

CONNECTOR/PROTECTOR UNITS
305- TYPE

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1. GENERAL

1.1 Description

1.1.1 The 305 type connector is a plastic panel 9-3/8 inches high and extends outward 7-1/2 inches from the vertical frame mounting. The test terminal field is located alongside of the protector units and is arranged to be used with "M" and "N" test connectors. The opposite side of the unit has a wirewrap terminal field arranged to accommodate the jumper wire cross-connects.

1.1.2 The 305A1-100(24 Ga.) and 305B1-100 (22Ga.) has Outside Plant (OSP) cable stubs that head downward toward the cable vault. The 305C1-100(24Ga.) and 305D1-100(22Ga.) have (OSP) cable stubs that head upward toward the overhead cable racks. These connectors were designed to be used on the Main Distributing Frame (MDF), the Combined Distributing Frame (CDF) or Low Profile Conventional Distributing Frame (LPCDF).

1.1.3 The latest type of 305 Connector is equipped with a replaceable, plastic, cross-connect terminal field guard. Earlier field mounted 305 type connectors were equipped with a sliding guard which may be replaced with an improved design. Terminal guard (842-556-504) is available for field replacement.

1.2 Capacities

1.2.1 When the 305- type connectors are used on the verticals of either the MDF, CDF, or LPCDF, they will accommodate the following number of pairs:

<u>Vertical Height</u>	<u>No. of Pairs</u>
8'-0"	800
9'-0"	1000
11'-6"	1200
*12'-5"	1200
*14'-5"	1200

*Indicates that a maximum of 1,200 pairs may be terminated. Any number above this will cause congestion problems in the vertical bays.

1.2.2 Because of the 305- type connector high-termination capacity, only DT22P Jumper Wire must be used. As noted above, excessive use of this connector on tall conventional frames can lead to a congestion problem.

2. PRECAUTIONS

2.1 General precautions to be taken against personal injury, equipment damage, and service interruptions are covered in Handbook 0 and are to be observed at all times as they apply to the operations being performed.

2.1.1 Do not leave these units on loading docks or other locations exposed to the weather. Store them in a dry location.

This section includes material from
BSP 636-330-105 dated August, 1979 and BSP 201-208-805 dated March, 1980
American Telephone and Telegraph Company

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2.12 When unpacking the connectors, open the carton on the side marked OPEN FROM THIS SIDE.

2.13 If the field is running in the cable stubs, do not bend the cable stub in a radius of less than five inches. Never bend the stub to a five inch radius more than twice at the same general location.

3. TOOLS AND SUPPLIES

There are no special tools required to install the 305- type connectors. The Installers 168 Kit plus standard wire skinning, wire wrapping, and cable tie fastening tools are sufficient. Refer to Sections 301, 310, and 205 of this handbook. The only supplies required are the R-2916 Twine and R-4265 Nylon Cable Ties.

4. TERMINAL REPLACEMENT

The 305 Connector has four separate terminal codes that could become damaged, they are; cross-connect terminals (842 137 796), tip-ring terminals (841 634 207), test terminals (842 137 986) and ground terminals (P-46D862).

4.1 Tip-Ring and Ground Terminals

If these terminals become damaged or broken, they cannot be replaced on the 305 Connector.

4.2 Cross-connect Terminals

4.21 To replace a damaged cross-connect terminal use the following procedure:

- a) On the cross-connect side of the panel, remove and tag the leads from the terminals requiring replacement.
- b) If the wire wrapped portion of the terminal is not broken, straighten the terminal so that it is perpendicular to the panel, push the straightened terminal through the connector and remove it from the protector side with a pair of long nose pliers.

c) If the wire wrap terminal is broken at the bent portion, the socket portion will stay attached to the protector unit pin. By removing the protector unit from the panel, the broken terminal will also be removed. Be sure there is no bent portion left on the terminal. If there is, straighten it before attempting removal.

d) From the front side of the connector, insert a new (842 137 796) terminal into the same hole from which the old terminal was removed. Push the terminal in as far as possible.

e) Insert a protector unit into the connector to hold the terminal in place.

f) On the cross-connect side, use a pair of long nose pliers and pull the terminal into its proper position. Using thumb pressure, carefully bend the terminal to the proper angle. This terminal has no tangs and is held in position only by its bent position.

g) Reconnect all leads, remove tags and remove the protector unit.

4.3 Test Terminals

4.31 To replace damaged test terminal, the (841 635 196) test field cover must be removed first. This can be accomplished by removing two screws from the outer edge and then sliding the cover outward to expose the terminals. After removing the cover, use the following procedures:

- a) From the wiring side, remove and tag the leads for the terminals requiring replacement.
- b) Using a new terminal, a test probe, or some other fairly pointed tool, push the terminal through the panel at least 1/8 inch.
- c) From the test side, grasp the terminal with a pair of long nose pliers and pull it out of the panel.
- d) From the front side of the connector, insert a new terminal into the vacated hole and push it in as far as possible into the panel.

- e) Using an orange stick or spudger, push the terminal into its seated position on the connector.
- f) Reconnect the cable leads and remove tags.

5. APPLICATION

5.1 Standard: The 305 Connector was designed with two fanning strips on the cross-connect side of the panel, one fanning strip is mounted at the rear edge of the terminal field and another fanning strip is located only a few inches behind the first one. These two strips are used to align the jumper wires entering into the connector and also assist in the jumper wire tracing operation. This connector was designed to only terminate jumper wires on the cross-connect field side.

5.2 Non-standard: Because of the high density and capacity of the connector, Distributing Frame and Cable Engineers have been using the 305- type connector as a means of protection for circuits terminating on distant distributing frames (other than where the connector/ protector is mounted).

5.21 When the 305 Connectors are utilized for protection of circuits located on other distributing frames, the engineers are running the cables between the two locations. Where tie cables are used, do not use the rear fanning strip of the 305 Connector because it is too time consuming to fan cable leads through both fanning strips. Use the following procedures to fan leads into the connectors.

- a) Starting at the top of the vertical, arrange the cables so they serve each connector in order from the top down and then secure them to the top transverse arm.
- b) Assuming the vertical is filled with connectors, break out the first cable serving the top connector. Butt this cable approximately 2-1/2 inches below the transverse arm located at the top edge of the connector.

c) Measure the cable long enough to serve the farthest point of the connector, add about six inches and then cut off the excess cable slack. Remove the sheathing from the butt mark to the cable end.

d) Bring the cable to the outside of the rear fanning strip and secure it in place with either a double band of twine or a nylon cable tie. The butt should be slightly past the front edge of the rear fanning strip and secured approximately at the tenth row (numbered 20).

e) Identify each cable binder and proceed to fan and connect the leads according to the cable terminating document.

f) Continue to secure the cables to the transverse arms and then fan, form and connect each cable as described above.

5.211 Should several connectors be served by one larger cable, i.e., 200, 300, etc. pairs, the above procedures can still be followed. However, where the unjacketed wires secure to the transverse arms, protection will be required. Cut a small section of RM-583101 Sheet Fiber and wrap it around the cable leads before securing them in place. No protection is required at the point where the cable leads are secured to the rear fanning system.

6. CONTINUITY TEST

All cable leads should be continuity tested after completion of the wiring operation. There is no standard Electronic Lead Verification System (ELVS) adapter for the 305- type connector.

7. VERIFICATION

7.1 Protect unjacketed cable leads with sheet fiber where they are secured to transverse arms (Paragraph 5.211).

[Vertical lines at side of paragraphs indicates requirements.

Engineering Planning Manager
(Installation)