available.	Instruction provided	P
6	Test methods for functional requirements		--
6.1	General		--
	The mandatory tests shall be made on the basis of the minimum requirements described by this standard.		P

EN 50133-1			
Clause	Requirement – Test	Result - Remark	Verdict
	All the necessary hardware to be tested shall refer to the block diagram, and shall be supplied.	The system contained all the necessary hardware: a card reader, a main control board, one to four relay control boards, and some mounting/wiring accessories. The relay boards and Adaptor housed in a metal box.	P
	The system to be tested shall fulfill, as a minimum, all the access point functions. It shall comprise all the necessary hardware to fulfill the recognition, access point interfaces, power supply, display, programming, communication and processing functions.	Per the design and use intention, the system comprise some necessary hardware to fulfill the recognition, access point interfaces, programming and processing functions.	P
	For recognition class 2 or class 3, a set of 10 tokens or a description of a measurement method for biometric shall be supplied with the relevant information.	A set of more than 10 tokens provided	P
	All documents needed for testing shall be supplied. The manufacturer shall provide an apas, or a simulator.	A set of simulating elevator floors button provided to check the system function, no apas	P
6.2	Tests		--
6.2.1	Document checking		--
	The laboratory shall check the documents for the requirements described in the following clauses		P
	Common clauses for access class A or B: — ref. 5.2.1 a), b), c) and d); — ref. 5.2.4 a) and b); — ref. 5.2.5 a) and d); — ref. 5.2.6 a), b), c), d), e), f), g) and h); — ref. 5.2.9 a) and d).	Refer to relevant clauses result	P
	For ref. 5.2.6 e), documents shall include the description of the measurement method.	Manufacturer provided the description of test method, FA: 0; FR:0.009%	P
	Complementary clauses for access class B: — ref. 5.3.1 a), b) and c); — ref. 5.3.8 e).	Not access class B	N/A
6.2.2	Inspection		--
	The laboratory shall verify that the products are built as per the requirements described in the following Clauses:		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Common clauses for access class A or B: — ref. 5.2.3; — 5.2.5 b), c), and e).	Refer to relevant clauses result	P
6.2.3	Functional tests		--
	For the following requirements, functional tests shall be carried out using the described test methods.		P
	Common clauses for access class A or B:		--
	Ref. 5.2.1 e): — System shall be programmed for one valid user information, and in normal condition. — Enter the user information, access shall be granted. — Select five sequential entries of invalid information, confirm access is not granted for each item of information entered. — Enter the valid information and confirm access is not granted. — Try again with the information four and a half minutes later, confirm access is not granted.	Not a system using memorized information, not recognition class 1, but also suitable for recognition class 2	P
	Ref. 5.2.1 f): — System shall be programmed for one valid user information, and in normal condition. — Carry out normal procedure, confirm access is granted. — Carry out user sequence with the same token or biometric, enter five sequential entries of invalid information, confirm each time access is not granted, and that an alert signal is given after the fifth entry.	Not a system using a combination of token or biometric and memorized information, not recognition class 3	N/A
	Ref.5.2.2 a): — System shall be programmed and in normal condition. — Verify that authorized users are granted access. — Disconnect power supply from the access control system, wait for a minimum of one second, then reconnect power supply, wait for at least 10 seconds. — Repeat connection/disconnection procedure 10 times. — Observe release signal during the test and verify that no release is given by the system.	(1) As the design and use intention by the manufacturer, after the unit is powered off, the floor button is not controlled by the unit, so button could be pushing down freely during the disconnection period; (2) after 10 times testing procedure, no false release at power reconnection condition	P
	Ref. 5.2.4 c): — Verify the procedure in the operator’s manual. — Run the system in normal condition. — Follow the instruction provided in the documentation, confirm that feature exists.	It is possible for the system manger to change the passcode, min. 1000,000 different keys	P

EN 50133-1			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>Ref. 5.2.5 f):</p> <ul style="list-style-type: none"> — System shall be programmed and in normal condition. — Run a normal access granted procedure, confirm that the control output switch is set. — Set release time to 5 seconds, then perform a normal access granted procedure, observe that the release signal is given for the pre-set release time $\pm 20\%$. — Repeat the test method with release time set to 60 seconds. — With the release time set to 60 seconds, carry out an access granted procedure, simulate apas opened at 30 seconds ± 5 seconds, observe that apas release signal is cancelled within 2 seconds. 	<p>no apas, after pre-set release time, the elevator floors button could not be pushed down again.</p>	N/A
	<p>Ref. 5.2.8 a) and b):</p> <ul style="list-style-type: none"> — System shall be programmed and in normal condition. — Simulate apas opened without access granted, observe that apas violation is annunciated within 10 seconds. — Set allowed open time for apas to 60 seconds. — Simulate apas closed, perform a normal access granted procedure, simulate apas opened within apas release time, observe that apas open status is annunciated within $(60 + 10)$ seconds $\pm 20\%$. — For the access point interface, open the housing and observe that a tamper detection condition is annunciated within the maximum delay time of 10 seconds. 		N/A
	<p>Ref. 5.2.9 b):</p> <ul style="list-style-type: none"> — System shall be programmed and in normal condition. — Run a normal access granted procedure, confirm the binary switch is set simultaneously with the apas opened. Simulate apas open and apas closed, observe that the binary switch is reset. — Run a normal access granted procedure and leave the apas closed, observe the binary switch is reset after expiration of the allowed apas release time. — Repeat again a normal access granted procedure. Simulate apas open status longer than the allowed apas open time period, observe that the binary switch is reset after the expiration of the apas open time period. 	<p>no communication with other systems. No binary switch</p>	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	<p>Ref. 5.2.9 c): Using the procedure described by the manufacturer, the following shall be verified: — System shall be programmed and in normal condition. — Run a normal access granted procedure, confirm that access granted is annunciated. — Simulate apas open and closed status. Confirm that completion of access granted process is annunciated. — Run a normal access granted procedure and leave the apas closed. Confirm that the completion of the access granted procedure is annunciated after expiration of the allowed apas release time. — Run a normal access granted procedure and simulate apas open status longer than the allowed apas open time period. Confirm that the completion of the access granted procedure is annunciated after the expiration of the time period.</p>	No apas, only floor button was controlled by the control system to be pushed or could not be pushed, no communication with other systems	N/A
	<p>Ref. 5.2.9 e): — System shall be programmed and in normal condition. — Interrupt the communication with other systems, wait for a minimum of one second, then re-establish it, wait for at least 10 seconds. — Repeat the above procedure 10 times. — Observe release signal during the test and verify that no release is given by the system.</p>	No communication with other systems	N/A
	Complementary clauses for access class B:	Not access class B	N/A
7	Marking/identification		--
	All access control system components shall be labeled. As a minimum, the label shall give the following information:		P
	— the name of the organization responsible for the conformity of the product (e.g. the manufacturer, importer);	Trade mark: BE-TECH	P
	— the product type;	Elevator controller, Type DTM	P
	— the manufacturing reference;	Date marked	P
	— all markings required by other standards or directives.		P
	The marking shall be readily fixed and durable. It can be made inside or outside the components.	Lable adhered to enclosure inside	P
Annex A	Special national conditions		--

EN 50133-1			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>The special national conditions described below apply to the following countries: Denmark, Finland, Norway and Sweden. The special national conditions below shall be used:</p> <p>a) access point interface and recognition equipment shall operate correctly when exposed to environmental influences normally experienced out of doors when those access control system components are fully exposed to the weather;</p> <p>b) temperatures may be expected to vary between -40 °C and +60 °C with average humidity of approximately 75 % non condensing. For 30 days per year, relative humidity can be expected to vary between 85 % and 95 % non condensing.</p>	<p>All the system components mounted in elevator car, not exposed to the outside weather; no such specified temperatures considered</p>	N/A
	<p>Consequently, the component shall be tested in accordance with the following conditions as described in EN 50130-5: 4.4.1.2 Cold, operational test Environmental class IIIA: temperature = -40 °C, duration 16 hours. Environmental class IVA: temperature = -40 °C, duration 16 hours.</p>	<p>Not Environmental class IIIA or IVA, no -40°C temperature test needed</p>	N/A

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

Appendix A - Product photos



View of all product components



Testing Assembly View (32 LED lights simulated floor button indicator, and they are provided by the manufacturer)



Testing Assembly View



View of Control box



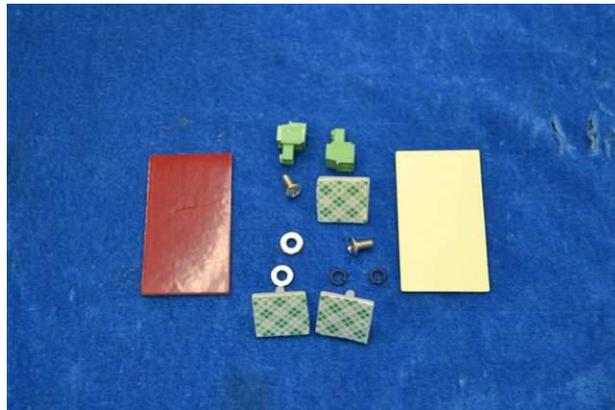
View of Control box



View of Control box



View of Control box



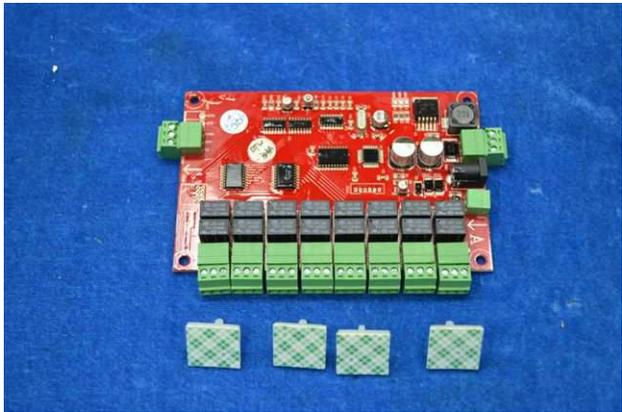
View of mounting/wiring accessories



View of card reader board



View of access control main board



View of relay control board

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