

File E28476  
SR9481720-T001

December 15, 2012

REPORT

On

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

TYCO ELECTRONICS CORP  
HARRISBURG PA 17111

Copyright © 2012 UL LLC

UL LLC authorizes the above named company to reproduce this Report either in its entirety or the portion of this Report consisting of the Cover Page up to (but not including) the Construction Details descriptive pages.

## DESCRIPTION

## PRODUCT COVERED:

USR, CNR - Component Connectors, Cat. Nos. Grace Hi Current Connector (GHC) 12.4 and Grace Hi Current Connector (GHC) 9.0.

USR, CNR - Component Connectors, Grace Hi Current Connector (GHC) 9.0 - FEMALE, Cat. No. 4-1903414-2.

USR, CNR - Component Connectors, Grace Hi Current Connector (GHC) 9.0 - MALE, Cat. No. 4-1903415-1.

\* Cat Nos. 1747995-4, 1747995-3, 1747995-2, 1747995-1, 1747996-4, 1747996-3, 1747996-2, 1747996-1, 2-1903414-1, 1-1903414-1, 1903414-1, **1903414-2, 1-1903414-2, 2-1903414-2**, 2-1903415-1, 1-1903415-1, 1903415-1, 1-2232564-1, 2232563-1, 4-1903415-1, 4-1903414-2.

**Obsolete Product (Retained for reference only): 1747995, 1746971, 1746971-1, 1746972, 1746972-1, 1747996, 1903414, 1903415, 2232564, 2232563**

## GENERAL:

These devices are multi-pole connectors intended for factory assembly on printed wiring boards where the acceptability of combinations is determined by UL LLC. 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:

Cat. Nos.	Voltage, V ac/dc	USR Current Rating (A)	CNR Current Rating (A)	Wire Size, AWG
Grace Hi Current Connector (GHC) 12.4	600	20	20	12
		15	15	14
		10	10	16
Grace Hi Current Connector (GHC) 9.0	600	20	20	12
		15	15	14
		10	10	16

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 and maximum temperature rise values tabulated below.

Cat Nos.	Current, A	Maximum Temperature, °C	Maximum Temperature Rise, °C
Grace Hi Current Connector (GHC) 12.4	20	48.1	23.1
	15	44.0	19
	10	33.0	8
Grace Hi Current Connector (GHC) 9.0	20	48.5	23.5
	15	41.7	16.7
	10	34.6	9.6

## 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.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	Max Operating Temp, °C
Grace Hi Current Connector (GHC) 12.4	A	0.6 mm	V-0	0	0	130	105
Grace Hi Current Connector (GHC) 9.0		0.5 mm					

(#) - Code for Insulating Body Material.

## \*A. R/M No. 704924

1. Dielectric strength (kV/mm): N/A
2. CTI: 2

#### Mating Connectors

4. These devices Grace Hi Current Connector (GHC) 12.4 and 9.0 have only been assessed for use with specific types of connectors within their product family. They have not been assessed to operate with any other similar devices from any other manufacturer.

#### Miscellaneous

5. Crimp contacts are intended for crimp termination on stranded copper conductor using the tooling shown in Fig. 1 for information purpose only.