File E28476
Project 4788251425

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REPORT

on

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

Tyco Electronics Corp
MIDDLETOWN, PA, US

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector - SGI2.0 connectors, Series 2232826, 2232829, 2232979, and 2350224.

USR, CNR Component Connector - SGI2.0 connectors, Series 2354044, 2354045, and 2354043.

USR, CNR Component Connector - SGI2.0 RA SMT connectors, Series 2336678.

USR – Component Connectors – SGI 1.50 Connector Series, Cat. Nos. X-2360545-Y, X-2360547-Y, X-2382946-Y, and X-2383410-Y (TPA) where X and Y can be 0-9.

USR, CNR Component Connector – SGI 1.25 connectors, series X-2360538-Y, X-2360540-Y, and X-2371404-Y where X and Y can be 0 thru 9 or blank.

USR Component Connector – SGI 1.50 connectors, series Cat, Nos. X-2406405-Y, X-2406441-Y, X-2406471-Y, and X-2406482-Y (TPA) where X and Y can be 0-9

USR, CNR Component Connector, Grace Inertia Connector Series SGI 1.25, Cat. Nos. 2-2376974-0, 2-2376974-2, 3-2376974-0, 4-2376974-0, 6-2376974-0, 7-2376974-0, 8-2376974-0, 9-2376974-0, 2-2376950-0, 2-2376950-2, 3-2376950-0, 4-2376950-0, 6-2376950-0, 7-2376950-0, 8-2376950-0, 9-2376950-0, X-2456588-Y, X-2456589-Y.

USR, CNR Component Connector, SGI 1.25 – 1-2428107-0, 2-2428108-0

USR Component Connector – SGI 1.50 connectors, series Cat, Nos. X-2427710-Y, X-2426397-Y where X=0-9 and Y=2-9

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:

series	Voltage Vac/dc	Ampere (A)	Conductor Sizes, AWG Sol/Str
2232826	50	2	-
2232829	50	2	-
2232979	50	2	26-28
2336678	50	2	-
2354043	50	2	26-28
2354044	50	2	-
2354045	50	2	-
2350224	50	2.5	22
2350224	50	2.2	24
2350224	50	2	26
2350224	50	1.5	28

RATINGS (CON'T):

Cat Nos. Series (@)	Wire Size	Poles	Current, A	Voltage, Vac/dc
X-2360545-Y, X-2360547-Y, X-2382946-Y X-2406405-Y, X-2406441-Y, X-2406471-Y	24	2-5	2.5	50
	24	6-8	2.2	50
	24	9-12	2.0	50
	26	2-5	2.0	50
	26	6-8	1.8	50
	26	9-12	1.7	50
	28	2-5	1.8	50
	28	6-8	1.6	50
	28	9-12	1.5	50
X-2371404-Y	26	2-8	2.2	50
	26	9-18	1.8	50
	28	2-8	1.9	50
	28	9-18	1.6	50
	30	2-8	1.8	50
	30	9-18	1.4	50
X-2360538-Y, X-2360540-Y	N/A	2-8	2.2	50
	N/A	9-18	1.8	50
SGI 1.25	26	20, 22	1.8	50
	26	30	1.7	50
	26	40	1.5	50
	28	20, 22	1.5	50
	28	30	1.4	50
	28	40	1.3	50
	30	20, 22	1.3	50
	30	30	1.1	50
	30	40	1.0	50
X-2456588-Y, X-2456589-Y	26	20, 22	1.8	50
	26	30	1.7	50
	26	40	1.5	50
	28	20, 22	1.5	50
	28	30	1.4	50
	28	40	1.3	50
	30	20, 22	1.3	50
	30	30	1.1	50
	30	40	1.0	50
1-2428107-0	**26**	**10**	**1.8**	**50**
	28	**10**	**1.6**	**50**
	30	**10**	**1.4**	**50**
2-2428108-0	**26**	**20**	**1.8**	**50**
	28	**20**	**1.5**	**50**
	30	**20**	**1.3**	**50**
X-2427710-Y Header, dual row	**24**	**4-6**	**2.8**	**100**
	24	**8-10**	**2.4**	**100**
	24	**12-18**	**2.0**	**100**
	26-28	**4-6**	**2.4**	**100**
	26-28	**8-10**	**2.0**	**100**
	26	**12-18**	**1.8**	**100**
	28	**12-18**	**1.7**	**100**
X-2426397-Y Plug, dual row	**24**	**4-6**	**2.8**	**100**
	24	**8-10**	**2.4**	**100**
	24	**12-18**	**2.0**	**100**
	26-28	**4-6**	**2.4**	**100**
	26-28	**8-10**	**2.0**	**100**
	26	**12-18**	**1.8**	**100**
	28	**12-18**	**1.7**	**100**

(@) – X, Y indicate various digit in product covered.

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:

Cat Nos.	Wire Size	Current, A	Maximum Temperature °C	
			Rise	Recorded Temperature
2-2232826-0 mating with 2-2232979-0	28	2	23.6	48.6
	28	2	24.6	49.6
2-2232829-0 mating with 2-2232979-0	28	2	26.6	51.6
	28	2	27.5	52.5
2-2336678-0 mating with 2-2232979-0	28	2	22.3	47.3
	28	2	23.8	48.8
2-2350224-0	22	2.5	12.7	36.5
2-2350224-0	24	2.2	11.8	35.6
2-2350224-0	26	2	15.9	39.5
2-2350224-0	28	1.5	11.9	35.5
1-2428107-0 mated with 1-2371404-0	**26**	**1.8**	**13.0**	**38.0**
	28	**1.6**	**14.2**	**39.2**
	30	**1.4**	**17.5**	**42.5**
2-2428108-0 mated with 2-2376950-0	**26**	**1.8**	**16.8**	**41.8**
	28	**1.5**	**19.3**	**44.3**
	30	**1.3**	**23.2**	**48.2**

Cat Nos. Series (@)	**Wire Size**	**Maximum Poles**	**Current, A**	**Maximum Temperature °C**	
				Rise	**Recorded Temperature**
X-2427710-Y, X-2426397-Y	**24**	**6**	**2.8**	**29.6**	**54.6**
	24	**10**	**2.4**	**20.1**	**45.1**
	24	**18**	**2.0**	**17.2**	**42.2**
	26	**18**	**1.8**	**24.9**	**49.9**
	28	**6**	**2.4**	**25.1**	**50.1**
	28	**10**	**2.0**	**28.4**	**53.4**
	28	**18**	**1.7**	**28.3**	**53.3**

Cat Nos. Series (@)	Wire Size	Maximum Poles	Current, A	Maximum Temperature Rise, °C
X-2360545-Y, X-2360547-Y, X-2382946-Y	24	2-5	2.5	21.8
	24	6-8	2.2	19.1
	24	9-12	2.0	16.9
	26	2-5	2.0	16.7
	26	6-8	1.8	15.8
	26	9-12	1.7	15.4
	28	2-5	1.8	15.8
	28	6-8	1.6	16.3
	28	9-12	1.5	16.4

Test Model	Contact/ Terminal	Wire size	Current, A	Maximum Temperature °C		Represent Series (@)
				Rise	Recorded Temperature	
1-2371404-8	2371403-1	26	1.8	18.6	43.6	X-2371404-Y
1-2360538-8	N/A	N/A	1.8	20.7	45.7	X-2360538-Y, X-2360540-Y
1-2371404-8	2371403-1	30	1.4	21.8	46.8	X-2371404-Y
1-2360538-8	N/A	N/A	1.4	21.7	46.7	X-2360538-Y, X-2360540-Y
2-2371404-8	2371403-1	26	2.2	21.9	46.9	X-2371404-Y
2-2360538-8	N/A	N/A	2.2	24.8	49.8	X-2360538-Y, X-2360540-Y
2-2371404-8	2371403-1	30	1.8	25.3	50.3	X-2371404-Y
2-2360538-8	N/A	N/A	1.8	25.1	50.1	X-2360538-Y, X-2360540-Y

Series No.	Wire Size, AWG	No. of Poles	Current, A	Maximum Temperature °C	
				Rise	Recorded Temperature
SGI 1.25	26	20, 22	1.8	22.0	47.0
	26	30	1.7	21.8	46.8
	26	40	1.5	20.4	45.4
	28	20, 22	1.5	25.0	50.0
	28	30	1.4	22.7	47.7
	28	40	1.3	20.6	45.6
	30	20, 22	1.3	23.8	48.8
	30	30	1.1	19.9	44.9
	30	40	1.0	17.5	42.5

The following devices have not been subjected to the temperature test but have been given current ratings based on similarity to the SGI 1.25 series.

Series No.	Wire Size, AWG	No. of Poles	Current, A	Maximum Temperature °C	
				Rise	Recorded Temperature
X-2456588-Y, X-2456589-Y	26	20, 22	1.8	22.0	47.0
	26	30	1.7	21.8	46.8
	26	40	1.5	20.4	45.4
	28	20, 22	1.5	25.0	50.0
	28	30	1.4	22.7	47.7
	28	40	1.3	20.6	45.6
	30	20, 22	1.3	23.8	48.8
	30	30	1.1	19.9	44.9
	30	40	1.0	17.5	42.5

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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	MSR Test Oven Temp, ^{0}C
2232826 2354044	A or B or C	0.75 mm	V-0	0	0	130	115
2232829 2354045	D	0.70 mm	V-0	1	0	150	115
	F		V-0	0	2	130	
	H		V-0	4	0	155	
2232979 2354043	A or B or C	0.50 mm	V-0	0	0	130	115
2336678	E	0.50 mm	V-0	0	2	130	115
2350224	A	0.42 mm	V-0	0	0	130	115
X-2360545-Y, X-2360547-Y X-2406405-Y, X-2406441-Y	F	0.31 mm	V-0	-	-	130	140
SGI 1.25 Male Devices	F	0.45 mm	V-0	-	-	130	130
X-2382946-Y X-2406471-Y	G	0.25 mm	V-0	-	-	130	140
X-2360538-Y, X-2360540-Y	F	0.5	V-0	0	2	130	140
X-2371404-Y	G	0.25	V-0	-	-	130	140
SGI 1.25, female devices	I	0.25 mm	V-0	-	-	150	150
X-2456588-Y	I	0.25 mm	V-0	-	-	160	105
X-2456589-Y	F	0.32 mm	V-0	-	-	140	105
X-2426397-Y	**A**	**0.22**	**V-0**	**0**	**0**	**140**	**150**
X-2427710-Y	**F**	**0.45**	**V-0**	**0**	**2**	**130**	**140**
1-2428107-0, 2-2428108-0	**J**	**0.25**	**V-0**	**4**	**1**	**130**	**140**

(@) – X, Y indicate various digit in product covered.

Note:

(#) – Code for Insulating Body Material.

A. Tyco RM 705999.
1. Dielectric strength (kV/mm): 8
2. CTI: 1

B. Tyco RM 2136488.
1. Dielectric strength (kV/mm): 8
2. CTI: 1

C. Tyco RM 2136488.
1. Dielectric strength (kV/mm): 8
2. CTI: 1

D. Tyco RM 2136634.
1. Dielectric strength (kV/mm): 24
2. CTI: 0

E. Tyco RM 1573851.
1. Dielectric strength (kV/mm): -
2. CTI: 0

F. Tyco RM 2136398.
1. Dielectric strength (kV/mm): -
2. CTI: 0

G. Tyco RM 2136919.
1. Dielectric strength (kV/mm): 18
2. CTI: 1

H. Tyco RM 2. 2136867.
1. Dielectric strength (kV/mm): 44
2. CTI: 0

I. Tyco RM No. 2136682
1. Dielectric strength (kV/mm): 20
2. CTI: 0

J. Tyco RM 1573235.
1. Dielectric strength (kV/mm): 37
2. CTI: 3

K. Tyco RM 1573551.
1. Dielectric strength (kV/mm): 33
2. CTI: 2

Miscellaneous

5. 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.