

GFELLER SUBSCRIBER LINE CONCENTRATOR 49-9-2

SCHEMATICS

1. GENERAL

1.01 This is one of a group of sections, pertaining to the Gfeller line concentrator, having the base numbers A804.901 and C85.010. This section contains the schematics S10460-3, S10461-3, S10460-4 and S10461-4 submitted by the Gfeller Company and an explanation of the symbols and drawing methods used.

1.02 The Gfeller concentrator schematics are of the detached contact type similar to those now in use in the Bell System.

1.03 Arrowheads, bearing no designation, are used to indicate a tie-in between two points of the circuit which are separated on the same

sheet. The connection of the two points may be found by following the direction of an arrowhead, in a straight line to its associated arrowhead (Fig. 2).

1.04 Resistor strapping drawn with an X on the strap is used to indicate strap removal when 72-volt operation is used (Fig. 2).

1.05 Fuses are represented by an oval-shaped symbol (Fig. 2). The contacts shown above each symbol are the fuse alarm contacts. Each fuse is designated by the equipment to which it supplies power as well as by a number; this number is also associated with arrowheads at the various components of the central office unit to indicate the source of the battery supply.

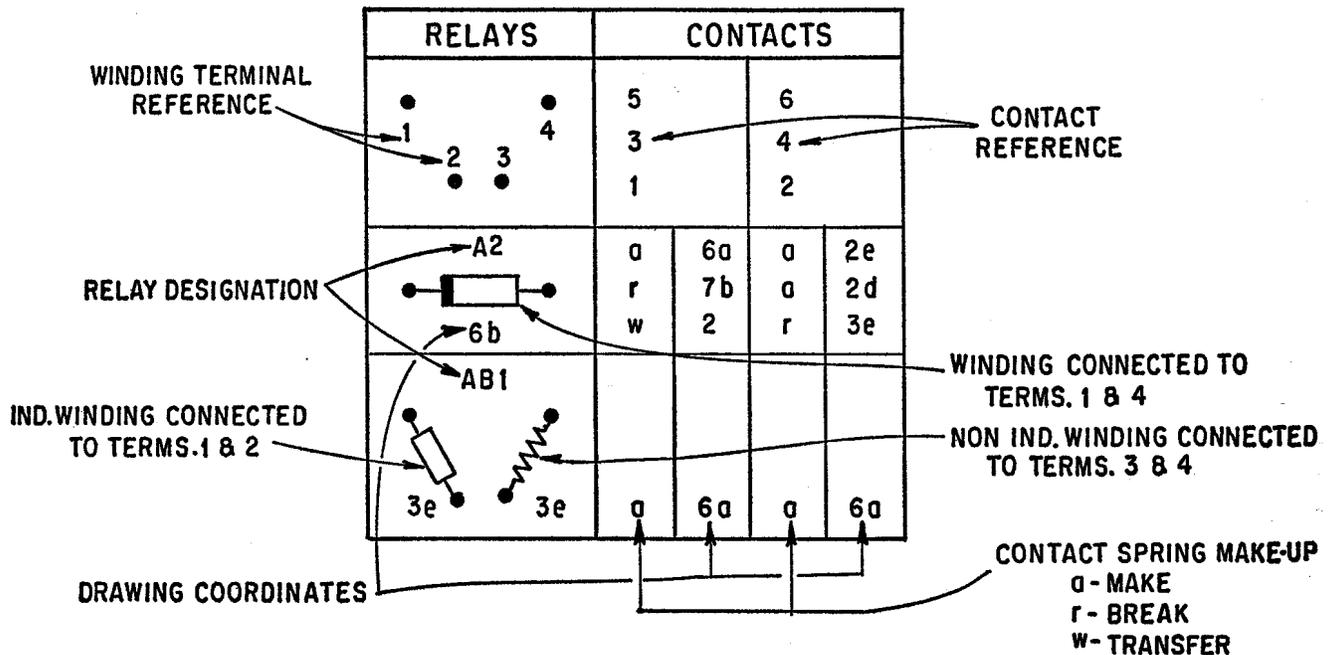


Fig. 1

1.06 The Gfeller switch vertical bars are drawn in a vertical plane and numbered 1 through 9. The horizontal bars are drawn in a horizontal plane and numbered 1 through 49. The horizontal bar designated 50 is a test bar associated only with the central office unit switch. The a, b, and c designations are the European equivalent of the Bell System T, R, and S, respectively.

1.07 The tables at the bottom of the schematics give the location of each relay winding terminal and its associated contacts by drawing coordinates. The contact spring make-up is also shown. Part of a table is shown in Fig. 1 with a labeled description.

1.08 Fig. 2 contains a list of designated symbols as used in the schematics.

SYMBOL CHART

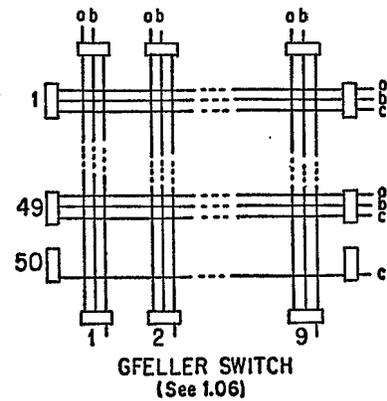
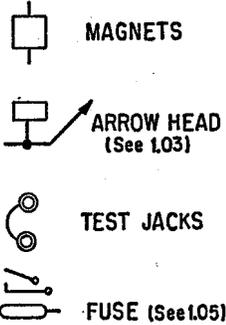
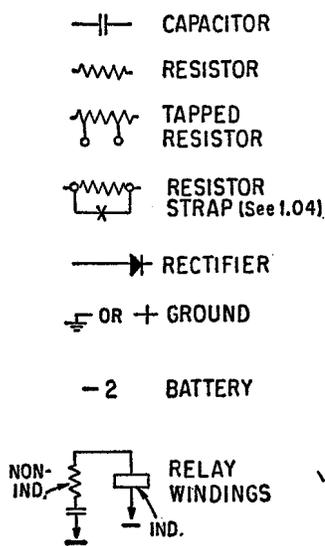
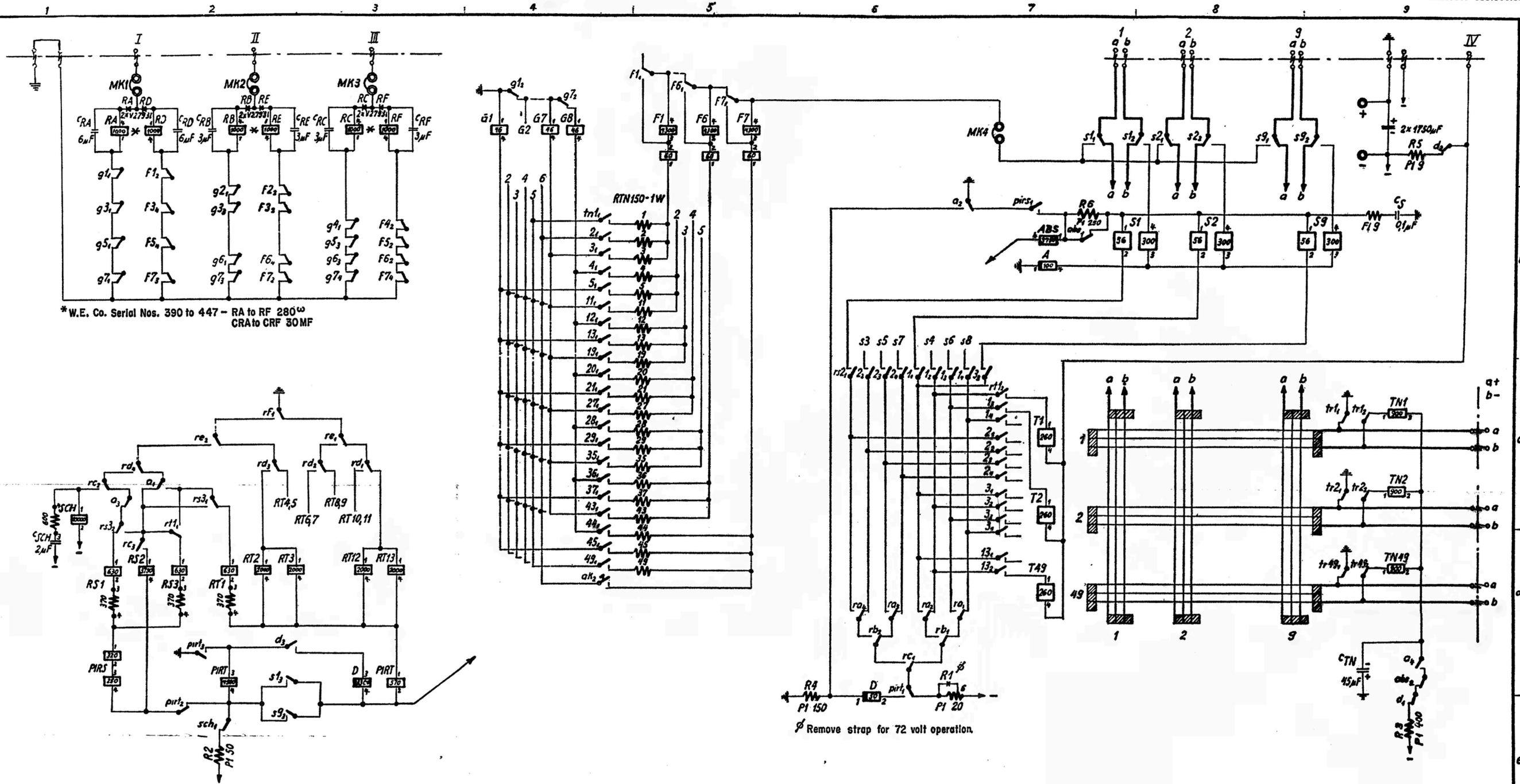


Fig. 2



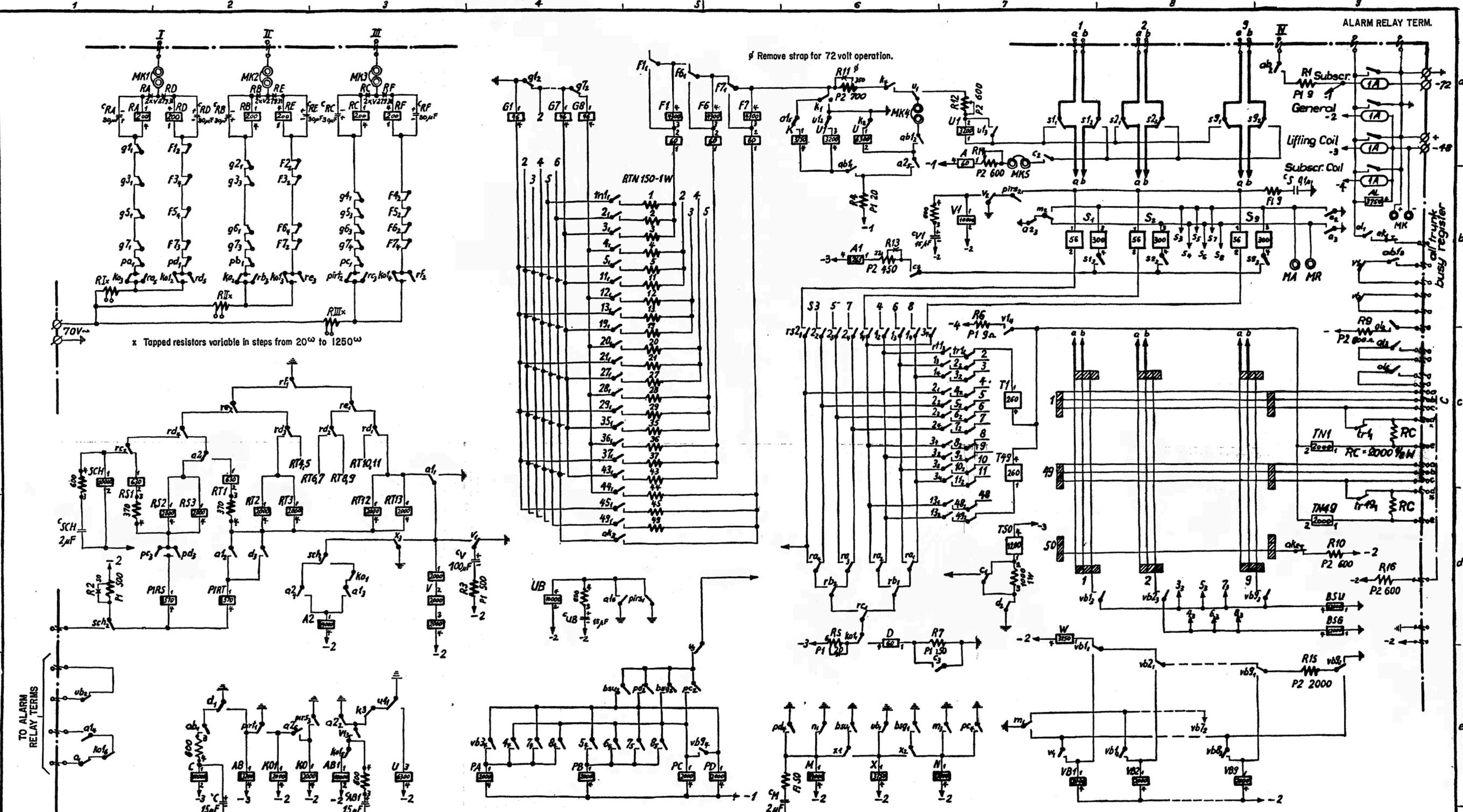
*W.E. Co. Serial Nos. 390 to 447 - RA to RF 280Ω
CRA to CRF 30MF

Remove strap for 72 volt operation.

Relays	Contacts	FS	RS3	SCH
F5	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
F6	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
D	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
F1	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
F2	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
F3	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b
F4	1 2 3 4	1 2b 3b	1 2b 3b	1 2b 3b

Lifting Coil	Contacts	Subscr. Coil	Subscr. relays	Contacts	Disconnecting	Brush
6 3b 3c	1 2 3 4	1 2 3 4	T1	1 2 3 4	1 2 3 4	1 2 3 4
S1	7b 8b	1 2 3 4	T2	1 2 3 4	1 2 3 4	1 2 3 4
S2	8b 9b	1 2 3 4	T3	1 2 3 4	1 2 3 4	1 2 3 4
S3	9b 10b	1 2 3 4	T4	1 2 3 4	1 2 3 4	1 2 3 4

GFELLER SUBSCRIBER LINE CONCENTRATOR
49-9-2
SUBSCRIBER UNIT
W.E. Co. Serial Nos. 2 thru 447 S10461-3

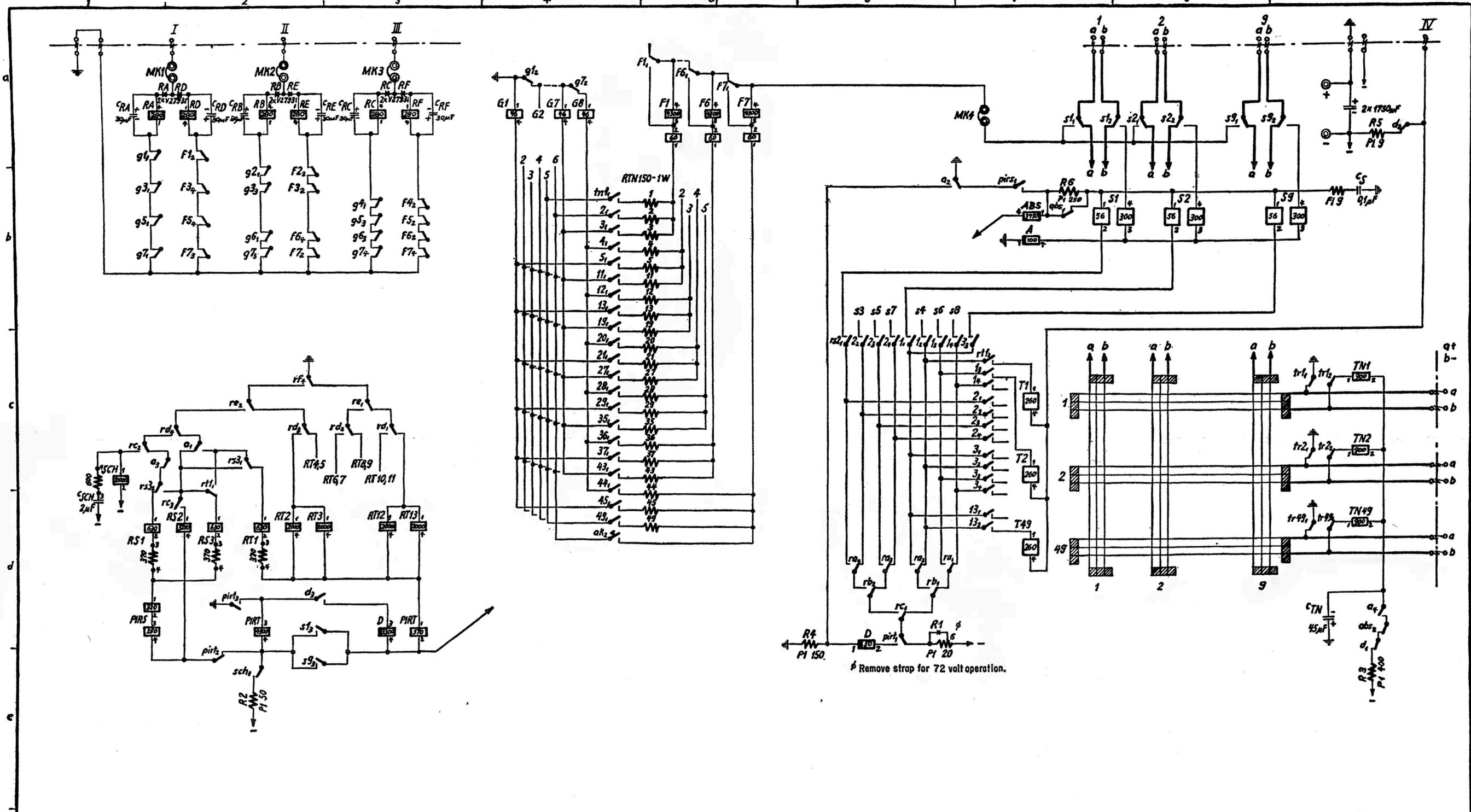


Relays	Contacts	1	2	3	4	5	6	7	8	9
BSU	9d	F5	G5	M	PIRT	RS1	RT12	V1	VB7	
A	7a	F6	G6	N	RA	RS2	RT13	VB1	VB8	
A1	6a	F7	G7	PA	RB	RS3	SCH	VB2	VB9	
A2	6a	F1	G8	PB	RC	RT1	U	VB3	W	
AB	2e	F2	G2	PC	RD	RT2	UI	VB4	X	
AB1	9b	F3	G3	PD	RE	RT3	UB	VB5	Y	
BSG	3d	F4	G4	PIRS	RF	RT4-11	V	VB6	Z	

Lifting Coil	Contacts	Subscriber Coil	Subscriber relay	Contact	Disconnecting rod	Ground contact
6-3-3-4	1/2	9-3-3-4	20 other	o2		1
S1	a 8b	71	TN1	o1		r 7c
S2	a 8b	7c	TN49	o1		r 7d
S9	a 8b	7c	150	o1		r 3d

GFELLER SUBSCRIBER LINE CONCENTRATOR
49-9-2
CENTRAL OFFICE UNIT

W.E.Co. Serial Nos. 448 and over **S10460-4**



Relays	Contacts	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18	F19
F5	1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i, 1j, 1k, 1l, 1m, 1n, 1o, 1p, 1q, 1r, 1s, 1t, 1u, 1v, 1w, 1x, 1y, 1z	2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k, 2l, 2m, 2n, 2o, 2p, 2q, 2r, 2s, 2t, 2u, 2v, 2w, 2x, 2y, 2z	3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j, 3k, 3l, 3m, 3n, 3o, 3p, 3q, 3r, 3s, 3t, 3u, 3v, 3w, 3x, 3y, 3z	4a, 4b, 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, 4k, 4l, 4m, 4n, 4o, 4p, 4q, 4r, 4s, 4t, 4u, 4v, 4w, 4x, 4y, 4z	5a, 5b, 5c, 5d, 5e, 5f, 5g, 5h, 5i, 5j, 5k, 5l, 5m, 5n, 5o, 5p, 5q, 5r, 5s, 5t, 5u, 5v, 5w, 5x, 5y, 5z	6a, 6b, 6c, 6d, 6e, 6f, 6g, 6h, 6i, 6j, 6k, 6l, 6m, 6n, 6o, 6p, 6q, 6r, 6s, 6t, 6u, 6v, 6w, 6x, 6y, 6z	7a, 7b, 7c, 7d, 7e, 7f, 7g, 7h, 7i, 7j, 7k, 7l, 7m, 7n, 7o, 7p, 7q, 7r, 7s, 7t, 7u, 7v, 7w, 7x, 7y, 7z	8a, 8b, 8c, 8d, 8e, 8f, 8g, 8h, 8i, 8j, 8k, 8l, 8m, 8n, 8o, 8p, 8q, 8r, 8s, 8t, 8u, 8v, 8w, 8x, 8y, 8z	9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k, 9l, 9m, 9n, 9o, 9p, 9q, 9r, 9s, 9t, 9u, 9v, 9w, 9x, 9y, 9z	10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o, 10p, 10q, 10r, 10s, 10t, 10u, 10v, 10w, 10x, 10y, 10z	11a, 11b, 11c, 11d, 11e, 11f, 11g, 11h, 11i, 11j, 11k, 11l, 11m, 11n, 11o, 11p, 11q, 11r, 11s, 11t, 11u, 11v, 11w, 11x, 11y, 11z	12a, 12b, 12c, 12d, 12e, 12f, 12g, 12h, 12i, 12j, 12k, 12l, 12m, 12n, 12o, 12p, 12q, 12r, 12s, 12t, 12u, 12v, 12w, 12x, 12y, 12z	13a, 13b, 13c, 13d, 13e, 13f, 13g, 13h, 13i, 13j, 13k, 13l, 13m, 13n, 13o, 13p, 13q, 13r, 13s, 13t, 13u, 13v, 13w, 13x, 13y, 13z	14a, 14b, 14c, 14d, 14e, 14f, 14g, 14h, 14i, 14j, 14k, 14l, 14m, 14n, 14o, 14p, 14q, 14r, 14s, 14t, 14u, 14v, 14w, 14x, 14y, 14z	15a, 15b, 15c, 15d, 15e, 15f, 15g, 15h, 15i, 15j, 15k, 15l, 15m, 15n, 15o, 15p, 15q, 15r, 15s, 15t, 15u, 15v, 15w, 15x, 15y, 15z	16a, 16b, 16c, 16d, 16e, 16f, 16g, 16h, 16i, 16j, 16k, 16l, 16m, 16n, 16o, 16p, 16q, 16r, 16s, 16t, 16u, 16v, 16w, 16x, 16y, 16z

Lifting Coil	Contacts	Subscr. Coil	Subscr. relays	Disconnecting	Bank contacts
6 33 8 7	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	9	02 01 02 01	1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
S1	7b 8b	11 7c	TN1	1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
S2	8b 8b	7c	TN2	1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
S9	8b 8b	13e 7d	TN49	1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

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49-9-2
SUBSCRIBER UNIT

W.E.Co. Serial Nos.448 and over S10461-4