

CERTIFICATE OF COMPLIANCE

Certificate Number 20140819-E28476
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Issued to: TYCO ELECTRONICS CORP
2901 FULLING MILL RD MIDDLETOWN PA 17057



This is to certify that representative samples of COMPONENT - CONNECTORS FOR USE IN DATA, SIGNAL, CONTROL AND POWER APPLICATIONS
Dynamic D Series

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

Standard(s) for Safety: Component Connectors for Use in Data, Signal, Control and Power Applications, UL 1977
SPECIAL USE ATTACHMENT PLUGS, RECEPTACLES AND CONNECTORS, CAN/CSA C22.2 No. 182.3-M1987

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

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. 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. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada:  and 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.

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 Recognized Component Mark on the product.



William R. Carney, Director, North American Certification Programs

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus



DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector, Dynamic D Series

GENERAL:

These devices are multi-pole connectors intended for factory assembly where the acceptability of combinations is determined by Underwriters Laboratories Inc.. The devices are identified as follows:

USR indicates investigation to United States Standards, UL 1977, Second Edition.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3-M1987.

ELECTRICAL RATINGS:

Cat. Nos.	Represents Groups		Wire Size, AWG	Current, A	Voltage, V dc
1318119 and 1376136	1A, 1B	USR, CNR	18 - 22	2	48
1318118 and 1318127	2A, 2B	USR, CNR	24 - 28	2	48
1318120 and 1318123	3A, 3B	USR, CNR	18 - 22	2	48
1318119 and 1376009	4A, 4B	USR, CNR	18 - 22	2	48
1318118 and 1376020	5A, 5B	USR, CNR	24 - 28	2	48
178128 and 178136	6A, 6B	USR, CNR	16 - 20	6	400
917807 and 917809	7A, 7B	USR, CNR	10 - 12	20	400
917807 and 1318983-6	8A, 8B	USR, CNR	10	20	400

Flammability - V0

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 Underwriters Laboratories Inc.

Conditions of Acceptability - In order to be judged acceptable as a component of electrical equipment, the following conditions should be met.

Interruption of Current

1. These devices have not been tested for interrupting the flow of current by connecting or disconnecting the mating connector. These devices should be used only where they will not interrupt the flow of current.

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. The conductors terminated by the device and other associated components are to be reviewed in the end-use to determine whether the temperature rise from the connector exceeds their maximum operating temperature ratings.

Cat. Nos.		Wire Size, AWG	Current, A	Maximum Temp., °C	Maximum Temp. Rise, °C
1318119 and 1376136	USR	18	2	51.8	
	CNR	18	2		4.9
1318119 and 1376136	USR	22	2	56.0	
	CNR	22	2		8.9
1318118 and 1318127	USR	24	2	68.5	
	CNR	24	2		22.1
1318118 and 1318127	USR	28	2	73.2	
	CNR	28	2		26.9
1318120 and 1318123	USR	18	2	50.6	
	CNR	18	2		4.2
1318120 and 1318123	USR	22	2	51.9	
	CNR	22	2		5.5

Continued:

Cat. Nos.		Wire Size, AWG	Current, A	Maximum Temp., °C	Maximum Temp. Rise, °C
1318119 and 1376009	USR	18	2	53.5	
	CNR	18	2		6.5
1318119 and 1376009	USR	22	2	59.1	
	CNR	22	2		12.1
1318118 and 1376020	USR	24	2	66.9	
	CNR	24	2		21.3
1318118 and 1376020	USR	28	2	58.8	
	CNR	28	2		14.2
178128 and 178136	USR	16	6	64.2	
	CNR	16	6		17.6
178128 and 178136	USR	20	6	69.6	
	CNR	20	6		23.0
917807 and 917809	USR	10	20	63.2	
	CNR	10	20		17.3
917807 and 917809	USR	12	20	72.1	
	CNR	12	20		26.0
917807 and 1318983-6	USR	10	20	67.3	
	CNR	10	20		21.5

Spacings and Voltage Ratings

3. The devices in Groups 1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5A and 5B may be used at potentials not exceeding 48 V based on Dielectric Voltage-Withstand testing conducted at 1096 V dc.

The devices in Groups 6A, 6B, 7A, 7B, 8A and 8B may be used at potentials not exceeding 400 V based on Dielectric Voltage-Withstand testing conducted at 1800 V dc.

Cat. Nos. 178128 and 178136 were tested at a Dielectric Voltage-Withstand voltage of 3250 V per client request.

Cat. Nos. 917807 and 1318983-6 were tested at a Dielectric Voltage-Withstand voltage of 3250 V per client request.

Insulating Materials

4. These devices employ insulating materials with a minimum flame class of V-0 at the minimum thickness employed in the connector housing.

5. The operating temperature of the devices in Groups 1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5A and 5B should not exceed the temperature ratings of the insulating materials. Materials employed are based on material RTI electrical rating of 75°C and RTI Mech str rating of 75°C.

The operating temperature of the devices in Groups 6A, 6B, 7A, 7B, 8A and 8B should not exceed the temperature ratings of the insulating materials. Materials employed are based on material RTI electrical rating of 130°C and RTI Mech str rating of 130°C.

Terminations

6. The factory assembled contacts have been investigated for the following wire ranges and maximum tensile forces.

Part No.	Wire Range, AWG	Tensile Force, lbf
1-175218-5	16	20
	20	10
316041-6	10	40
	12	35
917805-3	10	40
	12	35

7. The printed-wiring-board terminals have not been evaluated for mechanical secureness. The construction of the connector is to be reviewed when it is assembled to the particular printed wiring board used in the end-use application.

Mounting

8. The suitability of the mounting means shall be determined in the end use.

9. The electrical and mechanical contact between the connector and the printed wiring board is to be judged in the end-use equipment.

10. The need to provide additional mounting hardware to mechanically secure the connector to the printed wiring board is to be determined in the end-use.