

TEST REPORT



KERI

**KOREA ELECTROTECHNOLOGY
RESEARCH INSTITUTE**



TEST REPORT

2017DS00104

1/8

CLASSIFICATION Performance Test

TEST OBJECT Industrial terminal block

DESIGNATION -
4P AC 600 V 600 A

RECEIPT No. RRD17S00073

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 ~ 2014-08-28

DATE OF ISSUE 2017-05-31

This report is the republication of test report No. 2014TS02303(2014-09-01) 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.

Only integral reproduction of this Report is permitted without written permission from KERI. Electronic copies in PDF-format or scanned version of this Report may be available and have the status "for information only". The sealed version of the Report is the only valid version.

This report shall not be used for any purpose such as exaggerated advertisement, misuse, and/or legal proceedings, except for information only.

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



Prepared by

Shon, Wha-Young

Approved by
(Technical manager)

Jeong, Jung-Il

President Park, Kyong-Yop

**KOREA ELECTROTECHNOLOGY
RESEARCH INSTITUTE**

Changwon Headquarters
12 Bulmosan-ro 10-beon-gil, Seongsan-gu,
Changwon, Gyeongnam-do
TEL. +82 55 280 1114, FAX. +82 55 280 1512

Ansan Branch
111, Hanggaui-ro, Sangnok-gu, Ansan,
Gyeonggi-do
TEL. +82 31 8040 4404, FAX. +82 31 8040 4499

Table of contents

Items	Sheet No.
Table of contents	2/8
Ratings	3/8
List of tests	4/8
Test results	5/8 ~ 6/8
Photographs	7/8
Circuit diagrams and parameters	-
Drawings	-
Attachments	-
Oscillograms	8/8

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	600 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
3 Temperature-rise test	Applicant's specifications	2014-08-28	5/8
4 Tensile strength test	Applicant's specifications	2014-07-10	6/8
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. Test requirement(s) : Not less than 20 MΩ Measuring devices : DC 500 V megger	Between the adjacent terminals	Not less than 2 000 MΩ
	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 Test requirement(s) - During the test, no flashover, breakdown of insulation or any other manifestation of disruptive discharge shall occur	Between the adjacent terminals	Withstood
	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: 600 A 3) Conductor for connection : Copper bus (8 mm x 40 mm)					

Channel No.	Measuring point	Measurement method	Limit of temperature rise	Measured values		Test result(s)
1	Terminal (2P of incoming part)	Thermocouples	45 K	56.4 °C		33.0 K
2	Terminal (2P of output part)			56.4 °C		33.0 K
3	Ambient temperature		-	23.5 °C	Average : 23.4 °C	-
4	Ambient temperature		-	23.3 °C		

* Refer to Osc. SG01: Temperature-rise

4 Tensile strength test

Test method(s) and requirement(s)	Test result
<p>There shall be no deformation, breakage or other harmful failure of each part after applying tensile force to the connected wires under the following conditions.</p> <ul style="list-style-type: none">- Joint cable : Copper bus (8 mm x 40 mm)- Tightening torque of terminal nut : 10 N·m- Tensile force : 350 N- Application time : 1 min	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 600 A

Manufacturer : SAMIL ENTERPRISE CO., LTD.

Photo. SG01 : Test object

Oscillogram

