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Project 03CA06784

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REPORT

on

COMPONENT - TERMINAL BLOCKS

Tyco Electronics Corp.
Harrisburg, PA

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Component-Terminal Blocks, Cat. Nos. 1604532, 1604668, 1604868 followed by Suffix 1 - 9 inclusive. **Cat. No. 2391314-1.**

USR - Component-Terminal Blocks, Cat. Nos. 1-1437081-5, 1437072-1.

Note - USR - Investigated for compliance with United States Standard - UL 1059, the Standard for Terminal Blocks, Third Edition.

CNR - Investigated for compliance with Canadian National Standard - C22.2 No. 158-1987, the Standard for Terminal Blocks, dated December 1987.

GENERAL CHARACTER AND USE:

The terminal blocks covered by this report are intended for use in the following applications and within the ratings specified.

Application -

Commercial appliances (such as business and EDP equipment, etc.).

General industrial (such as motor controllers, push-button stations, etc.).

Industrial control devices having limited ratings. For Cat. Nos. 1-1437081-5, 1437072-1

Terminal Type -

Line (Input Side) - Pressure wire connectors

Load (Output Side) - Screw terminal intended for prepared conductors, except for Cat. Nos. 1-1437081-5 and 1437072-1, which are directly mounted on a printed wiring board. The receptacle contacts plug onto the printed wiring board contacts.

Type Wiring - The pressure wire connectors are suitable for field and factory-wiring. The screw terminal (prepared conductors) are suitable for factory-wiring only.

For Cat. No. 2391314-1 (Line and Load) - Stud and nut connection.

RATINGS:

Cat. No.	Wire Range AWG CU-AL 90°C	Max Volts	Max Amperes	Screw Torque Lb.-In.
1604532,	4-8 Al.,	300	65	35-50
1604668,	6-10 Cu. (1)			
1604868				
1-1437081-5	14-22 Cu (2)	300	5	3-4
1437072-1	14-22 Cu (2)	300	5	3-4
*2391314-1	8-14 Cu Line	300	50	16-50
	8-14 Cu Load (3)			16-20

Note: (1) The grounding terminal (center pole pressure screw) provided for Cat. Nos. 1604532 and 1604868 is rated for No. 10 AWG Cu. only.

(2) Multiple wire combinations of two No. 14-22 AWG sol/str, same size wires only, no intermixing of solid and stranded wires. (3) The grounding terminal (Center pole) provided for Cat. No. 2391314-1 rated up to 8 AWG with using ground strap 2383946-1.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

Use - For use only in or with products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability -

1. The mounting suitability shall be determined in the end-use equipment.
2. The insulating bodies are molded of polymeric materials, as specified in the following tabulation. The use of these materials shall be judged in the end use application.

<u>Cat. Nos.</u>	<u>Manufacturer</u>	<u>Type No.</u>	<u>Temperature</u>
1604532, 1604668, 1604868 followed by Suffix 1 - 9 inclusive	[REDACTED]	[REDACTED]	120°C
1-1437081-5, 1437072-1	[REDACTED]	[REDACTED]	120°C
2391314-1	[REDACTED]	[REDACTED]	140°C

3. The pressure wire connectors are acceptable for field-wiring applications in accordance with the field-wiring requirements in UL 486E, the Standard for Equipment Wiring Terminals, Third Edition. Cat. Nos. 1604532, 1604668, 1604868 followed by Suffix 1 - 9 inclusive line terminals are suitable for copper and aluminum wires within the specified wire range, AL-CU 90°C. The grounding terminal is suitable for No. 10 AWG Cu. Cat. Nos. 1-1437081-5, 1437072-1 terminals are suitable for copper wires within the specified wire range

4. For Cat. Nos. 1604532, 1604668, 1604868 the No. 10-32 screw terminals are suitable for factory-wiring only. These screws are intended for use with prepared conductors, the ends of which are fitted with compression type ring terminals. The suitability of prepared conductors and their assembly to the screw terminals shall be determined in the end-use equipment.

5. Cat. Nos. with Suffix -3, -6, -8, -9. These Suffixes designate the No. 10-32 load side screws intended for prepared conductors are provided uninstalled. The suitability of factory-wired connections to the terminals shall be determined in the end-use equipment.

6. The grounding terminal provided for Cat. Nos. 1604532 and 1604868 complies with performance requirements for protective conductor terminal blocks in UL1059 Standard for Terminal Blocks, Fourth Edition.

7. For Cat. Nos. 1604532, 1604668, 1604868 followed by Suffix 1 - 9 inclusive the suitability of connection of the grounding strap to the grounding path shall be determined in the end-use equipment.

8. The suitability of the receptacle contacts for Cat. Nos. 1-1437081-5 and 1437072-1 in combination with an end-product printed wiring board shall be evaluated in the end-use equipment.

9. For Cat. Nos. 1-1437081-5 and 1437072-1 multi-wire ratings (2 No. 14-22 AWG Cu) solid and stranded wires are not to be intermixed. Two-wire combinations are same size only.

10. For Cat. No. 2391314-1, the use of the ground strap Cat. No. 2383946-1 was evaluated for use up to 8 AWG on a material of 14 gauge.

Nomenclature - Cat. Nos. (1604532, 1604668, 1604868 are designated as follows:

Typical Cat. No.	<u>1604532</u>	<u>-6</u>
	1	2

1. Basic Cat. No.

1604532 - With standard ground strap.

1604668 - Without ground strap.

1604868 - With extended length ground strap.

***2. 1 through 9 inclusive. Refer to Ill. 10 for details.**