Western Electric Co., Incorporated,
Equipment Engineering Branch, Hawthorne.

(2 Pages, Page 1)
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METHOD OF OPERATION
SIGNAL CIRCUIT

Fuse alarm and auxiliary busy back ground alarm without aisle pilot lamp with secondary signals at floor alarm and main alarm boards - Selector frames - Panel Machine Switching System.

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 This circuit is used in a Panel Machine Switching office to display a visual signal at the fuse board and a secondary signal at the floor alarm and main alarm boards, when a fuse operates.

2. WORKING LIMITS

2.1 None.

OPERATION

3. PRINCIPAL FUNCTIONS

3.1 In the event of a trouble condition or circuit failure, to notify the desk switchman or sender monitor promptly of the nature and approximate location of the trouble and of the progress being made to correct it. The signals at the trouble desk are in the nature of supervisory signals for enabling the switchman to take appropriate action if any alarm is left unattended for an undue length of time.

3.2 In addition to the alarm pilot equipment located at the trouble desk, there is provided on each floor a special panel known as a floor alarm board or power alarm cabinet, which mounts a set of alarm pilot signals associated with the equipment located on the corresponding floor.

4. CONNECTING CIRCUITS

4.1 This circuit connects with any standard selector and auxiliary busy back circuit.

DESCRIPTION OF OPERATION

5. Figures 1 and 4, 6 and 7.

5.1 When a fuse in a lead to the 48 volt bus bar operates, a circuit is closed from 48 volt battery through the fuse alarm lamp, winding of the B9 relay (A) to 24 volt battery, lighting the fuse alarm lamp and operating the B9 relay (A). The operation of the B9 relay (A) closes a circuit which operates the (E458) relay operated, closes a circuit to give secondary signals at the floor alarm and main alarm boards. Should the interrupter or the busy back ground alarm circuit fuse operate, a circuit will be closed from ground through the winding of the (E458) relay, to 24 volt battery, operating the (E458) relay. The (E458) relay operated, functions as described above.

6. Figures 2 and 5.

6.1 When a fuse in the lead to the 24 volt bus bar operates, a circuit is closed from 24 volt battery to the fuse alarm lamp, 5-A fuse post and the winding of the (B9) relay (A) to ground, lighting the fuse alarm lamp and operating the (B9) relay (A). The operation from this point is the same as described for Figures 1 and 4. Should the fuse, at the 5-A fuse post operate, the circuit through the fuse alarm lamp is opened, and 24 volt battery through the 18-AD resistance is connected to the winding of the (B9) relay (A) which operates and functions as described above.

7. Figures 3 and 5.

7.1 When a fuse in the lead to the 48 volt bus bar operates, a circuit is closed from 48 volt battery through the 18-AD resistance and fuse alarm lamp, 5-A fuse post, and winding of the (B9) relay (A), lighting the fuse alarm lamp and operating the (B9) relay (A). The operation from this point is the same as described for Figures 2 and 5. Should the 24 volt fuse operate, it would function the same as described for Figures 2 and 5.

8. Figures 3 and 6.

8.1 The operation is the same as described for Figures 3 and 5 except that the (B9) relay (A-1) operates, in places of the (B9) relay (A).

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