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Project 02ME23371

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REPORT

on

COMPONENT - CONNECTORS FOR USE IN DATA, SIGNAL,
CONTROL AND POWER APPLICATIONS

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Harrisburg, PA

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DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Crown Clip Series Connectors, Models Single Pole 538-17-00100A, Dual Pole 538-0061-00100A and 538-0055-00100B, and Crown Clip II, Model Dual Pole 538-0068-00100X, where "X" can be any alphanumeric character.

*USR, CNR Component - Crown Clip Series Connectors, Cat. Nos. 1643906-1, 1643902-1, 1926671-1, 1643903-1, **1643903-2, and 1643903-3**

GENERAL:

The above catalog number may be identified as follows:

<u>Cat. No.</u>	<u>USR Maximum Rating</u>	<u>CNR Maximum Rating</u>	<u>ILL.</u>	<u>Mating Blade Plating Material</u>	<u>Current Interruption</u>
538-17-00100A, 1643906-1	48 V, 100 A 42 V, 200 A	48 V, 100 A 41 V, 155 A,	1,2	Silver Silver	Yes Yes
538-17-00100A	250 V, 250 A 250 V, 250 A 250 V, 300 A	- - 250 V, 200 A		Silver Silver Nickel	No No No
538-0061-00100A, 1643902-1, 1926671-1	600 V, 425 A 250 V, 350 A	600 V, 280 A 250 V, 225 A	3,4	Silver Nickel	No No
538-0061-00100A	60 V, 100 A 5 V, 200 A	60 V, 100 A 5 V, 200 A		Gold Gold	Yes Yes
538-0061-00100A	250 V, 260 A 60 V, 80 A	250 V, 150 A 60 V, 80 A		Gold Gold	No Yes
538-0055-00100B	250 V, 260 A 60 V, 80 A	250 V, 150 A 60 V, 80 A		Gold Gold	No Yes
538-0068-00100X, 1643903-1, 1643903-3	250 V, 325 A * 250 V, 325 A	250 V, 225 A 250 V, 225 A		Gold(0.118in, 3mm) Silver	No No
538-0068-00100X	250 V, 300 A	250 V, 210 A		Nickel(0.118in, 3mm)	No
538-0068-00100X	250 V, 325 A	250 V, 225 A		Silver(0.118in, 3mm)	No

These devices are connectors employing contacts intended to be connected to a bus bar, for use in electrical equipment where the acceptability of the combinations is determined by Underwriters Laboratories Inc.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - In order to be judged acceptable as a component of electrical equipment, the following conditions should be met:

1. Connector Model 538-17-00100A has been investigated for a current of 100 A with a maximum temperature rise of 16.3°C. Connector Model 538-17-00100A was tested connected to a bus bar measuring 4.5 cm by 15.1 cm by 0.6 cm thick.
2. The suitability of the mounting means shall be determined in the end-use.
3. The placement of these devices within the equipment enclosure should be such that spacings between the live parts and the equipment are suitable for the particular application.
4. The operating temperature of these devices should not exceed the temperature ratings of the insulating materials. These materials may be used interchangeably at a maximum temperature of 130°C. For use in Canada, the operating temperature of these devices should not exceed 30°C rise above ambient.
5. Connector Model 538-17-00100A has been investigated for a current of 200 A with a maximum temperature rise of 45.3°C. Connector Model 538-17-00100A was tested connected to a bus bar measuring 4.5 cm by 15.1 cm by 0.6 cm.
6. Connector Model 538-17-00100A has been investigated for a current of 155 A with a maximum temperature rise of 28°C. Connector Model 538-17-00100A was tested connected to a bus bar measuring 4.5 cm by 15.1 cm by 0.6 cm.
7. The placement of these devices within the equipment enclosure should be such that spacings between live parts and the equipment are suitable for the particular application.
8. Connector Model 538-17-00100A has not been evaluated for a current interruption rating of 600 V, 250 A.
9. Connector Model 538-17-00100A has been investigated for a current of 250 A with a maximum temperature rise of 34°C. Connector Model 538-17-00100A was tested connected to a bus bar measuring 4.5 by 15.1 by 0.6 cm.
10. Connector Model 538-17-00100A has not been evaluated for a current interruption rating of 250 V, 250 A.

11. USR: Connector Model 538-0061-00100A with silver plated mating blades measuring 1.0 by 1.5 by 0.125 in. has been investigated for a current of 425 A with a maximum temperature rise of 66°C. Connector Model 538-0061-00100A was tested while connected to a bus bar measuring 1.75 by 6 by 0.25 in.
12. CNR: Connector Model 538-0061-00100A with silver plated mating blades measuring 1.0 by 1.5 by 0.125 in. has been investigated for a current of 280 A with a maximum temperature rise of 29°C. Connector Model 538-0061-00100A was tested while connected to a bus bar measuring 1.75 by 6 by 0.25 in.
13. Connector Model 538-0061-00100A has not been evaluated for current interruption rating of 600 V, 425 A or 600 V, 280 A.
14. USR: Connector Model 538-17-00100A has been investigated for a current of 300 A with a maximum temperature rise of 66°C. This connector was tested with nickel plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a bus bar measuring 1.75 in. by 6 in. by 0.25 in.
15. CNR: Connector Model 538-17-00100A has been investigated for a current of 200 A with a maximum temperature rise of 30°C. This connector was tested with nickel plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a bus bar measuring 1.75 in. by 6 in. by 0.25 in.
16. USR: Connector Model 538-0061-00100A has been investigated for a current of 350 A with a maximum temperature rise of 69°C. This connector was tested with nickel plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a bus bar measuring 1.75 in. by 6 in. by 0.25 in.
17. CNR: Connector Model 538-0061-00100A has been investigated for a current of 225 A with a maximum temperature rise of 30°C. This connector was tested with nickel plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a bus bar measuring 1.75 in. by 6 in. by 0.25 in.
18. Connector Model 538-0061-00100A has been evaluated for current interruption for the following ratings: USR and CNR rating of 200 A, 5 V and 100 A, 60 V A. This connector was tested with gold plated blades measuring 1.0 in by 1.5 in. by 0.125 in.

19. USR: Connector Model 538-0055-00100B has been investigated for a current of 260 A with a maximum temperature rise of 70°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
20. CNR: Connector Model 538-0055-00100B has been investigated for a current of 150 A with a maximum temperature rise of 24.6°C. This connector was tested with Gold plated mating blades measuring 1.0 in. by 1.5 in. by 0.125 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
21. Connector Model 538-0055-00100B has been evaluated for current interruption for the following ratings: USR and CNR rating of 80 A, 60 V with a maximum temperature rise of 23°C. This connector was test with gold plated blades measuring 1.0 in. by 1.5 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
22. USR: Connector Model 538-0068-00100X has been investigated for a current of 325 A with a maximum temperature rise of 49.1°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
23. USR: Connector Model 538-0068-00100X has been investigated for a current of 300 A with a maximum temperature rise of 49.1°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
24. USR: Connector Model 538-0068-00100X has been investigated for a current of 325 A with a maximum temperature rise of 46.1°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.
25. USR: Connector Model 538-0068-00100X has been investigated for a current of 225 A with a maximum temperature rise of 24.6°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.

26. USR: Connector Model 538-0068-00100X has been investigated for a current of 210 A with a maximum temperature rise of 24.6°C. This connector was tested with gold plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.

27. CNR: Connector Model 538-0068-00100X has been investigated for a current of 225 A with a maximum temperature rise of 24.1°C. This connector was tested with Silver plated mating blades measuring 1.0 in. by 2.0 in. by 0.118 in. and connected to a silver plated bus bar measuring 1.75 in. by 6 in. by 0.25 in.