

File E28476
Project 08CA46946

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REPORT

on

COMPONENT - Connectors for Use in Data, Signal, Control and Power
Applications - Component

Tyco Electronics Corp
HARRISBURG, PA 17111

Recognized Company: Tyco Electronics Corp

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DESCRIPTION

PRODUCT COVERED:

* USR, - Component Connector, Crown Clip Junior Connector Series, Cat. Nos. 1982530-x, 1982995-x, 2042305-x, 2170033-x, 2178410-x, 2178411-x, 2178517-x, 2178531-x.

USR, CNR - Component Connector, Crown Clip Junior Connector Series, Cat. No. 1551953-x.

GENERAL:

These devices are single -pole connectors intended for factory assembly on printed wiring boards and mating with a copper buss bar where the acceptability of combinations is determined by Underwriters Laboratories Inc.

The devices are identified as follows:

USR indicates investigation to United States Standards, UL 1977, Second Edition.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3.

RATINGS:

Series	Voltage, Vdc	UL Current, A
*1982530-x, 1982995-x, 2042305-x, 2178410-x, 2178411-x, 2178517-x, 2178531-x	48	150
2170033-x	60	120

*Series No.	Voltage		Ampere, A	
	For current interrupting	Not for current interrupting	UL (For current interrupting)	CUL (Not for current interrupting)
1551953-x	48 Vdc	600 Vac/dc	150	160

Disconnecting use - See Sec. Gen. for required marking (for CUL).

TECHNICAL CONSIDERATIONS (NOT FOR FIELD 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 - The following are among the considerations to be made when evaluating the device in the end-use product.

Interruption of Current

1. Devices 1982530-x, 2042305-x, 1551953-x (with UL rating) and 1982995-x are suitable for interrupting the flow of current by connecting or disconnecting the mating connector. Model 2170033-x is not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

2. Devices 1982530-x and 2042305-x have been tested for 250 make-and-break cycles of interrupting a current of 225 A at 48 VDC by connecting and disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

3. These devices have been subjected to the Temperature test with the rated UL currents and maximum temperature rise values tabulated below.

Cat Nos. Series	UL Current, A	Maximum Temperature Rise, °C
1982530-x, 2042305-x, 2042305-x, 1551953-x, 2178410-x, 2178411-x, 2178517-x, 2178531-x	150	45
2178531-4	150	20.15
2170033-x	120	64.7

4. The Cat. No. 1551953-x has only been subjected to the Temperature test without Overload Test and Resistance to Arcing Test, the rated CUL currents and maximum temperature rise tabulated below:

Cat. No.	CUL Current, A	Wire Range, AWG	Maximum Temperature Raise, °C
1551953-x	160	1/0	25.5

Insulating Materials

5 . These devices employ insulating materials with properties as tabulated below at the minimum thickness employed in the connector housing, the suitability of the insulating materials based on the documented values shall be determined in the end-use application. Please note the values specified in the table when multiple materials are indicated represent the minimum values for the group of materials.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	RTI Str	Max Operating Temp, °C
1982530-x, 2042305-x, 1551953-x, 1982995-x, 2178410-x, 2178411-x, 2178517-x, 2178531-x except for 2178531-4	A	0.43 mm	V-2	-	-	75	75	75
2170033-x	A	0.75	V-0	3	0	130	140	130

Effective Date: 2015-02-10

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	RTI Str	Max Operating Temp, °C
1982530-x, 2042305-x, 1551953-x, 1982995-x, 2178410-x, 2178411-x, 2178517-x, 2178531-x except for 2178531-4	A	0.75 mm	V-0	3	0	130	140	130

(#) - Code for Insulating Body Material.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	RTI Str	Max Operating Temp, °C
2178531-4	B	0.75 mm	V-0	2	0	240	240	240

A. Tyco Electronics Raw Material Part Number 1573755

1. Dielectric strength (kV/mm): 27
2. CTI: 3

B. Tyco Electronics Raw Material Part Number 1573878

- 1. Dielectric strength (kV/mm): 39**
- 2. CTI: 4**

6. The suitability of the quick-connect terminal for grounding shall be determined in the end-use.

7. The suitability of the solder terminal for grounding shall be determined in the end-use.

8. The terminals have not been evaluated for compliance with the dimensional requirements of UL 310, the Standard for Electrical Quick-Connect Terminals

9. Cat. No. 1982530-1 has been evaluated for Access to Energized Parts UL 60950-1, Figure 2A, Clause 2.1.1.1, to the top, and bottom, and the probe does not touch live parts. The probe can touch live parts from the front and back

Miscellaneous

10. Test voltage of DIELECTRIC VOLTAGE-WITHSTAND TEST **except for cat. No. 2178531-4** is conducted at 2500 Vac which is higher than standard requirement, and is acceptable.