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PANEL SYSTEM  
AUDIBLE ALARM CIRCUIT  
FOR POWER ALARM CABINET

CHANGES

B. CHANGES IN APPARATUS

B.1 Added

1 - E6183 Relay, Fig. 16

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Fig. 16 is added.

D.2 Relays (NV) and (NV1) have been removed from Fig. 3 and shown as Fig. 17.

1. PURPOSE OF CIRCUIT

1.1 To provide exit pilot lamps, "other floor" pilot lamps, power failure audible signal and associated circuits for the panel power room.

1.2 To provide means for associating the alarms of a panel system with the alarms of crossbar offices.

2. WORKING LIMITS

2.1 None.

3. FUNCTIONS

3.1 To provide a power failure audible signal.

3.2 To provide an alarm battery supply audible signal.

3.3 To provide exit pilot and "other floor" pilot lamps.

3.4 To provide means for grouping certain alarms with corresponding alarms on other floors.

4. CONNECTING CIRCUITS

4.1 Aisle pilot circuit.

4.2 Audible alarm circuit for floor alarm board.

- 4.3 Power alarm circuit miscellaneous and auxiliary alarms.
- 4.4 Power alarm cabinet miscellaneous and auxiliary alarms.
- 4.5 Miscellaneous alarm circuit.
- 4.6 Power alarm circuit DC and miscellaneous.
- 4.7 Floor alarm board miscellaneous and auxiliary alarm circuit.

#### DESCRIPTION OF OPERATION

##### 5. D.C. AUXILIARY SIGNAL RELAY (FIG. 1)

When ground is connected to the DB lead, relay (DA) operates, and the (DA) relay of the adjacent floor operates, if a controlling alarm switching key is operated. Operation of relay (DA) operates the associated DC auxiliary signal.

##### 6. A.C. AUXILIARY SIGNAL RELAY (FIG. 2)

A minor trouble condition in the power system operates relay (AL), operating relay (AA), operating the (AA) relay of the adjacent floor or power room, if a controlling alarm switching key is operated, and operating relay (F), Fig. 8. Operation of relay (AA) operates the associated AC auxiliary signal.

##### 7. POWER FAILURE AUDIBLE SIGNAL (FIGS. 3 & 4)

Failure of power causes operation of relay (DF), operating relays (NV), (NV1), Fig. 17, operating relay (PF) and operating relay (F), Fig. 8. Relay (PF) will also be operated if a battery distributing fuse operates while a controlling alarm switching key is operated. Operation of relay (NV) lights the corresponding "other floor" pilot lamps on all "other" floors. Operation of relay (NV1) operates the power failure audible signals on all "other" floors. Operation of relay (PF) operates the power room power failure audible signal. Operation of relay (F) disconnects the power room "other floor" pilot lamps and lights the power room exit pilot lamps on all floors of the alarm group. When the ringing machine is located outside the power room, a failure of ringing machine power operates the (RP) relay, Fig. 15, which operates relay (DF), but disconnects ground from lead "GR" to prevent operation of relay (F).

##### 8. ALARM BATTERY SUPPLY AUDIBLE SIGNAL (FIGS. 5, 6, & 9)

Operation of an alarm battery supply fuse on any floor or in the power room, operates relay (AB) which operates the (AB) subsets.

9. ALARM SWITCHING KEY (FIG. 7)

Operation of key (SW) connects the D.C. and A.C. auxiliary signals and power failure signal of the power room to the major, minor and power failure audible signals, respectively, of the succeeding floor, in such a manner that an alarm on either floor will operate the corresponding audible signals of both the power room and the succeeding floor. Operation of key (SW) also connects to the (OF) relay of an adjacent floor so that operation of a power room audible signal operates the (OF) relay of the floor, and operation of an audible signal on the floor operates the power room (OF) relay.

10. FLOOR SIGNAL RELAY (FIG. 8)

Operation of an A.C. auxiliary signal or a power failure alarm operates relay (F) which disconnects relay (OF), Fig. 10, operates the "other floor" signal relay of the adjacent floor, if a controlling alarm switching key is operated, and operates an exit pilot relay on each "other" floor.

11. OTHER FLOOR PILOT LAMP (FIGS. 10 & 11)

When alarm switching keys are operated to connect together the power alarms and the alarms of one or more floors, operation of an alarm on a connected floor operates relay (OF), lighting lamps (FP).

12. EXIT PILOT RELAY (FIG. 12)

Operation of an alarm on any floor operates a relay (EP) corresponding to that floor, lighting lamps (EP), Fig. 13.

13. EXIT PILOT LAMP (FIG. 13)

Lighting of a lamp (EP) indicates that there is a trouble condition on the floor or in the power room corresponding to the lighted lamp.

14. OTHER POWER ROOM EXIT PILOT RELAY (FIG. 14)

Operation of an A.C. auxiliary signal or a power failure alarm in an associated power room, operates the corresponding (F) relay, Fig. 8, operating relay (PE), which lights the corresponding (EP) lamps, Fig. 13.

15. RINGING MACHINE POWER FAILURE RELAY (FIG. 15)

When the ringing machine is located outside the power room, a failure of ringing machine power operates relay (RP), which operates relay (DF), Fig. 3, to operate the power failure audible signals on all floors, and prevents operation of relay (F).

16. OTHER POWER ROOM POWER FAILURE AUDIBLE SIGNAL RELAY (FIG. 16)

When the power failure audible signal relays, Fig. 3, of another power room are operated, relay (P) operates, operating the power failure signals, Fig. 4. Relay (P) will also be operated if a battery distributing fuse operates while a controlling alarm switching key is operated.

17. POWER FAILURE SIGNAL RELAYS (FIG. 17)

Failure of power causes operation of the (DF) relay, Fig. 3, operating relays (NV) and (NV1). Operation of relay (NV) lights the corresponding "other floor" pilot lamps on all "other" floors. Operation of relay (NV1) operates the power failure audible signals on all "other" floors.

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