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Project 05ME11152

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REPORT

On

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

TYCO Electronics Corp  
Middletown, PA

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## DESCRIPTION

## PRODUCT COVERED:

**USR Component Connector, Series Hall Sensor 5 Position.**

**USR Component Connector, Series Hall Sensor 4 Position, Model 1897005-1**

## GENERAL:

These devices are multi-pole connectors intended for factory assembly on No. 16, 18 and 20 AWG stranded copper conductors where the acceptability of combinations is determined by Underwriters Laboratories Inc.. The devices are identified as follows:

## Electrical Ratings:

Cat. Nos.	Wire Size (AWG)	Current (A)	Voltage (V)
1743399, 1743401, 1897007	16	9	300
1743399, 1743401, 1897007	18	7	300
1743399, 1743401, 1897007	20	6	300

Cat. Nos.	Wire Size (AWG)	Current (A)	Voltage (V)
<b>1897005-1</b>	<b>16</b>	<b>9</b>	<b>300</b>
	<b>18</b>	<b>7</b>	<b>300</b>
	<b>20</b>	<b>6</b>	<b>300</b>

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 Temperature °C	Represent models
1743399, 1743401	16	9	70.2	1897007, <b>1897005-1</b>
1743399, 1743401	18	7	80.4	1897007, <b>1897005-1</b>
1743399, 1743401	20	6	73.7	1897007, <b>1897005-1</b>

### Spacings and Voltage Ratings

3. These devices may be used at potentials not exceeding 300 V based on Dielectric Voltage-Withstand testing conducted at 1600 V ac.

### Insulating Materials

4. The insulating materials used in these devices comply with the requirements of UL 1977.

\* 5. The operating temperature of these devices should not exceed the temperature ratings of the insulating materials. These materials may be used interchangeably at a maximum temperature of 65°C.

6. Mold Stress Relief testing was conducted at a temperature of 140°C.

### Terminations

7. These devices employ terminals which are not suitable for field wiring.

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

Part No.	Wire Range, AWG	Tensile Force, lb
177915	16, 18	20
177915	20	8

9. 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

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

11. The placement of these devices within the equipment enclosure should be such that spacings between the live parts and the equipment are suitable for the particular application.

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

13. 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.