RESISTANCE MEASUREMENTS FOR TERMINATING SENDER TEST FRAME (SD-25159)

NOTE: Use 508A blocking tools for blocking relays when making resistance measurements.

RESISTANCE PATH		CONNECTIONS		OPERATE		RESISTANCE	
RESISTANCES	RELAYS	X1	X2	RELAYS	KEYS	MIN.	MAX.
-0106 CKT. DRG.							
A,B		#10,SM Rel. T.S.	#11 SM Rel. T.S.	C1,SPF5,SMO		564	576
AB		"D" GRD	6T (UO)	C11,CH,CH1		1084	1106
AC		"D" GRD	#13 SM Rel. T.S.	C1,TR1,SMO		158	162
BA		"E" BAT	5B (GE)			475	485
1/2 BA		"E" BAT	RB1 (X)			237	243
-0108 CKT. DRG. - (See Figure 2 for Additional Measurements)							
DK	BST	2T (BS)	3T (C)	G		3094	3156
DL	BST	2T (BS)	11B (C)	G	LST	5443	5553
DH,DJ	BST Pri	3T (C)	11B (C)		LST	7128	7272
DB,DC,DN	OF1 Sec	1T (BS)	11B (C)	RB,LNO		6603	6737
1/2 DB,DN	OF1 Sec	1T (BS)	11B (C)		LRB	3960	4040
BB	OF1 Pri	"F" BAT	GRD	C1		921	939
BB,DM,W	OF1 Pri	"F" BAT	GRD	C1	LRB	4207	4293
BB,DM,DG	OF1 Pri	"F" BAT	GRD	C1,LNO		6069	6191
S	OF Pri & T	3T (OD)	5B (OD)	G,BS,FO1,OD,TT		727	742
S,T,U,R,DP,DD	OF Pri	3T (OD)	5B (OD)	G,BS,FO1,OD,RB',TT	L	2996	3064
S,T,U,T1		3T (EV)	GRD	G,EV	L	31160	31790
AA,DF,S	FTP	3T (EV)	GRD	G,BS,FO1,EV,TF		4718	4822
BC,DE		5B (EV)	"G" BAT	G,EV,FRP		4113	4197
DA,S	OF,STP	3T (EV)	5B (EV)	G,BS,FO1,EV,RB',LNO		7036	7194
BD,DR		6T (FB)	"G" BAT			7435	7585
"D"		1T (G)	4T (TM)			49.5	50.5
-0112 or -0116 CKT. DRG. - (See Figure 3 for Additional Measurements)							
BA,N		"KP" BAT	114,Misc.T.S.			307	313
AB		"KP" GRD	5TF (CT)			445	455
B		"KP" BAT	103,Misc.T.S.	CT2,CT3		868	886
A		"KP" BAT	113,Misc.T.S.	CT2,CT3		868	886
E,F,KP1,Z	KP1-2-3-4	2B (KA)	5B (KA)	KA	SKP	7841	7999
EE or L,K,F,Z		2B (KA)	1T (KA)	KA		1138	1162
F,C,Z		2B (KA)	KP Cond.	KA	SKP	3771	3847
M,BC	PD	"KP" BAT	2B (PT2)			1852	1898
1/2 G (G Wire)	DS	3B (PD2)	4B (PT2)			263	269
1/2 G (H Wire)	OAP,OBP	3B (PD2)	4B (PT2)			274	284
G		4B (PT2)	T Cond.			544	556
1/2 H (G Wire)	DS	1B (PD2)	4B (PT)			263	269
1/2 H (H Wire)	OAP,OBP	3B (PD2)	4B (PT2)			274	284
D (-0112)		3T (C1)	4T (D)			49	51
AE,AF		8B (RR1)	5B (K3)			2574	2602
R (H Wire)		1T (OP)	1B (OP)		TP	990	1010
P (F Wire -0112)		7B (AB1)	6TR (CT1)		OB or OA	990	1010
P (F Wire -0116)		8B (AB1)	6TR (CT1)		OB or OA	990	1010

FIGURE 1

NOTE 1: Connect the X1 and X2 terminals of the Wheatstone Bridge to the miscellaneous terminal strip punchings shown in the chart.

NOTE 2: Block operated relays KA, K3 and TR4 for all tests. The relays are shown on the -0112 schematic drawing.

NOTE 3: In addition to checking that the resistances are within their proper limits an additional check is made of the various paths over which these resistances are used. This is done to check the relay and numerical key contacts. Operate the key shown in Column A for making the original measurement. After this test is made release that key and check that the same reading (or a reading that is within the limits shown in the last column) is obtained when the keys listed in Column B are operated in turn. Additional paths, using the same resistances, are verified by blocking or releasing the relays and operating the keys shown in the succeeding horizontal lines. Do not operate more than one numerical key at a time for any one measurement or check.

-0109 CKT. DRG. - Resistances Associated With The Numerical Keys.

RESISTANCES	See Note 1		See Note 2	See Note 3		RESISTANCE MEASUREMENT	
	X1 to PCH.	X2 to PCH.	OPERATE RELAYS	A	B	Min.	Max.
A,B,F	110	104	TR3,TR2,TR1	TH8	TH6,TH5	1319	1345
A,B,F	110	104	TR3,TR2,		H8,H6,H5	1319	1345
A,B,F	110	104	TR3,C1		T8,T6,T5	1319	1345
A,B,F	110	104	RR1,C1		U8,U6,U5	1319	1345
A,B	110	104	TR3,TR2,TR1	TH9		527	537
C,E	110	104	TR3,TR2	H9		490	500
C,E	110	104	TR3,C1		T9	490	500
C,E	110	104	RR1,C1		U9	490	500
1/2 C,1/2 H	110	104	TR3,TR2	H4	H3,H2,H1,H0	107	109
1/2 C,1/2 H	110	104	TR3,C1		T4,T3,T2,T1,T0	107	109
1/2 C,1/2 H	110	104	RR1,C1		U4,U3,U2,U1,U0	107	109
1/2 C,1/2 H	110	104	TR3,TR2,TR1	TH4	TH3,TH2,TH1,TH0	104	106
X,Y,Z	110	113	CT3,TR3,TR2,TR1	TH4		747	763
X,Y,Z	110	113	CT3,TR3,TR2		H4	747	763
X,Y,Z	110	113	CT3,TR3,C1		T4	747	763
X,Y,Z	110	113	CT3,RR1,C1		U4	747	763
K,L,G	110	113	CT3,TR3,TR2	H9		471	481
K,L,G	110	113	CT3,TR3,C1		T9	471	481
K,L,G	110	113	CT3,RR1,C1		U9	471	481
K,L	110	113	CT3,TR3,TR2,TR1	TH9		434	442
X,1/2 Y	110	113	CT3,TR3,TR2,TR1	TH8	TH3	114	116
X,1/2 Y	110	113	CT3,TR3,TR2		H8,H3	114	116
X,1/2 Y	110	113	CT3,TR3,C1		T8,T3	114	116
X,1/2 Y	110	113	CT3,RR1,C1		U8,U3	114	116
N,P,J	110	103	CT3,TR3,TR2,TR1	TH2		747	763
N,P,J	110	103	CT3,TR3,TR2		H2	747	763
N,P,J	110	103	CT3,TR3,C1		T2	747	763
N,P,J	110	103	CT3,RR1,C1		U2	747	763
N,1/2 P,M	110	103	CT3,TR3,TR2,TR1	TH7		609	621
N,1/2 P,M	110	103	CT3,TR3,TR2		H7	609	621
N,1/2 P,M	110	103	CT3,TR3,C1		T7	609	621
N,1/2 P,M	110	103	CT3,RR1,C1		U7	609	621
N,1/2 P	110	103	CT3,TR3,TR2,TR1	TH6	TH1	114	116
N,1/2 P	110	103	CT3,TR3,TR2		H6,H1	114	116
N,1/2 P	110	103	CT3,TR3,C1		T6,T1	114	116
N,1/2 P	110	103	CT3,RR1,C1		U6,U1	114	116

FIGURE 2

NOTE: The resistance of EB, EC, ED may vary in steps of 400 ohms from a nominal resistance of 5315 ohms to 7715 depending on optional wiring.

RESISTANCE PATH		CONNECTIONS		OPERATE		RESISTANCE	
RESISTANCES	RELAYS	X1	X2	RELAYS	KEYS	MIN.	MAX.
-0116 CKT. DRG.							
D		7T (D)	3T (C1)			49	51
P		8B (AB1)	6TR (CT1)			990	1010
T,U,V,W,X		1B (MF8)	Res. X			247	253
Y		11B (MF8)	Res. Y			99	101
BD (H Wire)		4B (OP)	9B (OP)		PD	1980	2020
EA		3T (KPT)	Res. EA			148	152
EB,EC,ED		8B (MF9)	Res. ED			148	152
EF,EG,EY		7T (MF10)	4T (DP3)			See Note	
FA		4B (MF10)	6B (MF10)		TFT	247	253
RLS		4T (TD5)	3T (TD4)			29700	30300
-0118 CKT DRG.							
C		2B KS	KP COND	KS	SKP	3490	3530
D		7T D	1T COL			49	51
E.F,KP1,Z	KP1-2-3-4	5B KA	2B KA	KA. KS	SKP	7840	8010
EA		3T KPT	EA RES. (Center)			149	152
EB, EC, ED		1B PR	ED RES.	KA		149	152
EF, EG, EYq	A	5B TD4	2T MF8			7880	8070
EE		7T KPT	1T KA	KA		247	255
EZ	TCO	1T TD1	2T TD			49	52
FA		8BD	9T C		TFT	247	255
RLS		4T TD5	3T TD4			29700	30300
T.U,V,W,X		2T PR	X RES.	KA		247	255
Y		8T KPT	Y RES.	KA		99	101

FIGURE 3

→ Arrowed lines indicate new or changed information.

R. E. RAHMES

Engineer of Installation

Reason for Reissue:
To change Fig 3 -0118 CKT DRWG.

Replaces Section 221.1 dated 9- 4-52.