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REPORT

On

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

Tyco Electronics Corp
MIDDLETOWN, PA, US

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DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector- Series Power Versa-Lock

Cat Nos. 2336231, 3-2336231-6, 2-2336231-6, 1-2336231-6, 2336229, 3-2336229-6, 2-2336229-6, 1-2336229-6, 2329915, 2329915-1, 2329912, 2329912-2, 2329912-1, 2329909, 2329909-1, 2329906, 2329906-2, 2329906-1, 2329914, 2329914-2, 2329914-1, 2329916, 2329916-2, 2329916-1, 2329908, 2329908-2, 2329908-1, 2329907, 2329907-2, 2329907-1, 2345729, 1-2345729-1, 2332040, 3-2332040-4, 2-2332040-4, 1-2332040-4, 3-2332040-3, 2-2332040-3, 1-2332040-3, 9-2332040-2, 8-2332040-2, 7-2332040-2, 6-2332040-2, 5-2332040-2, 4-2332040-2, 3-2332040-2, 2-2332040-2, 1-2332040-2, 2345728, 1-2345728-1, 2325350, 3-2325350-4, 2-2325350-4, 1-2325350-4, 3-2325350-3, 2-2325350-3, 1-2325350-3, 9-2325350-2, 8-2325350-2, 7-2325350-2, 6-2325350-2, 5-2325350-2, 4-2325350-2, 3-2325350-2, 2-2325350-2, 1-2325350-2, 1-2370523-9, 2-2370523-9, 3-2370523-9, 1-2370527-9, 2-2370527-9, 3-2370527-9, 1-2373799-9, 2-2373799-9, 3-2373799-9, 2378158, 3-2378158-4, 2-2378158-4, 1-2378158-4, 3-2378158-3, 2-2378158-3, 1-2378158-3, 9-2378158-2, 8-2378158-2, 7-2378158-2, 6-2378158-2, 5-2378158-2, 4-2378158-2, 3-2378158-2, 2-2378158-2, 1-2378158-2, 2378159, 3-2378159-4, 2-2378159-4, 1-2378159-4, 3-2378159-3, 2-2378159-3, 1-2378159-3, 9-2378159-2, 8-2378159-2, 7-2378159-2, 6-2378159-2, 5-2378159-2, 4-2378159-2, 3-2378159-2, 2-2378159-2, 1-2378159-2, 1-2381313-1, 1-2381260-1, X-2381317-Y (X=1,2, 3 and Y= 2,3,4), X-2381315-Y (X=1,2,3 and Y=2,3,4), 1-2381596-6, 2-2381596-6, 3-2381596-6, 1-2381595-6, 2-2381595-6, 3-2381595-6, 1-2381608-6, 2-2381608-6, **3-2381608-6, X-2483568-4, X-2483566-6, X-2483565-9, X-2483564-9 (X= 1, 2, 3)**.

GENERAL:

These devices are multiple connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

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.

RATINGS:

Table 1

Series	Max No. of Positions	Voltage, V ac/ dc	Ampere (A)	
Power Versa-Lock	9	600	See Table 2 below	

Table 2

USR/CNR

Position	Wire Size							
	26 AWG	24 AWG	22 AWG	20 AWG	18 AWG	16 AWG	14 AWG	2x22 AWG
1P-2P	3 A	4 A	5 A	7 A	8 A	12 A	15 A	6 A
3P-4P	2 A	3 A	4 A	6 A	7 A	9 A	11 A	5 A
6P - 9P	2 A	2 A	3 A	5 A	6 A	8 A	10 A	4 A

Disconnecting Use - see Sec Gen 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 UL LLC.

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. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

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

Series Name	Wire Size, AWG	Current, A	Maximum Temperature °C	
			Rise	Recorded Temperature
Power Versa-Lock	20 (USR and CNR)	5		
	22 (USR and CNR)	3	9	34
Power Versa-Lock 2P	14	15	21.5	46.5
Power Versa-Lock 2P	16	12	19.6	44.6
Power Versa-Lock 2P	18	8	16.0	41.0
Power Versa-Lock 2P	20	7	18.4	43.4
Power Versa-Lock 2P	22	5	10.6	35.6
Power Versa-Lock 2P	24	4	12.2	37.2
Power Versa-Lock 2P	26	3	7.7	32.7
Power Versa-Lock 2P	2x22	6	9.3	34.3
Power Versa-Lock 4P	14	11	16.9	41.9
Power Versa-Lock 4P	16	9	14.2	39.2
Power Versa-Lock 4P	18	7	14.3	39.3
Power Versa-Lock 4P	20	6	13.8	38.8
Power Versa-Lock 4P	22	4	9.9	34.9
Power Versa-Lock 4P	24	3	6.1	31.1
Power Versa-Lock 4P	26	2	3.3	28.3
Power Versa-Lock 4P	2x22	5	8.1	33.1
Power Versa-Lock 6P	14	10	17.8	42.8
Power Versa-Lock 6P	16	8	15.0	40.0
Power Versa-Lock 6P	18	6	12.9	37.9
Power Versa-Lock 6P	20	5	15.4	40.4
Power Versa-Lock 6P	26	2	8.2	33.2
Power Versa-Lock 6P	2x22	4	6.9	31.9
Power Versa-Lock 9P	14	10	21.9	46.9
Power Versa-Lock 9P	16	8	19.3	44.3
Power Versa-Lock 9P	18	6	15.5	40.5
Power Versa-Lock 9P	20	5	15.9	40.9
Power Versa-Lock 9P	22	3	7.5	32.5
Power Versa-Lock 9P	26	2	7.5	32.5
Power Versa-Lock 9P	2x22	4	7.6	32.6

Insulating Materials

3. 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.

Series	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec, °C	Max Operating Temp, °C
Power Versa-Lock	A	1.5 mm	V-0	-	-	140	130
Power Versa Lock	B	1.5 mm	V-0	-	-	140	130
Power Versa-Lock	C	1.5 mm	V-0	0	0	130	130
Power Versa Lock	D	1.5 mm	V-0	-	-	130	130
Power Versa-Lock, 1-2381313-1, 1-2381260-1, X-2381317-Y (X=1,2, 3 and Y=2,3,4), X-2381315-Y (X=1,2,3 and Y=2,3,4), 1-2381596-6, 2-2381596-6, 3-381596-6, 1-2381595-6, 2-2381595-6, 3-2381595-6, 1-2381608-6, 2-2381608-6, 3-2381608-6	E	1.5 mm	V-0	0	0	140	130

Note:

(#) - Code for Insulating Body Material.

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- A. Tyco Raw Material # 2136507
 1. Dielectric strength (kV/mm): 19
 2. CTI: -
- B. Tyco Raw Material # 2136507
 1. Dielectric strength (kV/mm): -
 2. CTI: -
- C. Tyco Raw Material # 705999
 1. Dielectric strength (kV/mm): 8
 2. CTI: 1
- D. Tyco Raw Material # 705999
 1. Dielectric strength (kV/mm): -
 2. CTI: -
- E. Tyco Raw Material # 705999**
 1. **Dielectric strength (kV/mm): 8**
 2. **CTI: 1**