

**SPECIFIC REQUIREMENTS FOR APPARATUS AND EQUIPMENT
ELECTRONIC TYPE
NUMBERING AND LETTERING
GENERAL EQUIPMENT REQUIREMENTS**

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1. GENERAL

1.01 This section covers specific requirements for numbering and lettering electronic-type apparatus and equipment in any system in which it is used.

1.02 These requirements supplement the standard requirements for numbering and lettering as covered in other sections in this series

of Bell System Practices, except as modified by applicable specifications and drawings.

1.03 All dimensions shown in this section for locating designations shall be considered approximate unless otherwise indicated by tolerances.

2. SPECIFIC REQUIREMENTS

A. General

2.01 To effect good contrast, color of characters shall be white when stamped on a blue-gray finish; black when stamped on a light gray finish.

2.02 A manufacturing location symbol shall be stamped on electronic-type equipment when required by the Western Electric Company. The symbol shall conform to the assignment shown in the Western Electric Company Q-894.1 Report. The location of such stamping is not a part of the associated equipment drawing information and shall be stamped, when required, as follows:

(a) On sheet metal frames, stamp the symbol with 3/16-inch characters on the frame base in the area reserved for Western Electric Company use shown in Fig. 2.

(b) On non-X units that are mounting plate or panel mounted, stamp the symbol with 1/8-inch characters on the extreme right rear side below the top mounting hole or slot. The symbol stamping shall be so located as to clear the mounting head screw.

(c) On non-X plug-in units, stamp the symbol with 1/8-inch characters in an inconspicuous location, where it will not be interpreted as a functional designation or part of the code.

B. Sheet Metal Frame

2.03 *The equipment code designation* shall be stamped horizontally with 3/16-inch characters on the right end of the top cross channel face as viewed from the rear. (See Fig. 1.)

2.04 *Frame name designations* shall be stamped with 3/8-inch characters on the front and rear of frames at two locations as covered in (a) and (b) below.

(a) **Frame Base:** Stamp on top surface at the right end as viewed from the stamping side. (See Fig. 2.)

(b) **Frame Base Cover:** Stamp on top surface, 3/16 inch from the leading edge. On the front of frames equipped with memory modules located at the bottom of the bays, stamp on the vertical face of the frame base cover, 3/16 inch from the top edge.

(1) *For single bay frames*, other than junctor grouping frames, designations shall be located in front of the left upright as viewed from the stamping side. For junctor grouping frames, designations shall be centrally located between the frame uprights.

(2) *For multibay frames*, designations shall be stamped in front of the bay upright specified in Table A.

Designations of supplementary Signal Distributors located on Miscellaneous Trunk frames shall be stamped with 3/8-inch characters located to the right of the frame name and separated by a 3/16-inch dash as follows: MT21 — SSD07

TABLE A

LOCATION OF FRAME NAME ON BASE COVER

NUMBER OF BAYS PER EQUIPMENT	FRONT	REAR
	LEFT UPRIGHT OF BAY NUMBER	
2	1	0
3	1	0
4	2	1
5	3	2

2.05 *Bay number designations* shall be stamped on the top surface of front and rear base covers with 3/8-inch characters centered between the bay uprights 3/16 inch from the leading edge except as follows:

(a) Bays equipped with memory modules located at the bottom of even-numbered bays shall be stamped on the front face of the left cover stile. For odd-numbered bays, stamp on the front face of the right cover stile. Characters shall be 3/8 inch, horizontally centered on the cover stile, 1 inch above the frame base cover. On the rear, stamp bay numbers in the standard manner specified above.

Bay numbers associated with multiframe equipments shall be stamped with 3/16-inch characters centered below the frame name on the front and rear top surface of the frame base. (See Fig. 2.)

2.06 *Central Control group designations*, when required, shall be stamped on the frame base cover with 3/16-inch characters centered 1/8 inch above the frame name.

2.07 *SD- circuit schematic drawing numbers* shall not be stamped.

2.08 *Frame convenience receptacles* of 115 volts ac shall not be stamped.

2.09 *Frame cable potential designations* shall be stamped on the rear face of the top channel assembly with 1/8-inch characters located immediately above the associated cable hole in the cable cap.

2.10 *Mounting plate position numbers on front of frames* shall be stamped with 1/8-inch characters centered on the front face of various bay uprights specified on the applicable frame equipment drawing. Position numbers shall be stamped in ascending numerical order, starting with 00, from the bottom of each bay as follows:

(a) Stamp the first, last, and each intermediate 2-inch mounting plate position whose number is a multiple of five. Characters will be 00, 05, 10, 15, 20, 25, 30, 35, and 37. On bays arranged with 4-inch mounting plates, stamp the first, last, and each intermediate 4-inch mounting plate position whose number

is a multiple of five. Characters will be 00, 05, 10, 15, and 18.

2.11 Mounting plate position numbers on rear of frames shall be stamped on each mounting plate corresponding to the position assigned on the front of the frame. Numbers shall be stamped horizontally with 3/8-inch characters located between the left mounting screws. Mounting plates occupying more than one 2-inch position increment shall be stamped with the lowest associated position number. Mounting plate position numbers concealed by the addition of a vertical ground bus bar shall be restamped onto the ground bus bar in the same relative location, unless otherwise specified.

2.12 Junctor grouping frames shall be stamped with 3/8-inch characters as follows:

(a) **Vertical file designations** shall be stamped 1/8 inch from the top edge of the front and rear faces of the frame top channel assembly. In addition, stamp on the top surface of the frame base cover, 3/16 inch from the front and rear edges. Designations shall be centered in line with associated vertical files. Designations that conflict in location with the frame name designation stamped on the frame base cover shall be stamped immediately in back of the frame name.

(b) **Shelf designations** shall be stamped on the front vertical face of each shelf tray 1/2 inch from the right end. On the rear, stamp the designation on the left upright in a location approximately in line with the horizontal center of each connector assembly.

C. Extruded Frames (Central Office Control Equipment)

2.13 Equipment code designations shall be stamped horizontally with 3/16-inch characters on the right of the top cross channel as viewed from the rear. (See Fig. 1.)

2.14 Frame name designations shall be stamped with 3/8-inch characters centered on the top rear cross channel. (See Fig. 3.)

2.15 Bay designations shall be stamped on the horizontal surface of front and rear top cross channels with 3/8-inch characters centered

between the bay uprights. On single or triple bay frames, designations that conflict in location with the frame name designation shall be stamped 5 inches left of the frame name. (See Fig. 3.)

2.16 Equipment unit designations, when required, shall be stamped with 3/8-inch characters on the inside face of left and right uprights of double bay frames (left upright of single bay frames) as viewed from the rear. Characters shall be stamped in a vertical file reading from top down. Separation stripes used to indicate the physical limits of a unit covered by a specific designation shall be stamped with the 3/4-inch letter I. (See Fig. 4.)

2.17 SD-circuit schematic drawing numbers shall not be stamped.

2.18 Frame convenience receptacles of 115 volts ac shall not be stamped.

2.19 Frame connector designations shall be stamped immediately above the associated connectors with 1/8-inch characters on front and rear of the frame upright. (See Fig. 5.)

2.20 Vertical ground bar designations shall be stamped with 1/8-inch characters centered on the ground bar. (See Fig. 5.)

D. Extruded Frames (Switch Unit Cabinet Equipment)

2.21 The equipment code designation and associated serial number shall be stamped with 3/8-inch characters on the top surface at the left end of the frame base as viewed from the front. (See Fig. 6.)

2.22 The frame name, when specified, shall be stamped with 3/8-inch characters on the top surface at the right end of the frame base as viewed from the front. (See Fig. 6.)

2.23 Bay designations shall be stamped with 3/8-inch characters as follows:

(a) On the front, stamp on top surface of the frame base centered between the bay uprights. (See Fig. 6.)

(b) On the rear, stamp on top cross channel centered between the bay uprights.

2.24 Frame connector designations shall be stamped on the rear of the frame mounting bracket with 1/8-inch characters located immediately above the connector. (See Fig. 7.)

2.25 Frame level position numbers shall be stamped with 3/16-inch characters on rear of frame mounting brackets. Locate each designation from the top surface of the frame base the number of inches corresponding to the number of the level position. (See Fig. 7.)

2.26 Tray level numbers, when required, shall be stamped with 3/16-inch characters following the associated frame level position number and separated therefrom by a slash (/) line. (See Fig. 7.)

E. Equipment Unit Stamping

2.27 Codes of mounting plate equipment units shall be stamped on the rear with 3/16-inch characters rotated 90 degrees counterclockwise, reading from the bottom up.

(a) **For single plate units**, centrally locate the code on the extreme right of the mounting plate sufficient to clear unit mounting screws.

(b) **For multiplate units**, locate the code in the extreme upper right area of the top mounting plate sufficient to clear unit mounting screws.

2.28 Equipment codes of units using ED-1H410-() tray assemblies shall be stamped on the rear center spacer of the uppermost tray in the unit. Characters shall be 1/8 inch, located 1 inch from top of tray. (See Fig. 8.)

2.29 Tray level designations shall be stamped on each ED-1H410-() tray assembly provided on an equipment-coded unit. Numbers shall be 1/8-inch characters centered on the rear center spacer 1/2 inch from the bottom of the tray. (See Fig. 8.)

2.30 ED-94888-01 tray assemblies shall be stamped as shown in Fig. 9.

2.31 ED-99576-() tray assemblies shall be stamped as shown in Fig. 10.

2.32 Filter units mounted under frame base covers shall be stamped as shown in Fig. 11.

2.33 SD- circuit schematic drawing numbers shall not be stamped unless otherwise specified. When required, stamp in accordance with Section 800-613-159.

2.34 Overall circuit group designations of units shall not be stamped unless otherwise specified. When required, stamp in accordance with Section 800-613-159.

F. Apparatus Mountings

2.35 The various types of apparatus mountings shall be stamped in accordance with the respective figures listed in Table B.

TABLE B

FIGURE REFERENCE FOR VARIOUS APPARATUS MOUNTINGS

CODE	FIG. NO.
35	12
36	13
38	14
44	15
46	16
47 - 50	17
51 - 56	18

(a) Numbers of circuit pack positions on 36-type apparatus mountings shall be stamped only on the rear of the mounting plate. The first and last position within each apparatus mounting shall be stamped. In addition, positions whose number is a multiple of five shall be stamped.

(b) When 38-type and/or 46-type apparatus mountings are mounted on the same mounting plate or mounted with 36-type apparatus mountings, each position within each apparatus mounting, except 36-type apparatus mountings, shall be stamped. The 36-type apparatus mountings shall be stamped as specified in (a) in all cases.

G. Chassis Mountings (Plug-In Units)

2.36 *Position numbers* of chassis mountings for plug-in units shall be stamped on the front and rear of mounting plates as shown in Fig. 19.

H. Connectors

2.37 *905-type connectors* mounted on apparatus mountings shall be identified as shown in Fig. 13, 14, and 16.

2.38 When 905-type connectors are furnished on apparatus mountings for circuit testing, the functional designations shall be stamped in the locations normally used for stamping circuit pack codes.

2.39 *910-, 912-, and similar-type connectors* shall be designated as shown in Fig. 20.

I. Designation Strips

2.40 *125A designation strips* used with 36A and 36B apparatus mountings shall be stamped as shown in Fig. 21.

J. Inductors

2.41 The various types of inductors shall be stamped in accordance with the respective figures listed in Table C.

TABLE C
FIGURE REFERENCE FOR VARIOUS INDUCTORS

CODE	FIG. NO.
1633	22
1641	23
1650	24
1700	37

K. Memories

2.42 *1-type memories* shall be designated on the front and rear as shown in Fig. 25.

2.43 *2-type memories* shall be designated on the front as shown in Fig. 26.

2.44 *15-type memory* designations shall be stamped on the top horizontal surface at the right end of the bottom mounting angle as shown in Fig. 27.

L. Networks

2.45 The various types of networks shall be stamped in accordance with the respective figures listed in Table D.

TABLE D
FIGURE REFERENCE FOR VARIOUS NETWORKS

CODE	FIG. NO.
4036	28
4042	29
4043	30

M. Plugs

2.46 *KS-20203 plugs* shall be stamped as shown in Fig. 31.

N. Sensors (Ferrod)

2.47 Designations of 1-type ferrod sensors mounted in matrix arrays shall be stamped on the apparatus mounting as shown in Fig. 12 and 15. Single-unit sensors mounted in P-11G084 shield assemblies shall be stamped as shown in Fig. 32.

O. Switches (Ferreed)

2.48 *241-, 244-, and similar-type switches* shall be stamped as shown in Fig. 33.

2.49 *242-, 243-, 252-, and similar-type switches* shall be stamped as shown in Fig. 34.

P. Terminal Strips

2.50 *288-type terminal strips* shall be stamped as shown in Fig. 35.

Q. Transformers

2.51 *2598- and similar-type transformers* shall be stamped as shown in Fig. 36.

2.52 *2650- and similar-type transformers* mounted in KS-20204, L1 mounting shall be stamped as shown in Fig. 37.

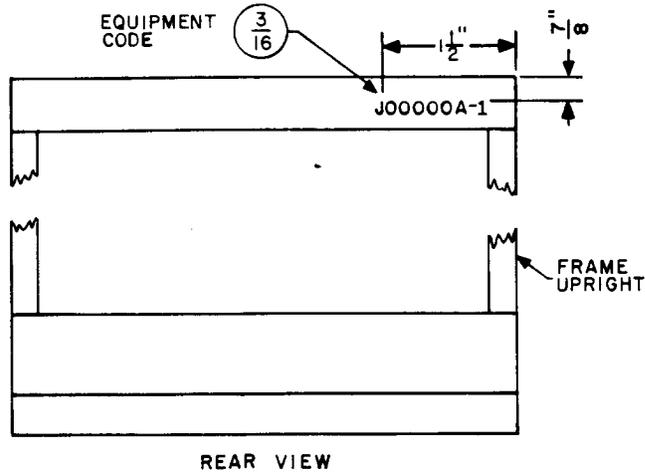


Fig. 1 - Frame Equipment Code

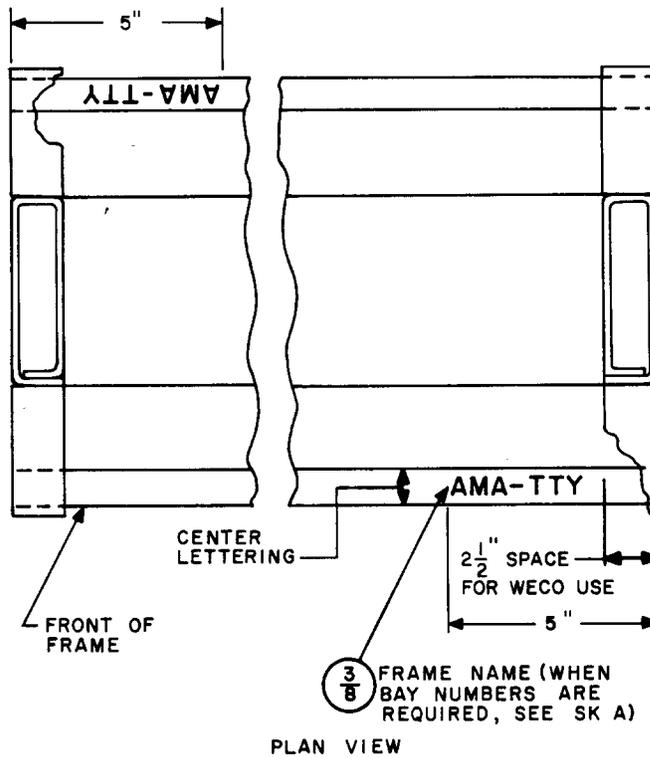
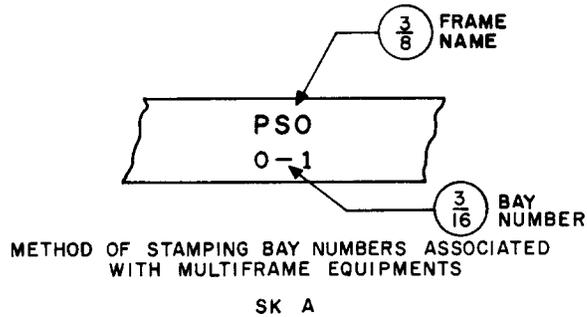


Fig. 2 - Frame Name Designation and Bay Number on Frame Base — Single or Multibay Sheet Metal Frame

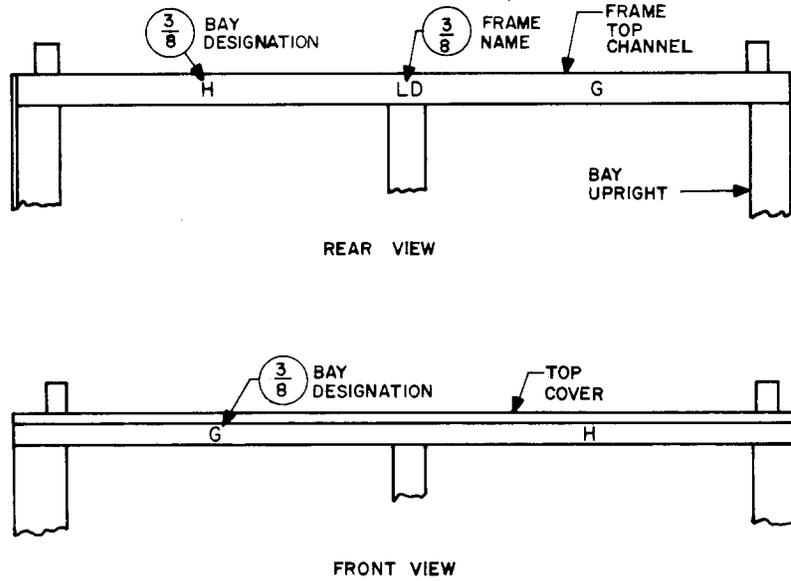


Fig. 3 - Method of Stamping Frame Name and Bay Designations

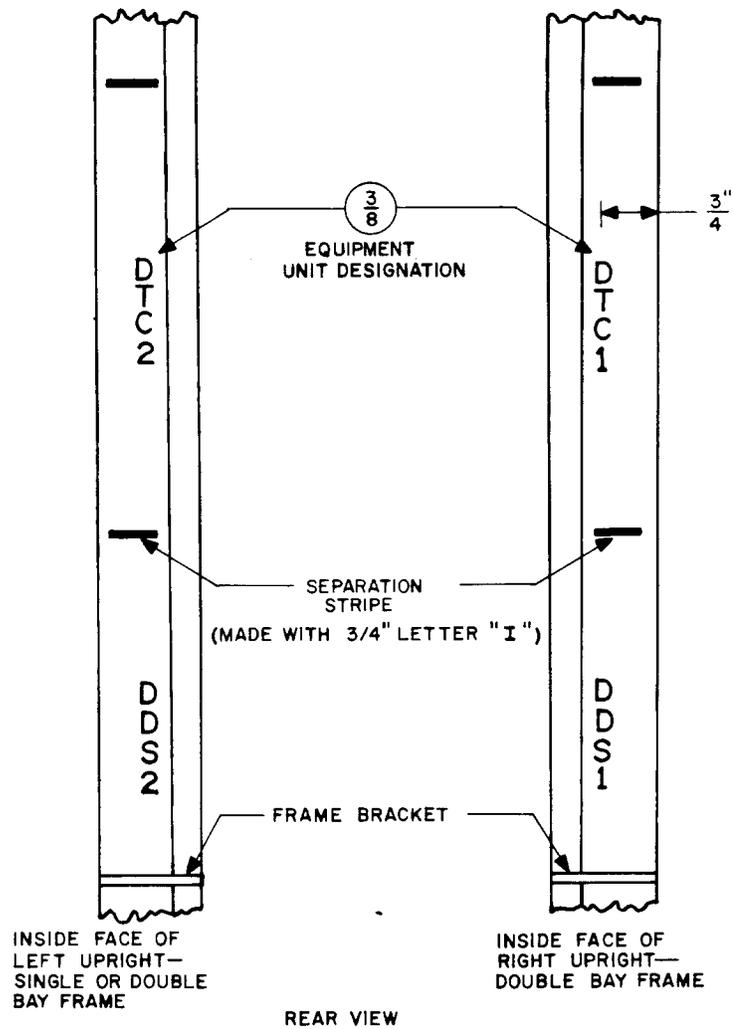


Fig. 4 - Equipment Unit Designations - Extruded Frame - Control Equipment

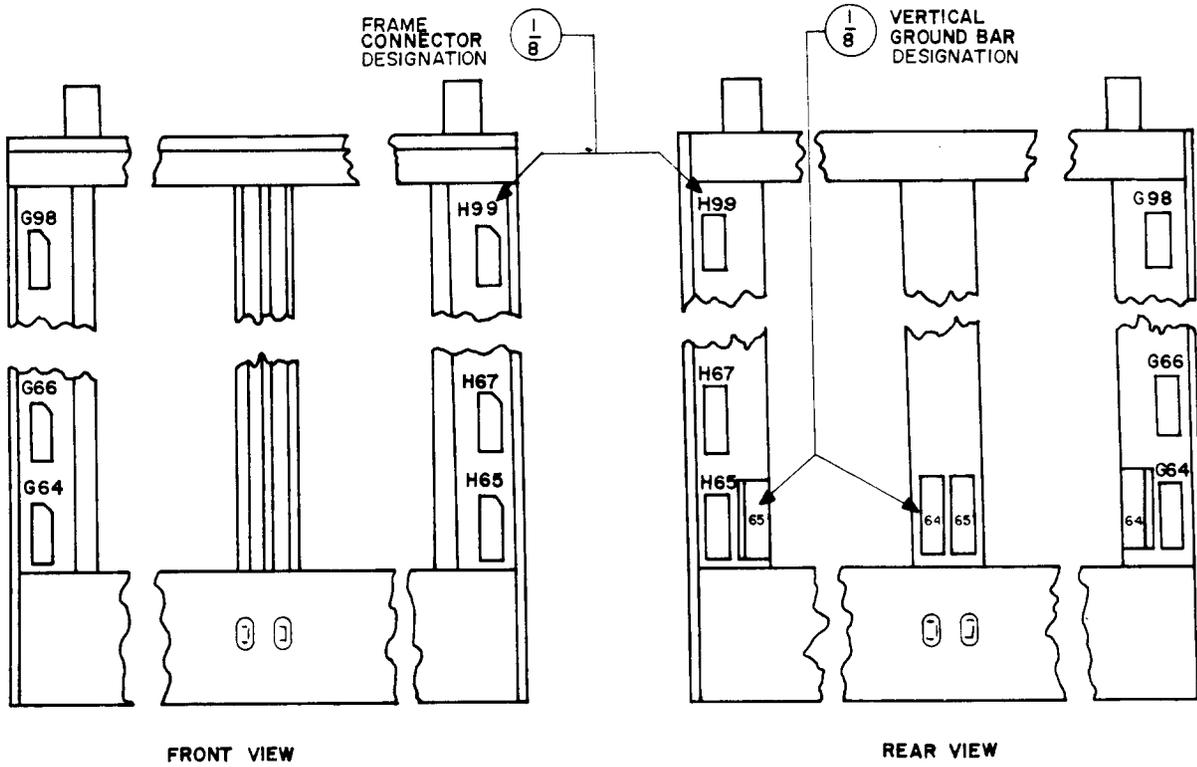


Fig. 5 - Typical Connectorized Multibay Frame — Connector and Vertical Ground Bar Designs

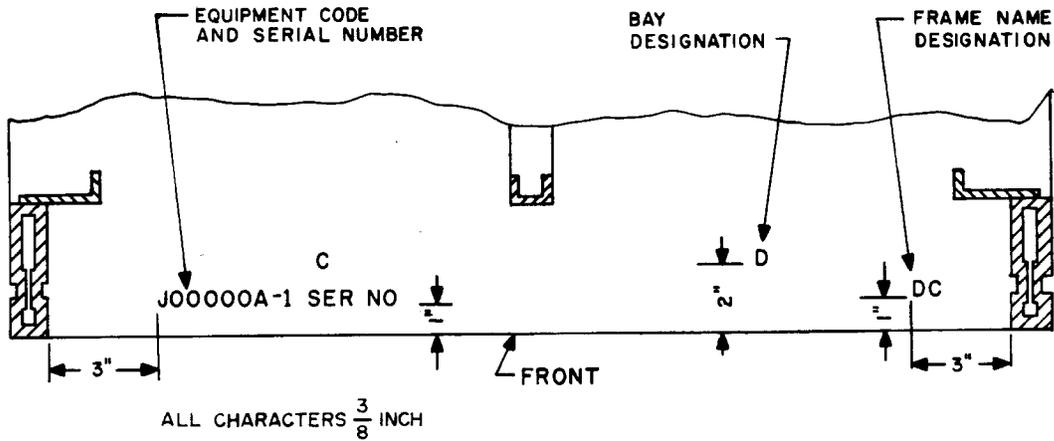
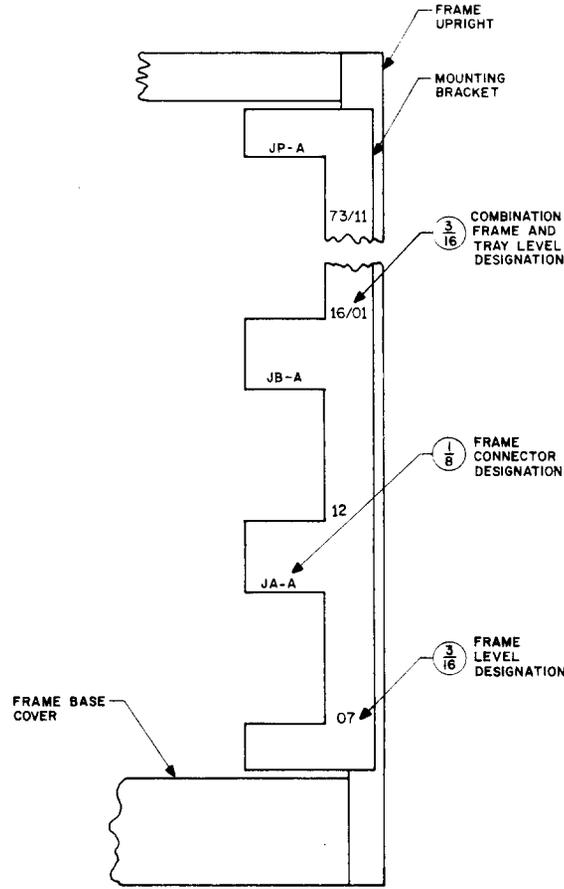


Fig. 6 - Method of Stamping Equipment Code, Serial Number, Bay Designation, and Frame Name on Base of Switch Unit Frame



REAR VIEW
Fig. 7 – Frame Connector, Frame Level, and Tray Level Designations on Mounting Brackets — Double Bay Switch Unit Frame

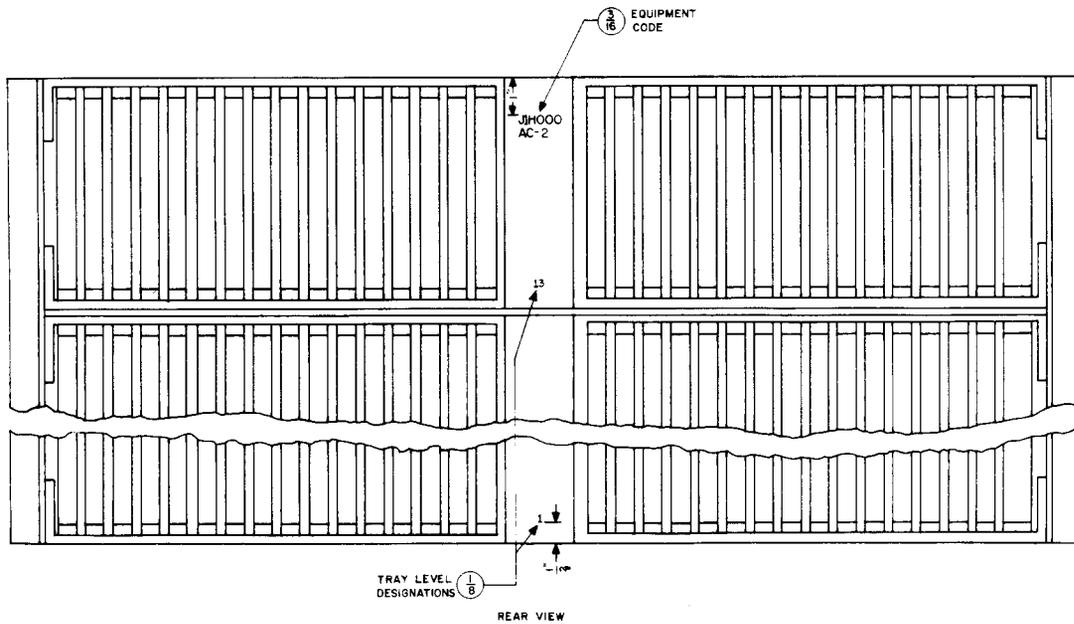


Fig. 8 – ED-1H410-() Tray Assembly — Equipment Code and Tray Level Designations

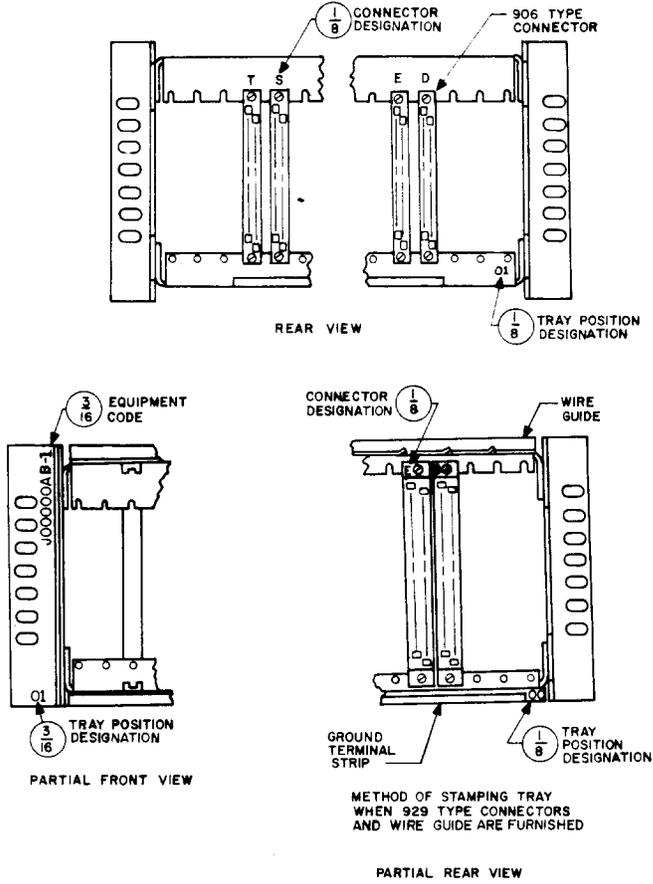


Fig. 9 - ED-94888-01 Tray

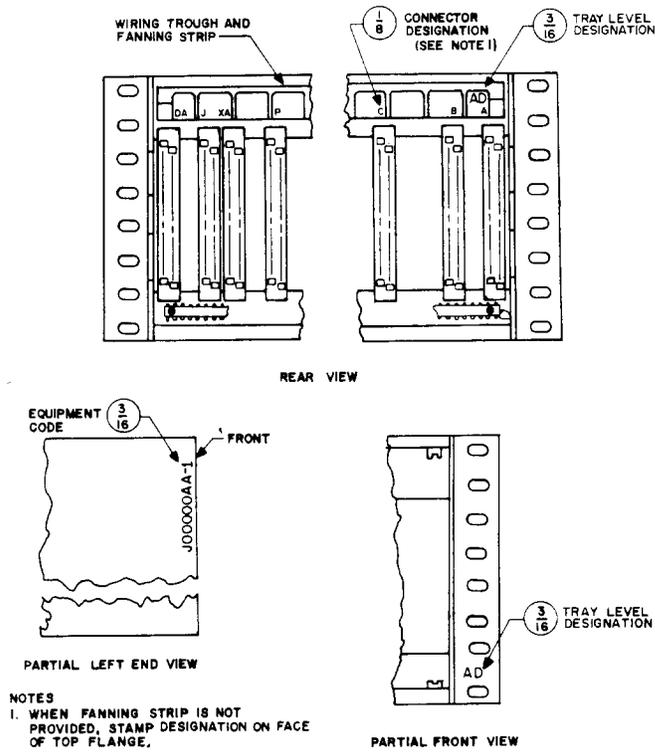


Fig. 10 - ED-99576-() Tray

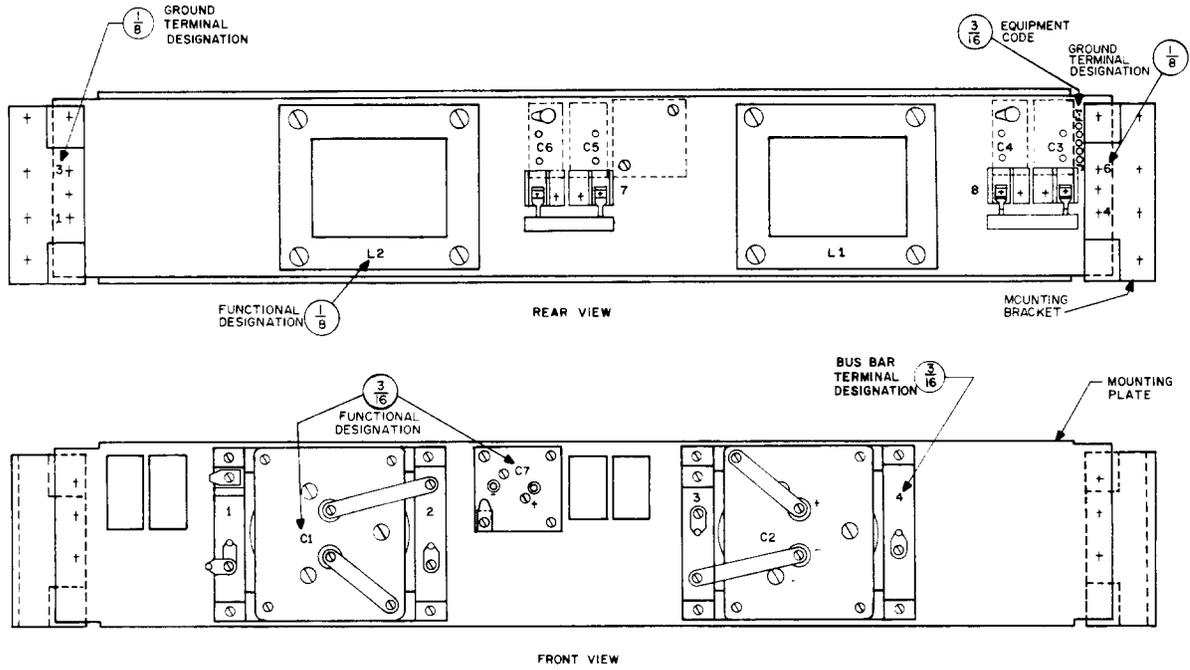


Fig. 11 - Typical Filter Unit

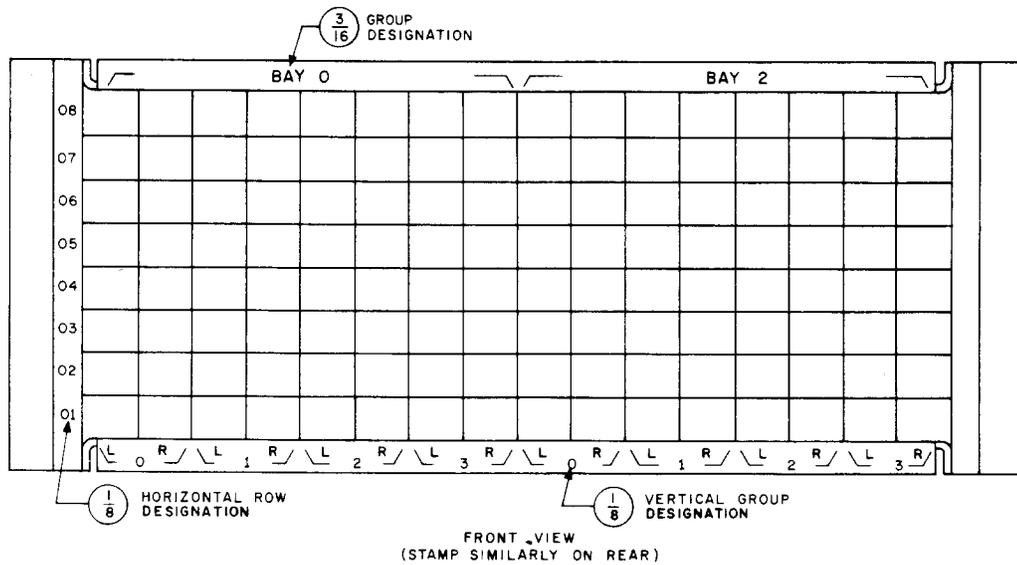


Fig. 12 - Apparatus Mounting - 35 Type Equipped With 1-Type Sensors

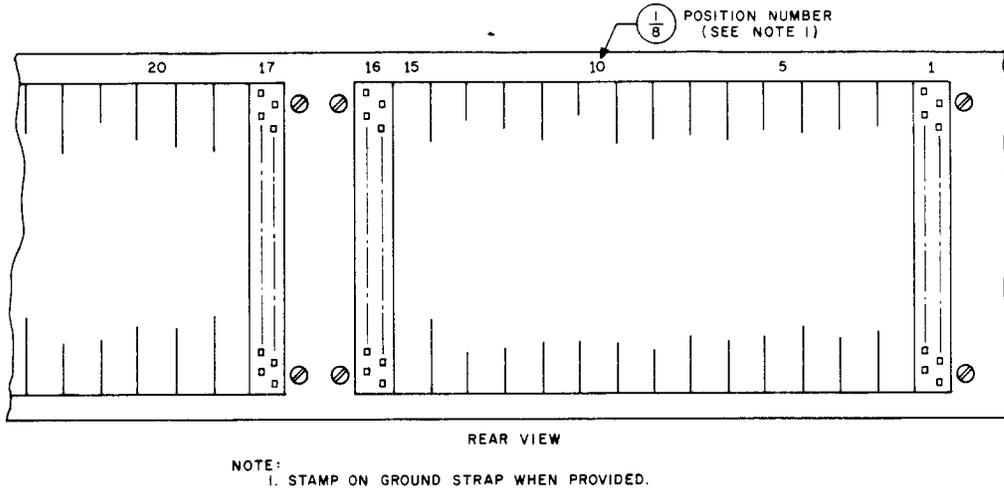


Fig. 13 – Apparatus Mounting — 36 Type Equipped With 905-Type Connectors

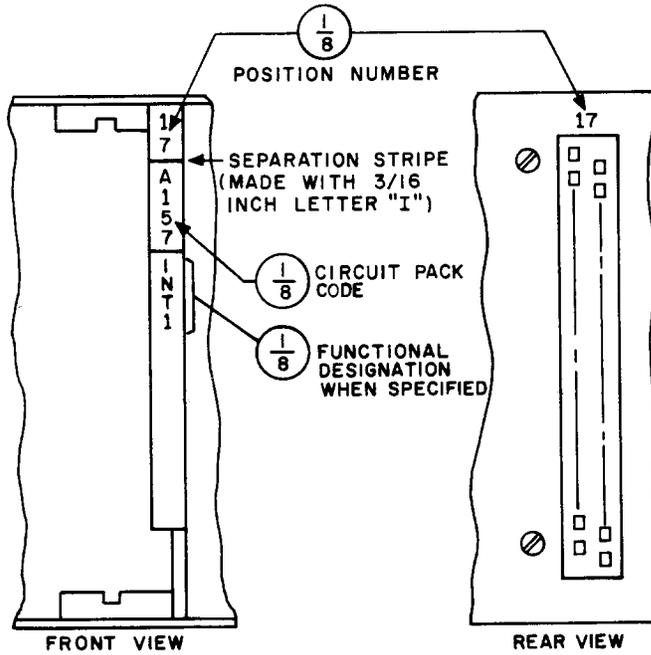


Fig. 14 – Apparatus Mounting — 38 Type Equipped With 905-Type Connectors

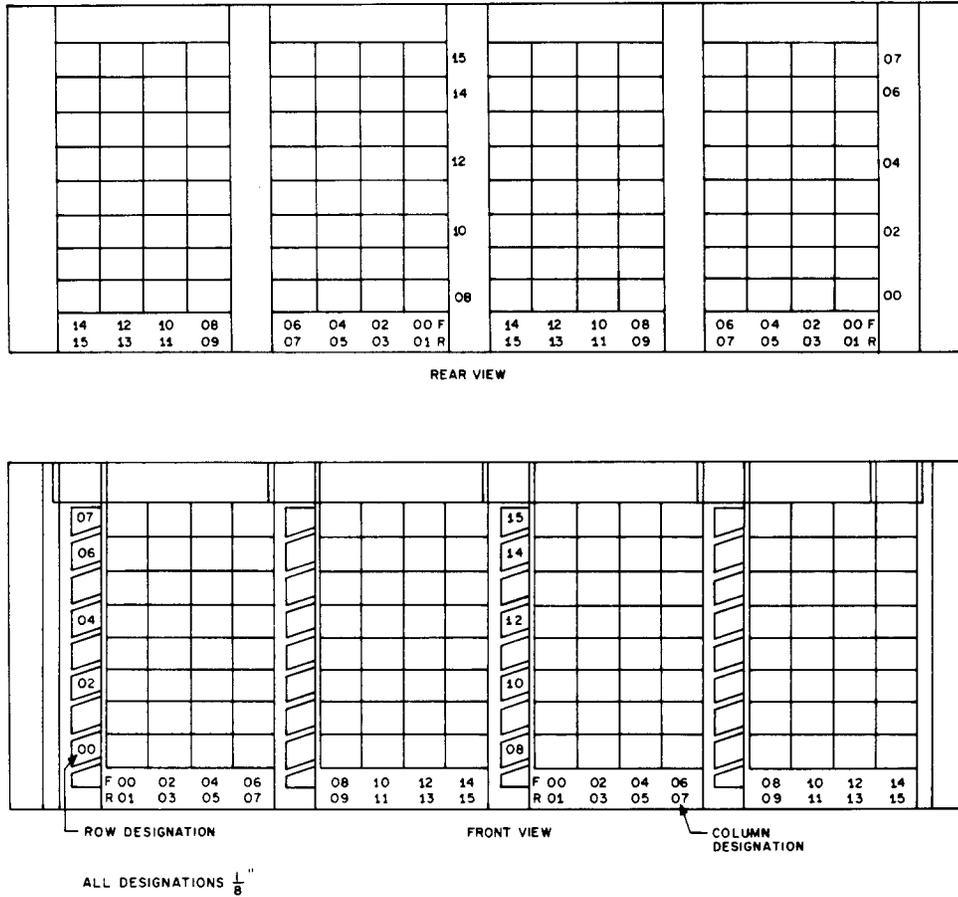


Fig. 15 - Apparatus Mounting - 44 Type Equipped With 1-Type Sensors

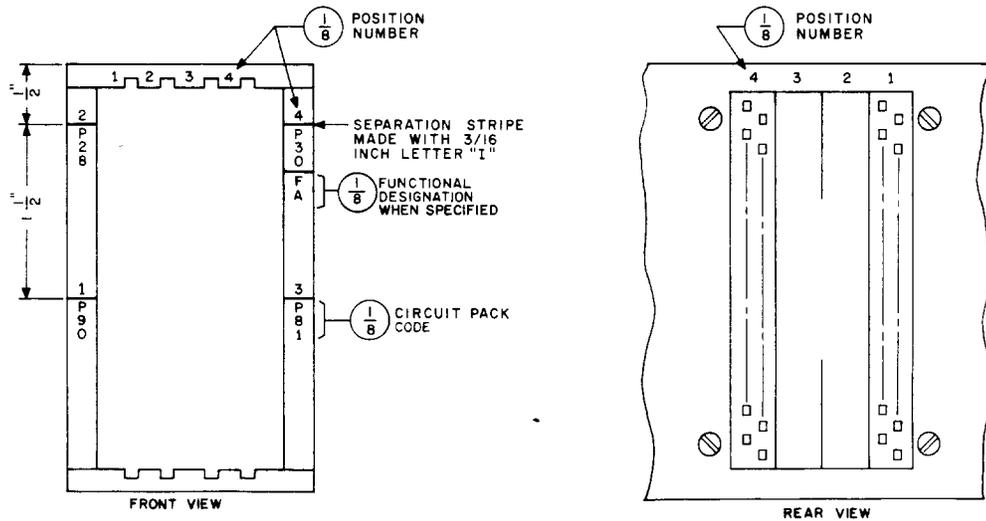


Fig. 16 - Apparatus Mounting - 46A Equipped With 905-Type Connectors

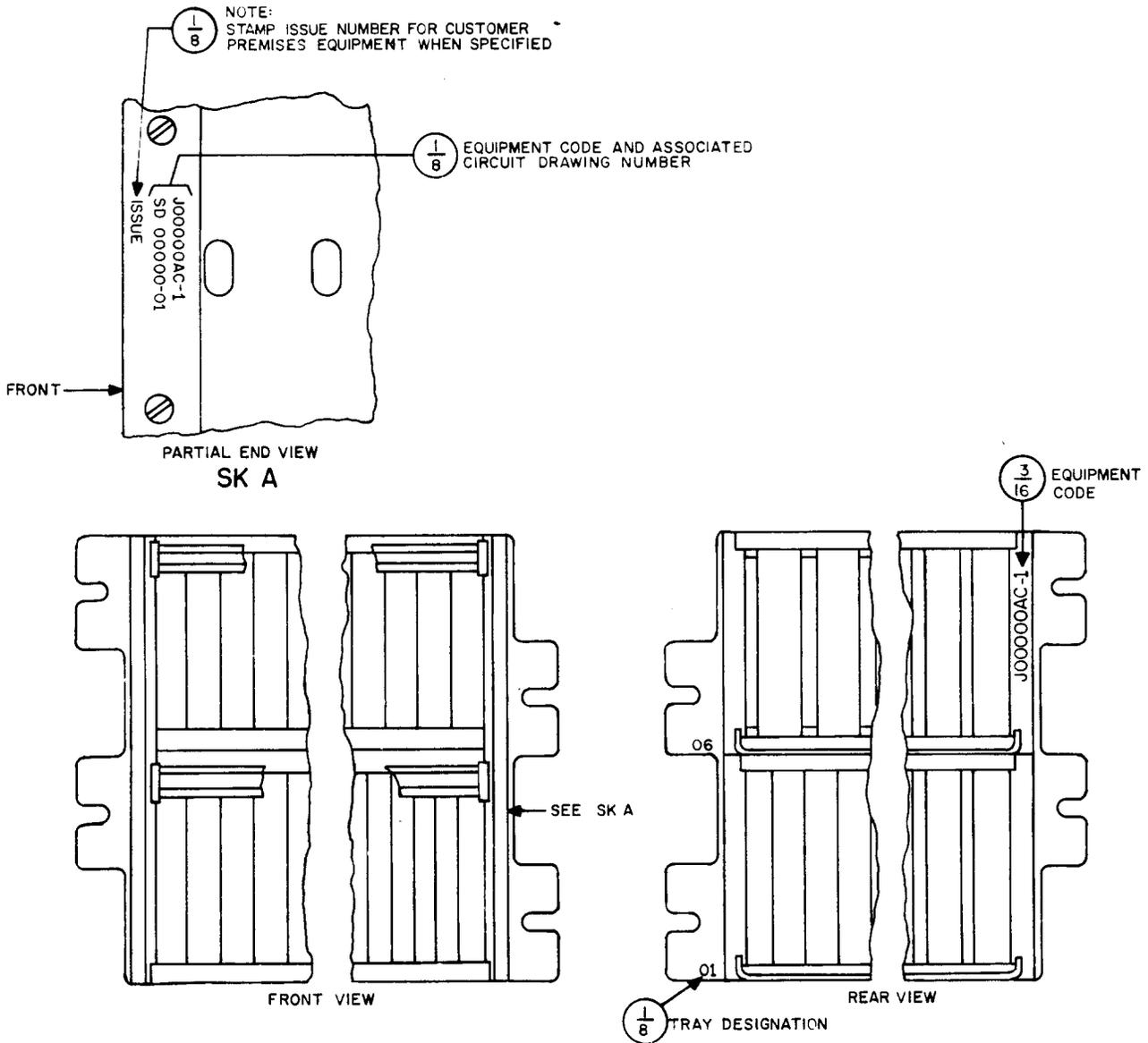


Fig. 17 - Apparatus Mounting 47-50 Type

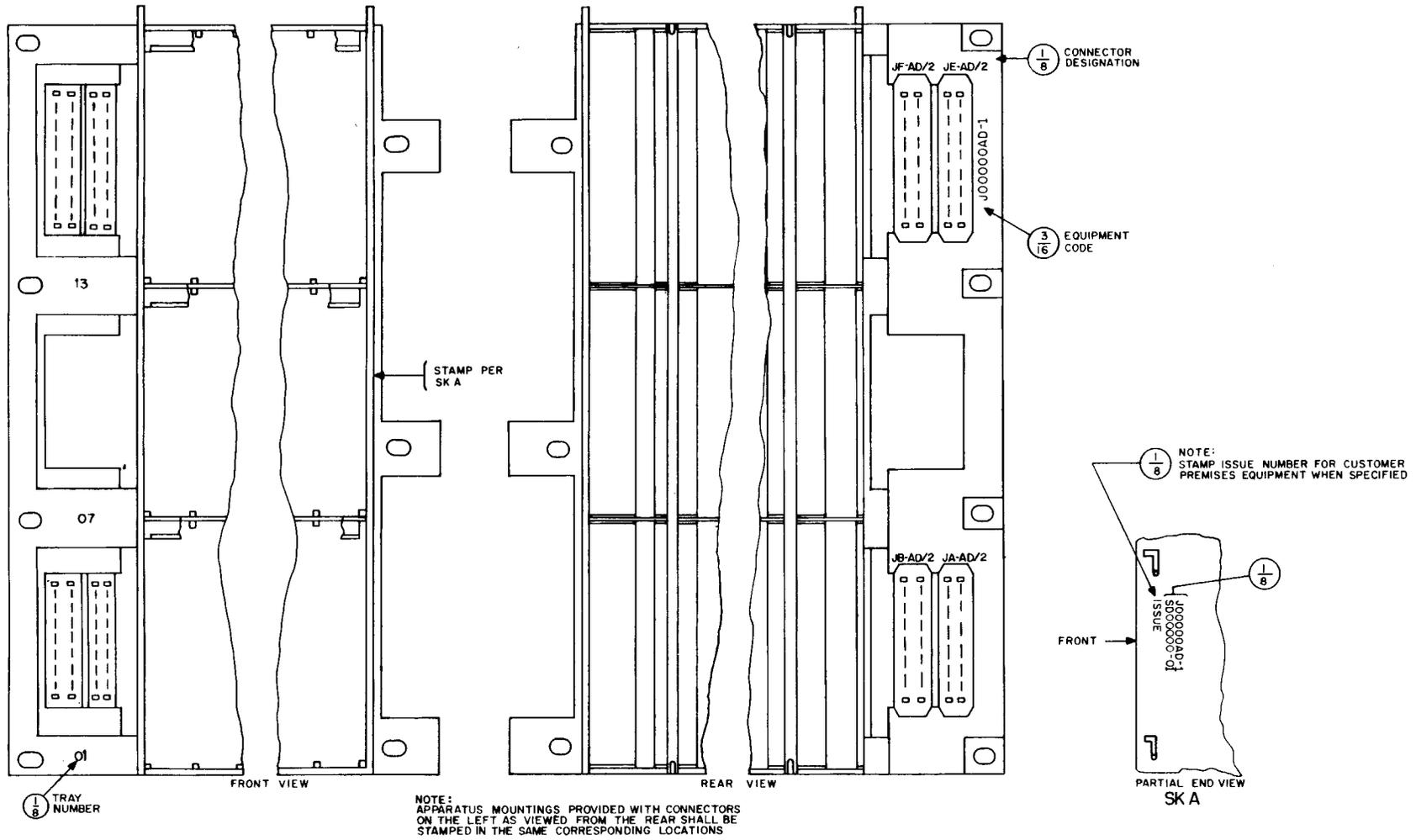


Fig. 18 – Apparatus Mounting — 51 Through 56 Type — Equipment Code, Connector Designations, SD- Drawing and Associated Issue Number

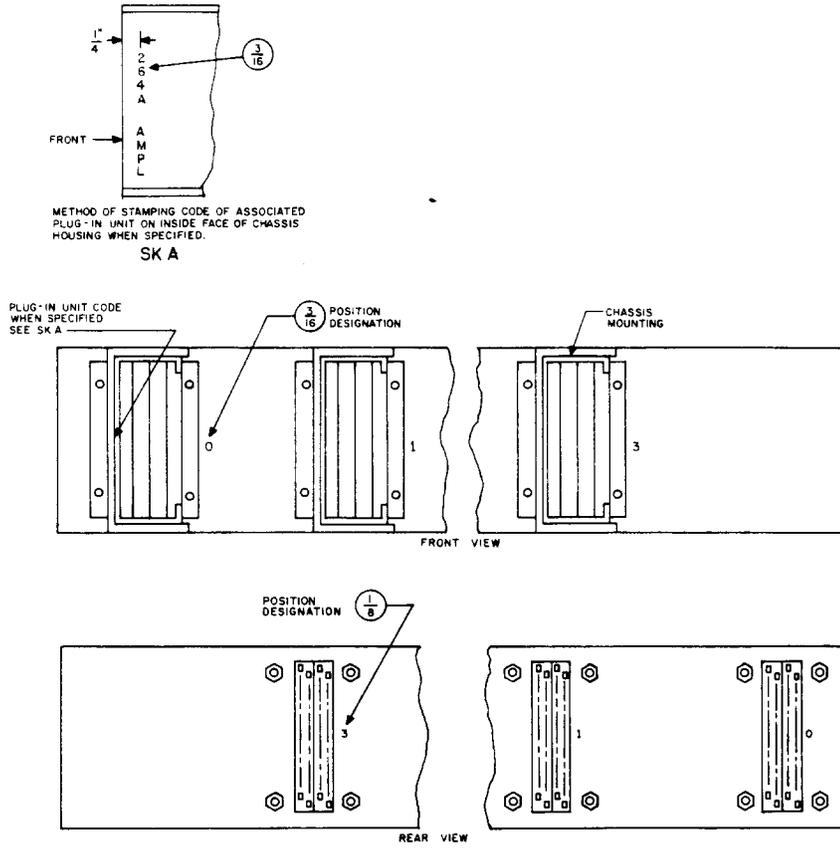


Fig. 19 - Chassis Mounting — Plug-In Unit

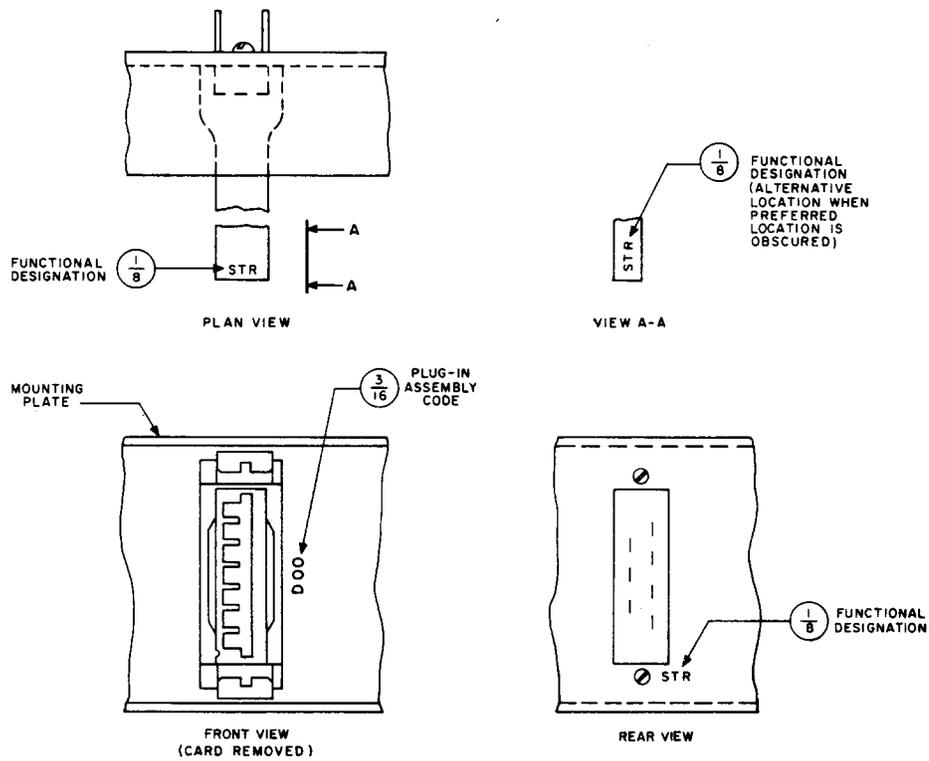
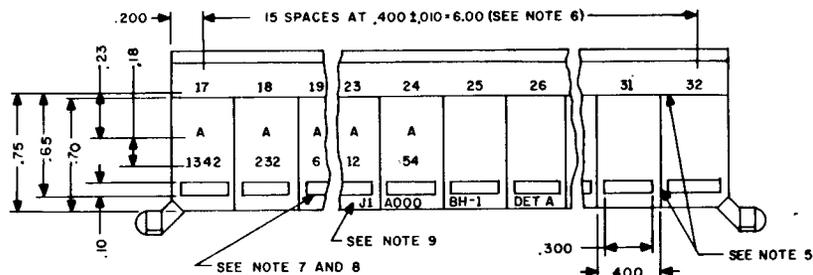
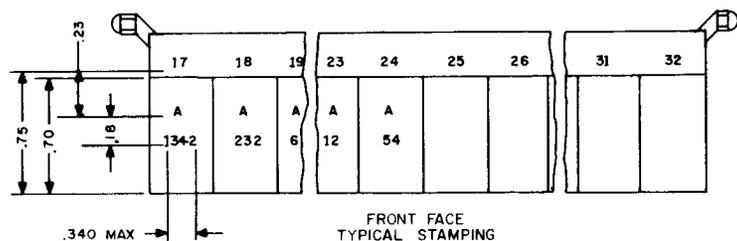


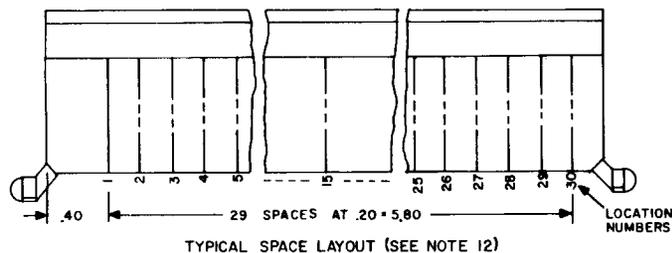
Fig. 20 - Connector — 910, 912, and Similar Types



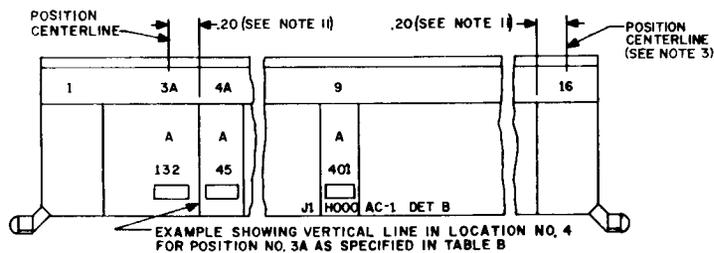
REAR FACE



FRONT FACE
TYPICAL STAMPING



TYPICAL SPACE LAYOUT (SEE NOTE 12)



EXAMPLE SHOWING VERTICAL LINE IN LOCATION NO. 4 FOR POSITION NO. 3A AS SPECIFIED IN TABLE B

TYPICAL METHOD OF LOCATING POSITION NUMBERS

NOTES:

1. DESIGNATION STRIPS SHALL BE HOT STAMPED PER DETAIL SHOWN ON J DRAWING.
2. UNLESS OTHERWISE SPECIFIED ALL CHARACTERS SHALL BE BLACK AND IN 10 POINT NEWS GOTHIC CONDENSED.
3. DESIGNATIONS SHALL BE LOCATED SYMMETRICALLY ABOUT THE POSITION CENTERLINE UNLESS OTHERWISE SPECIFIED.
4. DIMENSIONS LOCATING DESIGNATIONS ARE SHOWN TO BOTTOM OF CHARACTERS.
5. DIMENSIONS ARE TO CENTERS OF LINES. LINES SHALL BE BLACK AND .015 INCH WIDE.
6. UNLESS OTHERWISE SPECIFIED TOLERANCES ON ALL DIMENSIONS SHALL BE $\pm .005$ INCH FOR 3 PLACE DECIMALS AND $\pm .01$ INCH FOR TWO PLACE DECIMALS. TOLERANCES SHALL NOT BE CUMULATIVE.
7. COLOR BLOCKS ARE SHOWN FOR DIMENSIONAL PURPOSES ONLY AND SHALL NOT BE MOULDED ABOVE THE SURFACE OF DESIGNATION STRIP.
8. COLORS SHALL BE IN ACCORDANCE WITH THE FOLLOWING OBSERVATIONAL STANDARDS:
 BLUE - OS10886
 RED - OS10888
 YELLOW - OS10889
 WHITE - OS10965
9. PART NUMBER SHALL BE STAMPED APPROXIMATELY IN POSITION SHOWN WITH .030 TO .045 CHARACTERS DEPRESSED WITH NO COLOR.
10. AFTER STAMPING, MOULDING SHALL BE FLAT WITHIN $\pm .03$ INCH.
11. THE POSITION CENTERLINE SHALL BE LOCATED .20 INCH LEFT OF THE VERTICAL LINE POSITION NUMBER SHOWN IN TABLE A OR B EXCEPT FOR CIRCUIT PACK POSITION NUMBERS 16, 32, AND 48 WHICH SHALL BE LOCATED AS SHOWN FOR POSITION 16.
12. MODULAR SPACING OF VERTICAL LINES ON DESIGNATION STRIPS FOR 36B APPARATUS MOUNTINGS SHALL ALWAYS START WITH A BASIC MODULE OF .40 INCH FROM LEFT EDGE OF STRIP. ADDITIONAL VERTICAL LINES SHALL BE LOCATED BY DIMENSIONS THAT ARE MODULAR INCREMENTS OF .20 INCH FROM THE FIRST VERTICAL LINE.

TABLE A
(SEE NOTE 11)

CIRCUIT PACK POSITION NO.	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
VERTICAL LINE LOCATION NO.	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	NO LINE

TABLE B
(SEE NOTE 11)

CIRCUIT PACK POSITION NO.	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12A	13A	14A	15A	16A
	18A	19A	20A	21A	22A	23A	24A	25A	26A	27A	28A	29A	30A	31A	32A
	34A	35A	36A	37A	38A	39A	40A	41A	42A	43A	44A	45A	46A	47A	48A
VERTICAL LINE LOCATION NO.	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30

Fig. 21 - 125A Designation Strip

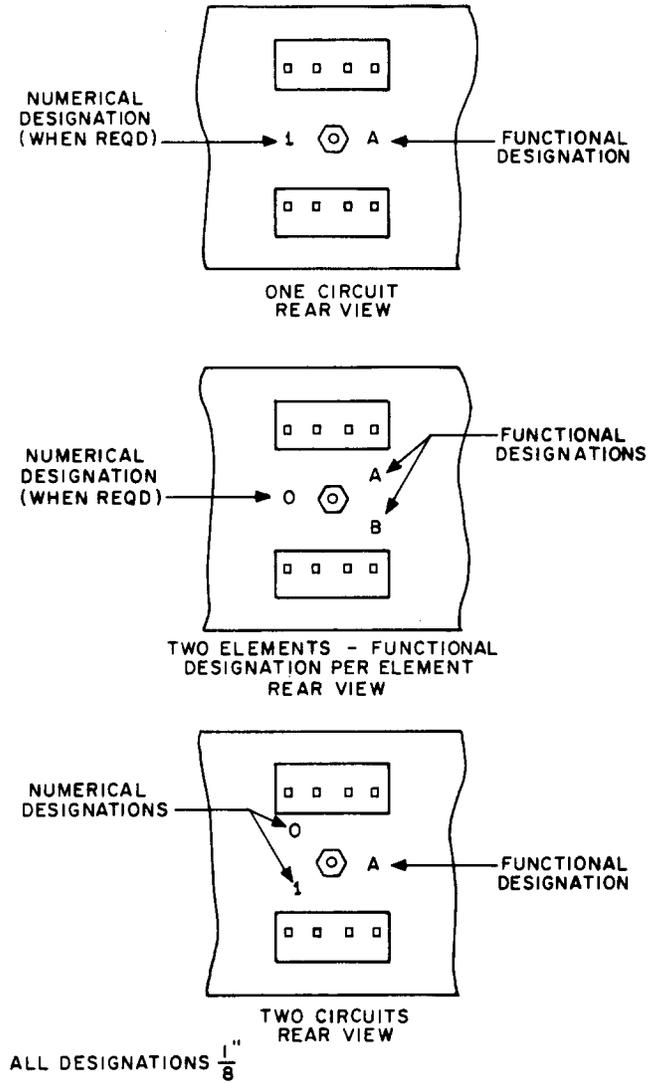
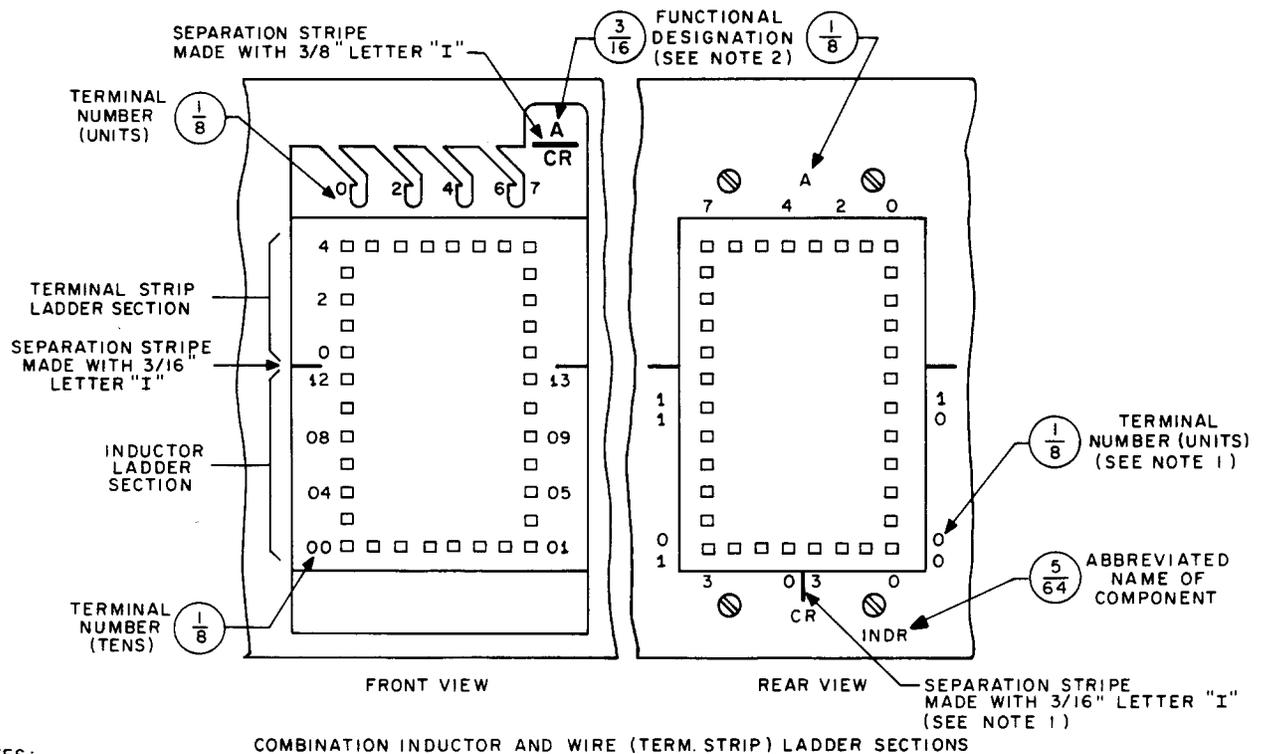
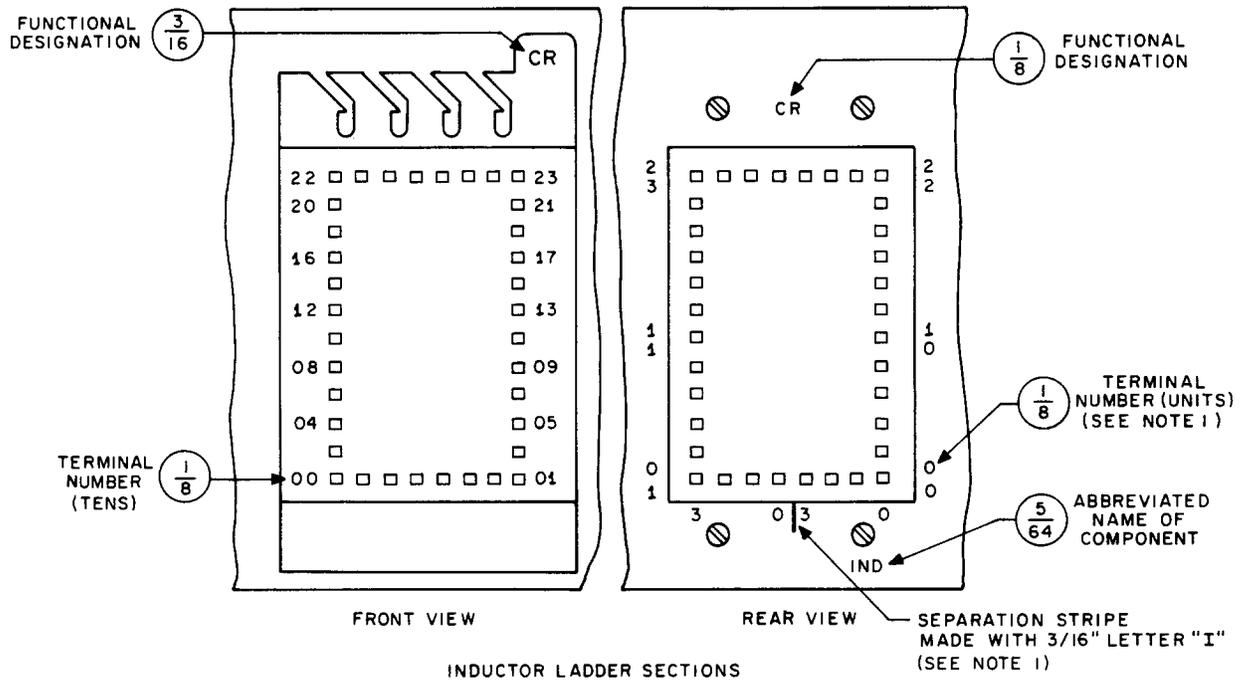


Fig. 22 - Inductor — 1633 and Similar Types



- NOTES:
 1. STAMP ON GROUND STRIP WHEN PROVIDED.
 2. THE UPPER AND LOWER FUNCTIONAL DESIGNATIONS IDENTIFY UPPER AND LOWER ELEMENTS RESPECTIVELY.

Fig. 23 - Inductor - 1641 and Similar Types

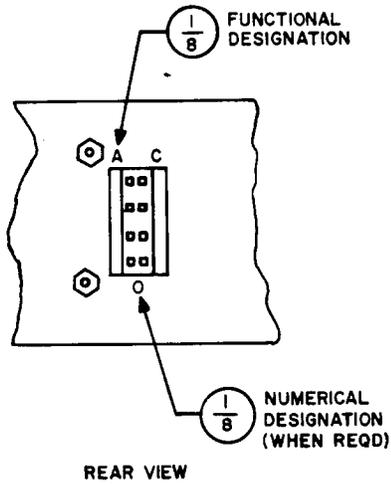


Fig. 24 - Inductor - 1650 and Similar Types

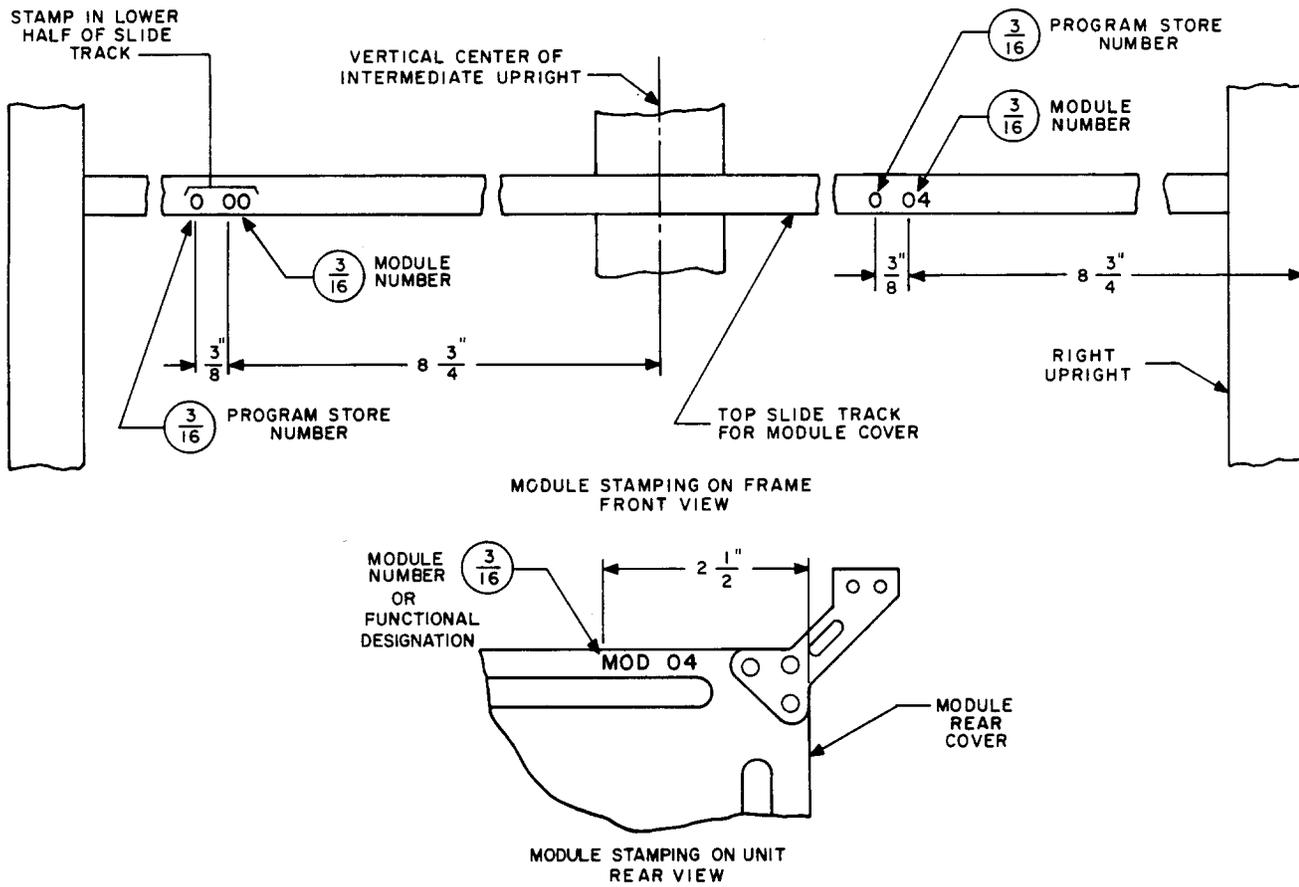


Fig. 25 - Memory - 1 and Similar Types

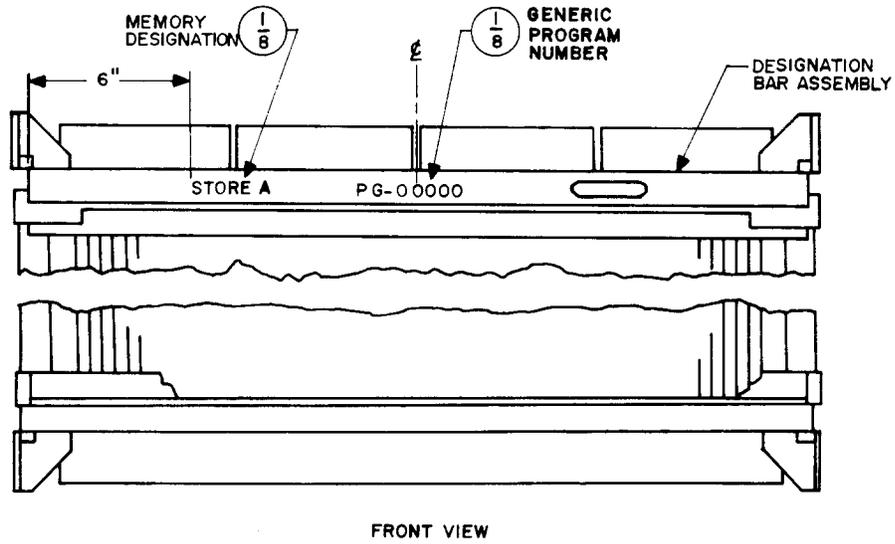


Fig. 26 - Memory — 2 Type

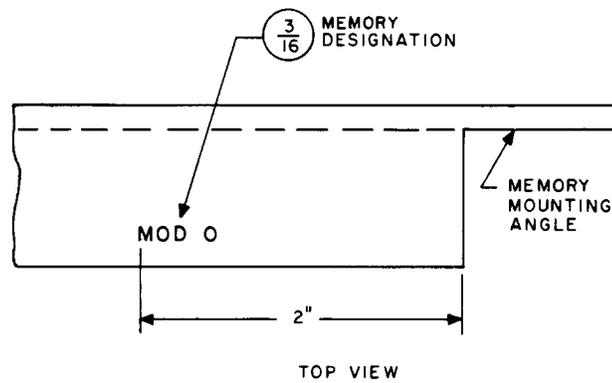


Fig. 27 - Memory — 15 and Similar Types (Mounted on Front or Rear of Frame)

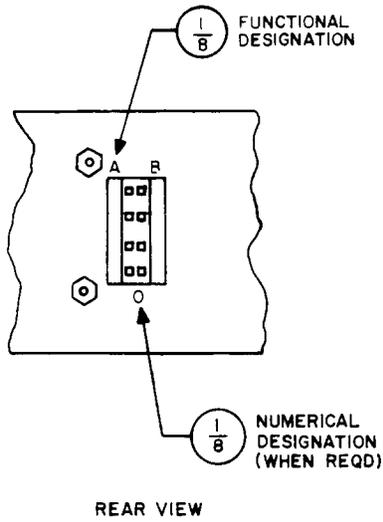


Fig. 28 - Network - Double Element - 4036 and Similar Types

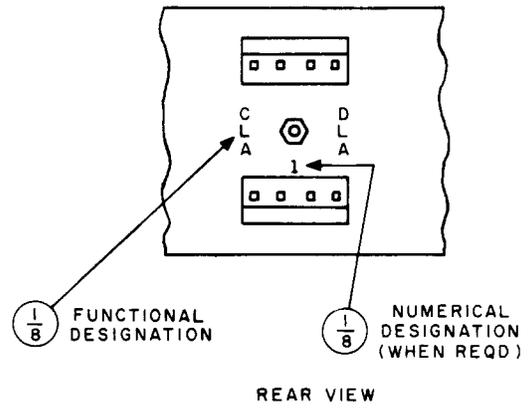


Fig. 29 - Network - Double Element - 4042 and Similar Types

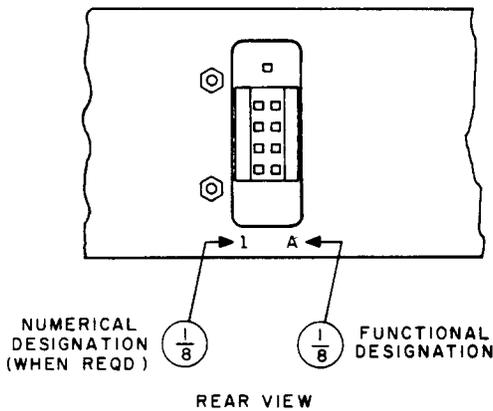


Fig. 30 - Network - 4043 and Similar Types

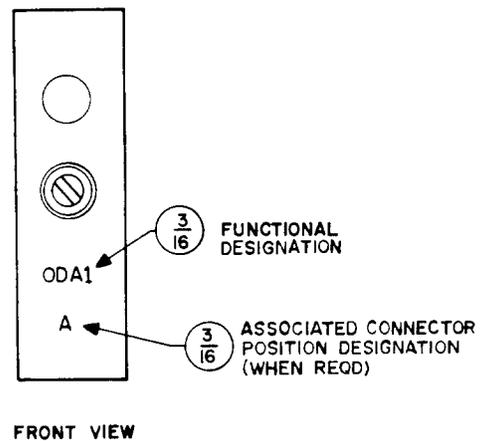


Fig. 31 - KS-20203 Plug

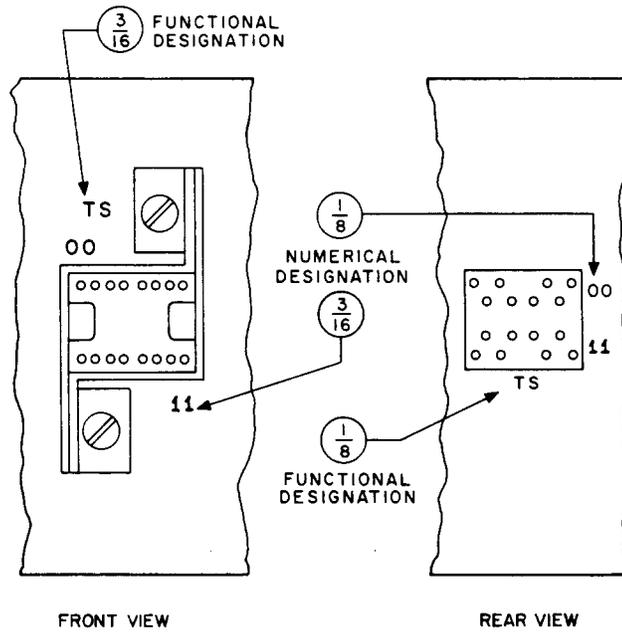


Fig. 32 – Sensor (Ferrod) — 1 Type Mounted in P-11G084 Shield Assembly

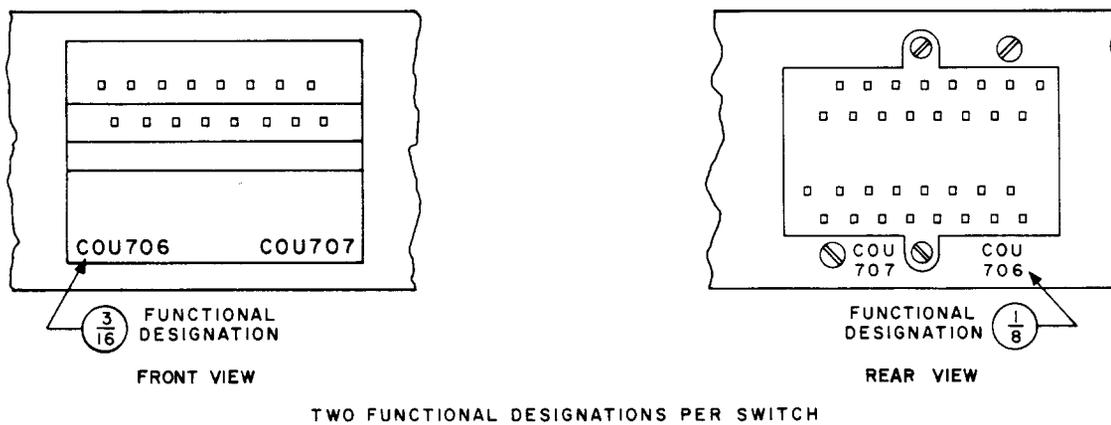
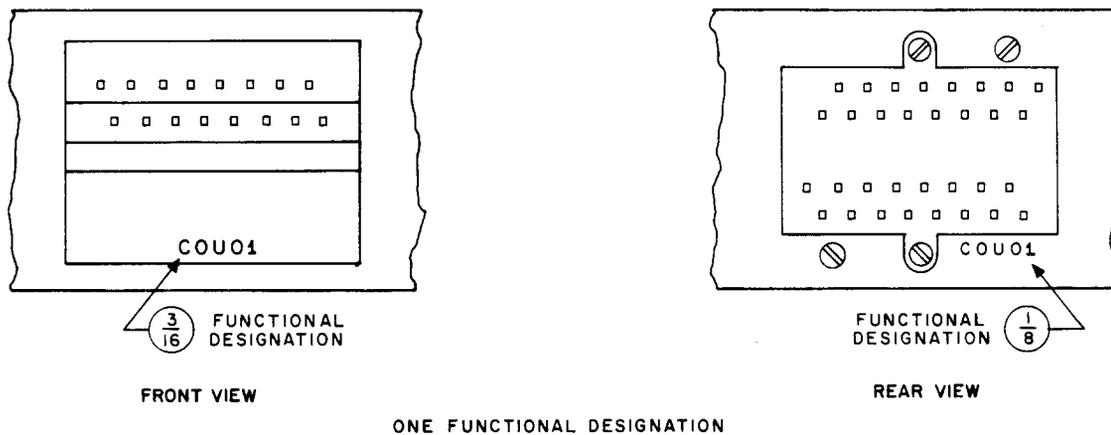
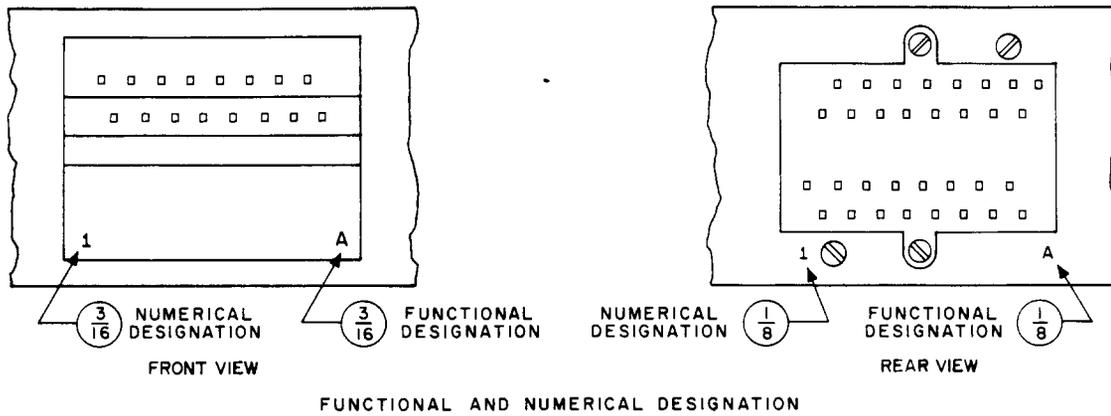


Fig. 33 - Switch (Ferreed) - 241, 244, and Similar Types

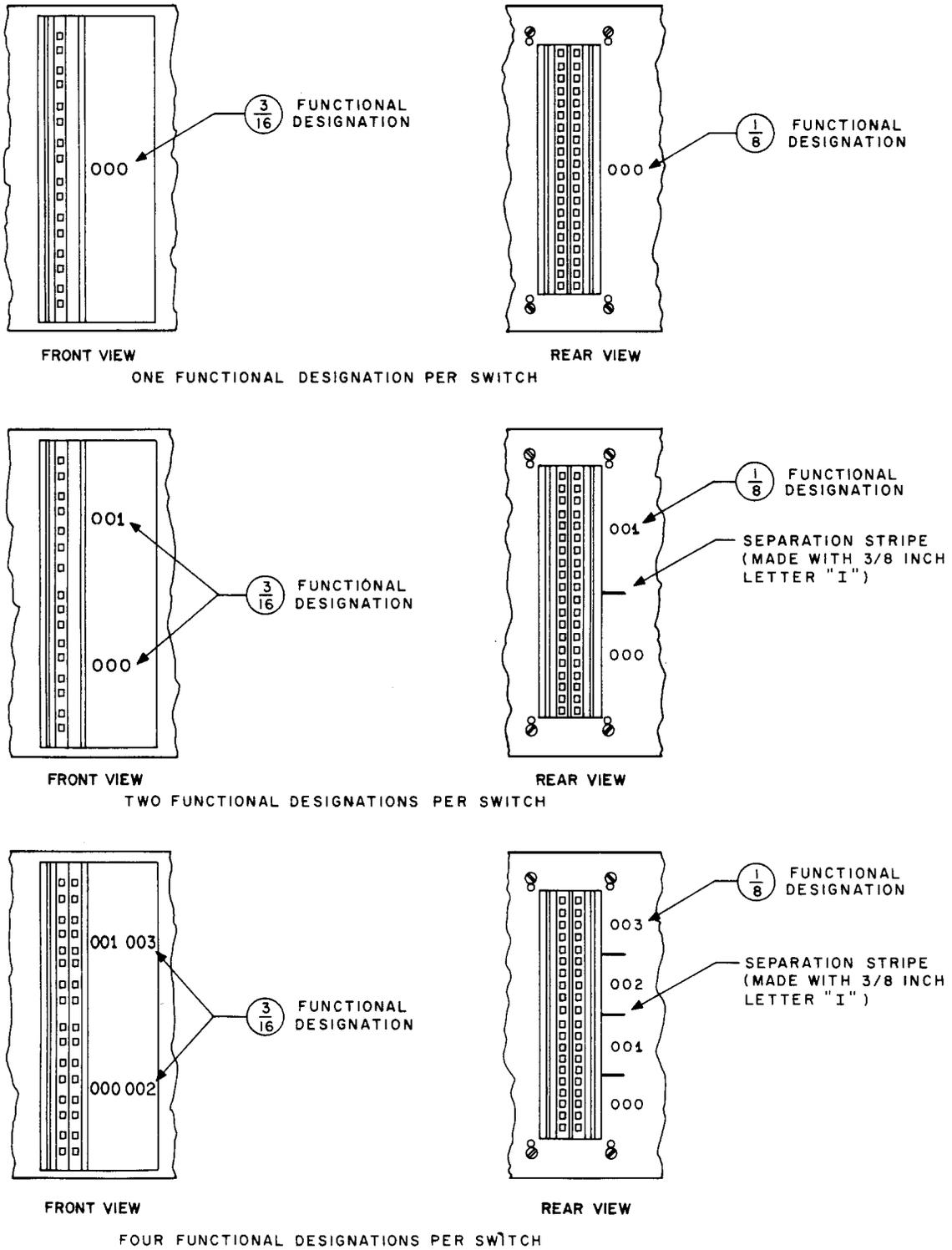


Fig. 34 - Switch (Ferreed) - 242, 243, 252, and Similar Types

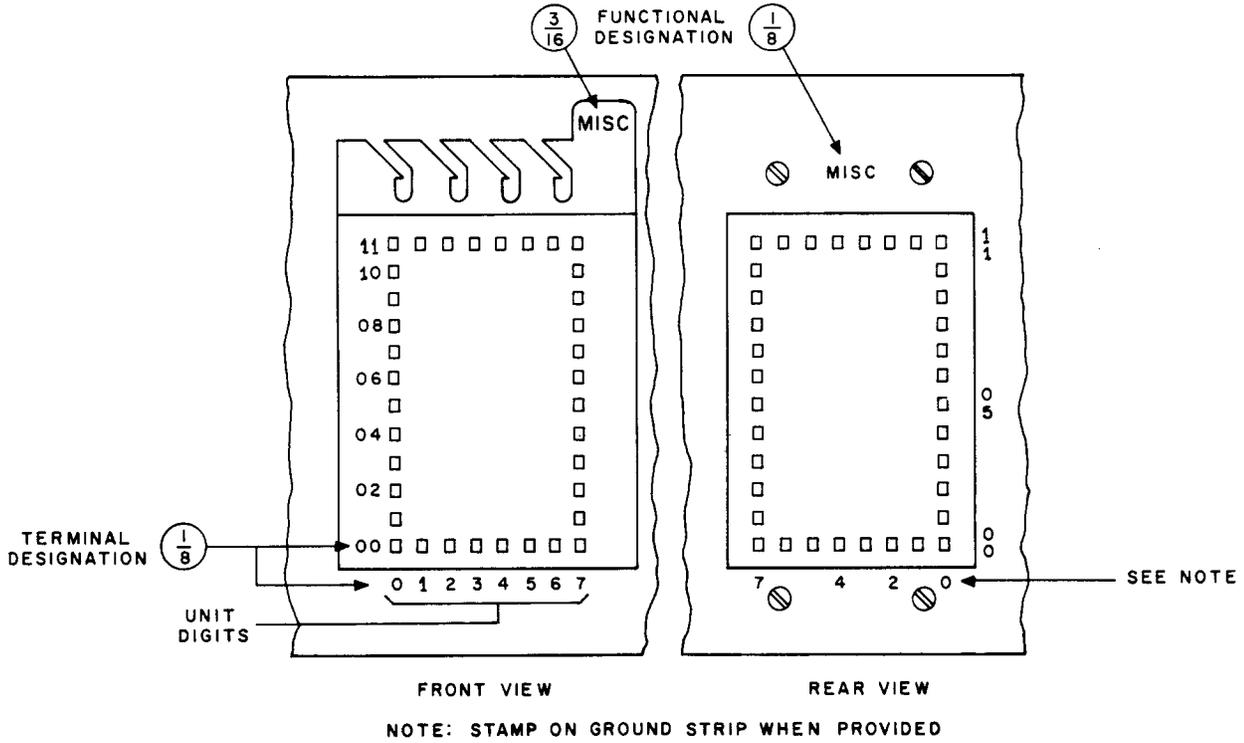
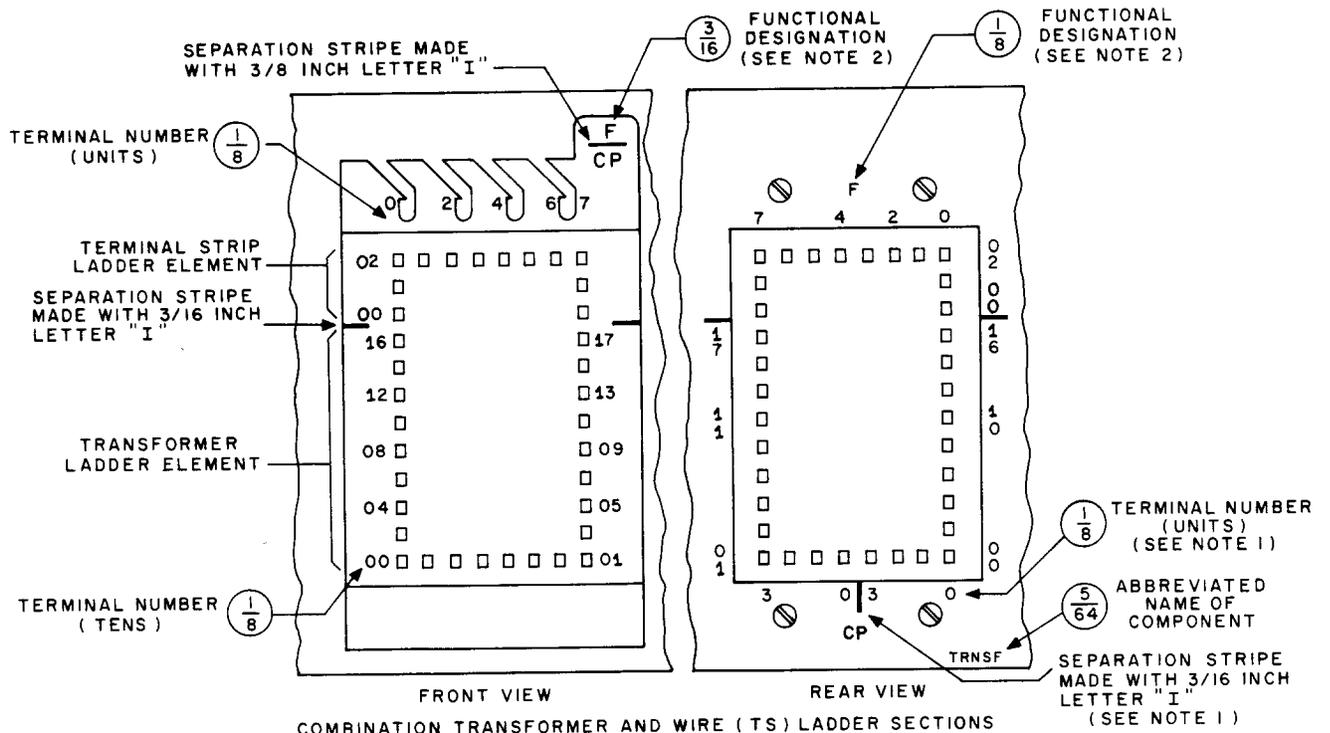
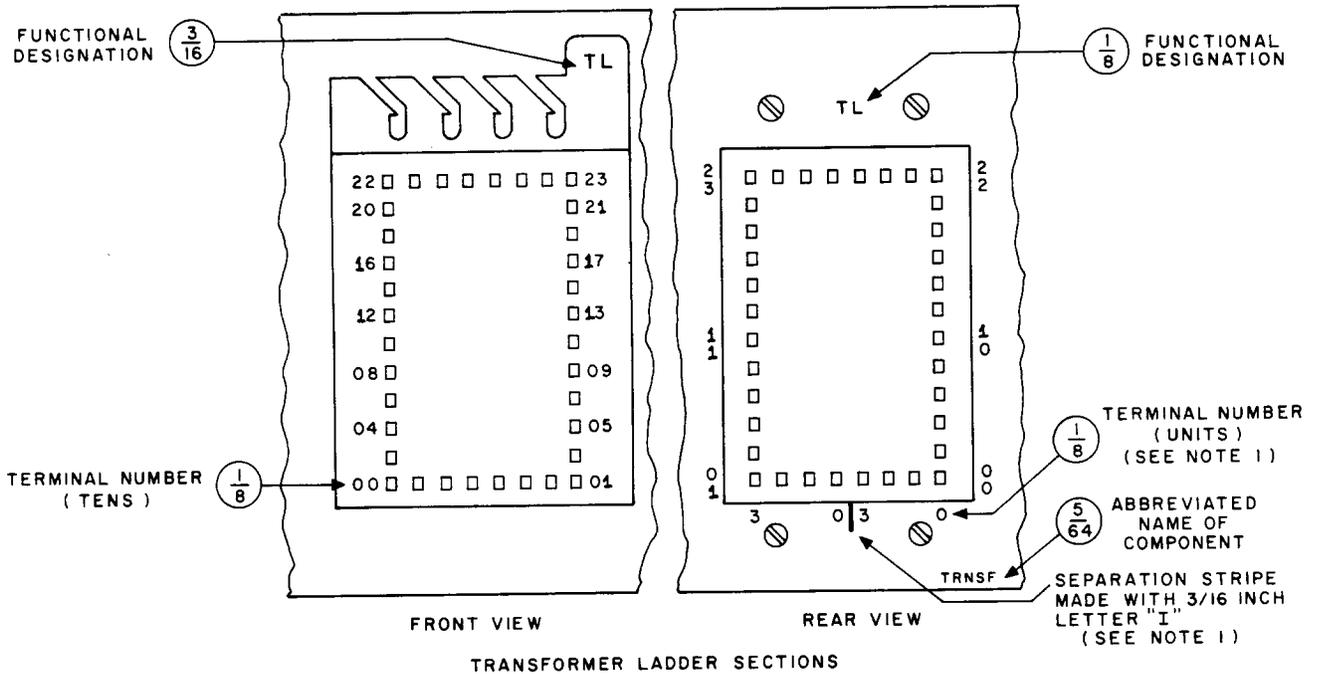


Fig. 35 - Terminal Strip - 288 Type (Coordinate Numbering)



- NOTES:
1. STAMP ON GROUND STRIP WHEN PROVIDED.
 2. THE UPPER AND LOWER FUNCTIONAL DESIGNATIONS IDENTIFY UPPER AND LOWER ELEMENTS RESPECTIVELY.

Fig. 36 - Transformer - 2598 and Similar Types

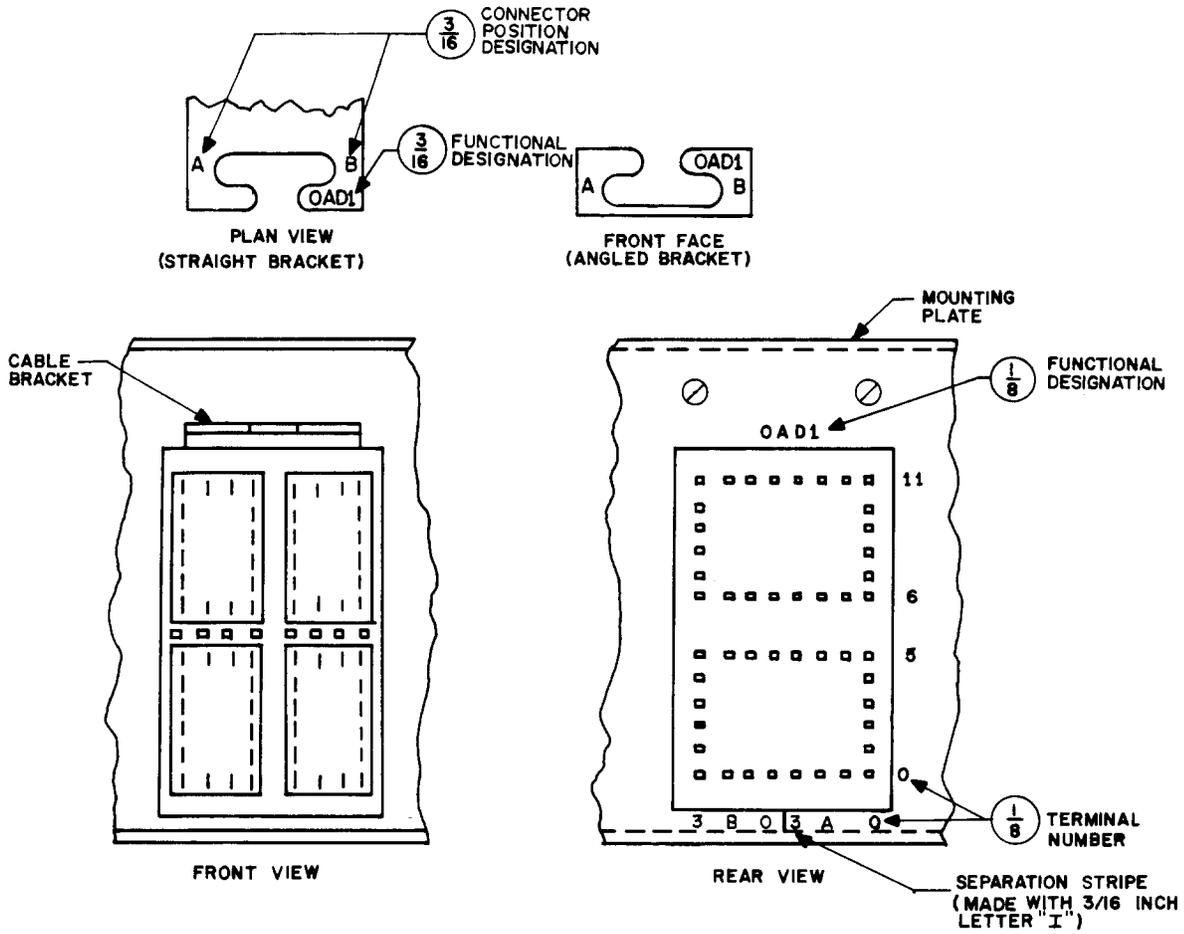


Fig. 37 - 1700-Type Inductor or 2650-Type Transformer Mounted on KS-20204 L1 Mounting