

# TEST REPORT

NO.1151

Project code:TI/0189-I60839-1-3

Test Report for Alarm Type HAL 109  
Manufactured by Hamyan Fan Co.

According to IEC60839-1-3

Tehran, 06/04/84

By order of Hamyan Fan Co, at Tehran, Iran

No. of pages

9

Issue date

84/04/06

Prepared :Test & Inspection Engineer  
F.Ansari



Verified:Test & Inspection Chief  
Sh.Abdolzadeh



Approved:Engineering Deputy of Test and Inspection  
(Representative of Amirkabir University of Technology)

Dr B Vahidi



*This test report does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by E.P.I.L is not the responsibility of E.P.I.L.*



*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## CONTENTS

	Page
1 General Information.....	3
1.1 Product Information.....	3
1.2 Client Information.....	3
1.3 Test performed.....	3
1.4 Result of tests.....	3
2 Performance and result of tests.....	4
2.1 Free Fall .....	4
2.2 Dry heat Test .....	6
2.3 Cold Test.....	7
2.4 Insulation test.....	8
3 Conclusion.....	9

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## 1. GENERAL INFORMATION

### 1.1 Product Information

Equipment under test : Alarm Type HAL 109  
Normative document : IEC 60839-1-3

### 1.2 Client Information(Manufacturer)

Applicant : Hamyan Fan Co.  
Contact person : Mr.Ahmadi  
Telephone : +98 21 2017692-3  
Fax : +98 21 2053237  
Adress : No.10. , Sayeh St, Vali-e-Asr Ave.,  
Tehran 19677 Iran

### 1.3 Tests performed

Free Fall :84/01/27  
Dry heat Test :84/01/28  
Cold Test :84/01/27  
Insulation resistanceTest :84/01/27

### 1.4 Result of test

Passed : See page 4 to 9

گروه آزمایشگاهی صنایع برق  
E.P.I.L.  
تهران - خیابان جانی

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## 2 PERFORMANCE AND RESULTS OF TESTS

### 2.1 Free Fall

#### 2.1.1 Test data

Location	: EPIL
Date	: 84/01/27
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mrs.F.Ansari
Normative document	: IEC 60839-1-3 ,Clause 5.2 A-18

#### 2.1.2 Instrument used for the test

A smooth surface of concrete or steel

#### 2.1.3 Ambient conditions

Ambient air temperature	: 22.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 32.3 %

#### 2.1.4 procedure of test

The test consists of two exposures to free fall from the specified height on to a smooth surface of concrete or steel.The orientations of the specimens at the moment of release shall be those considered to be most unfavourable.The specimen need not be operating during the test.

Falling height =120 cm

#### 2.1.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

توسعه و نگهداری تجهیزات  
تولید و تعمیرات تجهیزات  
تولید و تعمیرات تجهیزات  
تولید و تعمیرات تجهیزات

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

2.1.6 Photo



The EUT under the Free Fall test

2.1.7 Result of test

✓ passed

*E.P.I.L.✓*  
*شرکت آزمایشگاهی صنایع برق*  
*تهران - ایران*

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## 2.2 Dry heat Test

### 2.2.1 Test data

Location	: EPIL
Date	: 84/01/28
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mrs.F.Ansari
Normative document	: IEC 60839-1-3 clause 5.2 A-1

### 2.2.2 Instrument used for the test

Heating Cabinet	Pars Azma
-----------------	-----------

### 2.2.3 Ambient conditions

Ambient air temperature	: 21.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 34 %

### 2.2.4 procedure of test

The specimen was placed in heating cabinet for 20 h in temperature 55°C.

### 2.2.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

### 2.2.6 Photo



The equipment under dry heat test

### 2.2.7 Result of test ✓ passed

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## 2.3 Cold Test

### 2.3.1 Test data

Location : EPIL  
Date : 84/01/27  
Engineer of Hamyan fan : Mr.Ahmadi  
Engineer of EPIL : Mrs.F.Ansari  
Normative document : IEC 60839-1-3 clause 5.2 A-2

### 2.3.2 Instrument used for the test

Cold chamber : Manufacture pars teb novin

### 2.3.3 Ambient conditions

Ambient air temperature : 22.7°C  
Air Pressure : 962.5 mbar  
Relative humidity of air : 33 %

### 2.3.4 procedure of test

The specimen was placed in cold chamber for 20 h in temperature -25°C.

### 2.3.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

### 2.3.6 Photo



The equipment under cold test

### 2.3.7 Result of test

✓ passed

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*

## 2.4 Insulation resistance Test

### 2.4.1 Test data

Location	: EPIL
Date	: 84/01/27
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mrs.F.Ansari
Normative document	: IEC 60839-1-3 clause 5.2 A-15

### 2.4.2 Instrument used for the test

Meger	: Manufactured by metrel ,model Teraohm 5kV
-------	---

### 2.4.3 Ambient conditions

Ambient air temperature	: 21.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 31 %

### 2.4.4 procedure of test

The insulation resistance was measured with a d.c. voltage of approximately 500 V applied, the measurement being made 1 min after application of the voltage.

The insulation resistance is measured between the metal plate as electrical earth and all the terminals for external conductors linked together.

### 2.4.5 Acceptance conditions of test

Test should be down according to IEC60839-1-3 and the insulation resistance should not be less than specified value .

### 2.4.6 Photo



### 2.4.7 Result of test

EUT was tested according to IEC 60839-1-3 and the insulation was more than 20M $\Omega$  ( the minimum value of the insulation resistance (20M $\Omega$ ) is specified by the manufacturer).

✓ passed

*This report not be reproduced in extracts without written approval by E.P.I.L.  
The test results relate only the sample tested.*



**3 Conclusion**

Test	Result
Free fall	Passed
Dry heat test	Passed
Cold test	Passed
Insulation test	Passed

**Overall result : Passed**

*E.P.I.L.*  
*Electrical Power Industries*  
*Co. I.J.S.I*

*This report not be reproduced in extracts without written approval by E.P.I.L.*  
*The test results relate only the sample tested.*