File E13288 Project 93ME30637

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REPORT

on

COMPONENT - WIRE CONNECTORS

Tyco Electronics Corp.
Middletown, PA

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PRODUCT COVERED:

USR, Component pressure splicing connectors Cat. Nos. 485043-1, 485043-2, 63625-1, 63130-2, 63130-3, 62754-1,-2 60372-1, 62759-1, 61299-1, 61299-2, 61299-3, **62516-2**.

RATINGS:

| Cat. No. | Wire Combination Ratings | | | |
|--|--|--|--|--|
| 61299-1 | (1) 12AWG (65 strands) + (1) 18AWG (16 strands), (1) 12AWG (65 | | | |
| | strands) + (2) 18AWG (16 strands), (4) 16AWG str, (1) 12AWG (65 | | | |
| | strands) + (1) 14AWG str, (1) 12AWG (65 strands) + (1) 16AWG str | | | |
| 61299-2, | (4) 16AWG str, (1) 12AWG str (65 str) + (1) 14AWG str, (1) 12AWG | | | |
| 61299-3 | str (65 str) + (1) 16AWG str, (3) 16AWG str, (2) 16AWG str + (2) | | | |
| | 18AWG str, (2) 14AWG str + (1) 18AWG str | | | |
| 60372-1 | (1) 24AWG str + (2) 22AWG str, (2) 26AWG str + (2) 24AWG str, (1) | | | |
| | 24AWG str + (2) 24AWG sol, (1) 18AWG str + (1) 24AWG sol | | | |
| 62759-1 (1) 24AWG str + (1) 22AWG sol, (1) 24AWG str + (1) 22AWG | | | | |
| | 24AWG str + (1) 22AWG tinned str, (2) 24AWG str, (3) 24AWG str, | | | |
| | (2) 22AWG str, (1) 24AWG str + (1) 24AWG sol, (1) 20AWG str + (1) | | | |
| | 22AWG sol, (1) 22AWG str + (1) 22AWG sol | | | |
| 485043-1, | 1 No. 18 Str. with 1 No. 18 Sol, 2-5 No. 18 Str, 2 No. 18 Str with | | | |
| 485043-2 | 1 No. 16 Str, 1 No. 18 Str. with 1 No. 16 Str, 3 No. 18 Str. with | | | |
| | 1 No. 16 Str, 1 No. 18 Str. with 2 No. 16 Str, 2 No. 18 Str. with | | | |
| | 2 No. 16 Str. | | | |
| | | | | |
| 62516-2 | (3) 22AWG str, (4) 22AWG str, (5) 22AWG str, (6) 22AWG str, (2) | | | |
| | 20AWG str, (3) 20AWG str, (4) 20AWG, Str, (2) 18AWG str | | | |

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| 63625-1 | Stranded only: | |
|---------|--------------------|---|
| | 1-18 + 2-14 | 3-18 |
| | 1-14 + 1-16 + 2-18 | 2-18 + 1-20 + 1-22 |
| | 2-16 + 3-18 | 5-20 |
| | 5-18 + 2-20 | |
| | 4-16 | 2-18 + 2-20 |
| | 3-16 + 1-18 + 1-20 | 3-18 + 1-22 |
| | | 4-20 + 1-18 |
| | 2-16 + 2-18 + 2-20 | |
| | 4-18 + 1-14 | 1-16 + 2-18 |
| | 5-18 + 1-16 | 3-18 + 1-20 |
| | 3-16 + 3-20 | 2-18 + 2-20 + 1-20 |
| | 3-16 + 2-18 | 6-20 |
| | 2-16 + 3-18 + 1-20 | 2-16 + 1-20 |
| | 5-18 + 3-20 | 2-18 + 3-20 |
| | 2-18 + 2-14 | 4-18 |
| | 4-16 + 1-18 | 1-16 + 4-20 |
| | | 2-16 + 1-18 |
| | 5-18 + 1-14 | |
| | 6-18 + 1-16 | 3-18 + 2-20 |
| | 4-20 + 2-14 | 7-20 |
| | 3-14 | 2-16 + 2-20 |
| | 2-16 + 2-18 + 1-14 | 4-20 + 2-18 |
| | 3-16 + 3-18 | |
| | 5-16 | 4-18 + 1-20 |
| | 8-18 | 1-20 + 1-16 + 1-14 |
| | 3-16 | |
| | 3-18 + 2-14 | 3-18 + 1-16 |
| | 1-14 + 1-16 + 1-12 | 1-18 + 1-20 + 2-16 |
| | F 10 + 0 16 | |
| | 5-18 + 2-16 | |
| | 3-18 + 3-20 | F 10 |
| | 6-18 + 4-20 | 5-18 |
| | 3-14 + 1-18 | 3-20 + 2-16 |
| | 0 14 : 0 10 : 1 16 | 2-14 |
| | 2-14 + 2-18 + 1-16 | 1-16 + 1-18 + 1.14 |
| | 3-16 + 1-12 | 2-16 + 2-18 |
| | 4-16 + 1-14 | |
| | 2-12 + 1-18 | 4-18 + 2-20 |
| | 2-12 + 1-16 | 3-16 + 1-20 |
| | 2 17 1 12 | J 10 1 1 20 |
| | 7-18 + 4-20 | 1-14 + 3-18 |
| | 6-16 | 2-16 + 2-18 + 1-22 |
| | | 4-18 + 1-16 |
| | 3-14 + 2-18 | 5-18 + 1-20 |
| | 2-12 + 1-16 | - · · · · · · · · · · · · · · · · · · · |
| | 3-16 + 1-12 + 1-18 | 4-20 + 2-16 |
| | 2-14 + 1-20 | - |
| | 2-16 + 1-14 | |
| | 3-16 + 1-18 | |
| | 1-16 + 3-18 + 2-20 | |
| | 4-18 + 3-20 | |
| | 6-18 | |
| | 1-12 + 2-18 | |
| | | |
| L | 1 | |

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| 63130-2, | (1) 18AWG str + (1) 18AWG sol |
|-----------|--|
| 63130-3 | (1) 16AWG str + (1) 22AWG sol |
| | (1) 16AWG str + (1) 22AWG tin plated str |
| | (1) 18AWG str + (1) 20AWG str |
| | (2) 24AWG str + (2) 22AWG str |
| | (1) 18AWG str + (2) 22AWG str |
| | (1) 18AWG str + (3) 22AWG str |
| | (4) 20AWG str |
| | (3) 22AWG str |
| | (3) 18AWG str |
| | (4) 24AWG str |
| | |
| 62754-1,- | Refer to Ill. 8 |
| 2 | |

GENERAL CHARACTER AND USE:

The devices described in this report are of the following type.

Type of Wiring Termination

Wire Connector - Crimp type.

Tooling - These wire connectors are assembled to their rated wire combinations using the manufacturer's Amp-O-Lectric automatic crimp tooling as follows:

| Connector Cat. No. | Crimp Tool Applicators | <u>Ills.</u> |
|--------------------|---------------------------|--------------|
| 485043-1, 2 | .140F | 5 |
| 63625-1 | .180F or .220F | 2, 4 |
| 62754-1,-2 | .300F | 2,3 |
| 63130-2, -3 | .110F | 6 |
| 60372-1 | .180F | 9 |
| 62759-1 | .180F | 10 |
| | "Quick-Change Applicator" | 12 |
| 61299-1 | Part No. 565863-2 | |
| 61299-2, -3 | .180F | 11 |

Tooling - These wire connectors are assembled to their rated wire combinations using the manufacturer's TYCO ELECTRONICS crimp tooling as follows:

| Connector Cat. No. | Crimp Tool Applicators | <u>Ills.</u> |
|--------------------|------------------------|--------------|
| 62516-2 | 566365 | 14 |

 $\,$ Materials - These connectors are formed of copper alloy, See Ills. for dimensions.

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TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated USR have been investigated using requirements contained in the Standard UL 486C.

Conditions of Acceptability -

$\underline{\mathtt{Use}}$ - For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC.

- 1. Marking information including "CU" or "Copper", cat. no., crimp tool information, wire range are not provided. The need for such markings shall be determined in the end use equipment.
- 1A. The unit container is not marked "TO BE SOLD ONLY WITH INSTALLATION INSTRUCTIONS". The need for this marking shall be determined in the end use equipment.
- 2. Cat. Nos. 63625-1, **62754-1,-2**, 61299-1, 61299-2 and 61299-3 splicing connectors are intended for factory-wiring only.
 - 3. These terminals are for use with copper wires only.
- 4. Cat. Nos. 48503-1, 63130-2, -3 comply with field-wiring requirements in UL 486C Standard For Splicing Wire Connectors, Third Edition.
- 5. The current-carrying suitability of Cat. Nos. 61299-1, 61299-2, -3 shall be determined in the end-use.
- 6. Cat. No. 612991-1 may be used only where steel is acceptable for current carrying parts.