

Translated English of Chinese Standard: QC/T1058-2017

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

QC

AUTOMOTIVE INDUSTRY STANDARD
OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 43.040.60

T 26

QC/T 1058-2017

**Fingerprint recognition thief resistant automobile
equipment**

汽车用指纹识别装置

Issued on: January 09, 2017

Implemented on: July 01, 2017

Issued by: Ministry of Industry and Information Technology of PRC

Table of Contents

Announcement	3
Foreword	9
1 Scope	10
2 Normative references	10
3 Terms and definitions.....	11
4 Principle.....	12
5 General requirements.....	12
6 Technical requirements.....	13
7 Main technical parameters	15
8 Test methods	18
9 Inspection rules	23
10 Marking, packaging, transportation, storage	24

Annex:

References, names and dates of implementation of 42 automotive industry standards

No.	Standard reference	Standard name	Standard reference being substituted	Date of implementation
250	QC/T 776-2017	Motor caravan	QC/T 776-2007	2017-07-01
251	QC/T 1051-2017	Coach car		2017-07-01
252	QC/T 1052-2017	Communication vehicle		2017-07-01
253	QC/T 1053-2017	Concrete spraying vehicle		2017-07-01
254	QC/T 1054-2017	Tunnel cleaning vehicle		2017-07-01
255	QC/T 1055-2017	Drainage and rescue vehicle		2017-07-01
256	QC/T 218-2017	Technical specifications for steering column upper combined switch of automobile	QC/T 218-1996	2017-07-01
257	QC/T 1056-2017	Technical requirements and test methods for automotive dual clutch automatic transmission assembly		2017-07-01
258	QC/T 245-2017	Technical specifications for isolated plant of compressed-natural-gas (CNG) automobile	QC/T 245-2002	2017-07-01
259	QC/T 247-2017	Technical specifications for isolated plant of liquefied petroleum gas	QC/T 247-2002	2017-07-01
260	QC/T 1057-2017	Car snow chains		2017-07-01
261	QC/T 1058-2017	Car fingerprint identification device		2017-07-01

273	QC/T 1060-2017	Automotive hexagonal flower flange bolts		2017-07-01
274	QC/T 1061-2017	Road transport lightweight fuel tank vehicle anti-overflow system		2017-07-01
275	QC/T 1062-2017	Road transport lightweight fuel tank vehicle unloading valve		2017-07-01
276	QC/T 1063-2017	Road transport lightweight fuel tank vehicle oil and gas recovery components		2017-07-01
277	QC/T 1064-2017	Road transport flammable liquid dangerous goods tank vehicle - breathing valve		2017-07-01
278	QC/T 1065-2017	Road transport flammable liquid dangerous goods tank vehicle - manhole cover		2017-07-01
279	QC/T 789-2017	Performance requirements and bench test methods of automobile electric vortex retarder assembly	QC/T 789-2007	2017-07-01
280	QC/T 316-2017	Bench test methods of fatigue strength for automobile service brake	QC/T 316-1999	2017-07-01
281	QC/T 201-2017	Nylon pipe joint size for automobile air brake	QC/T 201-1995	2017-07-01
282	QC/T 1066-2017	Performance requirements of cable assembly for vehicle parking brakes and bench test method		2017-07-01

Fingerprint recognition thief resistant automobile equipment

1 Scope

This standard specifies the terms and definitions, principles, general requirements, technical requirements, main technical parameters, test methods, inspection rules, marking, packaging, transportation and storage of fingerprint recognition thief resistant automobile equipment (hereinafter referred to as "devices").

This standard applies to the fingerprint recognition thief resistant automobile equipment.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB 4208 Degrees of protection provided by enclosure (IP code)

GB/T 17619-1998 Limits and methods of testing for immunity of electrical / electronic sub-assemblies in vehicles to electromagnetic radiation

GB/T 17626.2 Electromagnetic compatibility (EMC) - Testing and measurement techniques - Electrostatic discharge immunity test

GB/T 17626.3 Electromagnetic compatibility - Testing and measurement techniques - Radiated radio-frequency electromagnetic field immunity test

GB/T 19951 Road vehicles - Test methods for electrical disturbances from electrostatic discharge

GB/T 21437.2-2008 Road vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only

QC/T 29106 Technical specification of low-voltage electric harness for motor vehicles

Refusal rejection rate (FRR)

The proportion of the fingerprint images which are acquired respectively from same finger and judged as the different fingers when performing 1:1 matching, expressed as a percentage.

3.7

One time watching rate [translator's note: shall be one time matching rate]

The proportion of the fingerprint images which are matched successfully and enrolled at the first time of operation when judging the fingerprint images which are acquired respectively from same finger as the same finger in the course of performing 1:1 matching, expressed as a percentage.

3.8

False enrollment rate

The proportion of the fingerprints of the personnel who are rejected for enrollment because the fingerprint images as acquired from the same finger after processing cannot generate a template when extracting the fingerprint features and cannot form the basis of matching, expressed as a percentage.

3.9

Miss work

The phenomena that the function of the device cannot be normally turned on or off when it is disturbed by any external factors.

4 Principle

The fingerprint recognition thief resistant automobile equipment is mainly composed of a host computer, a standalone module for fingerprint recognition, an alarm device, a wire harness.

5 General requirements

5.1 The device shall have the function to prevent unauthorized users from starting the engine or other major power source of the vehicle normally. The drive power system of the vehicle cannot be started until the system is turned on.

5.2 The size of the device or screen for acquiring the fingerprint image shall be

vehicle battery is replaced, the fingerprint information saved by the fingerprint enrollment shall not be lost. Except for manual deletion or damage, fingerprint information shall be permanently stored for a long time.

6.4.4 Management of usage rights.

The device shall have a hierarchical management function for user's usage rights. It shall have a corresponding authorization mechanism in the process of fingerprint enrollment or deletion.

6.5 Basic functions of host

6.5.1 Vehicle start function.

It shall be able to set the automatic start or manual start of the vehicle engine. The device shall have dual backup protection function. If one of the relays fails, it will not affect the normal start and driving of vehicle.

6.5.2 System function.

When it is necessary to temporarily turn off the function of the device (such as vehicle washing, repair, maintenance), the vehicle is brought to the state where no device is installed to facilitate the repair, maintenance, etc. of the vehicle, then the device is turned on after the vehicle is returned back to the user.

6.5.3 Password function

It shall be possible to set and use a password. When the fingerprint acquisition function cannot achieve normal acquisition and comparison, the owner may use the password function to start the vehicle engine normally.

6.5.4 Initialization function.

It shall be able to initialize the system to reach the exit-factory state.

6.5.5 Protection function.

The outer casing of the operating device for fingerprint acquisition shall be able to withstand the IP50 degree of protection in GB 4208. When a little water is spilled onto the outer casing of the operating device that collects the fingerprint, there shall be no leakage.

6.6 Power supply

The power supply of the device adopts the DC battery power supply as provided by the automobile DC generator as equipped by the vehicle.

7.21 Alarm function

7.21.1 When there are 3 consecutive fingerprint verification errors or 3 password input errors, the device shall be able to give an audible alarm or signal output.

7.21.2 When the fingerprint recognition device for vehicle is disconnected or short-circuited, the device shall be capable of giving an audible alarm or signal output.

7.21.3 When the vehicle is started by abnormal means, the device shall be capable of giving an audible alarm.

8 Test methods

8.1 Structure and appearance inspection

Use the testing, observation, measurement, and similar method to inspect the structure and appearance of the fingerprint recognition thief resistant automobile equipment.

8.2 Power test

8.2.1 Power supply inspection.

Use the DC-regulated power supply to replace the battery to connect the fingerprint recognition thief resistant automobile equipment. Between the power line as led from the positive pole of the power supply and the power line of the device, connect the DC current meter in series, to carry out test in the working state and standby state. The functions of the device shall be normal.

8.2.2 Undervoltage indication test.

Use the DC voltage-regulated power supply to supply power to the device. First adjust the voltage-regulated power supply to the rated voltage. Carry out test and the function shall be normal. Then reduce the power supply voltage to DC 9 V. At this time, the device shall be able to continuously and normally turned on/off for 50 times.

8.2.3 Power supply adaptability test.

Continuously adjust the power supply to 9 V, 12 V, 15 V for cyclic test. Each test time is not less than 10 min. Without any adjustments, the device shall be able to meet the requirements of 7.10.

8.2.4 Overvoltage operation test.

position on the vehicle. Use the three directions X, Y, Z as specified in Table 3, to carry out the sinusoidal vibration test in the range of 10 Hz ~ 55 Hz. If there is a resonance point, vibrate it at this frequency for 30 min. If there is no resonance point, vibrate it for 30 min at a frequency of 35 Hz, totally 90 min. Check the appearance and functions of the system after the test.

8.4.3 Impact test.

Fix the device on the impact test bench according to the actual assembly position on the vehicle. Follow the requirements of Table 3, impact it 3 times along each direction of axis X, Y, Z. After the test, check the appearance and each function of the system.

3.4.4 Free fall test.

Follow the requirements of Table 3 to carry out the free fall test. During the test, it may be protected by the exit-factory packaging box. After the test, check each function of the system.

8.5 Electromagnetic compatibility test

8.5.1 Test of electrostatic discharge immunity

The device shall be tested in accordance with the method specified in GB/T 17626.2. The test results shall meet the requirements of 7.16.1.

8.5.2 Test of radio frequency electromagnetic field radiation immunity.

The device shall be tested in accordance with the method specified in GB/T 17626.3. No malfunction shall occur during the test. The test results shall meet the requirements of 7.16.2.

8.5.3 Test of electric fast transient pulse group immunity

The device shall be tested according to the transient immunity test requirements and performance requirements of GB/T 21437.2-2008. The test level and function level are as shown in Table 4. No malfunction shall occur during the test. The test results shall meet the requirements of 7.16.3.

If the inspected item is qualified, it is judged that the batch of products is a qualified product. If one or two items of the sample are judged as unqualified items after inspection, it is necessary to double the sample from the batch of products for re-inspection. If there are still unqualified items, the batch of products is judged to be unqualified. If there are more than 2 unqualified items in the sample after inspection, this batch of products are unqualified and shall not be re-inspected.

9.5 Product quality certificate

The product quality certificate must state the relevant contents of 10.1 and 10.2 of this standard, the main contents of the instruction manual, precautions, after-sales service commitment, maintenance contact address, telephone number, etc.

10 Marking, packaging, transportation, storage

10.1 Marking

10.1.1 The product shall have clear and durable markings, including nameplates or signs and quality inspection marking.

10.1.2 The nameplate or sign of the fingerprint recognition thief resistant automobile equipment shall include the following contents:

- a) Product name and model;
- b) Product manufacturers and trademarks;
- c) Exit-factory date and number of products;
- d) Implemented standard number.

10.2 Packaging

10.2.1 The pictorial signs of packaging, storage, transportation shall comply with the provisions of GB/T 191. The packaging box shall have a product quality certificate, product instruction manual, certificate, after-sales service registration card, insurance card, its attachment. When operated according to the requirements of the product manual, it shall be able to correctly install, use and maintain the fingerprint recognition thief resistant automobile equipment.

10.2.2 Select the packing box of appropriate specification according to the size of the product. The packaging box shall have the name of the factory, the address of the factory, the telephone number, the implemented product standard number, the product model and name, the quantity, the exit-factory date, the exit-factory inspection form of product, the protection requirements

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----