

## DESCRIPTION

PRODUCT COVERED:

\* USR - Component noninsulated quick-connect connectors for steel or copper alloy tabs, Positive Lock-Ex Terminals Cat. Nos. 173722, 173722-3, 173723, 173724, 173724-2, 2232976-1, 2349518-1, 173724-8, 173725, 175019, 175019-8, 175020, 175020-8, 2232957-1, 175022, 175022-3, 2232958-1, 175024, 175024-8, 175057, 175057-1, 175057-8, 175057-9, 175193, 179973, 179974, 179975, 1743058, 1743221, 1742669, 2232342, 2232343-1, 2232343-2, 2232343-5, 2232553, and 175164. Prefixes and suffixes 0 through 9 may be added to indicate variations not affecting the performance of the product such as reverse reeling, etc.

USR, CNR - Component noninsulated quick-connect connectors for steel or copper alloy tabs, Positive Lock-Ex Terminals Cat. No. 2297529-1. Prefixes and suffixes 0 through 9 may be added to indicate variations not affecting the performance of the product such as reverse reeling, etc.

USR, CNR - Component noninsulated quick-connect connectors for steel or copper alloy tabs, POD-LOK Series, Cat. Nos. 2238099, 2299130, 2299278, 2299281, 2299283, 2299285, 2299291, 2299293, each followed by Suffix -1 thru -4 inclusively, Cat. No. 2399538-x (x = 1 to 9).

USR, CNR - Component noninsulated quick-connect connectors for steel or copper alloy tabs, POD-LOK Series, Cat. No. 2238100, followed by Suffix -1 thru -8, Cat. No. 2399565-x (x = 1 to 9).

USR, CNR - Component noninsulated quick-connect connectors for copper alloy tabs, Positive Lock-Ex Terminals, Cat. No. 175178-1, **175178-8**.

USR, CNR - Component noninsulated quick-connect connectors for copper alloy tabs, Cat. No. 2379911-x (x=1-9, means diff. package, customer, mark on product).

**USR, CNR - Component noninsulated quick-connect connectors for steel or copper alloy tabs, Positive Lock-Ex Terminals Cat. No. 175022-8.**

GENERAL CHARACTER AND USE:

The products covered are noninsulated quick-connect connectors intended for factory assembly on stranded copper wire of the size or range indicated below, using this manufacturer's automatic power tooling. They are intended for use in equipment where strain relief is provided. The quick-connect connectors are for use on the following copper alloy or plated steel production tabs, not covered by this Report, copper wire sizes, and tooling.

For products ending in -x where x = 1 to 9, the products are identical in construction, the suffixes are for commercial purposes only.

## TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

\* Products designated USR have been investigated using requirements contained in the **Test Record**

**Products designated CNR have been investigated using requirements contained in the Test Record**

Cat. No.	Copper AWG Wire Size	No. of Strands	Mates with Male Tabs - Size
173722	No. 26-20	#	0.020 x 0.187 in
173722-3	No. 26-20	#	0.020 x 0.187 in
173723	No. 26-20	#	0.020 x 0.187 in
173724, 173724-8	No. 20-14	#	0.020 x 0.187 in
2232976-1	No. 20-14	#	0.020 x 0.187 in
173274-2, 2349518-1	No. 16-14	#	0.020 x 0.187 in
173725	No. 20-14	#	0.020 x 0.187 in
175019, 2232342, 170519-8	No. 22-16	#	0.020 x 0.187 in
175020, 2232957-1, 175020-8	No. 22-18	#	0.032 x 0.250 in
175022, 2232553, 2232958-1, 175022-8, 175022-3	No. 18-14	#	0.032 x 0.250 in
175024, 175024-8	No. 14	#	0.032 x 0.250 in
<b>175178-1, 175178-8</b>	No. 12-10	#	0.032 x 0.250 in
175057, 2232343-1, 2232343-5, 232343-2, 175057-8	No. 18-12	#	0.032 x 0.250 in
175193	No. 22-18	#	0.032 x 0.187 in
179973	No. 22-18	#	0.032 x 0.250 in
179974	No. 18-14	#	0.032 x 0.250 in
179975	No. 14	#	0.032 x 0.250 in
1743058-1	No. 18	#	0.032 x 0.187 in
1743221	No. 18-12	#	0.032 x 0.250 in with holes
1742669	No. 20-18	#	0.032 x 0.187 in with holes
175164	No. 18	#	0.032 x 0.250 in
2297529-1	No. 22-20, 2*22	#	0.032 x 0.187 in
2238099	No. 18-14	#	0.032 x 0.250 in
*2238100-1/2/3/4, 2399565-x	No. 16-14	#	0.032 x 0.250 in
2238100-5/6/7/8	No. 14-12	#	0.032 x 0.250 in
2299130	No. 20-16	#	0.020 x 0.187 in
2299278	No. 14-12	#	0.032 x 0.250 in
2299281, 2399538-x	No. 22-18	#	0.032 x 0.250 in
2299283	No. 22-18	#	0.032 x 0.250 in
2299285	No. 24-20	#	0.020 x 0.187 in.
2299291	No. 24-20	#	0.020 x 0.187 in.
2299293	No. 20-16	#	0.020 x 0.187 in.

## # Wire Stranding as follows:

- No. 26-22 AWG - 7 strands
- No. 20 AWG - 19-21 strands
- No. 18 AWG - 16 strands
- No. 16 AWG - 26 strands
- No. 14 AWG - 41 strands
- No. 12 AWG - 65 strands

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

These devices are for use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability -

1. These devices are not to be used for current interruption.
2. These devices are for use where strain relief is provided as part of the equipment.
3. These devices are for internal wiring only in electrical equipment.
4. The connectors are intended for use with the respective mating tab sizes as outlined in the General Character and use portion of this report.
5. Cat. Nos. 173722, 173722-3, 173723, 173724, 2349518-1, 173725, 175019, 175020, 175022, 175024, 175057, 175193, 179973, 179974, 179975, 1743058, 1743221, 2232342, 2232343-1, 2232343-2, **2232343-5**, 2232553, 2232957-1, 2232958-1, 175022-3, 175022-8, 175020-8, 175024-8, 175019-8, 173724-8, 175057-8 are intended to be assembled to the wire using power tooling, AMP Inc. "Ampomator" or Amp-O-Lectric" with Cat Nos. 755843 and 744844 miniature quick-change application tooling.

Cat. No. 1742669 is intended to be assembled to the wire using power tooling, AMP Inc. "Ampomator" or Amp-O-Lectric" with crimping dies 5-456405 and 7-854830-6 and anvil 1633388-6.

Cat. No. 2297529-1 (Ill. 30) is intended to be assembled to the wire using power tooling, AMP Inc. "Ampomator" or Amp-O-Lectric" with Crimping applicator P/N is 2150638-2, Spare kit P/N is 7-2150638-7.

Cat. No. 175164 is intended to be assembled to the wire using power tooling, AMP Inc. "Ampomator" or Amp-O-Lectric" with crimping dies and anvil specified below.

Applicator	Wire Crimper	Insulation Crimper	Anvil	Feature
1729785-1	755596-2	755599-3	3-722634-7	Post Feed
2-1729785-2	755596-2	755599-3	3-722634-7	Pre Feed

6. Engagement and Disengagement Testing was not performed for all Cat. Nos. except 175164 since the quick-connect connectors covered by this report employ latching features, locking the connector to the male tab. The suitability of the connection shall be determined in the end product.

## and Report

7. Cat. Nos. 1743221 and 1742669, 2297529-1 were subjected to the engagement portion of the Engagement-Disengagement test only. Cat. No. 1743221 employs a locking feature that is intended only on production 0.032" by 0.250" tabs with holes and Cat. No. 1742669 employs a locking feature that is intended to be used only on production 0.020" by 0.187" tabs with holes. Cat. No. 2297529-1 employs a locking feature intended for mating solely onto 0.032 x 0.187 in mating tabs.

8. Cat. Nos. 175057, 175019 and 1743058-1 have additionally been investigated for use at 12 amps with 18 AWG wire. Internal wiring only.

9. Cat. No. 1742669 and 175164 are fabricated from stainless steel and may be used only where steel is acceptable for current carrying parts.

9A. Cat. No. 2297529-1 is fabricated from stainless steel, and is intended to use No. 22-20 AWG wire mating with steel tabs, No. 2\*22 AWG wire mating with brass tabs.

10. Disengagement portion of the Engagement and Disengagement Testing was not performed for Cat. No. 175164 because the quick-connect connector employs a latching features, locking the connector to the male tab.

11. Cat. Nos. 2232342-1, **2232343-5**, 2232343-1 (cone reel) and 2232343-2 (flat reel) are identical to Cat. Nos. 175019-1 and 175057-1 (cone reel) respectively except for packaging options. Refer to Ills 20 and 21 for details. Cat. No. 2232553 is identical to Cat. No. 175022 except for Cat. No. designation which is assigned for commercial purposes. **Refer to Ill. 51 for dimensional details of 2232343-5.**

12. Cat. No. 2232957-1 is identical to Cat. No. 175020 except for Cat. No. designation which is assigned for commercial purposes. Refer to Ill 22 for details.

13. Cat. No. 2232958-1 is identical to Cat. No. 175022 except for Cat. No. designation which is assigned for commercial purposes. Refer to Ill 23 for details.

14. Cat. No. 175022-8 (Ill. 24) is the same as Cat No. 175022 (Ill. 9) except a commercially assigned Cat. No.

14A. Cat. No. 175022-3 (Ill. 40) is similar as Cat No. 175022 (Ill. 9) except the dimension difference of wire insulation range.

15. Cat. No. 175020-8 (Ill. 25) is the same as Cat No. 175020 (Ill. 8) except a commercially assigned Cat. No.

16. Cat. No. 175024-8 (Ill. 26) is the same as Cat No. 175024 (Ill. 10) except a commercially assigned Cat. No.

17. Cat. No. 175019-8 (Ill. 27) is the same as Cat No. 175019 (Ill. 7) except a commercially assigned Cat. No.

18. Cat. No. 173724-8 (Ill. 28) is the same as Cat No. 173724 (Ill. 2) except a commercially assigned Cat. No.

19. Cat. No. 175057-8 (Ill. 29) is the same as Cat No. 175057 (Ill. 11) except a commercially assigned Cat. No.

20. The Cat. Nos. tabulated below are intended to be assembled to the wire using power tooling specified below.

Cat. No.	Power Tooling Model
2238099-1 thru -4	2836193
2238100-1 thru -8	2150647
2299130-1 thru -4	2836708
2299278-1 thru -4	2150794
2299281-1 thru -4	2836705
2299283-1 thru -4	2836705
2299285-1 thru -4	2836707
2299291-1 thru -4	2150792
2299293-1 thru -4	2150793
2399538-x (x = 1 to 9)	2400494
2399565-x (x = 1 to 9)	2400495

21. Cat. No. 2232343-2 (Ill. 21) is identical to Cat. No. 2232343-1 (Ill. 21) except for packaging options.

22. Cat. No. 2349518-1 (Ill. 41) is the same as Cat No. 173724-1 (Ill. 2) except a commercially assigned Cat. No.

22. Disengagement portion of the Engagement and Disengagement Testing was not performed for Cat. No. 173722-3 (Ill. 42) because the quick-connect connector employs a latching features, locking the connector to the male tab.

23. Cat. No. 173724-2 (Ill. 43) is the same as Cat No. 173724-1 (Ill. 2) except for different wire size.

24. Cat. No. 2232976-1 (Ill. 43) is the same as Cat No. 173724-1 (Ill. 2) except for different packaging.

25. Disengagement portion of the Engagement and Disengagement Testing was not performed for Cat. **Nos.** 175178-1 (Ill. 44) **and 175178-8 (Ill. 54)** because the quick-connect connector employs a latching features, locking the connector to the male tab. And Cat. **Nos.** 175178-1 **and 175178-8 are** intended to be assembled to the wire using power tooling, Tyco Electronics Corp with Cat. 915021-2 (ILL. 45), number of Crimps is two.

\*26. Cat. Nos. 2379911-x, x=1-9 are intended to be assembled to the wire using power tooling, AMP Inc. "Ampomator" or Amp-O-Lectric" with Die 456408-3 and anvil 1633386-2.

\*27. Disengagement portion of the Engagement and Disengagement Testing was not performed for Cat. No. 2379911-x, x=1 because the quick-connect connector employs a latching features, locking the connector to the male tab.

28. Cat. No. 2399565-x (x = 1 to 9) is identical to Cat. No. 2238100-1/2/3/4 except the pitch is smaller.

29. Cat. No. 2399538-x (x = 1 to 9) is identical to Cat. No. 2299281 except the pitch is smaller.

30. Cat. No. 175057-9 (Ill. 53) is identical to Cat. No. 175057-1 (Ills. 11, 21, and 52) except for a commercially assigned Cat. No.

**31. Cat. No. 175178-8 (Ill. 54) is identical to Cat. No. 175178-1 (Ill. 44) except for the trademark applied to the connector.**