

File E28476  
Project 02ME22714

Issued: January 28, 2003  
Revised: March 01, 2023

REPORT

on

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

Tyco Electronics **Corporation**  
Harrisburg, PA

Copyright © 2003 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above-named company to reproduce this Report provided it is reproduced in its entirety.

Underwriters Laboratories Inc. authorizes the above-named company to reproduce that portion of this Report consisting of this Cover Page through Page 2.

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connectors - Duoplug Power Connector Series

USR, CNR Component Connectors - Duoplug Power Connector - Cat. No. 4-964575-3

USR, CNR Component Connectors - Duoplug Power Connector - Cat. Nos. 293230-3 and 293230-4

USR, CNR Component Connectors - Monoplug Power Connector - Cat. Nos. 2325926-2, 2325926-3, 2325926-4, 2325926-5, 2325926-6.

USR, CNR Component Connector - Cat. No. 2376193-X where X can be 2 to 7

**USR, CNR Component Connectors - Duoplug Power Connector - Series x-2328644-x, x-2395228-x (where x denotes any number 0 to 9)**

GENERAL:

\*These devices are multi-pole headers and attachment plugs employing contacts of the solder and insulation displacement type for use with printed circuit boards and wires where the acceptability of the combinations is determined by **UL LLC**.

ELECTRICAL RATING:

USR, CNR - 20 AWG, 6 A, 250 V

USR, CNR - 22 AWG, 2 A, 250 V

USR - 18 AWG, 6 A, 250 V

CNR - 18 AWG, 5.5 A, 250 V

\*

**Cat. Nos. 293230-3 and 293230-4,**

**USR, CNR - 20AWG, 18 AWG, 16AWG, 6A, 250V for terminal Cat. No. 284798-1**

**USR, CNR - 24AWG, 22 AWG, 20AWG, 2A, 250V for terminal Cat. No. 1955441-1**

Cat. Nos.	Voltage V	Ampere (A)	Conductor Sizes, AWG
x-2328644-x	250	2	22
x-2395228-x	250	6	20-18
2325926-2, 2325926-3, 2325926-4, 2325926-5, 2325926-6.	250 Vac/dc	2	22
		6	20
		9	18
2376193-X	250 Vac/dc	6	18-20
		2	22

**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):

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. These devices should be used only where they will not interrupt the current.

\*2. These devices have been investigated for a current of 6 Amperes carried by each pole, when wired with 20 AWG, with a maximum temperature rise of **21.5 °C**.

\*These devices have been investigated for a current of 2 Amperes carried by each pole, when wired with 22 AWG, with a maximum temperature rise of **3.9 °C**.

\*USR - These devices have been investigated for a current of 6 Amperes carried by each pole, when wired with 18 AWG, with a maximum temperature of **55.5 °C**.

\*CNR - These devices have been investigated for a current of 5.5 Amperes carried by each pole, when wired with 18 AWG, with a maximum temperature rise of **26.8 °C**.

\*USR/CNR - These devices (293230-3 (with terminal 284798-1)) have been investigated for a current of 6 Amperes carried by each pole, when wired with 20 AWG, with a maximum temperature of **25.0 °C**.

\*USR/CNR - These devices (293230-3 (with terminal 1955441-1)) have been investigated for a current of 2 Amperes carried by each pole, when wired with 24 AWG, with a maximum temperature of **7.9 °C**.

\*USR/CNR - These devices (2325926-6) have been investigated for a current of 2 Amperes carried by each pole, when wired with 22 AWG, with a maximum temperature of **3.1 °C**.

\*USR/CNR - These devices (2325926-6) have been investigated for a current of 6 Amperes carried by each pole, when wired with 20 AWG, with a maximum temperature of **17.1 °C**.

\*USR/CNR - These devices (2325926-6) have been investigated for a current of 9 Amperes carried by each pole, when wired with 18 AWG, with a maximum temperature of **25.3 °C**.

\*USR/ CNR - These devices (2376193-7) have been investigated for a current of 6 Amperes carried by each pole, when wired with 20 AWG, with a maximum temperature of **19.94 °C**.

\*USR/ CNR - These devices (2376193-7) have been investigated for a current of 2 Amperes carried by each pole, when wired with 22 AWG, with a maximum temperature of **4.13 °C**.

**Cat. No. x-2328644-x (10-pole version) have been investigated for a current of 2 Amperes carried by each pole, when wired with 22 AWG, with a maximum temperature of 29.8°C, adjusted to 25°C ambient.**

**Cat. No. x-2395228-x (8-pole version) have been investigated for a current of 6 Amperes carried by each pole, when wired with 20 AWG, with a maximum temperature of 45.6°C, adjusted to 25°C ambient.**

3. The suitability of the mounting means shall be determined in the end use.

4. The electrical and mechanical suitability of the wiring terminals shall be determined in the end use.

5. 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.

6. The adjacent and non adjacent poles of a fully loaded connector may be used at potentials not exceeding 250 Volts based on the results of a Dielectric Withstand Test which was performed at 1500 V.

7. The electrical and mechanical contact between the connector and the printed circuit board is to be judged in the end-use equipment.

8. The electrical and mechanical contact between the IDC connector and the wire is to be judged in the end-use equipment.

9. The suitability of the insulating materials used in the molded bodies shall be judged in the end-use equipment.

\* 10. The operating temperature of these devices should not exceed the temperature ratings of the insulating materials