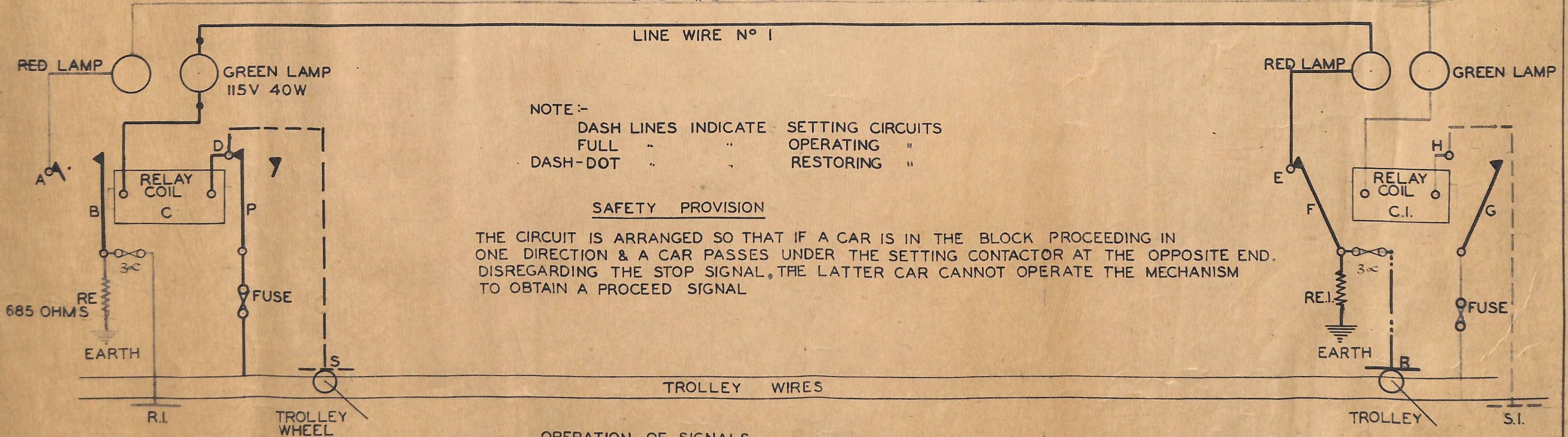


STATE ELECTRICITY COMMISSION OF VICTORIA
ELECTRICITY SUPPLY DEPARTMENT
 BALLARAT ELECTRIC TRAMWAYS

LINE WIRE N° 2

LINE WIRE N° 1



NOTE :-
 DASH LINES INDICATE SETTING CIRCUITS
 FULL " " OPERATING "
 DASH-DOT " " RESTORING "

SAFETY PROVISION

THE CIRCUIT IS ARRANGED SO THAT IF A CAR IS IN THE BLOCK PROCEEDING IN ONE DIRECTION & A CAR PASSES UNDER THE SETTING CONTACTOR AT THE OPPOSITE END, DISREGARDING THE STOP SIGNAL, THE LATTER CAR CANNOT OPERATE THE MECHANISM TO OBTAIN A PROCEED SIGNAL

OPERATION OF SIGNALS

SUPPOSE A CAR IS PASSING FROM LEFT TO RIGHT. AS THE CAR PASSES UNDER THE SETTING CONTACTOR "S" A CURRENT WILL PASS FROM THE SETTING CONTACTOR, RELAY COIL "C", GREEN LAMP IN THE HOME BOX, LINE WIRE N° 1, RED LAMP, CONTACT "E" & ARMATURE "F" IN THE DISTANT BOX, RESISTANCE "RE.I." AT DISTANT BOX & TO EARTH. RELAY COIL "C" IS THEREBY ENERGISED & ARMATURE "B" IS LIFTED AWAY FROM CONTACT "A" & ARMATURE "P" IS LIFTED INTO CONTACT WITH D. A CIRCUIT IS THEN MADE UP FROM THE TROLLEY WIRE, FUSE, ARMATURE "P", CONTACT "D", RELAY COIL "C" & GREEN LAMP IN HOME BOX, LINE WIRE N° 1, RED LAMP, CONTACT "E" & ARMATURE "F" IN DISTANT BOX, RESISTANCE "RE.I." AT DISTANT BOX & TO EARTH. RELAY COIL THEREFORE REMAINS ENERGISED AFTER THE CAR HAS LEFT THE SETTING CONTACTOR "S", & THE SIGNAL LAMPS REMAIN LIT SO LONG AS THE CAR REMAINS IN THE BLOCK. THE FACT THAT ARMATURE "B" REMAINS LIFTED OUT OF CONTACT WITH "A", BREAKS THE CIRCUIT WHICH WOULD NORMALLY BE MADE IF A CAR ENTERS FROM THE OPPOSITE END, UNDER SETTING CONTACTOR "S.I.", SO THAT, IF SUCH A CAR ENTERS FROM THE DISTANT END IN DISREGARD OF THE STOP SIGNAL, IT CANNOT OPERATE THE CIRCUIT TO CHANGE THE SIGNAL ASPECTS, OR TO OBTAIN A PROCEED SIGNAL. THE CAR WHICH HAS ENTERED THE BLOCK UNDER SETTING CONTACTOR "S" IS THUS PROTECTED UNTIL IT PASSES UNDER RESTORING CONTACTOR "R", WHEN A CIRCUIT IS MADE UP FROM THE RESTORING CONTACTOR "R", RESISTANCE "RE.I." AT DISTANT BOX & TO EARTH. THE ENERGISING OF THIS CIRCUIT FROM THE RESTORING CONTACTOR "R" RESULTS IN THE SHORT CIRCUITING OF THE RELAY COIL "C", SO THAT ARMATURES "B" & "P" FALL BACK BY GRAVITY. THE SIGNAL LIGHTS ARE EXTINGUISHED, & THE CONDITION OF THE APPARATUS RETURNS TO NORMAL. A CAR ENTERING THE BLOCK FROM RIGHT TO LEFT OPERATES THE CIRCUIT FOR THE OTHER LIGHTS IN EXACTLY THE SAME MANNER.

ONLY ONE CAR MUST BE IN THE BLOCK WHEN THE SIGNALS ARE IN OPERATION

NO LIGHTS SHOWING, IS AN INDICATION THAT THE BLOCK IS EMPTY, & THAT IT IS SAFE TO ENTER THE BLOCK. AS DESCRIBED ABOVE, A CAR PASSING UNDER THE SETTING CONTACTOR UNDER THESE CONDITIONS, LIGHTS THE GREEN SIGNAL AT THE ENTERING END, WHICH INDICATES THAT THE RED SIGNAL IS SHOWING AT THE OPPOSITE END, & THAT THE CAR CAN PROCEED WITH SAFETY. WHEN THE CAR PASSES UNDER THE RESTORING CONTACTOR IT EXTINGUISHES BOTH LIGHTS.

REVISION	DATE	REMARKS	CHECKED	PASSED

SIGNALLING SYSTEM

MODIFIED TYPE BY NON-CAR COUNTING SIGNALS.

LINE DIAGRAM OF OPERATION

SCALE:-

SECTION No 4-14.

DRAWN H.L.M. 26.2.38.

TRACED

CHECKED

PASSED

DRG. No. (VB 4)/8757/7

MANAGER BES & T.

John A. Lee
28/2/38