

DESCRIPTION

PRODUCT COVERED:

\*USR, CNR - Component Connectors, **NECTOR S** Series, Types Plugs, Connectors, Splice Barrel, Splitter, Distribution Block, PWB Mounted, Panel Mounted, Male-to-Male Bridge Connector - Series 2213142

\*USR, CNR - Component Connectors, **NECTOR S** Buss

GENERAL:

These devices are multi-pole connectors intended for factory assembly on 18AWG flexible cord or printed wiring boards 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.

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

## RATINGS:

## Electrical -

Type	Voltage Rating		Current Rating	
	USR	CNR	USR	CNR
*Plugs	125V AC/DC	125V AC/DC	6	6
	<b>125V</b> AC/DC	<b>125V</b> AC/DC	7	7
*Connectors	125V AC/DC	125V AC/DC	6	6
	<b>125V</b> AC/DC	<b>125V</b> AC/DC	7	7
*Splice Barrel	125V AC/DC	125V AC/DC	6	6
	<b>125V</b> AC/DC	<b>125V</b> AC/DC	7	7
*Splitter	125V AC/DC	125V AC/DC	6	6
	<b>125V</b> AC/DC	<b>125V</b> AC/DC	7	7
*Distribution Block	125V AC/DC	125V AC/DC	6	6
	<b>125V</b> AC/DC	<b>125V</b> AC/DC	7	7
*PWB Mounted	125V AC/DC		6	6
	<b>125V</b> AC/DC		7	-
*Panel Mounted	125V AC/DC		6	6
	<b>125V</b> AC/DC		7	-
Male-to-Male Bridge Connector - Series 2213142-1,-3	125V AC/DC	125V AC/DC	7	7
*Male-to-Male Bridge Connector - Series 2213142-2	<b>125V</b> <b>AC/DC</b>	<b>125V</b> <b>AC/DC</b>	7	7
*NECTOR S Buss	125V AC	125V AC	6	6
	<b>125V</b> <b>AC/DC</b>	<b>125V</b> <b>AC/DC</b>	7	7

Flammability - V0

Disconnecting Use - See Section General for required marking

## 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. Types Plugs, Connectors, PWB Mounted, Splice Barrel, Panel Mounted, Splitter, Distribution Block, Male-to-Male Bridge Connector are suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

2. These devices have been tested for 250 make-and-break cycles of interrupting a current as follows:

Type	Voltage	Current
Splice Barrel	125VDC	10.5
Panel Mount (Representing PWB Mounted)	125VAC	6
Distribution Block	125VDC	10.5
Male-to-Male Bridge Connector	125VDC	10.5
Plug	125VDC	9
	42VDC	10.5
Connector	125VDC	9
	42VDC	10.5
Splitter	125VDC	9
	42VDC	10.5
*NECTOR S Buss (with and without gel)	125VAC	9
	42VDC	10.5

## Current-Carrying Capability and Current Ratings

3. These devices have been subjected to the Temperature test with the rated currents and maximum temperatures tabulated below, adjusted to a 25°C ambient.

Type	Current, A	Maximum Temperature, °C
Plugs	7	47.6
Connectors	7	52.76
Splice Barrel	7	41
Splitter	7	51.46
Panel Mounted	7	58.8
Panel Mounted (representing PWB Mounted)	6	36.3
Distribution Block	7	36.7
PWB Mounted	7	65.8
Male-to-Male Bridge Connector - Series 2213142-3 (representing 2213142-1,-2)	7	47.5
*NECTOR S Buss (with gel (1))	6	33.6
	7	34.6

Note (1): Sampling with gel serves to representing sampling without gel.

#### Insulating Materials

4. 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	Max Operating Temp, °C
*ALL except NECTOR S Buss	A	0.38	V-0	4	3	130	130
*NECTOR S Buss	B	0.7	V-0	3	4	120	120

(#) - Code for Insulating Body Material.

- A. Tyco Raw Material No. 1573716.  
 1. Dielectric strength (kV/mm): 25  
 2. CTI: 2
- B. Tyco Raw Material No. 1-703197-3  
 1. Dielectric strength (kV/mm): 31  
 2. CTI: 2

#### Terminations

\*5. All devices except for **NECTOR S** Buss are suitable for use with No. 18 AWG Type SVT or SPT-2 flexible cord. The **NECTOR S** Buss is suitable for use with 18 AWG stranded SPT-2 flexible cord.

#### Mating Connectors

\*6. The **NECTOR S** Series - Male-to-Male Bridge Connector Series 2213142 have only been assessed for use with connector Series 293387 and 293648. The **NECTOR S** Buss Connector Series has only been assessed for use with the **NECTOR S** Plug Assemblies. They have not been assessed to operate with any other similar devices from any other manufacturer.

#### Miscellaneous

7. The enclosure of the load devices have live parts that may be exposed to user contact when the connector is unmated. The load devices must be marked "load" or otherwise identified so they are not energized in an unmated condition.

\*8. The **NECTOR S** Series - Plugs and Connectors covered by this report have been subjected to the Connector Separation test in accordance with UL2459, 1<sup>st</sup> Edition, Section 7.3.2 and the Mechanical Sequence test in accordance with UL486C, 5<sup>th</sup> Edition, Section 7.4.

\*9. The **NECTOR S** Series - Panel Mounted devices covered by this report have been subjected to the Mounting Strength test in accordance with UL498, 14<sup>th</sup> Edition, Section 142.2.

10. The Distribution blocks covered by this report have been subjected to the Strain Relief test in accordance with UL1363, 3<sup>rd</sup> Edition, Section 30.

\*11. The **NECTOR S** Series - devices contained herein may be provided with Accessories - Mounting Frame Cat. No. 293302 and Mounting Frame Support Cat. Nos. 2213129 and 2213143. The suitability of these Accessories shall be an end product consideration.

\*12. The **NECTOR S** Buss Connector Series may be provided with a gel on the wire termination portion of the contacts.

\*13. Testing per The Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces, UL 2043, 3<sup>rd</sup> edition dated 2008-08-20 has been performed on a sample set of **NECTOR S** Series connectors, constituting a maximum mix of devices that fit into a 2 ft by 10 ft long air duct. The mix consisted of the following:

- One each of Plug 293388-3 with one Tube 293358-1
- One Connector (Outlets) 293387-1 with one Tube 293358-1
- One PWB Mounted Connector 293654-1
- One Bridge 293647-1
- One Panel Mounted Outlet 293648-1
- One Splitter 293650-2
- One Distribution Block 293651-2 with two Cover pieces 293587-1

One Male-to-Male Bridge 2213142-1.

\*14. Testing per The Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces, UL 2043, 3<sup>rd</sup> edition dated 2008-08-20 has been performed on a sample set of **NECTOR S** Buss Series connectors, constituting a maximum mix of devices that fit into a 2 ft by 10 ft long air duct. The mix consisted of 24 **NECTOR S** Buss Series connectors, with and without gel.

#### Miscellaneous

\*15. The **NECTOR S** Buss Connector Series with gel were evaluated for IP 67 ratings in accordance with IEC 60529, DEGREES OF PROTECTION REQUIRED BY ENCLOSURE, Edition 2.1, revised 2009-10-01.