



# 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

REVISION: <b>A</b>	ECR/ECN INFORMATION: EC No: <b>WNA2011-0278</b> DATE: <b>2010 / 11 / 23</b>	TITLE: <b>PRODUCT SPECIFICATION- AVIKRIMP QUICK DISCONNECTS</b>	SHEET No. <b>1 of 4</b>
DOCUMENT NUMBER: <b>PS-19902-014</b>	CREATED / REVISED BY: <b>E. THRODAHL</b>	CHECKED BY: <b>J. MACNEIL</b>	APPROVED BY: <b>J. MACNEIL</b>



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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 $25 \pm 6$ 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 <sup>th</sup> Cycle and not more than 85C at the 500 <sup>th</sup> 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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