

MAIN DISTRIBUTING FRAMES TYPES OF PROTECTION

1. GENERAL

1.001 This addendum supplements Section 201-202-101 Issue 1. The attached pages must be inserted in the section in accordance with the filing instructions above.

1.002 This addendum is issued to revise 5.11 Note and Table E to reflect that the soldered terminal and soldered pin version of 302-type connectors and associated protectors are for use with double sided frames in common system central offices.

Attached:

Page 5 dated July 1972 revised
Page 6 dated July 1972 reissued
Page 29 dated July 1972 revised

5. TYPES OF PROTECTIVE APPARATUS

The following change applies to Part 5 of the section.

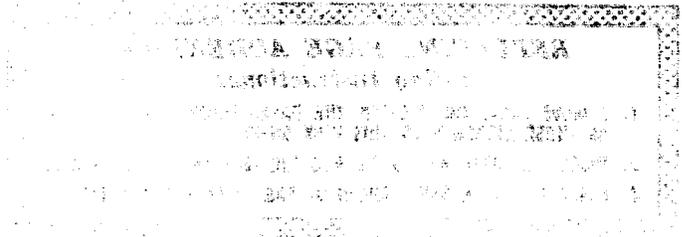
(a) 5.11 Note—revised

10. CONDUCTORS ON B-TYPE FRAMES

The following change applied to Part 10 of the section.

(a) Table E—revised

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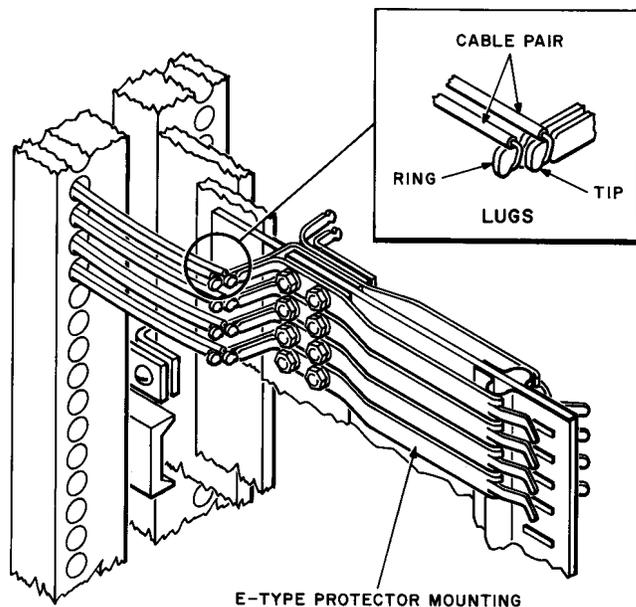


Fig. 4—E-Type Protector Mounting

are used only as a terminating device, and provide access to cable pairs and central office equipment for testing and maintenance purposes.

300-TYPE CONNECTOR

5.07 The 300-type connector supersedes a similar arrangement, coded the 121-type protector. All references in this section to the 300-type connector shall be considered to apply to the 121-type protector.

5.08 The 300-type connector and the associated protector units are shown in Fig. 7 and 8.

5.09 Some of the characteristics of the 300-type connector are as follows.

- (a) In the working position, the assembled protector unit (Fig. 7) is inserted and turned in a clockwise direction so that the stripe on the cap is horizontal (Fig. 8).
- (b) In the open circuit position, the protector unit is rotated 90 degrees counterclockwise from the working position. The stripe on the cap is vertical and the cap projects farther from the faceplate (Fig. 8). In this position, the central office equipment is disconnected from the outside plant conductor. Protective carbons (gap discharge blocks) are still effective.

(c) When the protector unit is removed, the central office equipment is disconnected from the outside plant conductor and no protection is provided.

Note: When the 121-type protector units are removed, the cable conductors may be automatically grounded. Therefore, before removing these protector units from circuits serving telegraph loops or other types of special circuits which have potential on the cable side, the associated equipment should be taken out of service. It may be necessary to remove connections to the cable pair to prevent equipment damage. Also for this reason, the modified B test clip with the M2EM cord is not recommended for use with the 121-type protector units.

(d) In either the working or the open position, the ground feeder of the protector unit (Fig. 7) rests against the inside surface of the grounded aluminum faceplate. This ground is fed through the ground feeder to the carbon insert of the 33B protector block.

(e) When heat coil operation is effected, the tip of the coil passes through the hole in the 32B carbon block or 34A1 porcelain dummy block and makes contact with the grounded insert of the 33B protector block (Fig. 7.)

302- AND 303-TYPE CONNECTORS

5.10 The 302- and 303-type connector panels are shown in Fig. 9 and 10. The associated protector units are shown in Fig. 11 and 12.

5.11 Protector units designed for the 302- and 303-type connectors (Fig. 9 and 10) have four contact pins and one ground pin.

Note: Protector units designated for use with 300-type connectors are physically smaller than the gold plated pin protector units initially specified for the 302-type connector. Thus, protectors designated for use with 302A1- or 302B1-type connectors (ESS, gold plated terminals) and 302A2- or 302B2-type connectors physically cannot be used with 303-type connectors. However, protectors designated for use with 303-type connectors physically and electrically fit 302A1- or 302B1-type and 302A2- or 302B2-type connectors (solder plated

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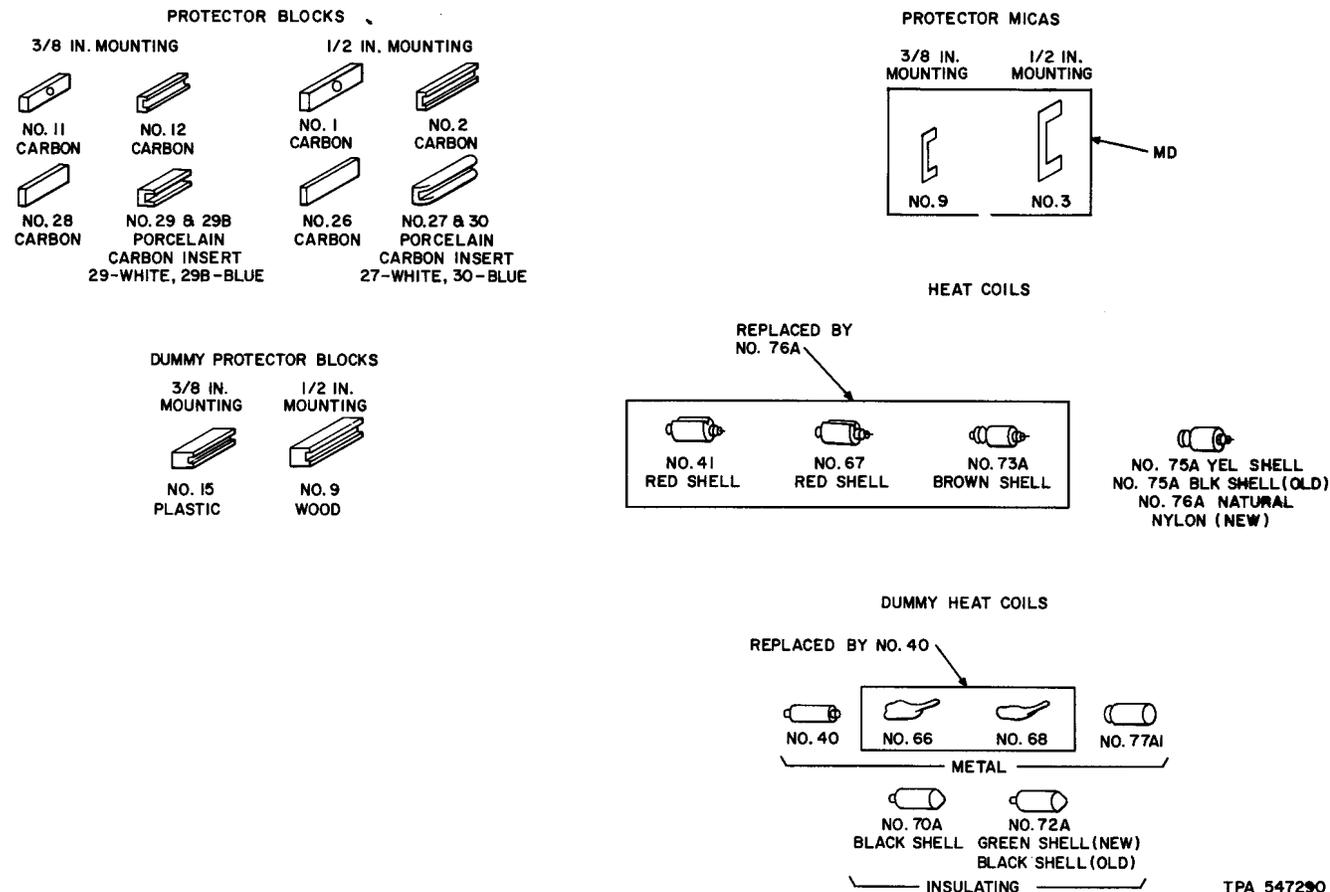


Fig. 5—Types of Protector Blocks and Heat Coils

terminal version for use with double sided frames in common system central offices).

5.12 When the protector units are inserted into a jack group on the connector panel, they provide the following contact for one pair:

- (a) Tip and ring to outside plant conductor (long pins)
- (b) Tip and ring to central office equipment (short pins)
- (c) Ground, which also serves as a polarizing pin (center pin).

5.13 Voltage protection *only* is provided by four carbon blocks which are enclosed by the plastic cap of the 3A protector unit as shown in Fig. 11 and 12. These units are used on circuits where sneak current protection is not required.

5.14 The 4A protector unit with carbon blocks and heat coils is used on circuits requiring *both* voltage and sneak current protection. The type of protection required will be indicated in the detail plans.

5.15 The 5A protector unit (dummy) may be used when *no* protection is required.

5.16 When the protector units are fully inserted into the connector, the outside plant and central office equipment is connected and protection is provided. Ground, for protection purposes, is provided for the heat coils and carbon blocks through the ground pin of the protector unit. The ground pin is connected to a vertical bus bar which in turn is strapped to two horizontal bus bars. These bars are grounded by the mounting screws securing the connector to the protector frame.

◆ TABLE E ◆

302- AND 303-TYPE CONNECTORS

ITEM	CLASS P	CLASS NP	CLASS TP
Spare Conductors	4A1C Protector Unit (302 Only)* 4A5C Protector Unit (302 or 303)*	5A1D Protector Unit (302 Only)* 5A5D Protector Unit (302 or 303)*	3A1A Protector Unit (302 Only)* 3A5A Protector Unit (302 or 303)*
Working Conductors	Black Caps No Designation Pins	Gray Caps No Designation Pins	Black Caps No Designation Pins
	<i>Customer Lines</i> 4A1C Protector Unit (302 Only)* 4A5C Protector Unit (302 or 303)* Black Caps No Designation Pins	<i>Customer Lines</i> 5A1D Protector Unit (302 Only)* 5A5D Protector Unit (302 or 303)* Gray Caps No Designation Pins	<i>Customer Lines</i> 3A1A Protector Unit (302 Only)* 3A5A Protector Unit (302 or 303)* Black Caps No Designation Pins
	<i>Battery Feeders</i> 4A4C Protector Unit (302 Only)* 4A8C Protector Unit (302 or 303)* Yellow Caps Yellow Designation Pins	<i>Battery Feeders</i> 5A4D Protector Unit (302 Only)* 5A8D Protector Unit (302 or 303)* Yellow Caps Yellow Designation Pins	<i>Battery Feeders</i> 3A4A Protector Unit (302 Only)* 3A8A Protector Unit (302 or 303)* Yellow Caps Yellow Designation Pins
	<i>Special Lines (Note 1)</i> 4A3C Protector Unit (302 Only)* 4A7C Protector Unit (302 or 303)* Red Caps Red Designation Pins (Note 2)	<i>Special Lines (Note 1)</i> 5A3D Protector Unit (302 Only)* 5A7D Protector Unit (302 or 303)* Red Caps Red Designation Pins (Note 2)	<i>Special Lines (Note 1)</i> 3A3A Protector Unit (302 Only)* 3A7A Protector Unit (302 or 303)* Red Caps Red Designation Pins (Note 2)
	<i>Denied Lines</i> 4A2C Protector Unit (302 Only)* 4A6C Protector Unit (302 or 303)* (Note 3 for 4A2C and 4A6C) Green Caps Green Designation Pins	<i>Denied Lines</i> 5A2D Protector Unit (302 Only)* 5A6D Protector Unit (302 or 303)* (Note 3 for 5A6D) Green Caps Green Designation Pins	<i>Denied Lines</i> 3A2A Protector Unit (302 Only)* 3A6A Protector Unit (302 or 303)* (Note 3 for 3A6A) Green Caps Green Designation Pins

* ◆ Protector units (gold plated pins) designed for ESS 302-type connectors should only be used with 302A1- or 302B1-type connectors (gold plated terminals).

Protector units designed for 303-type connectors can be used on 303-, as well as, 302A2- or 302B2-type connectors [solder plated terminals for use with double sided frames in common system central offices (5.11 Note)]. ◆

Notes:

1. Procedures for the protection of special lines against service interruptions are covered in Section 069-120-801.
2. A description of apparatus provided for guarding against service interruptions is covered in Section 201-203-102.
3. No continuity between outside plant and central office.