



PRODUCT SPECIFICATION

AVIKRIMP QUICK DISCONNECTS

1.0 SCOPE

- A. THIS PRODUCT SPECIFICATION COVERS THE AVIKRIMP QUICK DISCONNECTS WITH NYLON INSULATION FOR 22 AWG TO 10 AWG WIRE.

2.0 PRODUCT DESCRIPTION

2.1 INSULATED QUICK DISCONNECTS

- A. 19001 FULLY INSULATED AVIKRIMP MALE COUPLERS 22 – 10 AWG
- B. 19002 FULLY INSULATED FEMALE AVIKRIMP QUICK DISCONNECTS 22 – 10 AWG
- C. 19006 FULLY INSULATED FEMALE AVIKRIMP FLAG QUICK DISCONNECTS 22 – 10 AWG
- D. 19012 PARTIALLY INSULATED AVIKRIMP PIGGYBACK QUICK DISCONNECTS 22 – 10 AWG
- E. 19019 PARTIALLY INSULATED AVIKRIMP QUICK DISCONNECTS 22 – 10 AWG
- F. 19025 PARTIALLY INSULATED MALE AVIKRIMP QUICK DISCONNECTS 22 – 10 AWG
- G. 19026 PARTIALLY INSULATED MALE AVIKRIMP QUICK DISCONNECTS 22 – 10 AWG
- H. 19600 FULLY INSULATED OVAL EXPANDED FLARE AVIKRIMP QUICK DISCONNECTS FOR 2 WIRES, (2) 22 AWG TO (2) 16 AWG
- I. 19606 LOW PROFILE FULLY INSULATED FEMALE QUICK DISCONNECTS 12 – 10 AWG (SERIES INCLUDES AVIKRIMP AND INSULKRIMP)

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

- A. THE DIMENSIONAL CHARACTERISTICS ARE IDENTIFIED ON THE SALES DRAWINGS.
- B. MATERIALS:
 - I. BASE MATERIAL IS C26000 BRASS IN VARIOUS THICKNESSES.
 - II. PLATING IS
 - 1. MATTE TIN FOR SERIES 19002, 19006, 19012, AND 19019
 - 2. ZINC CHROMATE FOR SERIES 19001, 19025, AND 19026
 - III. INSULATION MATERIAL IS NYLON 94V2 OR 94V0 IN VARIOUS COLORS

2.3 SAFETY AGENCY APPROVALS

- A. MOST PARTS ARE UL LISTED E79133 CATEGORY RFWV
- B. MOST PARTS ARE CSA CERTIFIED 018689 CLASS 6227-01
- C. ALL PARTS ARE ROHS COMPLIANT

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

- A. UL STANDARD FOR ELECTRICAL QUICK-CONNECT TERMINALS ANSI/UL 310
- B. CSA STANDARD CSA-C22.2 NO 153-09 FOR ELECTRICAL QUICK-CONNECT TERMINALS

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PS-19902-014	E. THRODAHL	J. MACNEIL	J. MACNEIL



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4.0 RATINGS

4.1 VOLTAGE

A. ALL OF THESE PARTS ARE RATED AT 300VAC WITH THE EXCEPTION OF SERIES 19006 AND 19025, WHICH ARE RATED AT 600VAC.

4.2 CURRENT

A. THE AMPERAGE RATING IS BASED ON THE WIRE AWG APPLIED TO THE TERMINALS PER UL 310 SHOWN BELOW.

TABLE 4.2.B

WIRE AWG	MAX AMPERE RATING
22	3
20	4
18	7
16	10
14	15
12	20
10	24

4.3 MAXIMUM OPERATING TEMPERATURE – 105C (221F)

5.0 PERFORMANCE – SAMPLE PREPARATION, WIRE REQUIREMENTS, TESTS DESCRIPTIONS AND TABLE INFORMATION ARE PER UL STANDARD 310.

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Dielectric Strength Test	As Received Samples to be tested at 2200 volts (300 Volt Rating) or 3400 volts (600 Volt Rating) for 1 minute.	No Breakdown (Puncture) thru the Insulation is allowed
2	Assembled Conditioning	Samples Assembled (crimped) to wire to be Conditioned at 136C for 7 days	The Insulation will not harden, soften, crack, deform or loosen to effect insulation qualities
3	Non-Assembled Conditioning	Samples not Assembled to wire to be Conditioned at 100C for 7 days	The Insulation will not harden, soften, crack, deform or loosen after Crimping to effect insulation qualities

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5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4	Crimp Pullout Force (Axial)	Test Samples Crimped to Min/Max wire awg are subjected to an axial pullout force on the wire at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	The Test Samples must withstand Table 10.1 Force applied for 1 minute
5	Engage / Disengage Test	Samples to be Mated/Unmated to Unplated Brass Test Tabs for 6 Mating Cycles	Samples must meet the Requirements of Table 11.1
6	Secureness of Insulation Test as Received	The Insulation on Terminal Samples will be pulled Axially with 1 lb (4.5N) for 1 minute	The Insulation will not be Damaged or Removed
7	Secureness of Insulation Test as Assembled (Crimped)	The Insulation on Terminal Samples will be pulled Axially with 5 lbs (22.3N) for 1 minute	The Insulation will not be Damaged or Removed

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
8	Temperature Test	The Test Specimens shall be subjected to continuous current per Table 4.2.B until Stabilization.	Temperature Rise must not exceed 30C
9	Heat Cycling Test	The Temperature Test Samples shall complete 500 cycles of equal current on and off (45 min on/ 15 min off) at the current levels noted in Table 12.1.	Temperature Rise shall not rise more than 15C from 24 th Cycle and not more than 85C at the 500 th Cycle

Table 10.1

WIRE AWG	MIN PULL FORCE (LBS)
22	8
20	13
18	20
16	30
14	50
12	70
10	80

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TABLE 11.1

Tab size	First Insertion Force (lbs)	First Withdrawal Force (lbs)	Sixth Withdrawal Force (lbs)
.250 x .032 (6.35 x 0.81)	16 MAX	3 MIN, 16 MAX	3 MIN
.205 x .020 (5.21 x 0.51)	15 MAX	3 MIN, 20 MAX	2 MIN
.205 x .032 (5.21 x 0.81)	15 MAX	3 MIN, 20 MAX	2 MIN
.187 x .020 (4.75 x 0.51)	15 MAX	3 MIN, 20 MAX	2 MIN
.187 x .032 (4.75 x 0.81)	15 MAX	3 MIN, 20 MAX	2 MIN
.110 x .020 (2.79 x 0.51)	12 MAX	2 MIN, 14 MAX	1 MIN
.110 x .032 (2.79 x 0.81)	12 MAX	2 MIN, 14 MAX	1 MIN

TABLE 12.1

Wire AWG	Current Cycling Amperes
22	6
20	8
18	14
16	20
14	30
12	40
10	48

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

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