Western Electric Co., Incorporated,
Engineering Dept.,
New York.

Issue 1 - BT-451447.
June 3,1920.

METHOD OF OPERATION
MOTOR STOP ALARM
And Frame Busy On Selectors - Full Mechanical Power Driven System

GENERAL DESCRIPTION

1. Figures 1 and 4 show the wiring of the alarm governor on the motor shaft, used to close the circuit of the auxiliary alarm shown in Figures 2, 3, 5, 6 and 7.

2. Figures 2, 3, 5, 6, 7 and 9 show the wiring of the auxiliary alarm circuit used to close an alarm circuit (not shown) when the stop contacts of the alarm governor close, due to the motor stopping or slowing down below its critical speed. They also show the wiring of the make busy circuit used to make the effected individual line switches busy in the event of cable failure, until the trouble has been cleared. The FB relay shown in Figure 3 operates in parallel with the MS relay shown in Figure 2, and its function is identical to that of the FB relay shown in Figure 2.

3. Figure 9 shows the auxiliary alarm relay circuit used to close the alarm circuit at the monitoring board when a frame is busy.

4. When the stop contacts of the alarm governor, Figure 1 or 4 make, due to the motor stopping, the E458 relay (MS), Figure 2, operates lighting the red motor stop alarm lamps at the control cabinet and monitoring board. At the same time, the E455 relays (FB), Figures 2 and 3, one of which is provided for each side of the district frame, operate through their inner windings, placing ground instead of battery on the test leads to the selector circuit.

5. In the event of cable failure, the B10 relay (L) Figure 9, operates in series with the outer winding of the E455 relay (FB), Figure 2 or 3, lighting the green frame busy guard lamp at the control cabinet.

6. Should the motor be stopped intentionally, the associated motor stop key (not shown) is operated, lighting the white motor stop guard lamp at the control cabinet. Under this condition when the motor starts to run, the red motor stop pilot lamps light, and the white guard lamp remains lighted as an indication that the key should be restored to normal.

7. The E458 relay (MS) in Figures 5, 6 and 7 operates and functions in the same way as the E458 relay (MS) described under Figure 2.

8. The E447 relay (FB) figure 7 operates and functions in the same way as the E455 relay (FB) described under Figure 2 or 3.

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
B10 (L)	Test .039 amp. Readj. .025 amp.		Test .0019 amp. Readj. .002 amp.
E447 (FB)	Test .033 amp. Readj. .027 amp.	Test .013 amp. Readj. .014 amp.	
E455 (FB) 1000 ohm winding	Test .042 amp. Readj. .039 amp.	Test .024 amp. Readj. .026 amp.	
800 ohm winding	Test .047 amp.		
E458 (MS) Figures 5, 6 and 7)	Test .015 amp. Readj. .011 amp.		Test .0014 amp. Readj. .0015 amp.
E458 (MS) Figure 2	Test .026 amp. Readj. .011 amp.		Test .0014 amp. Readj. .0015 amp.

ENG.--HBH-VL. CHK'D.--CWP. APPROVED - C.L. Sluyter, G.M.L.
8/12/21