



Universal Mount Series

Test Report: 09-145

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Product: UPSS-500 (1" Stud)(N5019 & N5020)
Type Test: ANSI C119. 6 Class A - Heavy Duty Test
Method CCT - Current Cycle Test

Test Facility: UTILCO - 4730 Madison Road, Cincinnati, Ohio 45227

Tested By: Bryan Donell Date: 12-Oct-09

Supervisor: Robert Westbrook Date: 1/19/2010

Reviewed By: Don Smiley Date: 1/20/2010

Purpose:

Test The UPSS-500 (1" Stud)(N5019 & N5020) to ANSI C119-6 Class-A - Heavy Duty Test

The test current used was 1174 amperes.

Current On/Off Time **1.5** Hours

Installation:

The UPSS-500 (1" Stud)(N5019 & N5020) Connector was tested using Aluminum conductors and were wire brushed with DE-OX V applied.
Wire Size Used for testing **(2)350 kcmil Bare Aluminum Cable(s)**
The 5/16 inch internal Hex screw was

240	In-lbs
240	in-lbs

 using a calibrated Stud Locking screw Torque

240	in-lbs
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 torque wrench

Test Loop:

The tests loop was run vertically using properly sized Copper plates as equalizers as noted on the loop diagram. Each vertical leg consisted of two samples with a copper stud between them. Thermocouples were peened in place for temperature measurements utilizing Lab View equipment and software program developed by ILSCO.

Procedure:

Four UPSS-500 (1" Stud)(N5019 & N5020) were assembled with a copper stud as the main feeder using (2)350 kcmil Bare Aluminum Cable(s)
During the heat cycle testing the LabView system recorded temperature data. The resistance measurements were taken by a calibrated micro-ohm meter and recorded as specified in ANSI C119.6

Results:

The connector temperatures did not exceed the temperature of the control conductor, stability was within +/- 10 and the resistance of the connections did not exceed ± 5% of the average resistance.
The maximum stability value **6.1**
The Max Connector Temp was **123.0**
UTILCO's UPSS-500 (1" Stud)(N5019 & N5020) Connector successfully completed the ANSI Heat Cycle test

ANSI C119. 6



Current Cycle Data Sheet

Test Method: CCT

Class of Test A

Part Tested: IS-500 (1" Stud)(N5019 & N5 Date Started: 10/12/09 Date Completed: 1/10/10

Cable (main) Size (2)350 kcmil Type AL Length 24" Cable (tap) Size 0 Type Length 0

Conductor Preparation: Compounded? Yes Wire Brushed? Yes

Current Cycle: On Period (Hrs) 1.5 Off Period (Hrs) 1.5 Test Current: 1174

Amps Test # 09-145

Mechanical Connector Compound Used DE-OX V

Screw E1412C00T 1 screw/bolt (s) per conductor:

Torque: 240 in-lbs

Mounting Bolts 0 Torq: 240 in-lbs

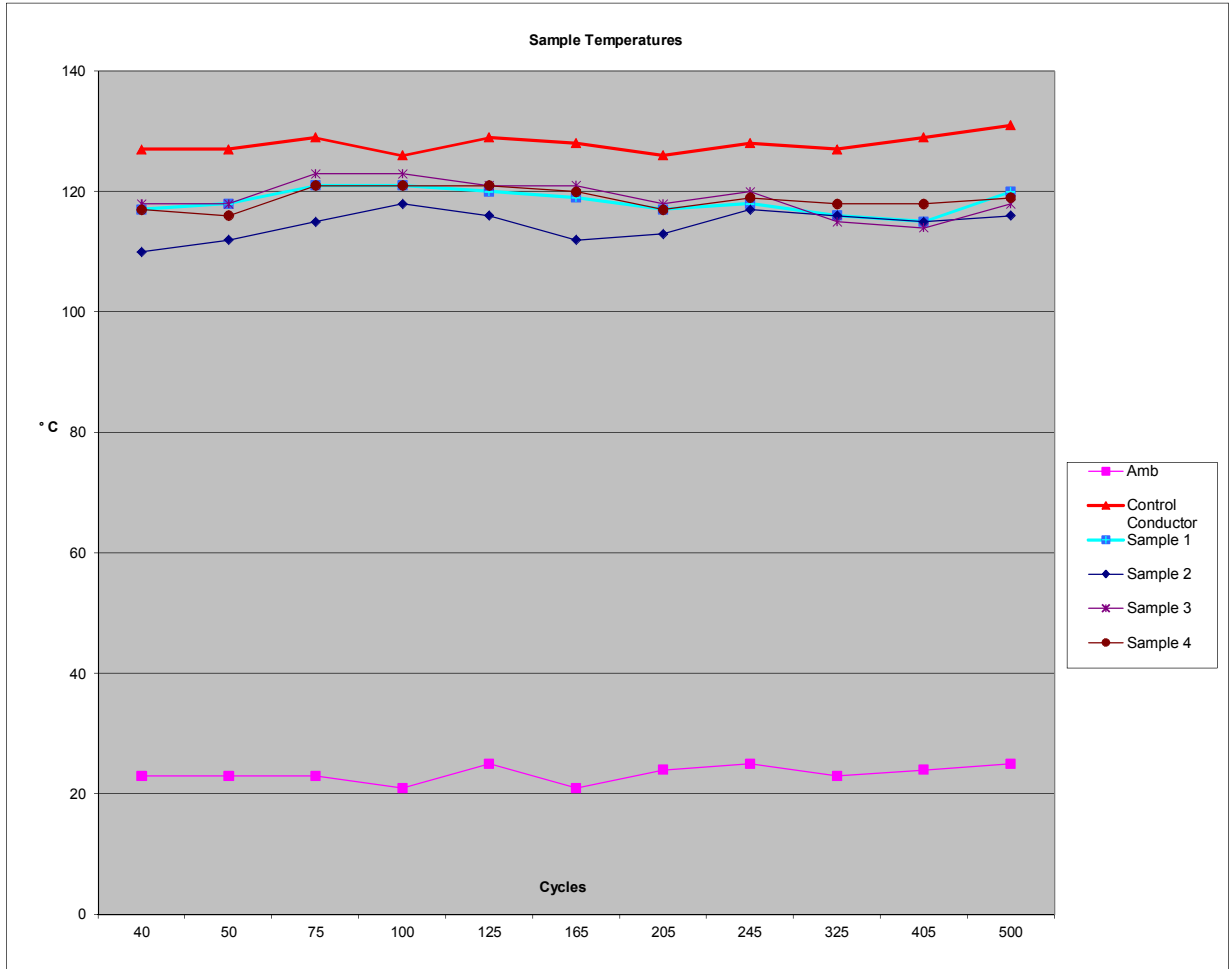
Table with 23 columns: Measurements Points, Cycle Number, Ambient (°C), Control Conductor (°C), Connector Temp (°C) [C1-C4], Temperature Difference (°C) [C1-C4], Stability Factor (Si) [C1-C4], Connector Resistance (Measured) Micro Ohms (µΩ) [Amb, C1-C4], and Connector Resistance (Corrected to 20°C) Micro Ohms (µΩ) [C1-C4]. Rows 1-11 contain data, rows 12-22 are shaded, and rows 23-24 are summary rows.

1. The connector temperature cannot exceed the control conductor temperature

2. The stability factor "Si" shall not exceed 10 for each of the connector temperature measurements recorded at the specified intervals.

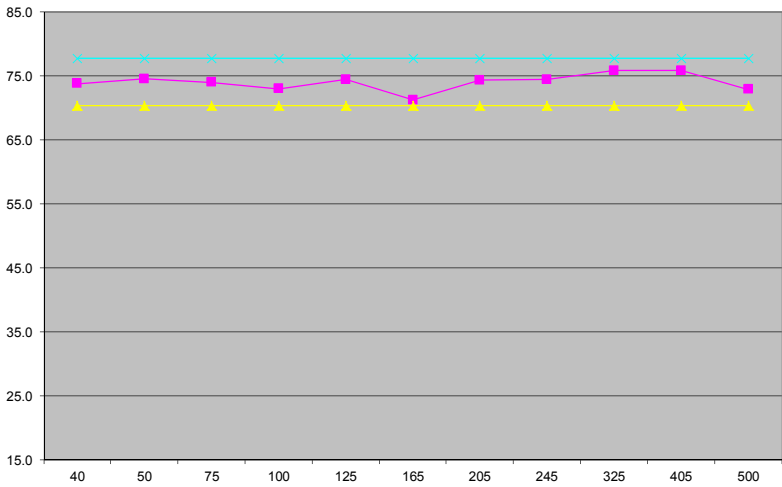
Summary table with 4 columns: Average Resistance (74.1, 74.2, 73.8, 74.5), Min Acceptable Resistance (70.4, 70.5, 70.1, 70.7), Max Allowable Resistance (77.8, 77.9, 77.5, 78.2).

3. The resistance of the connectors tested shall not vary by more than 5% from the average of the measured values.



Resistance 1

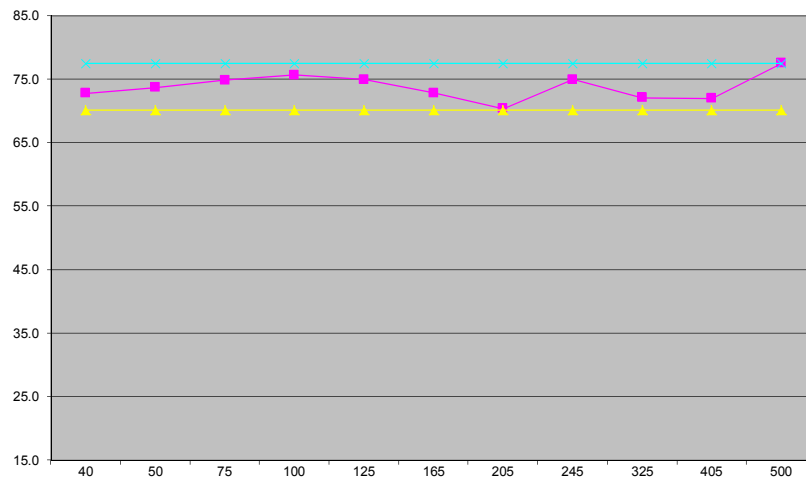
— R1 — Min — Max



Cycles

Resistance 3

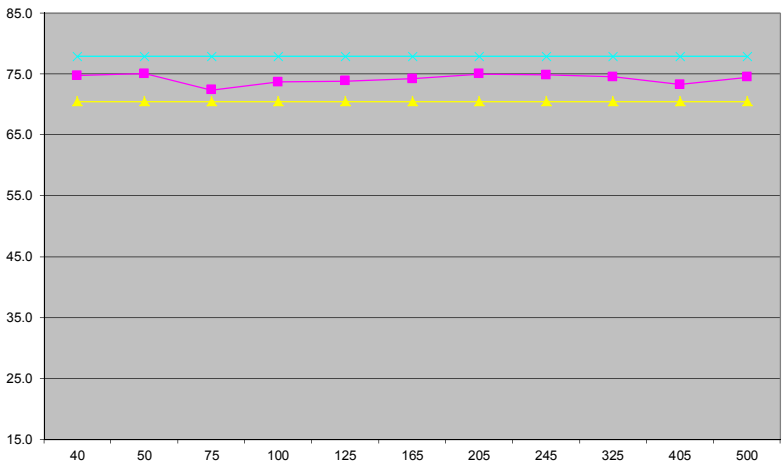
— R3 — Min — Max



Cycles

Resistance 2

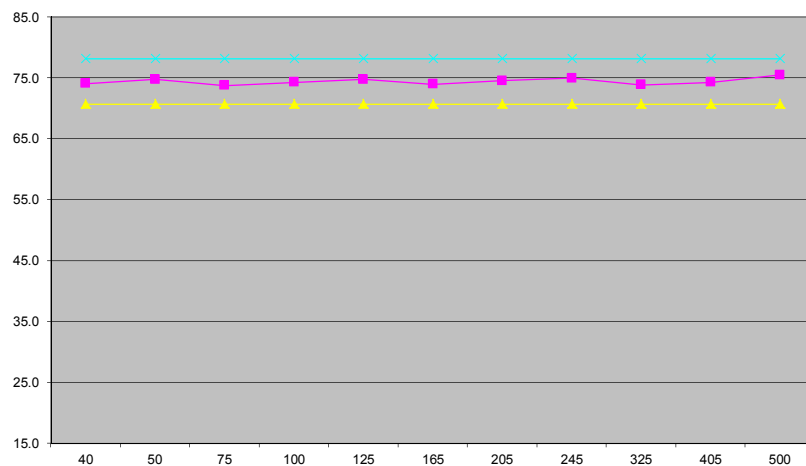
— R2 — Min — Max



Cycles

Resistance 4

— R4 — Min — Max



Cycles

