File E13288
Projects 73ME183

February 9, 1973

REPORT

on

COMPONENT - WIRE CONNECTORS

AMP, Incorporated
Harrisburg, Pennsylvania

DESCRIPTION

PRODUCT COVERED:

Component Wire Connectors, Type "Open Barrel Ring and Spades" or "OBR&S" (For specific cat. nos. see Illustrations.)

USR, CNR - Component Wire Connectors, Type "Open Barrel Ring and Spades", Cat. **Nos. 61794-9, 63610-1, 63610-2.**

GENERAL CHARACTER AND USE:

These devices are terminal connectors intended for use with stranded copper wire only and having a wire range as stated in the Illustrations.

USR – Products designated USR have been investigated using US requirements as noted in the Test Record.

CNR - Products designated CNR have been investigated using Canadian requirements as noted in the Test Record.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

These devices are for use where acceptability of the combination has been judged by Underwriters Laboratories Inc.

Conditions of Acceptability -

1. These devices are for factory assembly onto copper stranded wire only using this manufacturer's automatic power tooling which forms the wire entry opening and crimps the conductors to the terminal in one operation as illustrated in Fig. 2.

2. The plated steel connectors covered in this report are for use only where steel is acceptable for current-carrying parts.

3. Cat. Nos. 42313-2 and 42807-2 have a max assigned ampere rating of 15 A. Cat. No. 40902 has a max assigned ampere rating of 68 A. Cat. Nos. 520346-1, 520347-1, -2, 520892-1, 520893-1, 520940-1, 520941-1, 520943-1, 520944-1, 520993-1, 520994-1, 521305-1, have a max assigned ampere rating of 20 A. Cat. Nos. 520936-1, 520937-1, 520989-1, 520990-1, 63496-1, 63496-2 have a max assigned ampere rating of 30 A, Cat. No. 1742060-1 has a maximum assigned ampere rating of 18A. Cat No. 880626-1, -2 has a maximum ampere rating of 7 A.

4. Marking - Electrical ratings, including "CU", etc., are not provided. Such markings may be required in the end-equipment.

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5. Cat. Nos. 520346-1, 520347-1, -2, 520892-1, 520893-1, 520940-1, 520941-1, 520943-1, 520944-1, 520993-1, 520994-1, 521305-1, 520936-1, 520937-1 are intended for mounting on a base. The suitability of the base, including insulating material, shall be an end-use consideration.

6. Cat. Nos. 520346-1, 520347-1, -2, 520892-1, 520893-1, 520940-1, 520941-1, 520943-1, 520944-1, 520993-1, 520994-1, 521305-1, 520936-1, 520937-1, 520989-1 and 520990-1, 63496-1, 63496-2 are to be assembled using this manufacturer's mini-applicator automatic crimp tooling No. 567253-2.

7. Cat. Nos. 520347-1, -2, 520893-1, employ a No. 10-32 by 3/8 in terminal screw and a No. 10-32 by 7/16 in square nut Cat. Nos. 520346-1, 520892-1 employ a No. 10-32 by 7/16 in terminal screw and a No. 10-32 by 3/8 in square nut. Cat. Nos. 520940-1, 520941-1, 520943-1, 520944-1, 520936-1, 520937-1 employ a No. 10-32 by 7/16 in terminal screw and a No. 10-32 by 7/16 in square nut. The square nuts are provided for mounting, and termination of Nos. 6-14 AWG copper sol/str wire (serving as the load) between screwhead and terminal plate, considered the pressure terminal connector. Nos. 6-8 AWG stranded wires may be inserted into the pressure terminal connector of the mentioned Cat. Nos. in a manner that approximately half of the strands are captivated on each side of the terminal screw, or with all strands captivated on each side of the pressure terminal screw. The max tightening torque for the pressure wire connector terminal is 45 lb-in.

Additional Cat. Nos. -

Cat. No. 520993-1 (Ill. 46) is the same as Cat. No. 520943-1 (Ill. 34) except with a No. 10-32 x 3/8 in combination hex/phillips head pressure screw instead of a No. 10-32 x 3/8 in slot/phillips head screw. Also, the nut for Cat. No. 520993-1 is a No. 10-32 by 3/8 in instead of No. 10-32 x 7/16 in.

Cat. No. 520994-1 (Ill. 47) is the same as Cat. No. 520944-1 (ill. 35) except with a No. 10-32 x 3/8 in hex/phillips head pressure screw instead of a No. 10-32 by 7/16 in slot/phillips head screw.

Cat. No. 521305-1 (Ill. 48) is the same as Cat. No. 520943-1 (Ill. 34) except with a No. 10-32 x 3/8 in hex/phillips head pressure screw instead of a No. 10-32 x 7/16 in slot/phillips head screw.

Cat. No. 1-61795-1 (Ill. 223) is the same as Cat. No. 61795-3 (Ill. 7) except with different plating material with higher plating thickness.

Cat. No. 61794-9 (Ill. 224) is the same as Cat. No. 61794-1 (Ill. 10, page 91) except with different package.

8. Cat. Nos. 154672-1, -2, -3 are to be assembled using this manufacturer's automatic crimp tooling No. HD-1 applicator, Die No. 2-456406-3 with anvil 1-1333217-5.

9. Cat. Nos. 160434-1, -2 are intended for assembly onto No. 16 – 20 AWG Cu str wire using this manufacturer’s AMP End Feed HD-1 Applicator tooling.