

FUNCION TEST REPORT

Project No.: TL17-70002

Equipment under Test: Trip circuit Supervision RELAY

Model/Type : ETCA42
S/N : AUX111828

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:

on behalf 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	: ETCA42
S/N	: AUX111828
Nominal Voltage	: 110VDC
Operation Voltage	: 85-140VDC
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 5-7

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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"

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 trip circuit supervision relay including the following supervisions shall be tested:

Tests shall be conducted to demonstrate the ability of the trip circuit supervision relay to meet the following supervisions through operation voltage (85 to 140 VDC):

- Failure of trip supply
- Open circuit trip coil or trip circuit wiring
- Failure of circuit breaker tripping mechanism

The function of discussed relay shall be tested based on the test diagram shown in Fig.1

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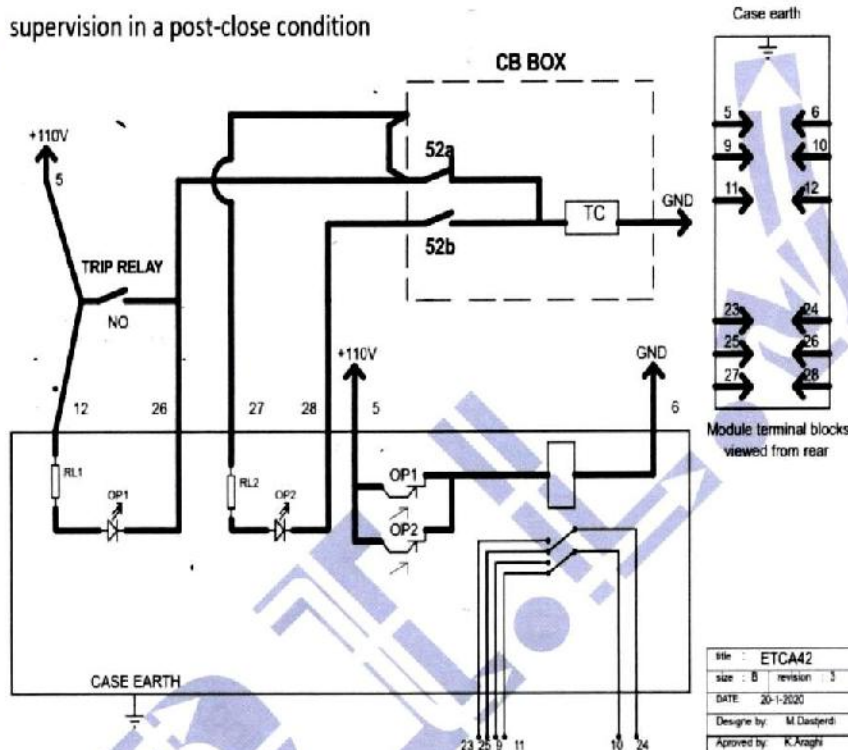


Figure 1: Test diagram including trip circuit.

2.1.5. Result of test

Table 1: Result of testing the supervision regarding the failure of trip supply

Iteration No.	Result
1	OK
2	OK
3	OK

Table 2: Result of testing the supervision regarding the open circuit trip coil or trip circuit wiring

Iteration No.	Result
1	OK
2	OK
3	OK

Table 3: Result of testing the required delay for reset the relay after fault elimination

Iteration No.	Required delay Time	Result
1	>1s	OK
2	>1s	OK
3	>1s	OK

Table 4: Result of testing the different condition of trip relay contact and C.B AUX NO contact according to Fig.1

Trip Relay Contact Condition	C.B AUX NO contact	Iteration No.	Relay Condition	Result
Open	Close	1	Normal	OK
		2	Normal	OK
		3	Normal	OK
Close	Open	1	Normal	OK
		2	Normal	OK
		3	Normal	OK
Open	Open	1	Normal	OK
		2	Normal	OK
		3	Normal	OK
Close	Close	1	Normal	OK
		2	Normal	OK
		3	Normal	OK

Table 5: Result of current providing the trip supply via voltage while the trip relay and C.B
AUX NO contacts are open (condition 1) and closed (condition 2)

Operating Voltage (V)	Trip Supply Current		Result
	Condition 1 (mA)	Condition 2 (mA)	
85	12	1.46	OK
90	14	1.57	OK
100	18	1.76	OK
110	21	1.87	OK
120	24	2.02	OK
130	27	2.15	OK
140	30	2.33	OK


PASSED
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3. FIGURES

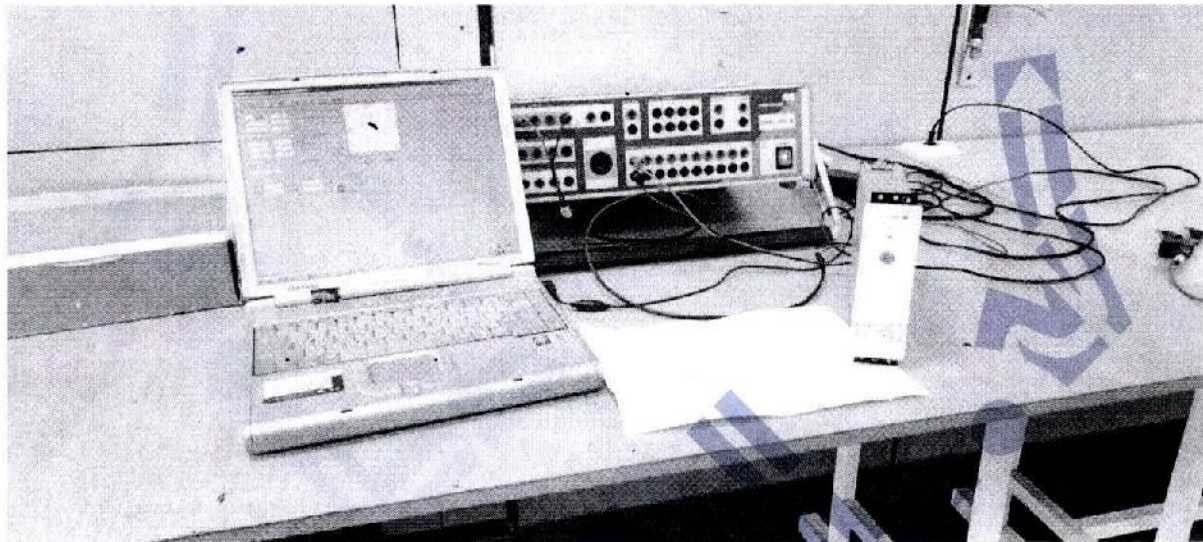
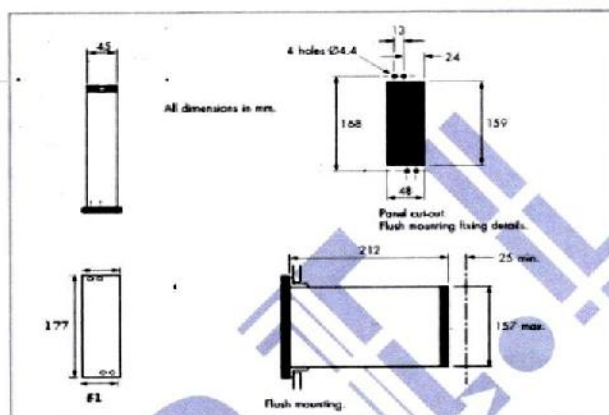


FIGURE 1 : The test circuit of measurement of operation time of EUT



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Figure 2 : Drawing And dimensions of EUT

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