File E28476
Assignment 71ME5690

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REPORT

On

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

Tyco Electronics Corp.
Middletown, Pennsylvania

DESCRIPTION

PRODUCT COVERED:

USR Component Connectors - Fastin-Faston Series Receptacles, Cat. Nos. 825274, 825273, 825350, may have Prefixes and/or Suffixes 0-9 to indicate color, number of positions, plating, or other characteristics not affecting performance.

USR Component Connectors - Fastin-Faston Series Plugs, Cat. Nos. 925137, 925138, may have Prefixes and/or Suffixes 0-9 to indicate color, number of positions, plating, or other characteristics not affecting performance.

USR Component Connectors - Fastin-Faston Series and 1241857 may have Prefixes and/or Suffixes 0-9 to indicate color, number of positions, plating, or other characteristics not affecting performance.

USR Component Connectors - Fastin-Faston Series, Cat. No. 293008, may have Prefixes and/or Suffixes 0-9 to indicate color, number of positions, plating, or other characteristics not affecting performance.

USR Component Connectors - Fastin-Faston Series, Cat. No. 293011-1, -2.

* USR, CNR Component Connectors - Fastin-Faston Series, Cat. Nos. 1-293008-1, 293008-1, 293008-3, 293008-5.

USR, CNR Component Connectors - Fastin-Faston Series Receptacles, Cat. Nos. 293009-x, x-293009-x, 293010-x, where x indicates Prefixes and/or Suffixes 0-9 indicating polarization, keying code or other characteristics not affecting performance.

USR, CNR Component Connectors – Fastin-Faston Series, Cat. Nos. 925015-0, 925015-1, 925015-2, 925015-4, 925015-5, 925015-6.

GENERAL:

These devices are multi-pole connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below where the acceptability of the combination is determined by Underwriters Laboratories Inc.

USR indicates investigation to United States Standards, as indicated in the Test Record.

CNR indicates investigation to Canadian National Standards, as indicated in the Test Record.

RATINGS:

Housing Cat. Nos	Contact Cat. Nos	Voltage Vac/dc	Ampere (A)	Wire Size (AWG)
293008-3	60294	600	-	20-16
293008-5	60294	600	-	20-16
293010	60294	600	-	20-16
925015-x	**160655**	**600**	**6**	**20-16**

Housing Cat. No.	Contact Cat. No.	USR Rating		CNR Rating		Wire Size AWG
		Voltage V	Ampere A	Voltage V	Ampere A	
1241857, 1241967, 1241969, 964492, 293008, 293011-1, 293011-2	293041	600	7	-	-	18
		600	4	-	-	20
		600	3	-	-	22
1-293008-1, 293008-1, 293008-3, 293008-5, 293010		600	7	600	7	18
		600	4	600	4	20
		600	3	600	3	22
293009, x-293009-x	160691 or 60294	600	7	600	7	18
			4	600	4	20
			3	600	3	22

Disconnecting Use - see Sec Gen for required marking

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

Use - For use only in 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. The current carried by each pole shall be judged under the requirements applicable to the electrical equipment in which the devices are used with respect to operating temperatures.

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.

3A. These devices have been subjected to the USR Temperature test with the rated currents and maximum recorded temperature (adjusted to 25°C ambient) values tabulated below:

Housing	Contact	Current A	Wire Size AWG	Maximum Temperature °C		Represent Cat. No.
				Recorded Temperature	Rise	
0-1241967-8	0-293041-1	7	18	41.2	-	1241857, 1241967, 1241969, 964492, 293008, 293011-1, 293011-2
0-1241967-8	0-293041-1	4	20	32.2	-	
0-1241967-8	0-293041-1	3	22	31.2	-	

*

3B. These devices have been subjected to the USR and CNR Temperature test with the rated currents and maximum temperature rise and recorded temperature (adjusted to 25°C ambient) values tabulated below:

Housing	Contact/Blade	Current A	Wire Size AWG	Maximum Temperature °C		Represent Cat. No.
				Recorded Temperature	Rise	
293008-1	0-293041-1	7	18	36.2	11.2	1-293008-1, 293008-1, 293008-3, 293008-5, 293010
293008-1	0-293041-1	4	20	30.2	5.2	
293008-1	0-293041-1	3	22	29.5	4.5	
293009-3	160691	7	18	36.4	11.4	Same housing with 60294 Tab (no hole). Represents also x-293009-x.
		4	20	31.6	6.6	
		3	22	32.3	7.3	
925015-1	160655	6	20	37.9	12.9	925015-0, 925015-2, 925015-3, 925015-4, 925015-5, 925015-6

4. The factory assembled contacts have been investigated for the following wire ranges and maximum tensile forces.

Part No.	Wire Range (AWG)	Tensile Force (lb)
60434	18, 16	20
	20	12
925614	18, 16	20
	20	12
60435	18, 16	20
152368	18, 16	20
	20	12
160655	18	20
160762	18	20
60294	18	20
60294	22	8
160762	20	8
160762	16	20
160691	22	8
160691	18	20
293041	18	20
293041	20	10
293041	22	8
160655	**16**	**20**
160655	**20**	**10**

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

6. 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 65°C.

* 7. The following Cat. Nos. 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. 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 (mm)	Flame Class	HWI	HAI	RTI Elec	Max Operating Temp, ^{0}C
293011-1, -2	A	1	V-2	4	0	130	130
293008-3	B	0.8	V-0	4	0	120	120
293008-5	C	0.8	V-0	-	-	65	65
293010, 293009, X-293009-X.	C	0.5	V-0	4	0	140	140
925015-x	**E**	**0.75**	**V-2**	**4**	**0**	**130**	**105**

(#) - Code for Insulating Body Material.

A. Tyco RM No. 705304.
1. Dielectric strength (kV/mm): --
2. CTI: 2

B. Tyco RM No. 703939
1. Dielectric strength (kV/mm): --
2. CTI: 0

C. Tyco RM No. 1573697
1. Dielectric strength (kV/mm): --
2. CTI: -

E. Tyco RM No. 702925
1. Dielectric strength (kV/mm): 26
2. CTI: 0

7A. 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.

Mold Stress testing was performed at 140°C for 7 hours.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec Temperature °C
1-1241857-5	D	1.0	V-0	0	0	130

D. Tyco RM No. 2136700
1. Dielectric strength (kV/mm): 17
2. CTI: 2

Miscellaneous

7B. The enclosure of the device has live parts that may be exposed to user contact when the connector is energized. The device is suitable for use only within an acceptable enclosure.

Terminations

8. Contacts PNs 60294 and 160691 are intended for assembly with crimp tool Ocean 2150037-2. The suitability of use with any other crimp tool shall be an end product consideration.

8A. Crimp contacts of series as tabulated below are intended for crimp termination on stranded copper conductor using the tooling shown as tabulated below for information purpose only.

Terminal	Wire Size	Crimp Tool	ILL. No.
293041	22-18 AWG	2150035	25