

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20170208-E28476  
**Report Reference** E28476-20130116  
**Issue Date** 2017-FEBRUARY-08

**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  
See next page for models.

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. 182.3-16, Special Use Attachment  
Plugs, Receptacles and Connectors

**Additional Information:** See the UL Online Certifications Directory at  
[www.ul.com/database](http://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.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog  
number, model number or other product designation as specified under "Marking" for the particular  
Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products  
that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark:  
, may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is  
required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual  
recognitions.

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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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

**Models:**

Component Connector Series Z50 LED Holder, Cat. Nos. 2213130-1, 2213130-2, 1-2213130-1, 1-2213130-2, 2-2213130-1, 2213134-1, 2213134-2, 2213254-1, 1-2213254-1, 2213254-2, 2213258-1, 2213258-2, 2213382-1, 2213382-2, 1-2213382-1, 1-2213382-2, 2-2213382-1, 2213401-1, 2213401-2, 2213407-1, 2213407-2, 2213580-1, 2213580-2, 2213804-1, 2213804-2.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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## DESCRIPTION

## PRODUCT COVERED:

USR, CNR - Component Connector Series Z50 LED Holder, Cat. Nos. 2213130-1, 2213130-2, 1-2213130-1, 1-2213130-2, 2-2213130-1, 2213134-1, 2213134-2, 2213254-1, **1-2213254-1**, 2213254-2, 2213258-1, 2213258-2, 2213382-1, 2213382-2, 1-2213382-1, 1-2213382-2, 2-2213382-1, 2213401-1, 2213401-2, 2213407-1, 2213407-2, 2213580-1, 2213580-2, 2213804-1, 2213804-2.

## GENERAL:

These devices are single-pole 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 indicates investigation to United States Standards, UL 1977.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3.

## RATINGS:

Series	Voltage Vac/dc	Ampere (A)	Conductor Sizes, AWG Sol/Str
Z50 LED Holder	300	5	18-22

## 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.

Series	Current, A	Maximum Temperature Rise, °C
Z50 LED Holder	5	13

## Insulating Materials

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	Max Operating Temp, °C
Z50 LED Holder	A	0.4 mm	V-0	4	3	130	105
<b>Z50 LED Holder</b>	<b>B</b>	<b>0.4 mm</b>	<b>(+)</b>	<b>4(++)</b>	<b>0(++)</b>	<b>75(++)</b>	<b>75</b>

(#) - Code for Insulating Body Material.

**(+): Thickness is less than the minimum Recognized material thickness, as such no assigned Flame class. UL746C 12mm Flammability test conducted.**

**(++): These PLCs are based on the minimum Recognized material thickness.**

A. Tyco- RM# 1573551  
1. Dielectric strength (kV/mm): -  
2. CTI: 2

B. Tyco- RM# 2136541  
1. Dielectric strength (kV/mm): -  
2. CTI: 1

3. The factory assembled contacts have been subjected to the Lead Security Test in CAN/CSA C22.2 No. 182.3-M1987 Special Use Attachment Plugs, Receptacles and Connectors. The value is to be reviewed to determine whether they are sufficient to represent actual forces exerted on the connection in the end-use equipment.

Part No.	Wire Range (AWG)	Tensile Force (lb)
2213130	18, stranded	10.2
2213130	18, solid	4.42
2213130	22, stranded	6.74
2213130	22, solid	11.8