

## CODED CONNECTORS—200 THROUGH 310

### DESCRIPTION

#### 1. GENERAL

1.01 This section lists and illustrates coded connectors within the part or type number range of 200 through 310, used for the maintenance and operation of equipment in central offices.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

#### 2. DESCRIPTION OF CONNECTORS

2.01 **200A Through E:** The 200-type connectors (Fig. 1) consist of a coupling, hexagon cap, rubber bushing, and compression washers. These connectors are used in the UG16 cable terminals to provide a water-tight entrance for subscriber connections.



Fig. 1—200A, B, C, D, or E Connectors

(a) **200A:** The 200A connector is used with a 1- or 2-pair service cable. The connector is also usable with NP-type drop wires and a 1-pair B underground wire, or UG-type wires with the jacket and armor removed, or C underground wire with the jacket removed.

(b) **200B:** The 200B connector is used with a U

bridle wire pair per specification AT-6719.

(c) **200C:** The 200C connector is used with a 2-pair B underground wire or UG-type wires with the jacket and armor removed. This connector can also be used with a 1-pair B underground wire or UG-type wires when its outer jacket and armor are not removed.

(d) **200D:** The 200D connector is used with a 1- or 2-pair service cable. This connector is also used with NP-type drop wires and a 1-pair B underground wire, or UG-type wires with the jacket and armor removed, or C underground wire with the jacket removed. This connector also contains an inner spacer.

(e) **200E:** The 200E connector is used with a 1- or 2-pair service cable. This connector is also used with NP-type drop wires and a 2-pair B service wire, or UG-type wires with the jacket and armor removed, or C underground wire with the jacket removed. This connector also contains an inner spacer.

2.02 **203A Through E:** The 203-type metal connectors are used on crosstalk balancing panels of the K2 Carrier Telephone System.

(a) **203A:** The 203A connector (Fig. 2) is used in connecting 2-type balancing coils and 213-type capacitors. This connector has a formed portion at each end to fit over the prongs of the balancing coils and capacitors. This connector has an embossing at each end for assembling, in the field, the leads of KS-8618 balancing capacitors between the terminals of the 2-type balancing coil.

#### NOTICE

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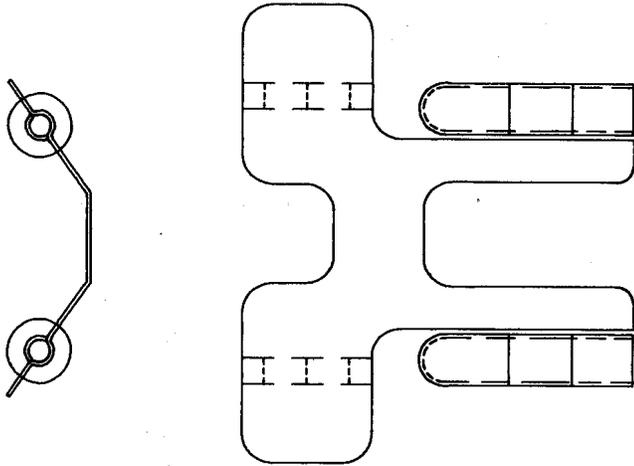


Fig. 2—203A Connector

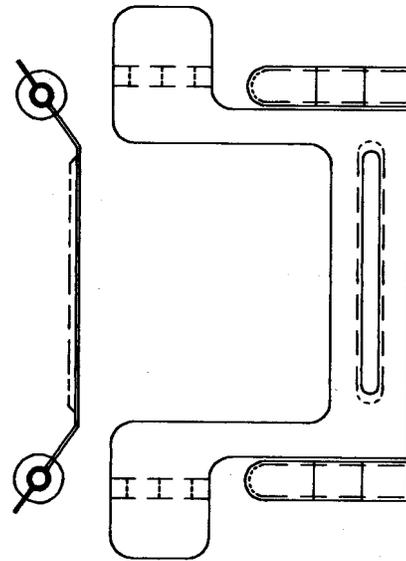


Fig. 4—203C or D Connector

(b) **203B and C:** The 203B connector (Fig. 3) and 203C connector (Fig. 4) are used in connecting 2-type balancing coils and 213-type capacitors. These connectors have a formed portion and lugs which are opposite to each other.

(c) **203D:** The 203D connector (Fig. 4) is used in connecting 2-type balancing coils and 213-type capacitors. This connector has a formed portion at each end to fit over the prongs of the balancing coils and capacitors. This connector has an embossing at each end for assembling, in the field, the leads of KS-8618 balancing capacitors between the terminals of the 2-type balancing coil.

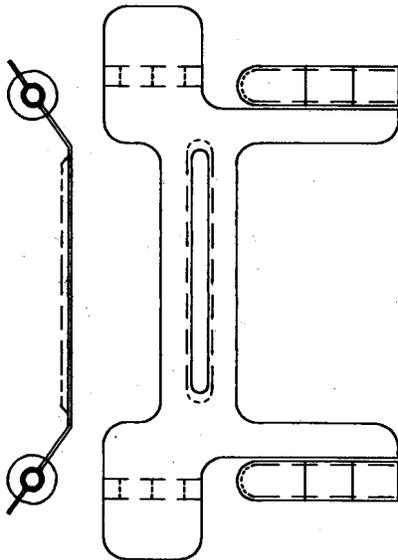


Fig. 3—203B Connector

(d) **203E:** The 203E connector (Fig. 5) is used for connecting incoming cable to the balancing coils and has a formed portion which fits over the prongs on the coils and two embossed lugs to accommodate the KS-8618 capacitor and the incoming cable.

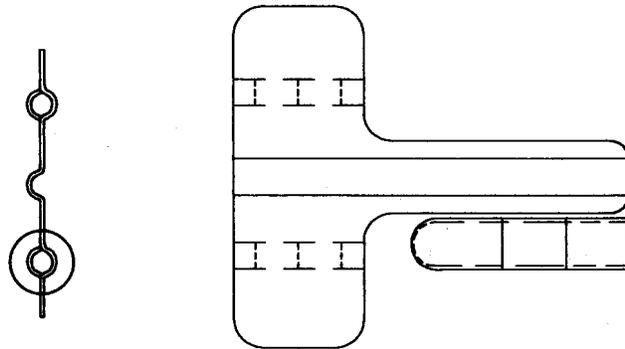


Fig. 5—203E Connector

(e) **203F, G, H, and J:** The 203F (Fig. 6), 203G (Fig. 7), 203H (Fig. 8), and 203J (Fig. 9) are metal connectors and are used for connecting balancing coils and condensers in the intergroup balancing panels of the K-Carrier Telephone Systems. These connectors are also used to connect adjacent coils in the top and bottom rows of the panel which are offset horizontally.

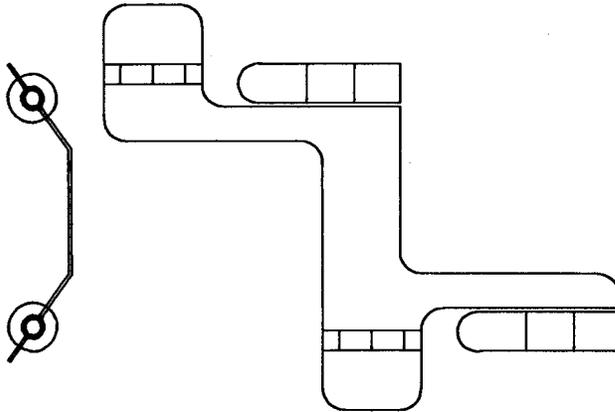


Fig. 6—203F Connector

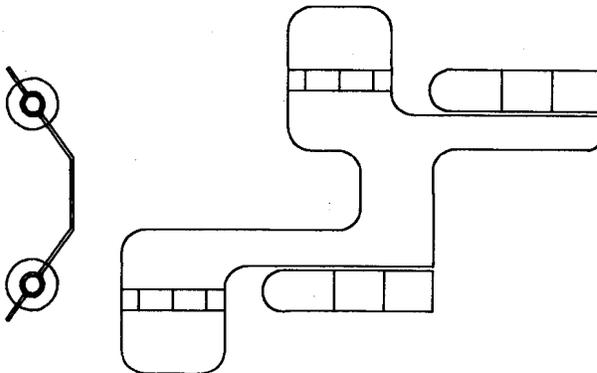


Fig. 7—203G Connector

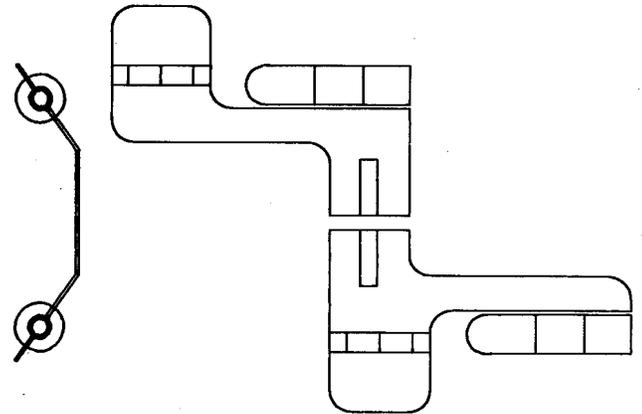


Fig. 8—203H Connector

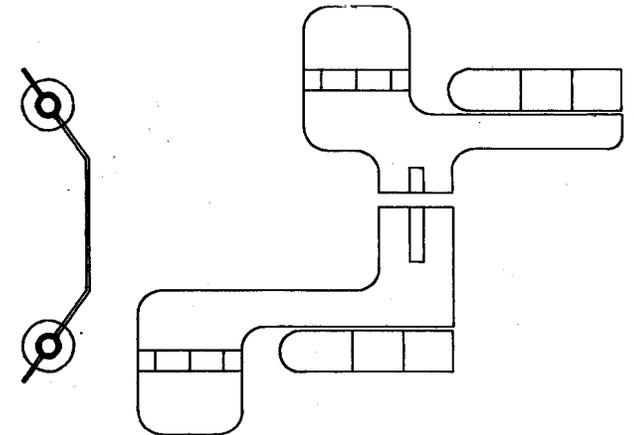


Fig. 9—203J Connector

**2.03 204A and B:** The 204A and B connectors (Fig. 10) consist of strips of contacts assembled between insulators to form 16 banks of contacts and 1 bank of soldering lugs. Each bank of contacts consists of three vertical rows of five contacts each, to accommodate a 348A plug. These connectors are provided with an electrostatic shield between contact strips three and four.

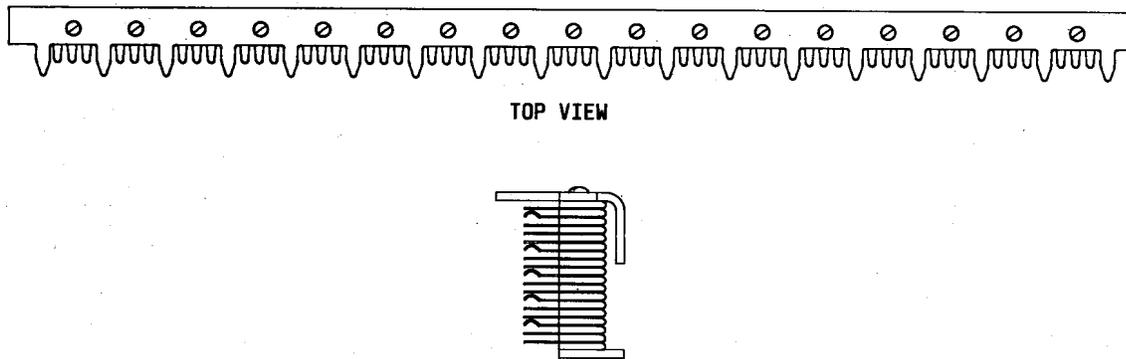


Fig. 10—204A or B Connector

(a) **204A:** The contacts of each strip of the 204A connector are electrically common. This connector is used in the No. 555 Private Branch Exchange (PBX) switchboard.

(b) **204B:** The twelfth contact strip of the 204B connector consists of six sections insulated from each other, one section on the left end having one contact and five sections having three contacts each. The five sections are each connected to a different terminal on a supplementary terminal block to the left of the contact strips. The contacts of each of the other strips are common electrically.

This connector is used in the No. 556A PBX switchboard.

**2.04 206A Through C:** The 206-type connectors (Fig. 11) consist of a black cylindrical shell containing a metal insert assembly. These connectors are used in the L Carrier Telephone System. The right end of these connectors are designed for the insertion of a 337 or similar-type plug, but provide electrical termination for only the center conductor of the plug. The center conductor termination of the left and right ends of the connectors and the clamping studs attached to the knobs are electrically common.

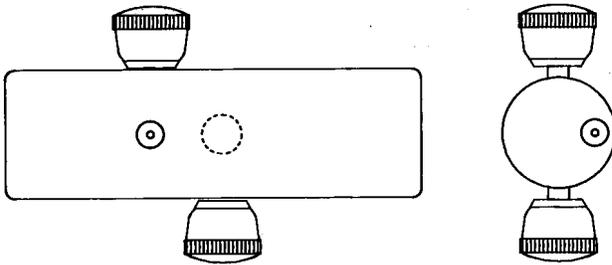


Fig. 11—206A, B, or C Connector

(a) **206A:** The left end of the 206A connector is used for the entrance of CA-1282 flexible coaxial cable. Electrical termination of the center conductor of the cable and mechanical termination of the shield is provided.

(b) **206B:** The left end of the 206B connector is used for the entrance of CA-1282 flexible coaxial cable. Electrical termination is provided for the center conductor of the cable and mechanical termination of the shield. This connector has a red band around the shell.

(c) **206C:** The left end of the 206C connector is used for the entrance and anchoring of the cord body of the W1AJ cord.

**2.05 209A:** The 209A connector (Fig. 12) consists of a coaxial jack, terminal, body, and gasket assembled together. This connector is used in modifying 30A, 30B, 31A, 31B, and 35A cable terminals when converting from L1 to L3 Carrier Telephone Systems.

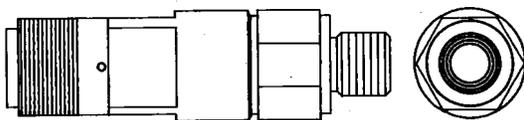


Fig. 12—209A Connector

**2.06 210A and B:** The 210A and B are metal connectors (Fig. 13) which permit solderless connection of the shield of the cable. The connectors consist of a shell body and sleeve plus a hexagon nut. The 210B connector contains a modified body on a KS-15712, L13, outer sleeve for connecting a KS-19224 cable. The 210A and B connectors are used in the L3 Carrier System.

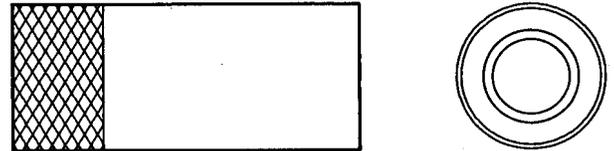
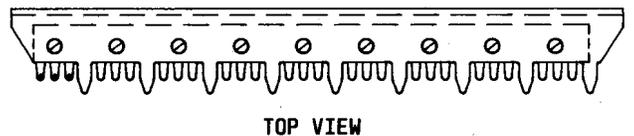


Fig. 13—210A or B Connector

**2.07 212A:** The 212A connector (Fig. 14) consists of 15 strips of contacts assembled between insulators to form 8 banks of contacts and 1 bank of soldering lugs. Each bank of contacts consists of three vertical rows of five contacts each, to accommodate a 348A plug. The contacts of each strip are common electrically. This connector is provided with an electrostatic shield between contacts three and four and is used in the No. 557A PBX switchboard.



TOP VIEW



Fig. 14—212A Connector

**2.08 213A:** The 213A connector (A&M Only) (Fig. 15) consists of a metal strip designed to fit across the terminals of a 11C fuse. This connector is used with the 121A adapter in converting the 58AP and 98AA protectors in the field so that they may be used with the 11C fuses strapped out, where subscriber stations are connected to grounded metal sheath cables. This connector also forms a part of the 98AA protector.

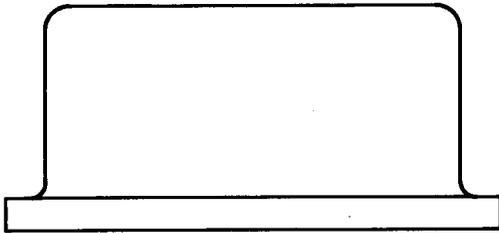


Fig. 15—213A Connector

**2.09 217A and B:** The 217A and B connectors (Fig. 16) consist of two molded blocks of insulating material each containing a row of 16 wire springs assembled together. The contact end is protected within a retainer. The terminals are arranged for mechanically wrapped connections. These connectors are arranged to mate with the 424A and C plugs and are used in the No. 1 Electronic Switching System (ESS). The 217B also is equipped with a handle that covers the contact spring assembly.

**2.10 219A Through H:** The 219-type connectors (Fig. 17) are supplied with a cable which is connected to the appropriate terminal and a resistor (not furnished) soldered from the wire terminal to the outer surface of the unused cable terminal. A sleeve is then positioned so its longer end will be over

the resistor side of the connector. For more information, see Table A.

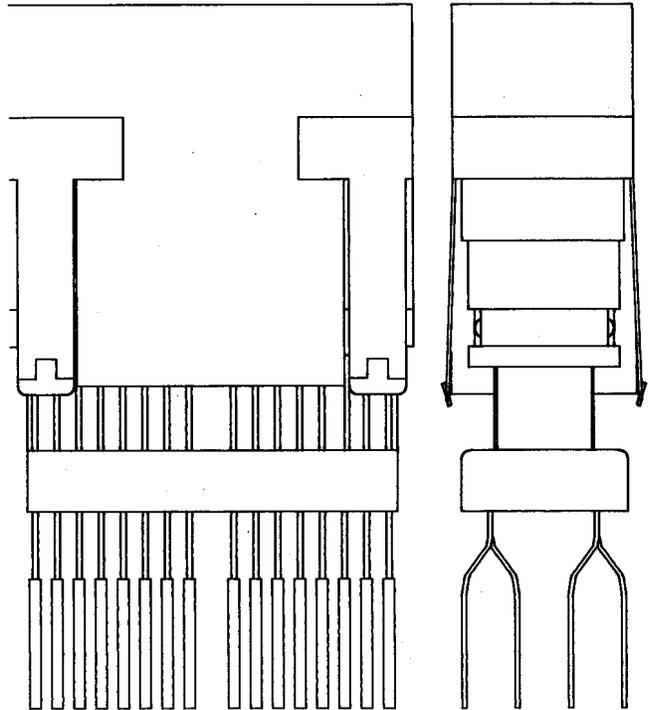


Fig. 16—217A or B Connector

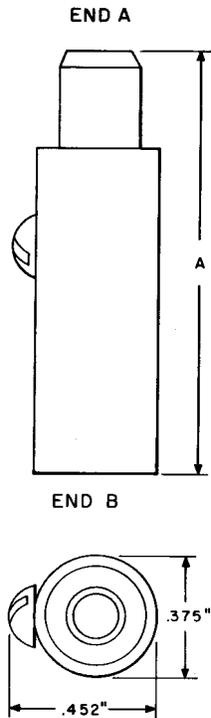


Fig. 17—219A, B, C, D, E, F, G, or H Connector

TABLE A

219-TYPE CONNECTOR	CABLE CONNECTIONS
A	724 Cable to 730A Cable
B	730A Cable to KS-19224, L2 Cable
C	Two 724 Cables
D	724 Cable to KS-19224, L1, Cable
E	Two 730A Cables
F	Two KS-19224, L2, Cables
G	724 Cable to KS-19906, L1 Cable
H	724 or 728A-Type Cable to KS-19224, L2, Cable

2.11 **220A Through H:** The 220-type connectors (Fig. 18) are used for connecting cables. For more information, see Table B.

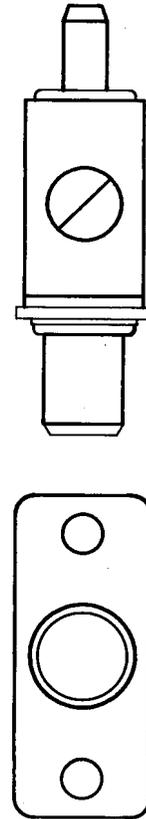


Fig. 18—220A, B, C, D, E, F, G, or H Connector

2.12 **301A-100 and A2-100:** The 301A-100 and A2-100 connectors (Fig. 19) consist of a 444C jack equipped with a universally mounted 24-gauge, color coded, plastic insulated stub cable with an aluminum shield and a polyvinyl chloride (PVC) sheath; and a fanning strip. The stub cable is equipped with a gas plug. These connectors provide ready means of opening lines and trunks for testing and other purposes. These connectors are used in central offices located in areas where incoming circuits are in underground cables and do not require heat coil or carbon block protection. The 301A2-100 has the stub cable and clamps reversed for top mounting.

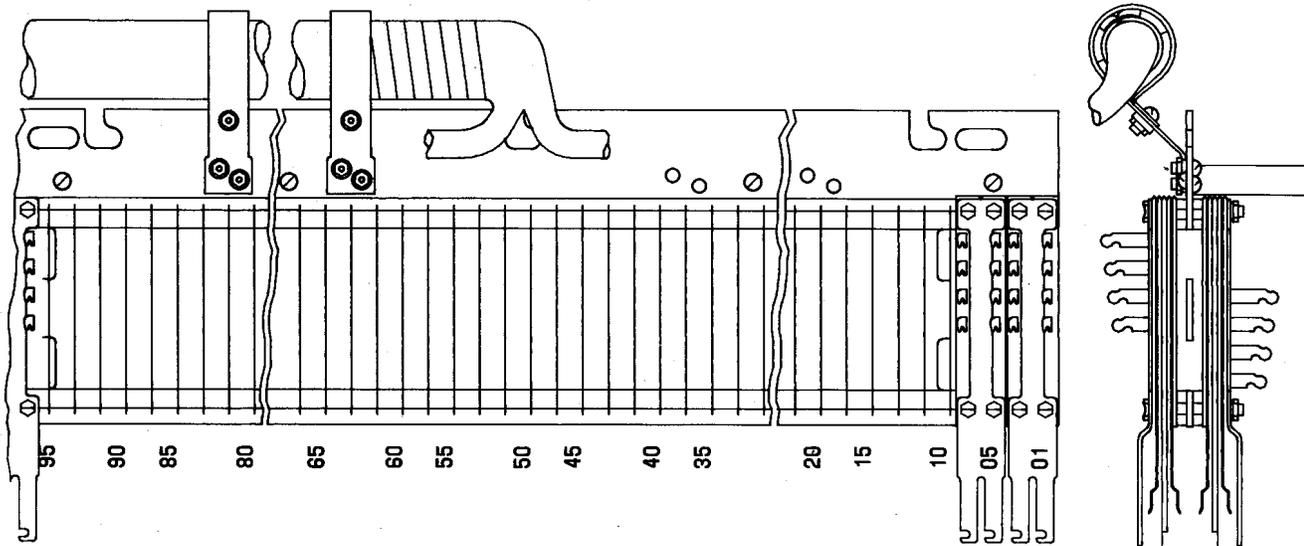


Fig. 19—301A-100 or A2-100 Connector.

TABLE B

220-TYPE CONNECTOR	CABLE CONNECTIONS
A	730A Cable to 724 Cable
B	730A Cable to KS-19224, L2 Cable
C	Two 724 Cables
D	724 Cable to KS-19224, L1, Cable
E	Two 730A Cables
F	Two KS-19224, L2, Cables
G	724 Cable to KS-19906, L1 Cable
H	724 or 728A-Type Cable to KS-19224, L2, Cable

2.13 **302A1-100, A3-100, B1-100, B2-100, B3-100, C3-100, D3-100, E1-100, and E3-100:** The 302-type connectors are illustrated in Fig. 20 and Fig. 21.

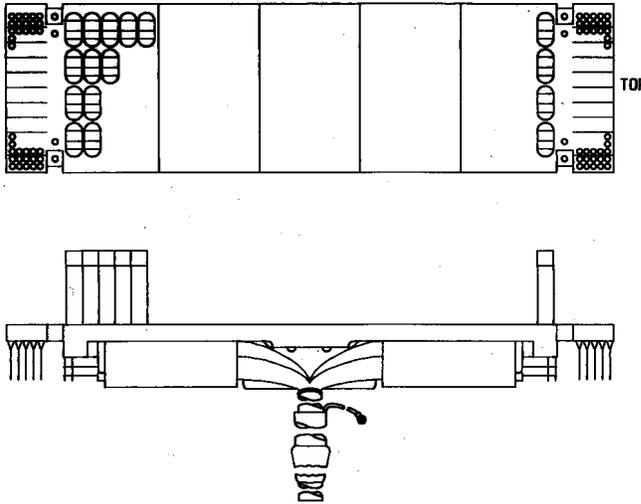


Fig. 20—302A1-100, B1-100, B2-100, or E1-100 Connector

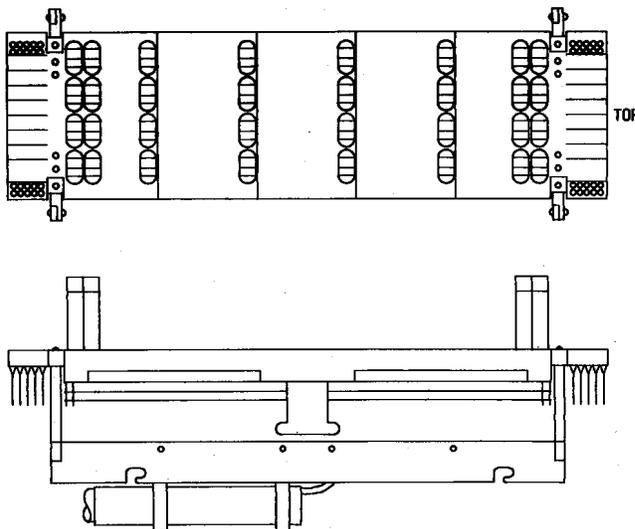


Fig. 21—302A3-100, B3-100, C3-100, D3-100, or E3-100 Connector

(a) **302A1-100:** The 302A1-100 connector (Fig. 20) consists of a protector mounting that is equipped with a light olive gray PVC sheath stub cable having 100 pairs of 24-American Wire Gauge (AWG) plastic insulated conductors. The connector can be obtained with a stub cable 30-, 50-, 80-, 100-, 150-, or 200-feet long as specified in the order. The stub cable is equipped with a gas plug. The connector is designed to be used in the ESS central

office protector frames. The terminals are arranged for mechanically wrapped connections.

(b) **302A3-100:** The 302A3-100 connector (Fig. 21) is equipped with a hinged bracket and has gold-plated terminals. The connector is designed to be used in central office equipment.

(c) **302B1-100:** The 302B1-100 connector (Fig. 20) is equipped with 100 pairs of 22-AWG plastic insulated conductors. The connector is designed to be used in ESS central office protector frames.

(d) **302B2-100:** The 302B2-100 connector (Fig. 20) is equipped with a hinged bracket. The connector also contains 100 pairs of 22-AWG plastic insulated conductors and is used in central office equipment.

(e) **302B3-100:** The 302B3-100 connector (Fig. 21) is equipped with a hinged bracket and has gold-plated terminals. The connector is used in the ESS central office protector frames.

(f) **302C3-100:** The 302C3-100 connector (Fig. 21) has the 24-AWG stub cable mounted upward. The connector is available in standard stub lengths of 30, 50, 80, 100, 150, or 200 feet. The connector is equipped with a hinged bracket and has gold-plated terminals. The connector is used in the ESS central office protector frames.

(g) **302D3-100:** The 302D3 connector (Fig. 21) is equipped with a hinged bracket and has gold-plated terminals. The connector is designed for use in the ESS central office protector frames.

(h) **302E1-100:** The 302E1-100 connector (Fig. 20) is not equipped with stub cables. The connector is used in modular protector frames.

(i) **302E3-100:** The 302E3-100 connector (Fig. 21) is equipped with a gold-plated terminal. The connector is used in double-sided protector frames.

**2.14 303A3-100, B3-50, B3-100, C3-100, D3-100 and E3-100:** The 303-type connectors (Fig. 22) consist of a fire retardant plastic connector panel and a light olive gray PVC sheath stub cable. These connectors are equipped with a gas plug. Terminals are located on the front of the panel for termination of cross-connect jumpers by wire wrapping.

These connectors are equipped with gold-plated terminals in the connector panel for installation of No. 3, 4, or 5-type protector units. The connector has stub cables available in 30-, 50-, 80-, 100-, 150-, or 200-foot lengths. These connectors are used in terminating outside plant cables on conventional main distributing frames (MDF) in central offices.

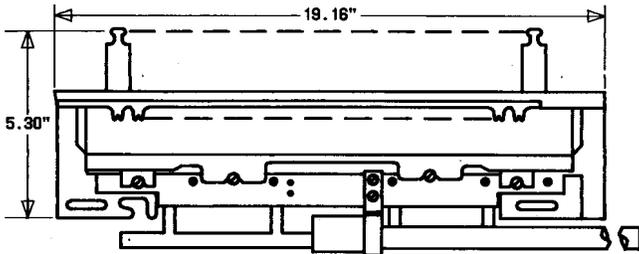


Fig. 22— 302A3-100, B3-50, B3-100, C3-100, D3-100, or E3-100 Connector

- (a) **303A3-100:** The 303A3-100 connector also consists of mounting brackets, protective guard, fanning strip, and a mounting screw. The stub cable is mounted for bottom entry having 100 pairs of 24-AWG plastic insulated conductors.
- (b) **303B3-50:** The 303B3-50 connector is equipped with two 50-pair stub cables of 22-AWG, PVC sheathed conductors in pair groupings of 1 to 50 and 51 to 100. The stub cables are mounted for bottom entry.
- (c) **303B3-100:** The 303B3-100 connector is equipped with a stub cable with 22-AWG plastic insulated conductors.
- (d) **303C3-100:** The 303C3-100 connector is equipped with a stub cable with 24-AWG plastic insulated conductors which is mounted for top entry.
- (e) **303D3-100:** The 303D3-100 connector is equipped with a stub cable with 22-AWG plastic insulated conductors and is mounted for top entry.
- (f) **303E3-100:** The 303E3-100 connector is not equipped with a stub cable.

**2.15 305A1-100, B1-100, C1-100, and D1-100:** The 305-type connectors (Fig. 23) consist of a fire retardant plastic panel equipped with a light olive gray PVC sheath stub cable having 100

pairs of plastic insulated conductors. These connectors are also equipped with a mounting bracket, cross connect terminal guard, and a slotted fanning strip. A stub cable 30-, 50-, 80-, 100-, 150-, or 200-feet long is available with these connectors (specify length in order). A wire-wrapped terminal field for central office cross-connections is located on the right side of the connectors. A 10 by 10 array mounting protector unit appears on the left side of the connector, and a test terminal field consisting of one grouping of 100 pairs is located to the right of the array. These connectors are used in conventional distributing frames.

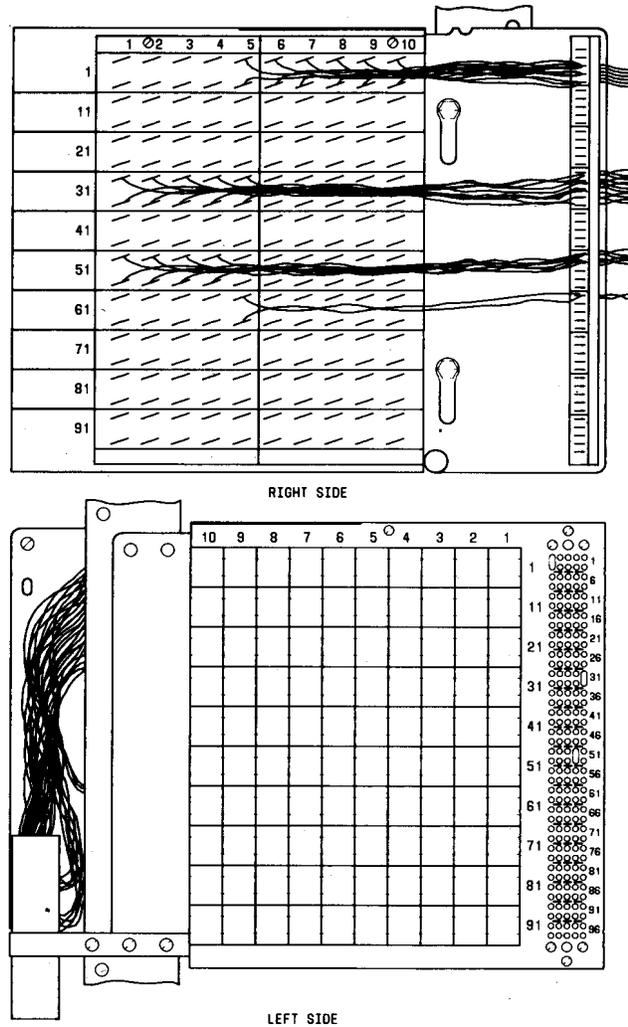


Fig. 23— 305A1-100, B1-100, C1-100, or D1-100 Connector

- (a) **305A1-100:** The 305A1-100 connector is equipped with a 24-AWG stub cable.
- (b) **305B1-100:** The 305B1-100 connector is equipped with a 22-AWG stub cable.

(c) **305C1-100 and D1-100:** The 305C1-100 (24 AWG) and D1-100 (22 AWG) connectors are equipped with upward-mounted stub cables.

**2.16 306A1-100:** The 306A1-100 connector (Fig. 24) consists of a molded plastic panel, terminals, ground terminals, ground rods, ground bars and screws as an assembly. This connector is used in the COSMIC\* II main distributing frame as a component part of the 307A1 and B1-100 connector assemblies.

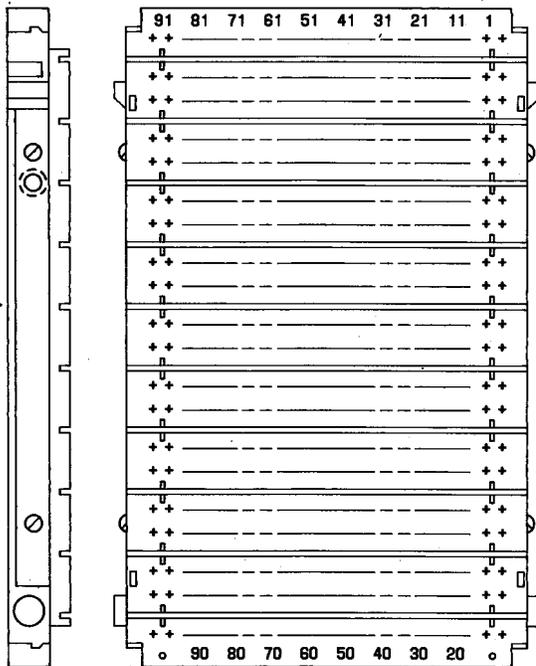


Fig. 24—306A1-100 Connector

**2.17 307A1-100, B1-100, D1-100 and E1-100:** The 307-type connectors (Fig. 25) are 100-pair connectors (protector panel) that interconnect to a connecting block.

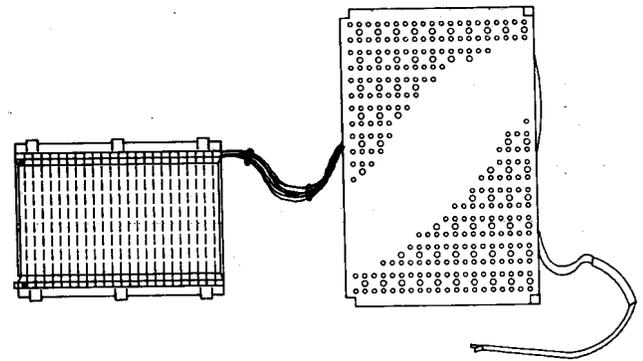


Fig. 25—307A1-100, B1-100, D1-100, or E1-100 Connector

(a) **307A1-100:** The 307A1-100 connector consists of a 306A1-100 connector, a 78C1B-100 connecting block, four 710-SD-25 connectors, and requires 100, 4C1C protector units. The connector is used in terminating outside plant cable pairs on ED-6C115 COSMIC II main distributing frame. This 307A1-100 connector interconnects to a 100-pair connecting block.

(b) **307B1-100:** The 307B1-100 connector interconnects two 50-pair connecting blocks. This connector consists of a 306A1-100 connector, a 78C1B-50, and a 78C2B-50 connecting block, four 710-SD-25 connectors and requires 100, 4C1C protector units. This connector is used in terminating outside plant cable pairs on ED-6C115 COSMIC II main distributing frame.

(c) **307C1-100:** The 307C1-100 connector consists of a 306A1-100 connector and eight 710-SD-25 connectors and requires 100, 4C-type protector units which must be ordered separately.

(d) **307D1-100:** The 307D1-100 connector consists of a 306A1-100 connector, a 112 C1B-100 connecting block, four 710-SD-25 connectors, and 100, 4C1C protector units. This connector consists of a 100-pair connector (protector panel) inter-connected to a 100-pair connecting block. This connector is used on the COSMIC II main distributing frame.

\*Trademark of Western Electric.

(e) **307D2-100:** The 307D2-100 connector consists of a 306A1-100 connector, a 112C1B-100 connecting block, and four, 710-SD-25 connectors. This connector requires 100, 4C-type protector units which must be ordered separately. The 307D2-100 connector is used in the COSMIC II main distributing frame.

(f) **307E1-100:** The 307E1-100 connector consists of two 100-pair connector (protector panel) interconnects to a 50-pair connecting block. This connector consists of a 306A1-100 connector, a 112C1B-50 connecting block, a 112C2B-50 connecting block, four 710-SD-25 connectors, and requires 100, 4C1C protector units. The 307E1-100 connector is used in the COSMIC II main distributing frame.

**2.18 308A1-100, and 308B1-100:** The 308A1-100 and 308B1-100 connectors (Fig. 26) consist of a protector unit mounting equipped with a light olive gray sheath stub cable having 100 pairs of plastic insulated conductors. The connectors are available with a stub cable 30-, 50-, 80-, 100-, 150-, and 200-foot long (length must be specified in order) equipped with a gas plug. The terminals are designed for mechanically wrapped connections. The connectors are arranged for a 5 by 20 array of protector units and are used on the ED-1A220-31 modular protector frame.

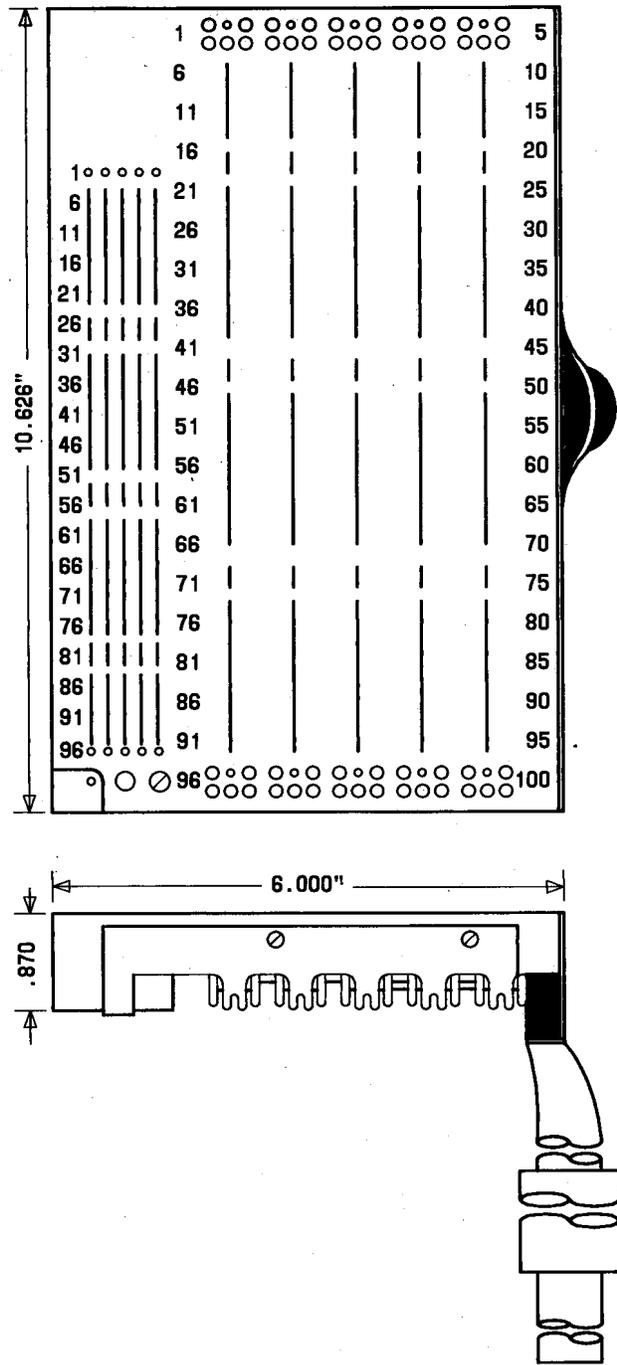
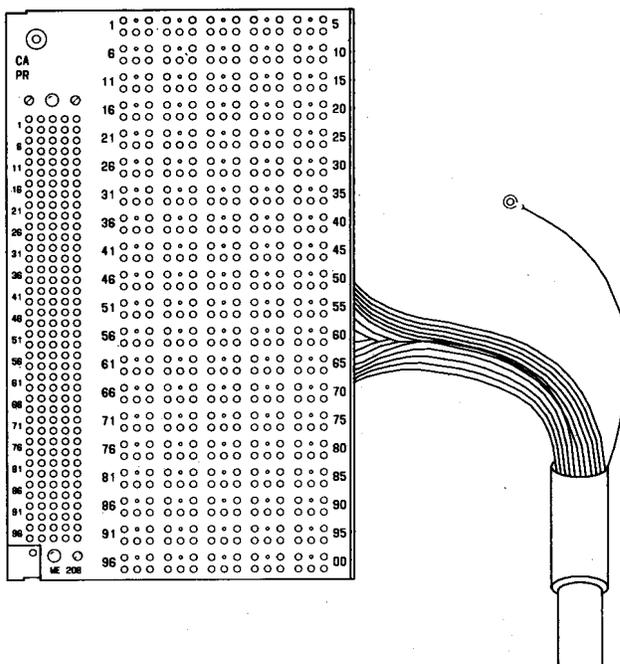


Fig. 26—308A1-100 or 308B1-100 Connector

- (a) **308A1-100:** The 308A1-100 connector is available with 24-AWG plastic insulated conductors.
- (b) **308B1-100:** The 308B1-100 connector is available with 22-AWG plastic insulated conductors.

**2.19 308A2-100, B2-100, C2-100, D2-100, E1-100 and E2-100:** The 308-type connectors (Fig. 27) consist of a hinged molded plastic panel equipped with 100 groups of 5 socket-type terminals. Four of these terminals are gold-plated and provide contact for tip and ring connections; the fifth terminal is solder-plated and provides a ground connection. These connectors also contain a 100-pair group of gold-plated test contacts located on the left of the panel. These connectors are equipped with a light olive PVC sheath stub cable mounted in an upward or downward position (as indicated below) and terminated by an aluminum covered moisture plug. The terminals are arranged for mechanically wrapped connections.



**Fig. 27—308A2-100, B2-100, C2-100, D2-100, E1-100, or E2-100 Connector**

- (a) **308A2-100:** The 308A2-100 connector is equipped with a stub cable mounted down having 100 pairs of 24-AWG plastic insulated conductors. This connector is used with the ED-97755-70 low profile, double-sided protector frame.
- (b) **308B2-100:** The 308B2-100 connector is equipped with a stub cable mounted down having 100 pairs of 22-AWG plastic insulated conductors. This connector is used with the ED-97755-70 low profile, double-sided protector frame.
- (c) **308C2-100:** The 308C2-100 connector is equipped with a stub cable mounted up having 100 pairs of 24-AWG plastic insulated conductors. This connector is used with the ED-97755-70 low profile, double-sided protector frame.
- (d) **308D2-100:** The 308D2-100 connector is equipped with a stub cable mounted up having 100 pairs of 22-AWG plastic insulated conductors. This connector is used with the ED-97755-70 low profile, double-sided protector frame.
- (e) **308E1-100:** The 308E1-100 connector does not contain a stub cable and the panel is not hinged. This connector is used in the ED-97898-31 modular protector frame.
- (f) **308E2-100:** The 308E2-100 connector does not contain a stub cable and is used in the ED-97755-70 low profile, double-sided protector frame.

**2.20 309A1-100:** The 309A1-100 is a high density MDF connector (Fig. 28) which provides protection and cross-connect capability for 100-outside plant cable pairs in a planar front facing orientation on conventional distributing frames. The connector mounts to the left of a 309B-type connector on a vertical frame.

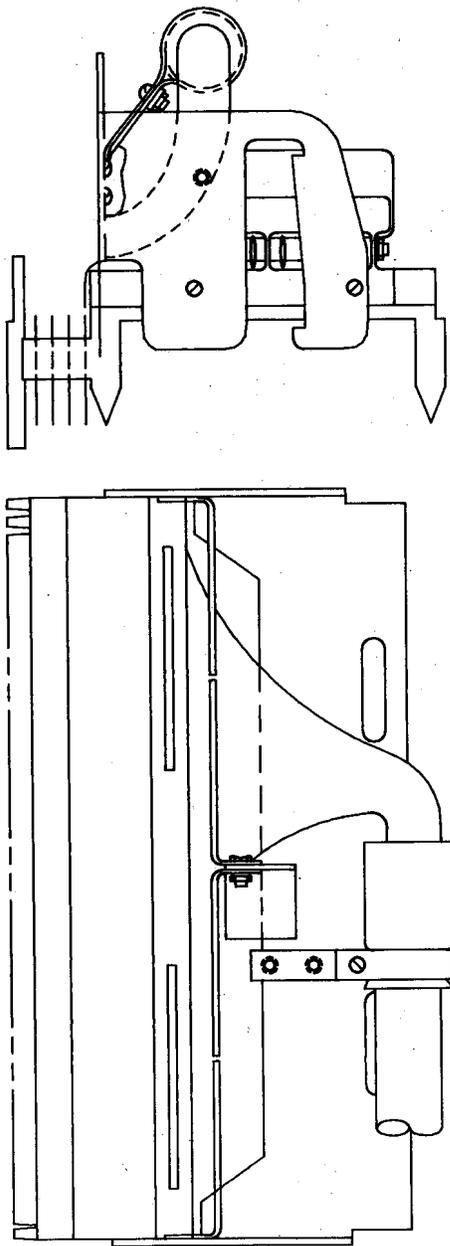


Fig. 28—309A-100 Connector

**2.21 310A1-100, B1-50, B1-100, C1-100, D1-50, D1-100 and E1-100:** The 310-type are high-density main distributing frame connectors (Fig. 29).

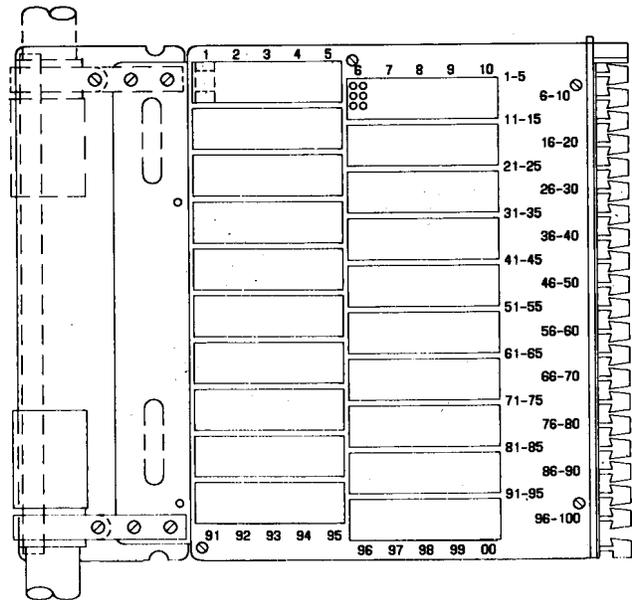


Fig. 29—310A1-100, B1-50, B1-100, C1-100, D1-50, D1-100, or E1-100 Connector

- (a) **310A1-100:** The 310A1-100 connector is interchangeable with the 305-type connector on conventional distributing frames.
- (b) **310B1-50:** The 310B1-50 connector is equipped with 2 factory connected, 50-pair, 22-gauge, stub cables arranged for a downward cabling position. The stub cables are available in standard 30-, 50-, 80-, 100-, 150-, and 200-foot lengths that must be specified when ordered.
- (c) **310B1-100:** The 310B1-100 connector is interchangeable with the 305-type connector on conventional distributing frames.
- (d) **310C1-100:** The 310C1-100 connector is interchangeable with the 305-type connector on conventional distributing frames. The connector also has a 24-gauge, up-mounted stub cable.
- (e) **310D1-50:** The 310D1-50 connector is equipped with two factory connected 50-pair, 22-gauge, stub cables arranged for an upward cabling position and available in standard 30-, 50-,

80-, 100-, 150-, and 200-foot lengths. The connector is intended for terminating T1C carrier facilities on conventional distributing frames.

(f) **310D1-100:** The 310D1-100 connector is interchangeable with the 305-type connector on

conventional distributing frames. This connector has a 22-gauge, up-mounted stub cable.

(g) **310E1-100:** The 310E1-100 connector is interchangeable with the 305-type connector on conventional distributing frames. This connector does not have a stub cable attached.