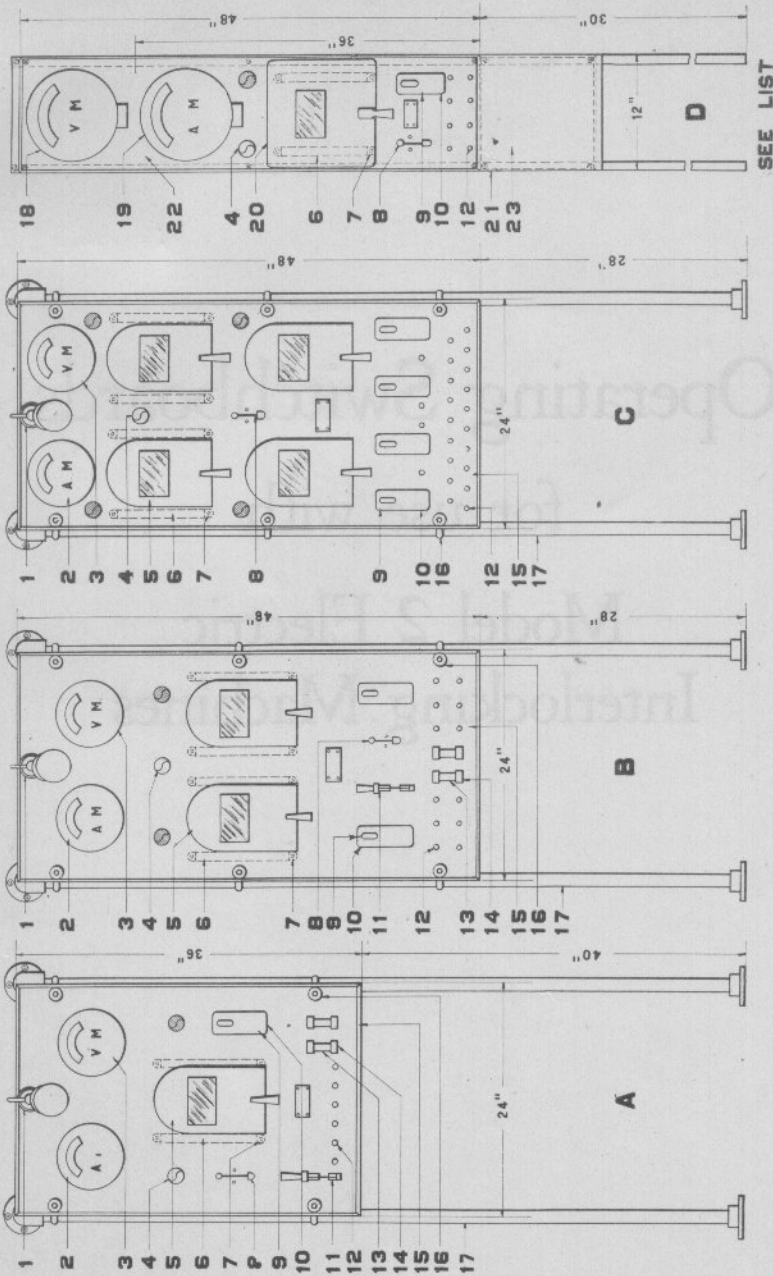


Section F, Part 1

Operating Switchboards

for use with

Model 2 Electric
Interlocking Machines



Operating Switchboards

Operating Switchboards

For use with Model 2 Electric Interlocking Machine

Notes: Operating Switchboards may be equipped with sub-panels shown on Plate F0301 Figs. A, B and C for the control of lighting circuits, etc.

Resistance units Fig. 6 are not required in connection with circuit breakers for sections controlling switches and solenoid dwarf signals only.

Where Model 2A Semi-automatic Signals are used we recommend that a separate Cross-protection Circuit Breaker be provided for the Signals.

In ordering operating boards for more than one section, state type of functions to be controlled through each circuit breaker.

Operating Switchboards of three, five or more sections are furnished as required or as specified. Fig. C shows a typical arrangement for a multi-section board.

All Switchboard Panels are of Black Slate, oil finished.

Old type Operating Switchboards at plants not equipped with individual polar relays may be replaced by switchboards equipped with new type circuit-breakers and polar relays, thereby eliminating the disadvantages of the old type circuit breaker relay without necessarily installing individual polar relays on interlocking machine. Inquiries about such Switchboards should state number of sections in plant and number of indication commons in each Section.

When ordering parts for replacements on existing switchboards give all information shown on name plate of apparatus, name of interlocking plant where switchboard is installed and thickness of slate.

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
Order by plate, figure number and name		
A	Operating Switchboard for use with Interlocking Machine equipped with Individual Polarized Relays, thickness of slate 1½ inches. Single Section, Complete as shown, equipped with Cross Protection Circuit Breaker with its Indicating Red Lamp, Polarized Relay, Ground Lamp and Switch, Voltmeter, Ammeter, etc. (1-1, 1-2, 1-3, 1-4, 1-4a, 1-5, 2-6, 4-7, 1-8, 1-9, 1-10, 1-11, 6-12, 2-13, 4-14, 1-15, 4-16, 2-17)	26228-2

(Continued on following page)

Operating Switchboards

For use with Model 2 Electric Interlocking Machine

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
Order by plate, figure number and name		
A1	as above, except without Voltmeter; Ammeter mounted in center and near top of board	26228-1
A2	same as Fig. A, except thickness of slate is 1 inch	26228-2
A3	same as Fig. A1, except thickness of slate is 1 inch	26228-1
B	Operating Switchboard, thickness of slate $1\frac{1}{2}$ inches, two section, Complete as shown, equipped with two Cross Protection Circuit Breakers with their Indicating Red Lamps, two Polarized Relays, one Group Lamp and Switch, Voltmeter, Ammeter, etc. (1-1, 1-2, 1-3, 1-4, 2-4a, 2-5, 4-6, 8-7, 1-8, 2-9, 2-10, 1-11, 12-12, 2-13, 4-14, 1-15, 6-16, 2-17)	41200-4
B1	as above, except without Voltmeter; Ammeter located in center and near top of board	41200-3
B2	same as Fig. B, except thickness of slate is 1 inch	41200-4
B3	same as Fig. B1, except thickness of slate is 1 inch	41200-3
C	Operating Switchboard, thickness of slate $1\frac{1}{2}$ inches, four section, Complete as shown, two sections for signal circuits, two for switch circuits. The Board is equipped with four Cross Protection Circuit Breakers with their Indicating Red Lamps, four Polarized Relays, Ground Lamp and Switch, Voltmeter, Ammeter, etc. (1-1, 1-2, 1-3, 1-4, 4-4a, 4-5, 4-6, 8-7, 1-8, 4-9, 4-10, 23-12, 6-16, 1-15, 2-17)	
C1	as above, except without Voltmeter. Ammeter is located in the center and near top of board	
C2	same as Fig. C, except thickness of slate is 1 inch	50796
C3	same as Fig. C1, except thickness of slate is 1 inch	

(Continued on following page)

March 1923

GENERAL RAILWAY SIGNAL COMPANY

Operating Switchboards

For use with Model 2 Electric Interlocking Machine

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
Order by plate, figure number and name		
D	Operating Switchboard, thickness of slate 1 inch, single section, Complete as shown, mounted on angle iron frame and equipped with outside front connected Voltmeter and Ammeter, Cross Protection Circuit Breaker with large size cover, Indicating Red Lamp, Polarized Relay, Ground Lamp and Switch, etc. This switchboard is shown for convenience in ordering repair parts only. (1-4, 1-4a, 2-6, 4-7, 1-8, 1-9, 1-10, 8-12, 1-18, 1-19, 1-20, 1-21, 1-22) Slate, 12" x 48"	26228
D1	as above, except without Voltmeter. Slate, 12" x 36"	26228
D2	same as Fig. D, except Switchboard includes Sub-panel as shown on Plate F0301 Fig. C.	
D3	same as Fig. D1, except Switchboard includes Sub-panel as shown on Plate F0301 Fig. C.	
1	Lamp Complete, as shown, for illuminating Switchboard. Includes Bracket, Key Socket, Holder, Shade and Lamp. Specify thickness of slate. For details see Plate F0509. Fig. E.	16590-1
2	D. C. Ammeter, back connected, Complete. Specify Scale or number and type of functions which can be operated simultaneously. For detail see Plate F0401, Fig. A.	
3	D. C. Voltmeter, back connected, Complete. Scale as specified or as required. For detail see Plate F0401, Fig. B.	
4	Switchboard Lamp Complete with Clear Bulb for use as Ground Detector Lamp. Specify thickness of slate. For detail see Plate F0509, Fig. C.	4439
4a	as above, except with Red Bulb for use to indicate when Circuit Breaker is open.	4439

(Continued on following page)

Operating Switchboards

For use with Model 2 Electric Interlocking Machine

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
Order by plate, figure number and name		
5	Cross Protection Circuit Breaker, Double Pole, Complete with Cover as shown. Specify thickness of slate. For details see Plate F0507, Figs. A and B.	38400
6	Resistance Unit only for use with Cross Protection Circuit Breaker Fig. 5. Specify resistance or the number and type of signal functions to be held clear simultaneously. The function of this Resistance Unit is to permit the Signal to hold clear when the Circuit Breaker is open.	
7	Bracket Complete for mounting Resistance Unit Fig. 6. Two required for each Unit. Specify thickness of slate.	35836
8	Ground Detector Switch Complete as shown for mounting on 1 1/2 inch slate. For detail see Plate F0509, Fig. D.	20930
8a	as above, except arranged for mounting on 1 inch slate.	20030
9	Polarized Relay Complete without Cover. Includes screws for Mounting. Specify thickness of slate. For detail see Plate G0501, Figs. A and B.	33880-1
10	Cover for Polarized Relay used on Switchboard. Includes screws for mounting. Specify thickness of slate. For detail, see Plate F0501, Fig. B.	39967-190.2
11	Single Pole, Single Throw, 30 Amp. 125 Volt, Knife Switch Complete as shown. For detail, see Plate F0501, Fig. 1.	52480 23502
12	Terminal Post Complete for terminaling wires on back of Switchboard. Specify thickness of slate. For detail, see Plate F0509, Fig. K.	33453
13	Fuse, Cartridge Type. Rating as specified or as required. For details, see Plate F0509, Fig. F.	
14	Fuse Clip Complete for Cartridge Fuse, Fig. 13. Specify Fuse rating and thickness of slate. For detail, see Plate F0509, Fig. G.	33451

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March 1923

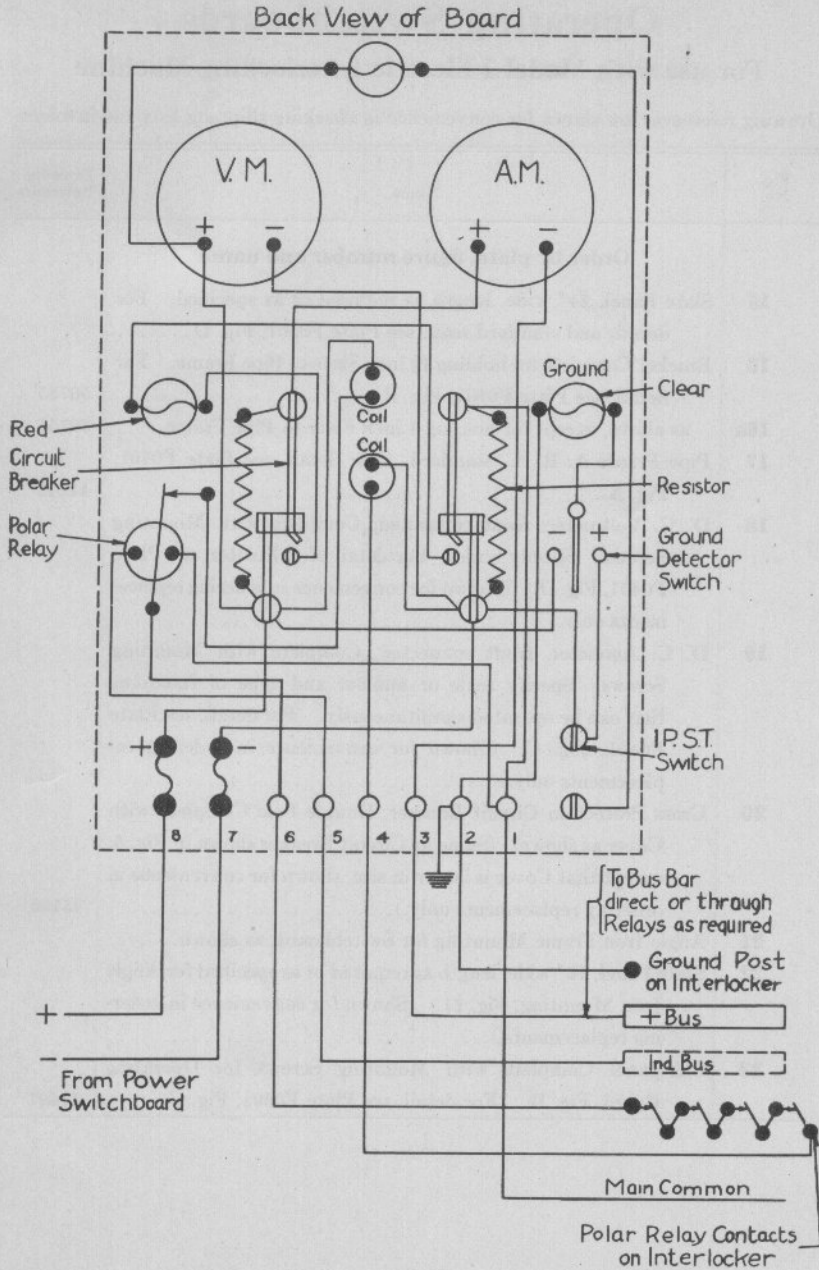
GENERAL RAILWAY SIGNAL COMPANY

Operating Switchboards

For use with Model 2 Electric Interlocking Machine

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
Order by plate, figure number and name		
15	Slate Panel, 24" wide, length as required or as specified. For details and standard sizes, see Plate F0501, Fig. D.....	
16	Bracket Complete for holding 1½ inch Slate to Pipe Frame. For detail, see Plate F0501, Fig. B.....	50755
16a	as above, except for holding 1 inch Slate to Pipe Frame.....	50755
17	Pipe Frame A. R. A. Standard. For detail, see Plate F0501, Fig. A.....	44248
18	D. C. Voltmeter, front connected, Complete with Mounting Screws. Specify scale. For detail of voltmeter, see Plate F0401, Fig. D. (Shown for convenience in ordering replacements only.).....	
19	D. C. Ammeter, front connected, Complete with Mounting Screws. Specify scale or number and type of functions that can be operated simultaneously. For detail, see Plate F0401, Fig. C. (Shown for convenience in ordering replacements only.).....	
20	Cross Protection Circuit Breaker, Double Pole Complete with Cover as shown. (Same as Circuit Breaker shown in Fig. 5, except that Cover is larger in size, shown for convenience in ordering replacements only.).....	35400
21	Angle Iron Frame Mounting for Switchboard, as shown.....	
22	Slate Panel, 12" wide, length as required or as specified for Angle Iron Mounting, Fig. 21. (Shown for convenience in ordering replacements.).....	
23	Sub-panel Complete with Mounting Screws, for Operating Board, Fig. D. For detail, see Plate F0301, Fig. C.....	41497



Wiring Diagram for Operating Switchboard
 Shown on Plate F0101, Fig. A