

FUNCION TEST REPORT

Project No.:TL17-70003

Equipment under Test: Close RELAY

Model/Type : ECA042-H
S/N : AUX112151

Manufactured by: HAMIANFAN Co.

Applicant: HAMIANFAN Co.

Trade Mark:

Tested According to: Client Request

Reception Date of Sample: 17-june-2021

Testing Date: 22-june-2021

Issue Date: 26-june-2021

Test Result: PASSED

No. of pages: 9

Prepared and Tested by: Test Engineer

A.Bayat

Verified by: Technical Manager

B.Hamidifard

Approved by:

Chief Executive Officer

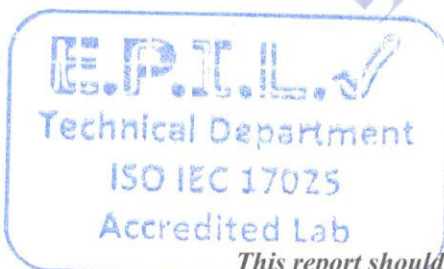
S.M.Mirsadri

Engineering Deputy Of Test And Inspection

Prof. B. Vahidi

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1. GENERAL INFORMATION

1.1. Product Information

Model/Type	:	ECA042-H
S/N	:	AUX112151
Nominal Voltage	:	110VDC
Operation Voltage	:	35-140VDC
Operation Time of Heavy-Duty Contacts for 52 VDC	:	<5ms
Operation Time of Heavy-Duty Contacts for 140 VDC	:	<4ms
Details and Drawings	:	According to report

1.2. Client Information

Main Client	HAMIANFAN CO.
Contact Person	Eng. Araghi
Telephone	+98-21-88581431-4
Fax	+98-21- 44725313

1.3. Tests Performed

Function Test	PASSED
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1.4. Results of Tests

See Pages 5-6

2. PERFORMANCE and RESULTS of TESTS

2.1. Function Test

2.1.1. Test data

Location	E.P.I.L Co.
Date	22-june-2021
Engineer of EPIL	Eng. Bayat
Normative document	Client Request
Number of samples	2

2.1.2. Ambient conditions

Ambient Temperature	"18°C -24°C"
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2.1.3. Instrument used for the test

Instrument	Calibration
Multimeter	Ok
DC Voltage Supply(CMC 256)	Ok
Stopwatch	Ok
Oscilloscope	Ok
Relay Tester	Ok

2.1.4. Procedure of test

The functions of close Relay shall be tested.

The functions of heavy duty self-reset relay shall be tested. Tests shall be conducted to demonstrate the operation time and disconnection current of the discussed relay during the Operation voltage range (52 to 140 VDC). The different between the time of occurring the Trip and Operation of relay contacts according to Fig 1 shall be measured as operation time.

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2.1.5. Result of test

Table 1: Result of operation time

Applied Voltage	Breaking Current	Iteration No.	Operation Time	Result
140	< 3 A	1	< 4 msec	OK
		2	< 4 msec	OK
		3	< 4 msec	OK
		4	< 4 msec	OK
		5	< 4 msec	OK
120	< 3 A	1	< 4 msec	OK
		2	< 4 msec	OK
		3	< 4 msec	OK
		4	< 4 msec	OK
		5	< 4 msec	OK
110	< 3 A	1	< 4 msec	OK
		2	< 4 msec	OK
		3	< 4 msec	OK
		4	< 4 msec	OK
		5	< 4 msec	OK
70	< 3 A	1	< 5 msec	OK
		2	< 5 msec	OK
		3	< 5 msec	OK
		4	< 5 msec	OK
		5	< 5 msec	OK
35	< 3 A	1	< 5 msec	OK
		2	< 5 msec	OK
		3	< 5 msec	OK
		4	< 5 msec	OK
		5	< 5 msec	OK



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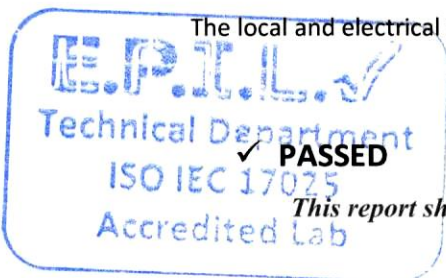
Table 2: Results of keeping the contact and LED status

Applied Voltage	Iteration No.	Result
140	1	OK
	2	OK
	3	OK
	4	OK
	5	OK
110	1	OK
	2	OK
	3	OK
	4	OK
	5	OK
80	1	OK
	2	OK
	3	OK
	4	OK
	5	OK
35	1	OK
	2	OK
	3	OK
	4	OK
	5	OK

The operation time of this relay is less than 5msec during the operation voltage range (35-140 VDC) and the breaking currents less than or equal to 3 amps. In addition to measuring of operation time, the function test has been examined and the test results are passed.

This relay keeps the contact and LED status after interruptions. The relay is tested under close status, and DC tripping circuit it has been removed, the relay remained locked out until reset.

The local and electrical resets have been checked and their performances were OK.



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3. FIGURES

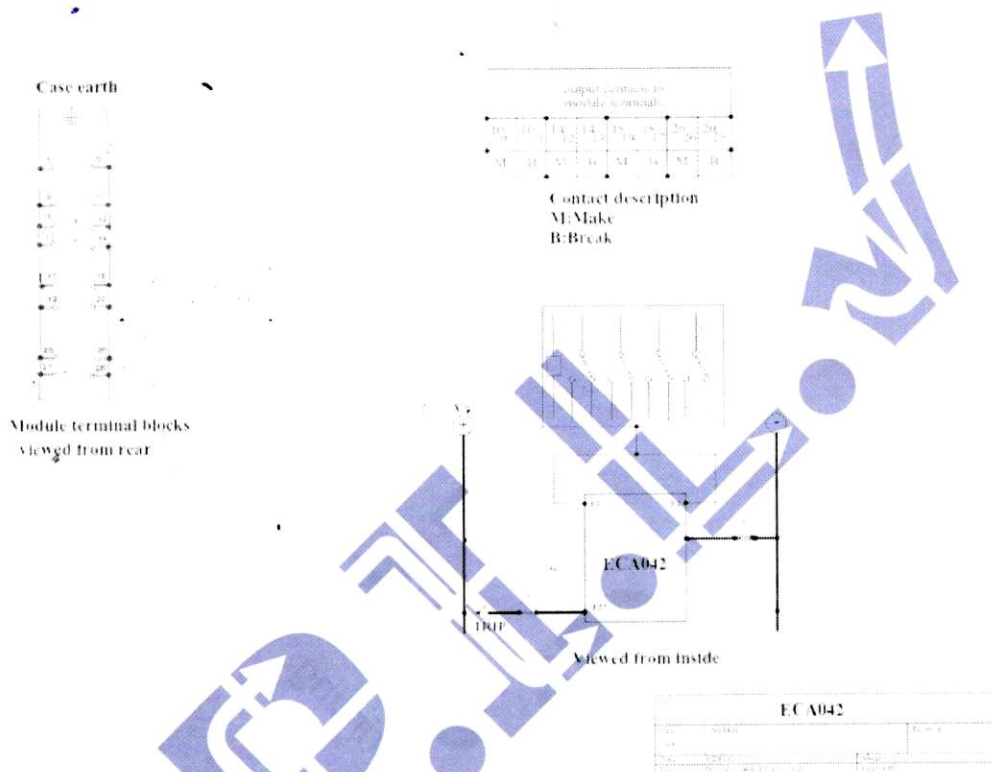
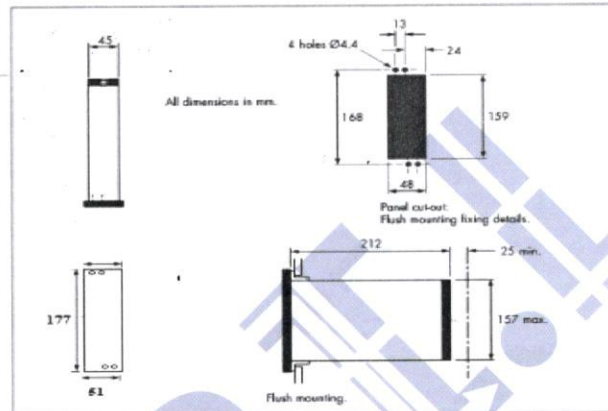


FIGURE 1 : EUT connections and terminals

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Figure 2 : Drawing And dimensions of EUT



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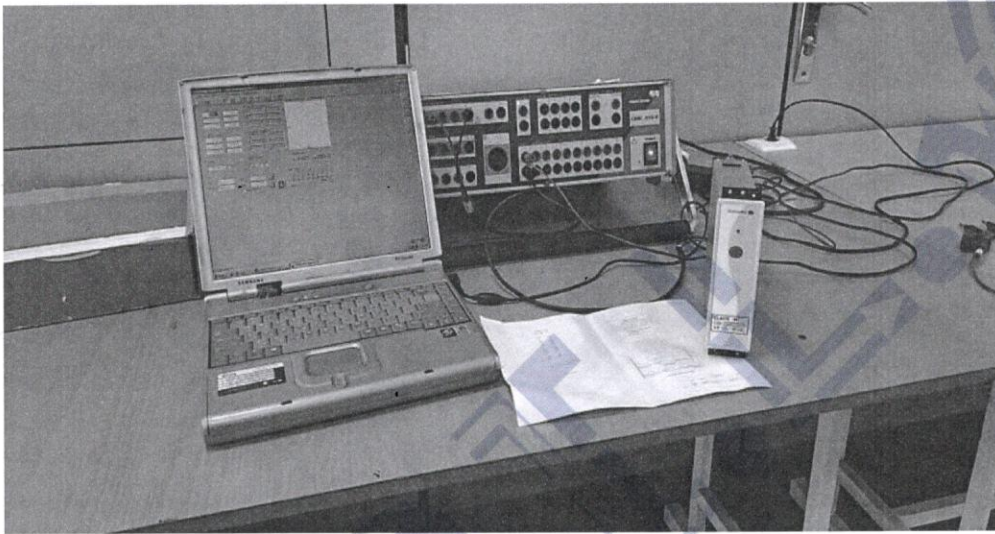
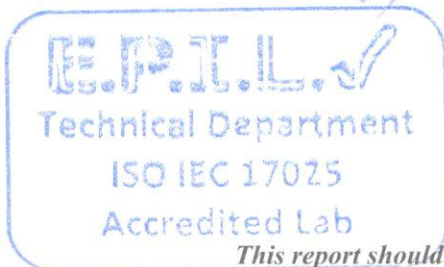


Figure 3 : The test circuit of measurement of operation time of EUT.



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