

TEST REPORT

TEST NO:

0383-03

TEST DATE: 3/21-24/83

REQUESTED BY: Richard Baker, Engineering

SUBJECT: Fuse Co-ordination

MANUFACTURER: Bussman Mfg. Div./McGraw Edison Co.

CONCLUSIONS:

The AGC-1 ampere fuse cleared the circuit, leaving the NON-3 ampere fuse unaffected for each test we conducted under the following parameters:

1. The source voltage remained at 125 VDC
2. The maximum DC current obtainable was 60.0 amperes.

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TEST EQUIPMENT

Nicolet Storage Scope, Model 1090
Variable DC rectifier, 100 A, 300 V
Beckman Model 3030 digital multimeter
HP Model 3466A digital multimeter
Shunt; 50A/100 MV
Blade Switch

DESCRIPTION OF DEVICE(S) TESTED

Bussman AGC-1 glass cartridge fuse and Bussman NON-3 fiber
cartridge fuse.

These fuses are used in a series application on a 125 VDC circuit.
The desired operation in case of a circuit malfunction is for
the AGC-1 fuse to clear its part of the circuit, leaving the part
of the circuit protected by the NON-3 fuse unaffected.

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DESCRIPTION OF TEST (S)

A series circuit was constructed consisting of a variable DC source, 0.002 ohm shunt, fuse holders for each type of fuse, and a blade switch. The storage scope was connected across the shunt to monitor both peak current and time duration for the fuse to clear. The test was conducted by setting the DC current for nominal steps of 10 amperes from 10 to 60 amperes. Three of each type of fuse were tested at each current step. Closing the blade switch completed the circuit causing current to flow through all parts of the circuit. The storage scope was triggered on the voltage drop across the shunt and was therefore able to indicate both peak current and time to clear.

OBSERVATIONS

Each tested fuse was identified with a number and its resistance was measured before and after the test. The before and after resistance of each NON-3 fuses did not change appreciably during any test. All test data was recorded.

TESTS PERFORMED BY: J. Manley/G. Bricks

CHECKED BY:

APPROVED BY:

Gerald Bricks

TEST REPORT

ARATUS TESTED: See Cover

ED BY: RG+E

STANDARDS USED: see cover

NO.: See below

LOCATION: Elec. Lab

ROOM TEMP: 25°C

TESTED BY: J. Marley

DATE: 3/21-25/83

CHECKED BY: G. Birch

SHEET NO: 1 OF 1

TEST NO.: 0383-03

[illegible]

