

CERTIFICATE OF COMPLIANCE

Certificate Number 20150616-E28476
Report Reference E28476-20140130
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Issued to: TYCO ELECTRONICS CORP
2901 FULLING MILL RD
MIDDLETOWN PA 17057-3170

This is to certify that representative samples of COMPONENT - CONNECTORS FOR USE IN DATA, SIGNAL, CONTROL AND POWER APPLICATIONS
Series Pos Lock-Rast 7 Plug and Header

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications
CAN/CSA C22.2 No. 182.3-M1987, Special Use Attachment Plugs, Receptacles and Connectors

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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and Report

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector, Series Pos Lock-Rast 7 Plug and Header

GENERAL:

These devices are multi-pole connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below and onto 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:

Series	Voltage [Vac/Vdc]	Ampere (A)	Conductor Sizes, AWG [Str]
Pos Lock-Rast 7 Plug and Header	250	7	18
	250	4	20
	250	3	22

Disconnecting Use - see Sec Gen for required marking

Housing Part Number Naming Convention:

Part number	Connector type
1969458-X (where x = 1 through 4)	2 Pos. plug
1969461-x (where x = 1 through 4)	3 Pos. plug
1969496-1	2 Pos. header
1969497-1	2 Pos. header
1969498-1	2 Pos. header
1969499-1	2 Pos. header
1969513-1	2 Pos. header
1969514-1	2 Pos. header
1969515-1	2 Pos. header
1969516-1	2 Pos. header
1969500-1	3 Pos. header
1969501-1	3 Pos. header
1969502-1	3 Pos. header
1969503-1	3 Pos. header
1969521-1	3 Pos. header
1969522-1	3 Pos. header
1969523-1	3 Pos. header
1969524-1	3 Pos. header

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 values tabulated below. Note, the 3-pole devices were tested to represent the 2-pole devices

Series	Current, A	Wire Size, AWG	Maximum Temperature Rise, °C	
			Plug	Header
Pos Lock-Rast 7 Plug and Header	7	18	7.8	8.3
	4	20	2.4	2.8
	3	22	2.6	2.8

These devices loaded with Plug Contact Cat. No. 1217378-x have been subjected to the Temperature test with the rated currents and maximum temperature rise values tabulated below. Note, the 3-pole devices were tested to represent the 2-pole devices

Series	Current, A	Wire Size, AWG	Maximum Temperature Rise, °C
Pos Lock-Rast 7 Plug and Header	7	18	13.3
	4	20	6.6
	3	22	5.3

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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.

Pos Lock-Rast 7 Series	Insulating Material (#)	Measured Min Thickness	Flame Class	HWI	HAI	RTI Elec	Max Operating Temp, °C
PLUG	A	0.9	V0	4	0	120	120
HEADER	B	0.9	V0	0	0	120	120
HEADER	C	0.9	V0	2	0	140	140
PLUG	D	0.9	V0	4	0	130	130
PLUG	E	0.9	V0	4	0	130	130

(#) - Code for Insulating Body Material.

- A. Tyco Raw Material No. 703939, 704811
 - 1. Dielectric strength (kV/mm): 14
 - 2. CTI: 0
- B. Tyco Raw Material No. 703817 (COLOR: Black)
 - 1. Dielectric strength (kV/mm): 19
 - 2. CTI: 0
- C. Tyco Raw Material No. 2136325
 - 1. Dielectric strength (kV/mm): 11
 - 2. CTI: 1
- D. Tyco Raw Material No. 2136403
 - 1. Dielectric strength (kV/mm): -
 - 2. CTI: 2
- E. Tyco Raw Material No. 2136597**
 - 1. Dielectric strength (kV/mm): 0**
 - 2. CTI: 0**

Mating Connectors

4. These devices 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.