DESCRIPTION

PRODUCT COVERED:

USR, Component Connectors - CPC (Circular Plastic Connectors) and Metal Shell CPC Multipole Connector Series.

GENERAL:

These devices are multipole attachment plugs, receptacles and connectors employing contacts of the crimp, solder, TERMI-POINT clips and wire wrap termination type for use with No. 8-30 AWG, inclusive, stranded copper cable leads and individual wires.

USR indicates investigation to United States Standards, UL 1977 STANDARD FOR COMPONENT CONNECTORS FOR USE IN DATA, SIGNAL, CONTROL AND POWER APPLICATIONS.

The CPC connectors may be:

1. Standard Sex: Pin contacts in receptacles housings, socket contacts inplug housings.

2. Reverse Sex: Socket contacts in receptacles housings, pin contacts in plug housings.

The CPC connectors are available in various shell sizes, configurations and the following densities:

1. Series 1 - Standard density with Series 1 contacts.

2. Series 2 - High density with Series 2 contacts.

3. Series 3 - Power density with Series 3 contacts.

4. Series 4 - Combination standard and power density with Series 1 and 4 contacts.

5. Series 5 - Power density with Powerband contacts.

6. Series 6 - Combination standard and power density with Powerband contacts.

The CPC connectors may be supplied with:

1. Threaded inserts installed in the mounting holes.

2. Peripheral seals bonded into the connector housing.

3. Square flanges or be free hanging.

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4. Standard or reverse lettering.

The metal shell CPC connectors may be Series 1, 2, 3 or 4 connectors. They use the same Recognized Component plastic (QMFZ2) materials, except provided with a nickel-plated zinc alloy shell.

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ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

Use - For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories.

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

1. These devices should be used only where they will not interrupt the current.

2. **These devices have not been tested for current-carrying capability except for the following devices using the type III+ contacts , part designations 1-66360-5, 2-66358-0, 1-66361-5, 1-66359-7, 1-66360-4, 1-66358-9, 1-66361-4 and 1-66359-6; representative of part designations 1-66598-1, 1-66601-0, 1-66597-0, 66602-9, 1-66598-2, 1-66601-2, 1-66597-1 and 1-66602-0, each crimped to 14 AWG wire.**

Connector Size	Positions Loaded	Current	Max Temp.(°C)	Max Rise (°C)
37 Pos.	1	25 A	49.8	27.1
37 Pos.	odd pos. 1-37	11 A	55.8	29.5
37 Pos.	all	8 A	52.4	25.2
4 Pos.	1	22 A	50.9	25.4
4 Pos.	1, 4	21 A	50.4	24.3
4 Pos.	all	16 A	48.6	22.8
9 Pos.	1	22 A	48.6	22.8
9 Pos.	1 - 5	16 A	51.9	25.7
9 Pos.	all	12 A	47.8	22.0
16 Pos.	1	22 A	49.4	24.1
16 Pos.	1 - 8	13 A	50.6	23.6
16 Pos.	all	10 A	50.0	22.1
24 Pos.	1	22 A	50.8	25.4
24 Pos.	1 - 12	13 A	52.9	26.6
24 Pos.	all	10 A	50.8	24.2

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2A. These devices have been subjected to the Temperature test with the rated currents and maximum temperature rise and recorded temperature at an elevated ambient of 40°C, values tabulated below. The tabulated devices are also rated 240V.

Cat Nos.	Current, A	Maximum Temperature °C	
		Rise	Recorded Temperature
Reverse Sex Plug and Receptacle connectors, CPC Series 3, 17-3 with Type XII contacts on #14 AWG wire, 2 circuits power, 1 circuit ground (no current)- Receptacle, TE PN 206425-1 - Plug, TE PN 206426-1 - Female Contact, TE PN 66740-6 (Gold over Nickel Finish) - Male Contact, TE PN 66261-2 (Gold over Nickel Finish)	15	5.1	45.1
Reverse Sex Plug and Receptacle connectors, CPC Series 3, 17-3 with Type XII contacts on #10 AWG wire, 2 circuits power, 1 circuit ground (no current)- Receptacle, TE PN 206425-1 - Plug, TE PN 206426-1 - Female Contact, TE PN 66741-2 (Silver Finish) - Male Contact, TE PN 66259-4 (Silver Finish)	25	9.3	49.3
Reverse Sex Plug and Receptacle connectors, CPC Series 3, 23-7, with Type XII contacts on #14 AWG wire, 3 circuits power, 1 circuit ground (no current) - Receptacle, TE PN 206227-1 - Plug, TE PN 206226-1 - Female Contact, TE PN 66740-6 (Gold over Nickel Finish) - Male Contact, TE PN 66261-2 (Gold over Nickel Finish)	15	6.6	46.6
Reverse Sex Plug and Receptacle connectors, CPC Series 3, 23-7, with Type XII contacts on #10 AWG wire, 3 circuits power, 1 circuit ground (no current)- Receptacle, TE PN 206227-1 - Plug, TE PN 206226-1 - Female Contact, TE PN 66741-2 (Silver Finish) - Male Contact, TE PN 66259-4 (Silver Finish)	25	11.8	51.8

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

4. The electrical and mechanical suitability of the wiring terminals shall be determined in the end use. Conductor secureness testing was not conducted.

5. 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.

6. The suitability of the minimum 2.13 mm (0.084 in) spacings between live parts of opposite polarity (including adjacent poles) and between live parts and exposed dead metal parts shall be determined in the end use.

7. The electrical and mechanical contact between the connector and the cable or discrete wires is to be judged in the end-use equipment.

8. The suitability of the insulating materials used in the molded bodies shall be judged in the end-use equipment.

9. 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 105°C.

10. The accessories (such as: boots, clamps, cups, grips, hardware, jackets, etc.) have not been evaluated and should be judged in the end-use application.

11. Series 1, 3, 4 and 6 (PLUG 796203-1 and RECEPTACLE 796207-1 [redacted]) are rated 600 V based on the results of a Dielectric Voltage Withstand Test at 2200 V.

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