

# ***TEST REPORT***



KERI

**KOREA ELECTROTECHNOLOGY  
RESEARCH INSTITUTE**



## TEST REPORT

2017DS00070

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CLASSIFICATION Performance Test

TEST OBJECT Industrial terminal block

DESIGNATION -

4P AC 600 V 100 A

RECEIPT No. RRD17S00034

APPLICANT SAMIL ENTERPRISE CO., LTD.  
994-10, Pocheon-ro, Gunnae-myeon, Pocheon-si, Gyeonggi-do, Korea

MANUFACTURER SAMIL ENTERPRISE CO., LTD.  
994-10, Pocheon-ro, Gunnae-myeon, Pocheon-si, Gyeonggi-do, Korea

DATE OF TESTS 2014-07-01 ~ 2014-07-11

DATE OF ISSUE 2017-04-24

This report is the republication of test report No. 2014TS01879(2014-07-15) translated from Korean into English.

The tests have been carried out in accordance with the applicant's instructions.

This Test Report has been issued by KERI.

The test results are shown in the records of tests with the performance of the test object and the observations made during the tests. The oscillograms are attached hereto.

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TOTAL No. OF PAGES(8) : records (6), photographs (1), circuit diagrams (0),  
drawings & descriptions (0), attachments(0), oscillograms (1)



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## Tested by :

Shon, Hwa-Young

KERI

## Witnessed by : N.A

## Drawings : N.A

**Industrial terminal block**

Applied standard	Applicant's specification
Manufacturer	SAMIL ENTERPRISE CO., LTD.
Designation	-
Serial Number	-
Date of manufacture	-

Ratings of the test object assigned by manufacturer and proved by tests : N.A.

**Ratings of the test object assigned by manufacturer :**

Number of poles	4P
Rated voltage	AC 600 V
Rated current	100 A
Power-frequency withstand voltage	2.5 kV 60 s

## List of the tests :

Test items	Standard and clause	Test date	Sheet No.
1 Insulation resistance measurement	Applicant's specifications	2014-07-01	5/8
2 Power-frequency voltage withstand test	Applicant's specifications	2014-07-01	5/8
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5 Description of tests	-	-	6/8



## 1 Insulation resistance measurement

Test method(s) and requirement(s)		Test result(s)
Condition : Install the terminal block on a metal plate.	Between the adjacent terminals	Not less than 2 000 MΩ
Test requirement(s) : Not less than 20 MΩ Measuring devices : DC 500 V megger	Between all terminals connected together and the support to which the terminal block is attached.	Not less than 2 000 MΩ
* Atmospheric conditions : 23.3 °C, 62.1 % R.H., 1 007 hPa		

## 2 Power-frequency voltage withstand test

Test method(s) and requirement(s)		Test result(s)
Test method(s) - Test voltage and time : AC 60 Hz, 2.5 kV, 1 min	Between the adjacent terminals	Withstood
Test requirement(s) - During the test, no flashover, breakdown of insulation or any other manifestation of disruptive discharge shall occur	Between all terminals connected together and the support to which the terminal block is attached.	Withstood
* Atmospheric conditions : 23.3 °C, 62.1 % R.H., 1 007 hPa		

## 3 Temperature-rise test

Test method(s) and requirement(s)					
The temperature rise shall not exceed the limits.					
1) Test frequency: 60 Hz					
2) Test current: 100 A					
3) Conductor for connection : Vinyl-insulated wire 35 mm²					

Channel No.	Measuring point	Measurement method	Limit of temperature rise	Measured values		Test result(s)
1	Terminal (2P of incoming part)	Thermocouples	45 K	50.3 °C		25.1 K
2	Terminal (2P of output part)			50.6 °C		25.4 K
3	Ambient temperature		-	25.5 °C	Average : 25.2 °C	-
4	Ambient temperature		-	24.9 °C		

\* Refer to Osc. SG01: Temperature-rise

#### 4 Tensile test

Test method(s) and requirement(s)	Test result
<p>Tested in the condition below, when tensile force is applied then there should not be any deformation, break and failure.</p> <ul style="list-style-type: none"><li>- Joint cable : 35 mm<sup>2</sup></li><li>- Tightening torque of terminal nut : 6.0 N·m</li><li>- Tensile force : 200 N</li><li>- Application time : 1 min</li></ul>	No deformation, break and failure

#### 5 Description of test

- 5.1 The above test are carried out on the test objects submitted and confirmed by the applicant in accordance with applicant's instructions. The end.

## Photographs



Test object : Industrial terminal block

Designation : -

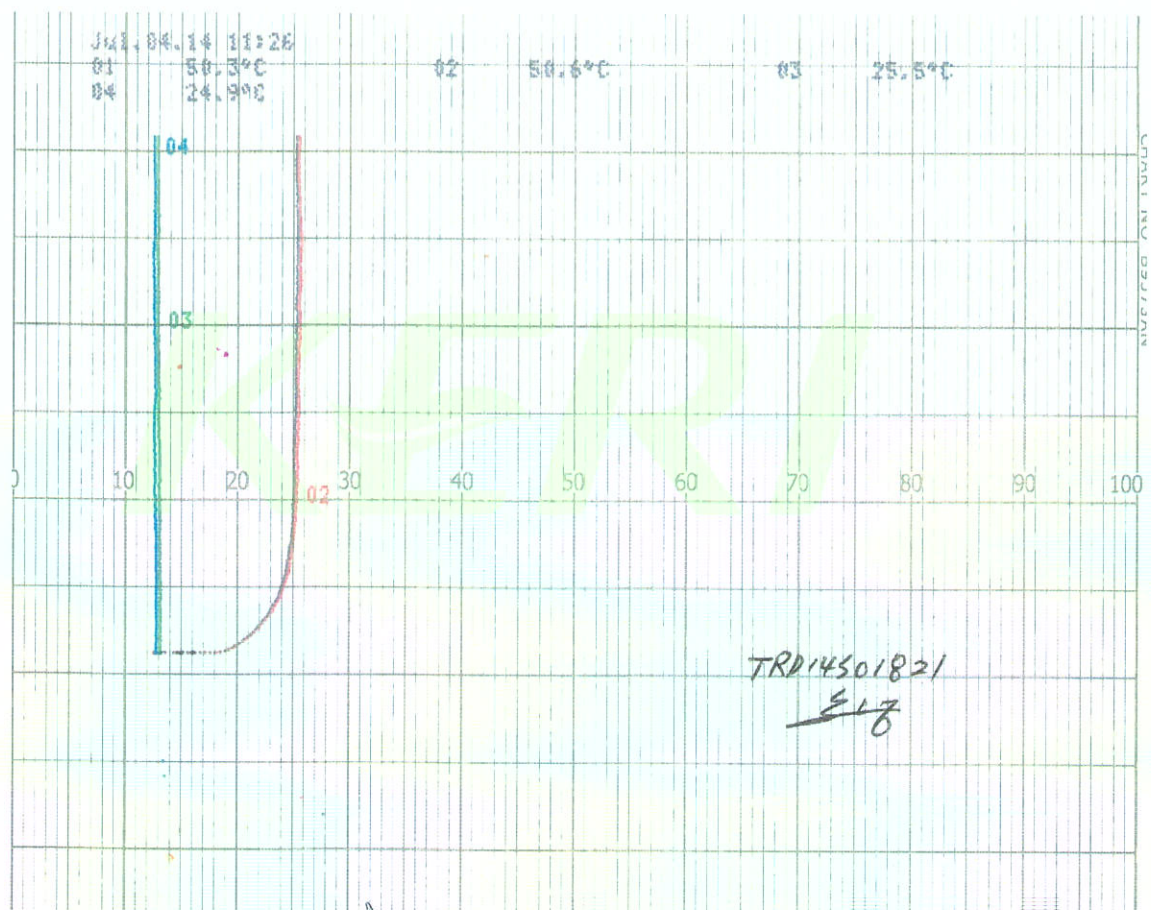
Ratings : 4P 600 V 100 A

Manufacturer : SAMIL ENTERPRISE CO., LTD.

Photo. SG01 : Test object



## Oscillogram



Osc. SG01 : Temperature-rise