# GRAND-DUCHÉ DE LUXEMBOURG Ministère du Développement durable et des Infrastructures Département des Transports

# SOCIÉTÉ NATIONALE DE CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180



L-2938 Luxembourg

**Référence:** E13\*10R05/01\*13796\*01

Annexes: - Rapport Technique

- Fiche de Renseignements du constructeur

Luxembourg, le 17 août 2018

L-5201 Sandweiler

### Communication concernant:(2)

Communication concerning:



- la délivrance d'une homologation approval granted
- l'extension d'homologation approval extended
- le refus d'homologation approval refused
- le retrait d'homologation approval withdrawn
- l'arrêt définitif de la production production definitely discontinued

d'un type de sous-ensemble électrique/électronique $^{(2)}$  en ce qui concerne le Règlement  $N^{\circ}$  10 of a type of electrical/electronic sub-assembly with regard to Regulation  $N^{\circ}$  10

Numéro d'homologation par type:

Approval number:

Marque d'homologation:

Approval mark:

E13\*10R05/01\*13796\*01

(E<sub>13</sub>

10R - 05 13796

1. Fabricant: (marque commerciale du

constructeur):

Make (trade name of manufacturer):

Ningbo SAFE Brakes System Co., Ltd

(for logo refer to manufacturer's information document)

**2. Type:** SF10

Type:

Dénomination(s) commerciale(s) générale(s):

General commercial description(s):

SF10-2

**ABS** 

Version(s)/Variante(s):

Version(s)/Variant(s):

3. Moyens d'identification du type, s'ils

sont marqués sur le <del>véhicule</del> / composant / <del>entité technique</del><sup>(2)</sup>:

Means of identification of type, if marked on the vehicle / component / separate technical unit:

See item 6.

3.1. Emplacement de ce marquage:

Location of that marking:

See item 6.

4. Catégorie du véhicule:

Category of vehicle:

Not applicable

5. Nom et adresse du constructeur:

Name and address of manufacturer:

Ningbo SAFE Brakes System Co., Ltd No. 8 Zhongyang Road, Shangyang Industrial Zone,

East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province

P.R. CHINA

6. Dans le cas de composants ou d'entités

techniques, emplacement et procédé de fixation de la marque de réception CEE:

In the case of components and separate technical units, location and method of affixing of the ECE approval mark:

Self adhesive label on the housing

7. Adresse(s) de l' (des) usine(s) d'assemblage:

Address(es) of assembly plant(s):

Ningbo SAFE Brakes System Co., Ltd

No. 8 Zhongyang Road, Shangyang Industrial Zone,

East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province

P.R. CHINA

8. Informations supplémentaires (s'il y a lieu):

Additional informations (where applicable):

See appendix

9. Autorité déléguée:

Assigned authority:

Société Nationale de Certification et d'Homologation

L-5201 Sandweiler

Service technique responsable de l'exécution

des essais:

Technical service responsible for carrying out the tests:

ATE EL s.à r.l. 14, op Huefdreisch L-6871 Wecker

10. Date du rapport d'essai:

Date of test report:

11.06.2018

11. Numéro du rapport d'essai:

Number of test report:

61SFA0001B

12. Remarques (s'il y a lieu):

Remarks (if any):

See appendix

13. Lieu: Luxembourg

Place:

17 août 2018 14. Date:

Date:

**Signature:** Signature: **15.** 

Pour le Ministre du Développement durable et des Infrastructures

Pour la SNCH

**Marco FELTES** Inspecteur Principal 1er en rang

**Laurent LINDEN** Attaché de Direction



16. L'index de l'ensemble des renseignements déposé chez l'autorité de réception, qui peut être obtenu sur demande, est joint.

The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

See index to type-approval report

**17.** Raison(s) de l'extension:

Reason(s) for extension:

Refer to Annex I1 of Technical Report

<sup>&</sup>lt;sup>2</sup>Biffer la mention inutile

# Appendice Appendix

# au certificat d'homologation par type N° E13\*10R05/01\*13796\*01 to type-approval certificate N° E13\*10R05/01\*13796\*01

 $\begin{array}{c} \textbf{concernant l'homologation par type d'un sous ensemble \'electrique} \'electronique selon le R\`eglement N° 10. \\ \textbf{concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.} \end{array}$ 

| 1.     | Informations supplémentaires. Additional information.  |  |                            |
|--------|--|--|----------------------------|
| 1.1.   | Tension nominale du système électrique [V]: Electrical system rated voltage [V]:   | 12V DC   |                            |
|        | Masse: Ground:   | Negative / Positive (2)  |                            |
| 1.2.   | Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes: This ESA can be used on any vehicle type with the following restrictions:   | None   |                            |
| 1.2.1. | Conditions d'installation, s'il y a lieu:<br>Installation conditions, if any:  | None   |                            |
| 1.3.   | CE SEEE peut seulement être utilisé sur les types de véhicules suivants: This ESA can be used only on the following vehicle types:   | Not applicable   |                            |
| 1.3.1. | Conditions d'installation, s'il y a lieu: Installation conditions, if any:   | Not applicable   |                            |
| 1.4.   | La (les) méthode(s) spécifique(s) d'essais utilisée(s) et les bandes de fréquences couvertes pour déterminer l'immunité étai(ent): (indiquez s'il vous plaît à partir de l'annexe 9 la méthode précise utilisée). The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from annex 9). | Bulk current injection test<br>20 to 400MHz<br>Absorber chamber test<br>400 to 2000MHz | ISO 11452-4<br>ISO 11452-2 |
| 1.5.   | Laboratoire accrédité au titre de la norme ISO 17025 et reconnu par l'autorité d'homologation chargé d'effectuer les essais: Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests:   | Not applicable   |                            |
| 2.     | Commentaires:  | None   |                            |

# GRAND-DUCHÉ DE LUXEMBOURG Ministère du Développement durable et des Infrastructures Département des Transports

# SOCIÉTÉ NATIONALE DE CERTIFICATION ET D'HOMOLOGATION

s.àr.l.

Registre de Commerce: B 27180



L-2938 Luxembourg L-5201 Sandweiler

**Référence:** E13\*10R05/01\*13796\*01

Annexes: - Rapport Technique

- Fiche de Renseignements du constructeur

Luxembourg, le 17 août 2018

## Index du dossier d'homologation

Index to type-approval report

**Numéro d'homologation:** E13\*10R05/01\*13796\*01

Approval number:

Revision:

**Révision:** 00

Marque de fabrique ou de commerce: Ningbo SAFE Brakes System Co., Ltd

Trade name or mark: (for logo refer to manufacturer's information document)

Type: SF10

Type:

1. Procès-verbal d'essai: N° 61SFA0001B

Test report:

- Technical report: Page 1 & 2

 $\begin{array}{ll} \text{- Index:} & \text{Annex I1 - Page 1} \\ \text{- Test report:} & \text{Annex T - Page 1 to 11} \\ \text{- General information:} & \text{Annex GI1 - Page 1 \& 2} \end{array}$ 

2. Dossier du constructeur: N° SF10-01-R10

Report of the manufacturer:

- Manufacturer's information document: Page <u>1 to 7</u>

3. Autres documents annexés: Not applicable

Other documents annexed:

4. Date de délivrance de l'homologation

initiale: 30.11.2015
Date of issue of initial type approval:

5. Date de la dernière délivrance de pages

révisées: Not applicable

Date of last issue of revised pages:

Bute of that issue of terrised pages?

6. Date de la dernière délivrance d'une

homologation révisée: 17.08.2018

Date of last extension:



Type: SF10

Tests and inspection concerning

#### **ELECTROMAGNETIC COMPATIBILITY**

according to the ECE Regulation No. 10 including all amendments up to Series 05, Supplement 1 of 08.10.2016

Manufacturer: Ningbo SAFE Brakes System Co., Ltd

No.8 Zhongyang Road, Shangyang Industrial Zone,

East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province,

P. R. China

Type: SF10

| Type of Approval: | Type Approval No.:    | Manufacturer:             |
|-------------------|-----------------------|---------------------------|
| ECE               | E13*10R05/01*13796*01 | Ningbo SAFE Brakes System |
|                   |                       |                           |

**Conclusion:** 

The tests and checks carried out have shown the compliance of the type described in this report and the attached annexes with the Regulation mentioned above.

Shanghai, 11.06.2018

Mengting Xu Ingénieur Inspecteur

Index: see Annex I1



Type: SF10

Refer to Annex T

#### 2 Type and variants

The tests and inspections carried out and described in this technical report have been selected in order to include the following variants and versions of the type and its equipments, as far as these are relevant for the topic of this report, into the judgement:

As stated in Annex MID (Manufacturer's Information Document):

- Variant(s) 2.

#### 3 Remark

3.1 General

None.

3.2 Extension 01

New tests have been run and new test results have been added.

ATE EL s.à r.l. 14, op Huefdreisch L-6871 Wecker Tel.: +352 26 787 715 Fax: +352 26 787 716 admin@ateel.lu



Type: SF10

#### Compilation of Dossier No.: 61SFA0001

#### **Extension 00**

Technical Report no.: 61SFA0001A page 1 and 2

#### Composition of Annex:

 I1:
 Index
 page 1

 T:
 General Test Report
 page 1 to 9

 GI1:
 General Information
 page 1 to 2

 MID:
 Manufacturer's Information Document
 page 1 to 6

Index of the appendices to the Manufacturer's Information Document: see Annex MID,page 1

#### **Extension 01**

Technical Report no.: 61SFA0001B page 1 and 2

#### Composition of Annex:

I1:Indexpage 1T:General Test Reportpage 1 to 11GI1:General Informationpage 1 to 2MID:Manufacturer's Information Documentpage 1 to 7

Index of the appendices to the Manufacturer's Information Document: see Annex MID,page 1

#### Content of extension:

#### to be added:

- item 2. Variant(s): SF10-2
- the assembly plant: Ningbo SAFE Brakes System Co., Ltd
- annex MID Drawing No.: SCHEMATIC and PCB for variant SF10-2.

#### to be updated:

- UNECE regulation No 10 including all amendments up to Series 05, Supplement 1

#### to be corrected:

- none

#### to be changed:

- the editorial arrangement

#### to be deleted:

- the assembly plant: Ningbo Norkin Precision Hardware Industry Co., Ltd.
- annex MID: List of main component constituting the ESA



Type: SF10

#### **General Test Report**

The data in this section refer only to the items submitted to testing or inspection.

| Λ | Δ | h | 10 | tra | ct |
|---|---|---|----|-----|----|
|   |   |   |    |     |    |

0.1 Type SF10

#### 1 Dates and resources

1.1 Date of receipt of test item 14.10.2015 27.05.2018

1.2 Date of test 14.10.2015

<u>27.05.2018</u>

1.3 Place of test Motorcycle Test Technology Institute of China South

**Industries Group Corporation** 

Xi'an, Shanxi, China

Compliance Certification Services Inc.(CCSRF)

Shanghai, China

1.4 Testing site and testing equipment:

All measuring and test equipment used to carry out the inspections are in accordance with ISO 17025 and the regulatory act(s) applied.

- 1.5 Resources
- 1.5.1 Configuration other than "REESS charging mode coupled to the power grid"
- 1.5.1.1 Broadband and narrowband emissions:
- 1.5.1.1.1 Broadband emissions

The requirements of item 3 and item 4 of Annex 7 of the Regulation have been fulfilled. The test have been conducted in measurements performed in a semi anechoic chamber.

1.5.1.1.2 Narrowband emissions

The requirements of item 3 and item 4 of Annex 8 of the Regulation have been fulfilled. The test have been conducted in measurements performed in a semi anechoic chamber.

1.5.1.2 The immunity of ESAs to electromagnetic radiation

The requirements of item 3 and item 4 of Annex 9 of the Regulation have been fulfilled. The specific test requirements shall include the absorber chamber test and bulk current injection testing.



Type: SF10

#### **General Test Report**

1.5.1.3 The immunity to transient disturbances conducted along supply lines

The requirements of item 2 of Annex 10 of the Regulation have been fulfilled. This test method shall ensure the immunity of ESAs to conducted transients on the vehicle power supply.

1.5.1.4 The emission of conducted disturbances

The requirements of item 3 of Annex 10 of the Regulation have been fulfilled.

This test method shall ensure limit conducted transients from ESAs to the vehicle power supply.

- 1.5.2 Configuration "REESS charging mode coupled to the power grid"
- 1.5.2.1 Broadband emissions

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.2 The immunity of ESAs to electromagnetic radiation

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.3 Emission of harmonics on AC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.4 Emission of voltage changes, voltage fluctuations and flicker on AC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.5 Emission of radiofrequency conducted disturbances on AC or DC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.6 Emission of radiofrequency conducted disturbances on network and telecommunication access from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.7 Immunity of an ESA to electrical fast transient/burst disturbances conducted along AC and DC power lines

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.8 Immunity of ESA to surge conducted along AC and DC power lines

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"



Type: SF10

#### **General Test Report**

#### 2 Test object

The tests were conducted with a test ESA which is representative of the ESA type to be approved.

#### 2.1 Description

The ESA is an ABS.

The ESA can be used with 12V(DC) voltage, negative ground.

ESA configuration: Other ESA's than involved in "REESS charging mode coupled to the power grid"

Type: SF10 Variant: SF10-2

#### 2.2 Equipment

Optional equipment installed on the ESA: none

#### 3 **Tests and inspections**

#### Measurement of radiated broadband electromagnetic emissions from ESA 3.1

The test is performed on 12V voltage system.

Antenna position: According to Annex 7, item 3.1

Limit values According to item 6.5.2.1 of the Regulation

Bandwidth: 120 kHz

Frequency range: 30 to 1000 MHz

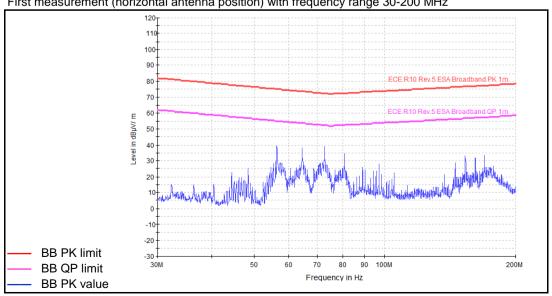
Detector: Type: SF10: Peak (CISPR 12)

Variant: SF10-2: Quasi Peak (CISPR 12)

ESA condition: According to item 2 of Annex 7 of the Regulation

#### 3.1.1 Test results:

First measurement (horizontal antenna position) with frequency range 30-200 MHz

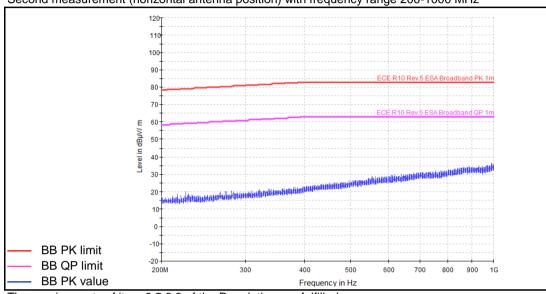




Type: SF10

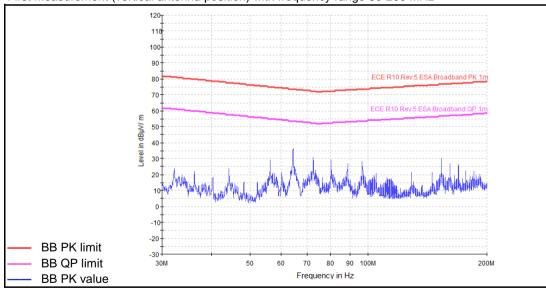
#### **General Test Report**

Second measurement (horizontal antenna position) with frequency range 200-1000 MHz



The requirements of item 6.5.2.2 of the Regulation are fulfilled.

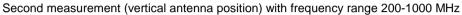
First measurement (vertical antenna position) with frequency range 30-200 MHz

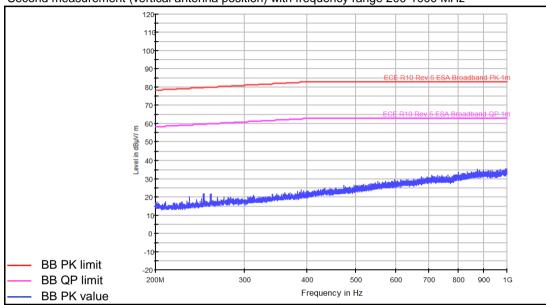




Type: SF10

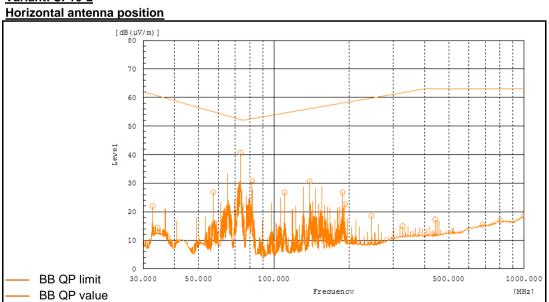
#### **General Test Report**





The requirements of item 6.5.2.2 of the Regulation are fulfilled.

### Variant: SF10-2

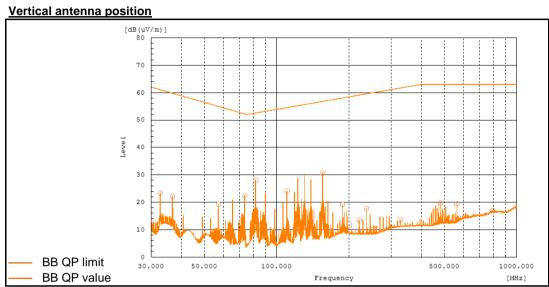


The requirements of item 6.5.2.2 of the Regulation are fulfilled.



Type: SF10

#### **General Test Report**



The requirements of item 6.5.2.2 of the Regulation are fulfilled.

#### 3.2 Measurement of radiated narrowband electromagnetic emissions from ESA

The test is performed on 12V voltage system.

Antenna position: According to Annex 8, item 3.1

Limit values According to item 6.6.2.1 of the Regulation

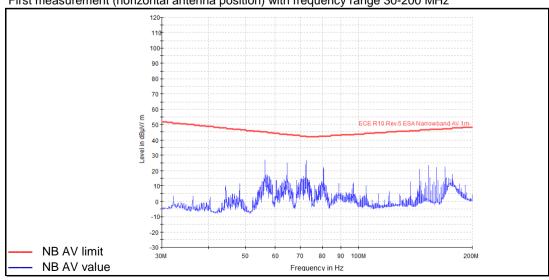
Bandwidth: 120 kHz Frequency range: 30 to 1000 MHz

Detector: Average detector

ESA condition: According to item 2 of Annex 8 of the Regulation

#### 3.2.1 Test results

First measurement (horizontal antenna position) with frequency range 30-200 MHz

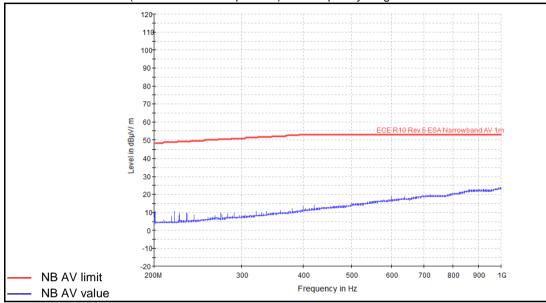




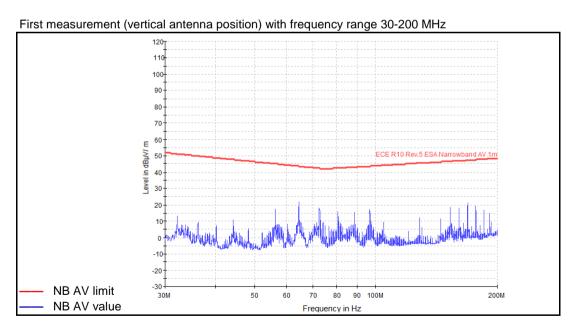
Type: SF10

#### **General Test Report**

Second measurement (horizontal antenna position) with frequency range 200-1000 MHz



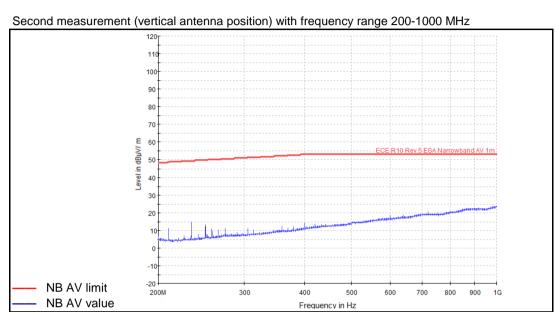
The requirements of item 6.6.2.2 of the Regulation are fulfilled.





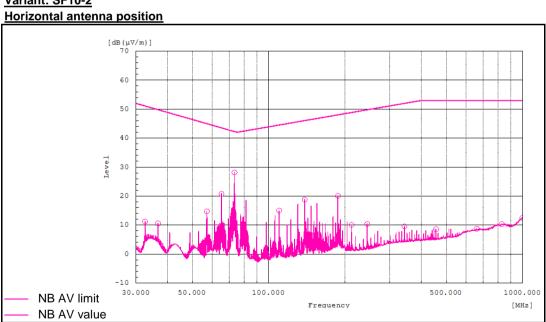
Type: SF10

#### **General Test Report**



The requirements of item 6.6.2.2 of the Regulation are fulfilled.

#### Variant: SF10-2

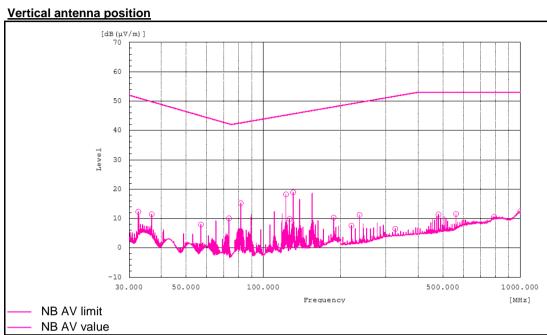


The requirements of item 6.6.2.2 of the Regulation are fulfilled.



Type: SF10

#### **General Test Report**



The requirements of item 6.6.2.2 of the Regulation are fulfilled.

#### 3.3 The immunity of ESAs to electromagnetic radiation

Type: SF10, Variant: SF10-2

#### 3.3.1 Absorber chamber test

The test is performed on 12V voltage system.

Method of testing: ISO 11452-2

Frequency range: 400 to 2000 MHz

Test level 30V/m

Type of modulation: 400-800 MHz: 80% AM, 1kHz

800-2000 MHz:PM, ton=577µs, period 4,600 µs

ESA condition: According to item 2 of Annex 9 of the Regulation

#### 3.3.1.1 Test results

There is no degradation of performance of "immunity related functions".

The requirements of item 6.8.2.2 of the Regulation are fulfilled.



Type: SF10

#### **General Test Report**

#### 3.3.2 Bulk current injection test

The test is performed on 12V voltage system.

Method of testing:

ISO 11452-4

Frequency range:

20 to 400 MHz

Test lever: 60mA

Type of modulation: 80% AM, 1kHz

ESA condition: According to item 2 of Annex 9 of the Regulation

#### 3.3.2.1 Test results

There is no degradation of performance of "immunity related functions".

The requirements of item 6.8.2.2 of the Regulation are fulfilled.

## 3.4 Measurement of the immunity to transient disturbances conducted along 12/24V supply lines

Type: SF10, Variant: SF10-2

The test is performed on 12V voltage system.

Method of testing: ISO 7637-2

Test pulse number: 1, 2a, 2b, 3a/3b,4

Immunity test level:

ESA condition: According to item 4 of ISO 7637-2

#### 3.4.1 Test results

#### 12V system

| Test pulse number | Test voltage | Number of pulses/duration | Required functional status | Functional status during test |
|-------------------|--------------|---------------------------|----------------------------|-------------------------------|
| 1                 | -75V         | 5000 pulses               | С                          | С                             |
| 2a                | +37V         | 5000pulses                | В                          | А                             |
| 2b                | +10V         | 10 pulses                 | С                          | С                             |
| 3a                | -112V        | 1 h                       | Α                          | Α                             |
| 3b                | +75V         | 1 h                       | А                          | A                             |
| 4                 | -6V          | 1 pulse                   | С                          | A                             |

The requirements of item 6.9.1 of the Regulation are fulfilled.



Type: SF10

## **General Test Report**

## 3.5 Measurement of Emission of transient conducted disturbances generated by ESAs on 12/24V supply lines

Type: SF10, Variant: SF10-2

The test is performed on 12V voltage system. Method of testing: ISO 7637-2

ESA condition: According to item 4 of ISO 7637-2

#### 3.5.1 Test results

### 12V system

| Polarity of pulse amplitude | Maximum allowed pulse amplitude for vehicle with 12 V system | Result |
|-----------------------------|--|--------|
| Positive                    | +75V   | Pass   |
| Negative                    | -100V  | Pass   |

The requirements of item 6.7.1 of the Regulation are fulfilled.



Type: SF10

[12.]

Remarks: (if any):

**General Information** [] Numbering according to annex 3B of the type-approval certificate following Regulation No.10 Communication concerning the type-approval / extension of type-approval EC type-approval mark to be affixed on ESA: E13 10R-05 13796 [1.] Make (trade name of manufacturer) [2.] Type and general commercial description: Type: SF10 Variant(s): SF10-2 Commercial description(s): ABS [3.] Means of identification of type, if marked on the vehicle/ component/ separate technical unit: See item 6 See item 6 [3.1.] Location of that marking: [4.] Category of vehicle: Not applicable [5.] Name and address of manufacturer: Ningbo SAFE Brakes System Co., Ltd No.8 Zhongyang Road, Shangyang Industrial Zone, East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province, P. R. China [6.] In the case of components and separate technical units, location and method of affixing of the approval mark: Self adhesive label on the housing [7.] Address(es) of the production plant(s): Ningbo SAFE Brakes System Co., Ltd No.8 Zhongyang Road, Shangyang Industrial Zone, East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province, P. R. China Additional information: (where applicable) See appendix [8.] [9.] Technical service responsible for carrying out ATE EL s.à r.l. the tests: 14, op Huefdreisch L-6871 Wecker [10.] **Date of test report:** 11.06.2018 Number of test report: 61SFA0001B [11.]

See appendix



**General Information** 

Technical Report No. 61SFA0001B

Type: SF10

| [13.]<br>[14.]<br>[15.]<br>[16.] |   |   |
|----------------------------------|---|---|
| [17.]                            | Reasons for extension:  | See Annex I1  |
|                                  | Appendix to type-approval communication form No. approval of an electrical/ electronic sub-assembly ur  |   |
| [1.]                             | Additional information:   |   |
| [1.1.]                           | Electrical system rated voltage:  | 12V DC, negative ground   |
| [1.2.]                           | This ESA can be used on any vehicle type with the following restrictions:   | None  |
| [1.2.1.]                         | Installation conditions, if any:  | None  |
| [1.3.]                           | This ESA can only be used on the following vehicle types:   | Not applicable.   |
| [1.3.1.]                         | Installation conditions, if any:  | Not applicable.   |
| [1.4.]                           | The specific test method(s) used and the frequency ranges covered to determine immunity were: (please specify precise method used from Annex 9) | Absorber chamber test according to ISO 11452-2 (from 400-2000MHz) Bulk current injection test according to ISO 11452-4 (from 20-400MHz) |
| [1.5.]                           | Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests:                             | Not applicable.   |
| [2.]                             | Remarks:  | None  |
|                                  |   |   |

UNIFORM PROVISIONS CONCERNING THE EC TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUBASSEMBLY WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY

#### **REGULATION No. 10.05**

(Information Document No. SF10-01-R10)

### **INDEX OF DOCUMENTATION**

| <u>Page</u> | Concept                           | <u>Date</u>       |
|-------------|-----------------------------------|-------------------|
| <u>2</u>    | <u>GENERAL</u>                    | <u>11.06.2018</u> |
| <u>3</u>    | LOCATION OF THE ECE APPROVAL MARK | <u>11.06.2018</u> |
| <u>4-5</u>  | SCHEMATIC OF THE DEVICE           | <u>11.06.2018</u> |
| 6-7         | PCB                               | 11.06.2018        |

### **APPLICATION HISTORY**

| Extension No. | Extension Reasons   | APPLICATION<br>DATE |
|---------------|---|---------------------|
| 00            | Not applicable(Base Approval)   | NOV. 2015           |
| <u>01</u>     | Add variant(s), SCHEMATIC and PCB drawings for this variant(s). Add a new assembly plant and delete the old one. Delete 'List of main component constituting the ESA' | <u>11.06.2018</u>   |

Ext. : 0

#### **GENERAL**



1. Make (trade name of manufacturer):

2. Type: **SF10** 

Variant(s): SF10-2

Commercial description(s): **ABS** Function: **The ESA is an ABS.** 

- 3. Means of identification of type, if marked on the component/separate technical unit (a):
- 3.1. Location of that marking:

On the housing, see drawing of the ESA.

4. Name and address of manufacturer:

Ningbo SAFE Brakes System Co., Ltd No.8 Zhongyang Road, Shangyang Industrial Zone, East Qianhu Town, Yinzhou District, Ningbo City, Zhejiang Province, P. R. China Name and address of authorised representative, if any: Not Applicable

5. In the case of components and separate technical units, location and method of affixing of the EC approval mark:

Self adhesive label on the housing, see drawing of the ESA.

6. Address(es) of assembly plant(s):

Ningbo SAFE Brakes System Co., Ltd
No.8 Zhongyang Road, Shangyang Industrial Zone, East Qianhu Town, Yinzhou
District, Ningbo City, Zhejiang Province, P. R. China

- 7. This ESA shall be approved as a component/STU<sup>2)</sup>: **Component**
- 8. Any restrictions of use and conditions for fitting: **Not Applicable**
- 9. Electrical system rated voltage: ...... V, positive/negative<sup>2)</sup> ground

12V DC, negative ground

- 10. Charger: Not Applicable
- 11. Charging current: Not Applicable
- 12. Maximal nominal current (in each mode if necessary): **Not Applicable**
- 13. Nominal charging voltage: **Not Applicable**
- 14. Basic ESA interface functions: **Not Applicable**
- 15. Minimum R<sub>sce</sub> value: **Not Applicable**

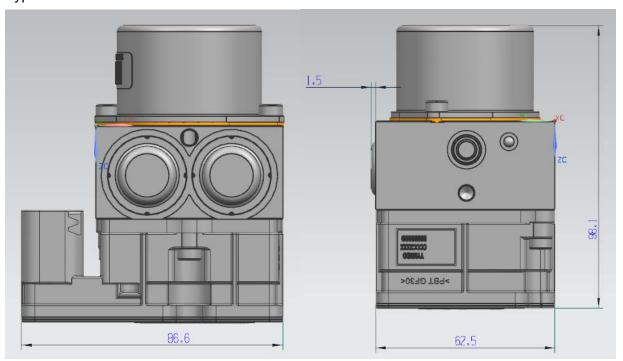
## DRAWINGS OF THE ESA

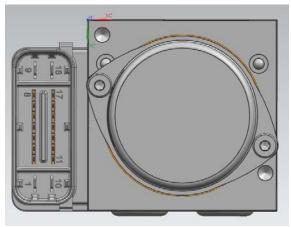
## LOCATION OF THE ECE APPROVAL MARK



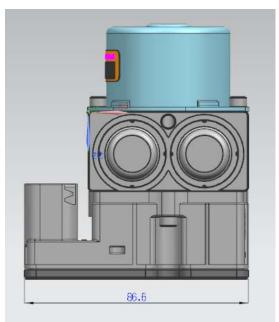
## SCHEMATIC OF THE DEVICE

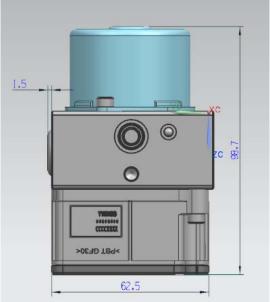
Type: SF10

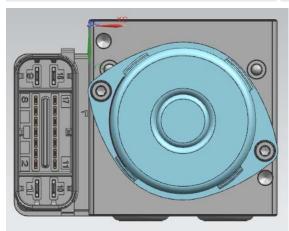




## Variant(s): SF10-2

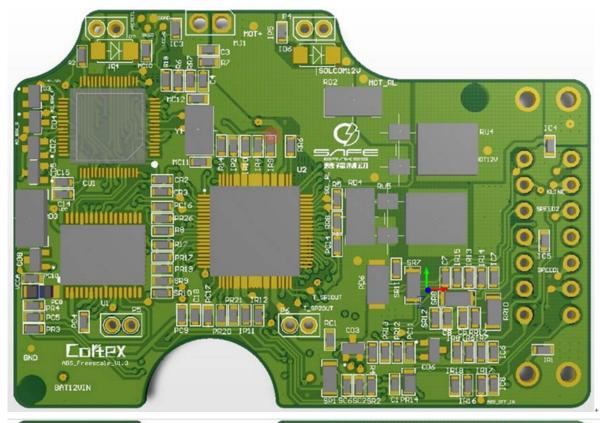


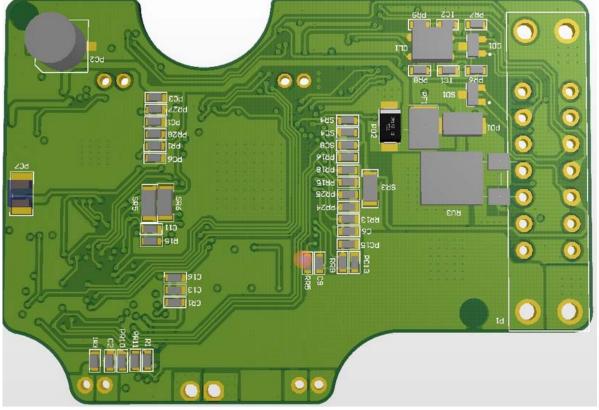




PCB

Type: SF10





## Variant(s): SF10-2

