



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: **OSP – 0197-10**

**OSHPD Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: APC by Schneider Electric

Manufacturer's Technical Representative: Bill Burks

Mailing Address: 800 Federal Street, Andover MA 01810

Telephone: (978) 975-9451 Email: Bill.burks@schneider-electric.com

**Product Information**

Product Name: Smart-UPS On-Line

Product Type: Uninterruptible Power Supply (UPS)

Product Model Number: See Certified Product Table attached

(List all unique product identification numbers and/or part numbers)

General Description: Smart-UPS On-Line units consist of UPS units, battery packs, and transformers contained in commercial and seismic racks. Seismic enhancements made to the UUTs & modifications required to address anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid floor mounted

**Applicant Information**

Applicant Company Name: APC by Schneider Electric

Contact Person: Bill Burks

Mailing Address: 800 Federal Street, Andover MA 01810

Telephone: (978) 975-9451 Email: Bill.burks@schneider-electric.com

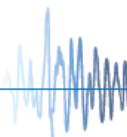
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: Bill Burks

Date: 2/5/16

Title: Compliance Manager Company Name: APC by Schneider Electric

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

**California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)**

Company Name: Forell/Elsesser Engineers, Inc.

Name: Marco Scanu, SE California License Number: S4454

Mailing Address: 160 Pine St., 6<sup>th</sup> Flr., San Francisco, CA 94111

Telephone: (415) 837-0700 Email: m.scanu@forell.com

**Supports and Attachments Preapproval**

- Supports and attachments are preapproved under OPM- \_\_\_\_\_  
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

**Certification Method**

- Testing in accordance with:  ICC-ES AC156
- Other (Please Specify): \_\_\_\_\_

**Testing Laboratory**

Company Name: National Technical Systems, Inc.

Contact Name: Steve Eisenberg

Mailing Address: 533 Main Street, Acton, MA 01720

Telephone: (978) 263-2933 Email: Steve.eisenberg@nts.com

**Testing Laboratory**

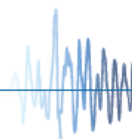
Company Name: National Technical Systems, Inc.

Contact Name: Jeffrey Henn

Mailing Address: 1146 Massachusetts Avenue, Boxborough, MA 01719

Telephone: (978) 266-1001 Email: \_\_\_\_\_

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**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

**Seismic Parameters**

Design in accordance with ASCE 7-10 Chapter 13:  Yes  No

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.40

$S_{DS}$  (Design spectral response acceleration at short period, g) = 1.86

$a_p$  (In-structure equipment or component amplification factor) = 2.5

$R_p$  (Equipment or component response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See attachment, UUT Summary Sheets

Overall dimensions and weight (or range thereof) = See attachment, Certified Products Table

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15:  Yes  No

Design Basis of Equipment or Components ( $V/W$ ) = \_\_\_\_\_

$S_{DS}$  (Design spectral response acceleration at short period, g) = \_\_\_\_\_

$S_{D1}$  (Design spectral response acceleration at 1 second period, g) = \_\_\_\_\_

$R$  (Response modification coefficient) = \_\_\_\_\_

$\Omega_0$  (System overstrength factor) = \_\_\_\_\_

$C_d$  (Deflection amplification factor) = \_\_\_\_\_

$I_p$  (Importance factor) = 1.5

Height to Center of Gravity above base = \_\_\_\_\_

Equipment or Component Natural Frequencies (Hz) = \_\_\_\_\_

Overall dimensions and weight (or range thereof) = \_\_\_\_\_


Tank(s) designed in accordance with ASME BPVC, 2015:  Yes  No

**List of Attachments Supporting Special Seismic Certification**

Test Report(s)  Drawings  Calculations  Manufacturer's Catalog

Other(s) (Please Specify): Certified Products Table, Certified Subcomponents Table, UUT Summary Sheets

**OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022**

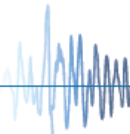
Signature:  Date: May 11, 2016

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to :  $S_{DS}$  (g) = 1.86  $z/h$  = 1

Condition of Approval (if applicable): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs\*



**APC - Smart-UPS On-Line**  
**I. Certified Product Table**

|                                                   | Width   | Depth   | Height  | Weight    | Construction Material | Component No. | Testing Status                            |
|---------------------------------------------------|---------|---------|---------|-----------|-----------------------|---------------|-------------------------------------------|
| <b>APC Racks</b>                                  |         |         |         |           |                       |               |                                           |
| APC NetShelter SX 42U Enclosure (Commercial)      | 23.6 in | 43 in   | 78.4 in | 275.8 lbs | 14 GA CRS,<br>NEMA 1  | AR3100SP1     | TR-PR040246-16 UUT2<br>TR63570-12-I RCK7  |
| APC NetShelter VX Seismic 42U Enclosure (Seismic) | 23 in   | 42.2 in | 81.5 in | 437.3 lbs | 14 GA CRS,<br>NEMA 1  | AR2145BLK     | TR-PR040246-16 UUT1,<br>TR63570-12-I RCK6 |

Notes: 1. CRS=Cold Rolled Carbon Steel (ASTM A1008)

APC Racks are preapproved to be filled with UPS and Accessories listed on the next page. Below are the maximum and minimum configurations tested. Intermediate weight configurations with center of gravity height below the tested center of gravity heights listed are preapproved by interpolation.

|                                                   | Minimum  |           | Maximum  |           |
|---------------------------------------------------|----------|-----------|----------|-----------|
|                                                   | Weight   | CG height | Weight   | CG height |
| <b>APC Racks</b>                                  |          |           |          |           |
| APC NetShelter SX 42U Enclosure (Commercial)      | 800 lbs  | 28 in     | 850 lbs  | 28.5 lbs  |
| APC NetShelter VX Seismic 42U Enclosure (Seismic) | 1300 lbs | 31.5 in   | 1650 lbs | 37 in     |

**APC - Smart-UPS On-Line  
I. Certified Product Table**

**APC Products Preapproved for use in APC Racks**

| <b>APC UPS</b>                                                      | <b>Width</b> | <b>Depth</b> | <b>Height</b> | <b>Weight</b> | <b>Construction Material</b> | <b>Component No.</b> | <b>Testing Status</b>                   |
|---------------------------------------------------------------------|--------------|--------------|---------------|---------------|------------------------------|----------------------|-----------------------------------------|
| APC Smart-UPS RT 1500VA Rack Tower 120V <sup>5</sup>                | 17 in        | 22 in        | 3.4 in        | 60.6 lbs      | 1.2 mm CRS                   | SURTA1500RMXL2U      | TR63570-12-I RCK6                       |
| APC Smart-UPS SRT 2200VA RM 120V <sup>3</sup>                       | 17 in        | 23 in        | 3.3 in        | 55.0 lbs      | 1.2 mm CRS                   | SRT2200RMXLA         | Interpolated                            |
| APC Smart-UPS SRT 2200VA RM 120V w/Network Card <sup>3</sup>        | 17 in        | 23 in        | 3.3 in        | 55.0 lbs      | 1.2 mm CRS                   | SRT2200RMXLA-NC      | TR-PR040246-16 UUT2                     |
| APC Smart-UPS SRT 3000VA RM 208V <sup>2</sup>                       | 17 in        | 25 in        | 3.3 in        | 69.0 lbs      | 1.2 mm CRS                   | SRT3000RMXLT         | Interpolated                            |
| APC Smart-UPS SRT 3000VA RM 208V <sup>2</sup>                       | 17 in        | 25 in        | 3.3 in        | 69.0 lbs      | 1.2 mm CRS                   | SRT3000RMXLA         | Interpolated                            |
| APC Smart-UPS SRT 3000VA RM 208V w/Network Card <sup>2</sup>        | 17 in        | 25 in        | 3.3 in        | 69.0 lbs      | 1.2 mm CRS                   | SRT3000RMXLT-NC      | Interpolated                            |
| APC Smart-UPS SRT 3000VA RM 120V w/Network Card <sup>2</sup>        | 17 in        | 25 in        | 3.3 in        | 69.0 lbs      | 1.2 mm CRS                   | SRT3000RMXLA-NC      | TR-PR040246-16 UUT1                     |
| APC Smart-UPS SRT 3000VA RM 208/230V IEC <sup>2</sup>               | 17 in        | 25 in        | 3.3 in        | 69.0 lbs      | 1.2 mm CRS                   | SRT3000RMLW-IEC      | Interpolated                            |
| APC Smart-UPS SRT 5000VA RM 208V <sup>1</sup>                       | 17 in        | 28.32 in     | 5.1 in        | 123.0 lbs     | 1.2 mm CRS                   | SRT5KRMXLT           | Interpolated                            |
| APC Smart-UPS SRT 5000VA RM 208V IEC <sup>1</sup>                   | 17 in        | 28.32 in     | 5.1 in        | 123.0 lbs     | 1.2 mm CRS                   | SRT5KRMXLT-IEC       | TR-PR040246-16 UUT1, UUT2               |
| APC Smart-UPS SRT 6000VA RM 208V <sup>1</sup>                       | 17 in        | 28.32 in     | 6.85 in       | 135.0 lbs     | 1.2 mm CRS                   | SRT6KRMXLT           | TR-PR040246-16 UUT1, UUT2               |
| APC Smart-UPS SRT 6000VA RM 208V IEC <sup>1</sup>                   | 17 in        | 28.32 in     | 6.85 in       | 135.0 lbs     | 1.2 mm CRS                   | SRT6KRMXLT-IEC       | Interpolated                            |
| APC Smart-UPS SRT 8000VA RM 208V <sup>1</sup>                       | 17 in        | 28.15 in     | 10.35 in      | 246.0 lbs     | 1.5 mm CRS                   | SRT8KRMXLT           | Interpolated                            |
| APC Smart-UPS SRT 8000VA RM 208V IEC <sup>1</sup>                   | 17 in        | 28.15 in     | 10.35 in      | 246.0 lbs     | 1.5 mm CRS                   | SRT8KRMXLT-IEC       | Interpolated                            |
| APC Smart-UPS SRT 10000VA RM 208V <sup>1</sup>                      | 17 in        | 28.15 in     | 10.35 in      | 246.0 lbs     | 1.5 mm CRS                   | SRT10KRMXLT          | TR-PR040246-16 UUT1                     |
| APC Smart-UPS SRT 10000VA RM 208V IEC <sup>1</sup>                  | 17 in        | 28.15 in     | 10.35 in      | 246.0 lbs     | 1.5 mm CRS                   | SRT10KRMXLT-IEC      | Interpolated                            |
| APC Smart-UPS RT 14kVA RM 200V <sup>4</sup>                         | 17 in        | 30.4 in      | 21 in         | 545.0 lbs     | 1.5 mm CRS                   | SURT14KRMXLJ         | Interpolated                            |
| APC Smart-UPS RT 15kVA RM 208V <sup>4</sup>                         | 17 in        | 30.4 in      | 21 in         | 545.0 lbs     | 1.5 mm CRS                   | SURT15KRMXLT         | Interpolated                            |
| APC Smart-UPS RT 18kVA RM 200V <sup>4</sup>                         | 17 in        | 30.4 in      | 21 in         | 545.0 lbs     | 1.5 mm CRS                   | SURT18KRMXLJ         | Interpolated                            |
| APC Smart-UPS RT 20kVA RM 208V <sup>4</sup>                         | 17 in        | 30.4 in      | 21 in         | 545.0 lbs     | 1.5 mm CRS                   | SURT20KRMXLT         | TR63570-12-I RCK6                       |
| <b>APC Accessories</b>                                              |              |              |               |               |                              |                      |                                         |
| APC Smart-UPS RT 48V RM Battery Pack <sup>5</sup>                   | 17 in        | 22.0 in      | 3.4 in        | 72.6 lbs      | 1.2 mm CRS                   | SURTA48RMXLB2U       | TR63570-12-I RCK7                       |
| APC Smart-UPS RT 72V RM Battery Pack <sup>3</sup>                   | 17 in        | 23.4 in      | 3.4 in        | 74.4 lbs      | 1.2 mm CRS                   | SRT72RMBP            | TR-PR040246-16 UUT1                     |
| APC Smart-UPS RT 96V RM Battery Pack <sup>2</sup>                   | 17 in        | 23.4 in      | 3.4 in        | 89.5 lbs      | 1.2 mm CRS                   | SRT96RMBP            | TR-PR040246-16 UUT2                     |
| APC Smart-UPS SRT 192V 5kVA and 6kVA Battery Pack <sup>1</sup>      | 17 in        | 26.9 in      | 5.1 in        | 200.4 lbs     | 1.2 mm CRS                   | SRT192RMBP           | Interpolated                            |
| APC Smart-UPS SRT 192V 8kVA and 10kVA Battery Pack <sup>1</sup>     | 17 in        | 26.0 in      | 5.1 in        | 200.4 lbs     | 1.2 mm CRS                   | SRT192RMBP2          | TR-PR040246-16 UUT1, UUT-2              |
| APC Smart-UPS RT 192V RM Battery Pack <sup>4</sup>                  | 17 in        | 26.0 in      | 5.1 in        | 200.4 lbs     | 1.2 mm CRS                   | SURT192RMXLB3U       | TR63570-12-I RCK1,<br>TR63570-12-I RCK7 |
| APC Smart-UPS RT 192V RM Battery Pack <sup>4</sup>                  | 17 in        | 29.1 in      | 10.4 in       | 400.0 lbs     | 1.5 mm CRS                   | SURT192RMXLB2        | TR63570-12-I RCK6                       |
| APC Step-Down Transformer RM 2U 208V IN 120V OUT; w/5-20 Receptacle | 17 in        | 24.0 in      | 3.5 in        | 95.2 lbs      | 1.5 mm CRS                   | AP9626               | TR63570-12-I RCK1,<br>TR63570-12-I RCK7 |

- Notes:
1. APC UPS Units and Accessories contain Battery Module #1 (OM-816336) as listed in the Certified Sub- Components Table
  2. APC UPS Units and Accessories contain Battery Module #2 (911-9012A) as listed in the Certified Sub- Components Table
  3. APC UPS Units and Accessories contain Battery Module #3 (911-1086A) as listed in the Certified Sub- Components Table
  4. APC UPS Units and Accessories contain Battery Module #4 (OM-1863B) as listed in the Certified Sub- Components Table
  5. APC UPS Units and Accessories contain Battery Module #5 (911-0041A) as listed in the Certified Sub- Components Table

**APC - Smart-UPS On-Line**  
**II. Certified Subcomponents Table**

| <b>Battery Module #1 (APC No. OM-816336)</b> |         |         |         |        |               |                                                               |
|----------------------------------------------|---------|---------|---------|--------|---------------|---------------------------------------------------------------|
| Manufacturer                                 | Width   | Depth   | Height  | Weight | Component No. | Testing Status                                                |
| Battery (APC No. 910-6003)                   |         |         |         |        |               |                                                               |
| Leoch                                        | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | LP12-5-4      | TR-PR040246-16 UUT1, UUT2                                     |
| CSB Battery                                  | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | HR1221WF2     | TR-PR040246-16 UUT1, UUT2                                     |
| Kung Long Batteries Industrial Co., LTD      | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | WP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| E-Power Trading Limited (B&B Battery Co.)    | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | BP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| <b>Battery Module #2 (APC No. 911-9012A)</b> |         |         |         |        |               |                                                               |
| Manufacturer                                 | Width   | Depth   | Height  | Weight | Component No. | Testing Status                                                |
| Battery (APC No. 910-6003)                   |         |         |         |        |               |                                                               |
| Leoch                                        | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | LP12-5-4      | TR-PR040246-16 UUT1, UUT2                                     |
| CSB Battery                                  | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | HR1221WF2     | TR-PR040246-16 UUT1, UUT2                                     |
| Kung Long Batteries Industrial Co., LTD      | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | WP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| E-Power Trading Limited (B&B Battery Co.)    | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | BP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| <b>Battery Module #3 (APC No. 911-1086A)</b> |         |         |         |        |               |                                                               |
| Manufacturer                                 | Width   | Depth   | Height  | Weight | Component No. | Testing Status                                                |
| Battery (APC No. 910-6003)                   |         |         |         |        |               |                                                               |
| Leoch                                        | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | LP12-5-4      | TR-PR040246-16 UUT1, UUT2                                     |
| CSB Battery                                  | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | HR1221WF2     | TR-PR040246-16 UUT1, UUT2                                     |
| Kung Long Batteries Industrial Co., LTD      | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | WP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| E-Power Trading Limited (B&B Battery Co.)    | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | BP5-12        | TR-PR040246-16 UUT1, UUT2                                     |
| <b>Battery Module #4 (APC No. OM-1863B)</b>  |         |         |         |        |               |                                                               |
| Manufacturer                                 | Width   | Depth   | Height  | Weight | Component No. | Testing Status                                                |
| Battery (APC No. 910-6003)                   |         |         |         |        |               |                                                               |
| CSB Battery                                  | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | HR1221WF2     | TR63570-12-I RCK1,<br>TR63570-12-I RCK6,<br>TR63570-12-I RCK7 |
| Kung Long Batteries Industrial Co., LTD      | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | WP5-12        | TR63570-12-I RCK6                                             |
| E-Power Trading Limited (B&B Battery Co.)    | 3.54 in | 2.76 in | 4.02 in | 4.4 lb | BP5-12        | TR63570-12-I RCK6                                             |
| <b>Battery Module #5 (APC No. 911-0041A)</b> |         |         |         |        |               |                                                               |
| Manufacturer                                 | Width   | Depth   | Height  | Weight | Component No. | Testing Status                                                |
| Battery (APC No. 910-1209)                   |         |         |         |        |               |                                                               |
| Shenzhen Center Power Tech Co. LTD (Vision)  | 2.55 in | 5.94 in | 3.70 in | 5.7 lb | CP1290        | TR63570-12-I RCK1, RCK6, RCK7                                 |
| Exide Industries                             | 2.55 in | 5.94 in | 3.70 in | 5.7 lb | EP1234WFR     | TR63570-12-I RCK1, RCK7                                       |

OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

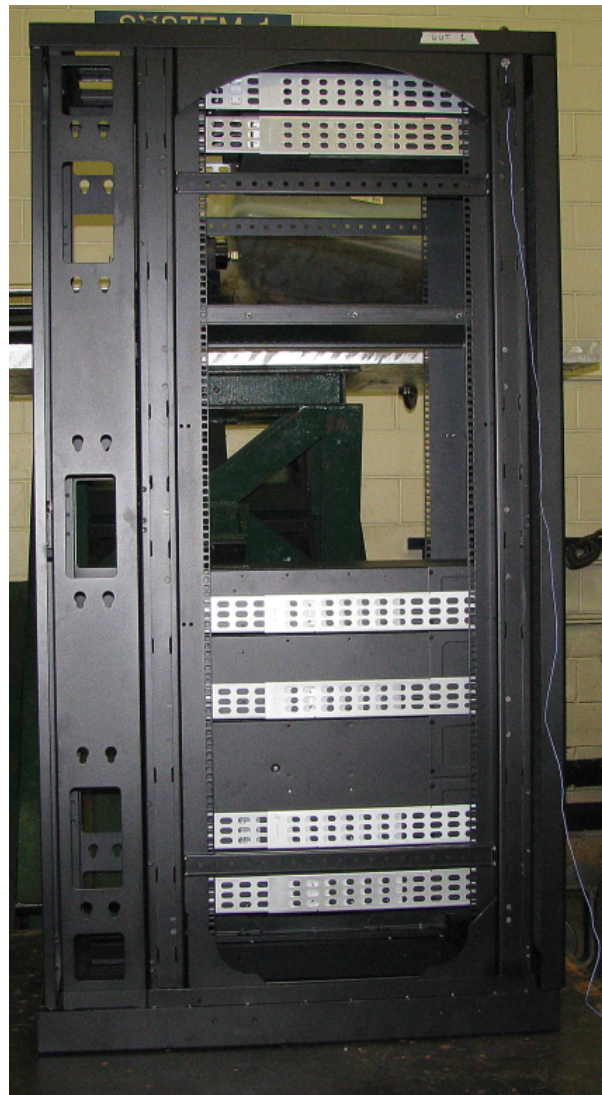
**TR-PR040246-16 UUT1**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.04”W x 42.2”D x 80.25”H, 1300 lbs, Center of Gravity Height = 32”  
 Floor mounted using (8) M12-1.75x30mm bolts.

| Building Code              | Test Criteria    | S <sub>Ds</sub> (g) | z/h                                                                                                                | Horizontal         |                    | Vertical           |                    |
|----------------------------|------------------|---------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                            |                  |                     |                                                                                                                    | A <sub>FLX-H</sub> | A <sub>RIG-H</sub> | A <sub>FLX-V</sub> | A <sub>RIG-V</sub> |
| CBC 2016                   | ICC-ES<br>AC 156 | 1.86                | 1                                                                                                                  | 2.98               | 2.23               | 1.25               | 0.51               |
| <b>Natural Frequencies</b> |                  |                     | <b>Test Results</b>                                                                                                |                    |                    |                    |                    |
| <b>F-B</b>                 | <b>S-S</b>       | <b>V</b>            | The UUT maintained structural integrity and functionality after the AC156 test. Unit full of contents during test. |                    |                    |                    |                    |
| 9.0                        | 5.0              | >33.3               |                                                                                                                    |                    |                    |                    |                    |

Test configuration is shown below:

|    |                                 |    |
|----|---------------------------------|----|
| 42 | <b>SRT3000RMXLA-NC (69 lb)</b>  | 42 |
| 41 | <i>uses module #2 - qty 1</i>   | 41 |
| 40 | <b>SRT72RMBP (78 lb)</b>        | 40 |
| 39 | <i>uses module #3 - qty 2</i>   | 39 |
| 38 |                                 | 38 |
| 37 |                                 | 37 |
| 36 |                                 | 36 |
| 35 |                                 | 35 |
| 34 |                                 | 34 |
| 33 |                                 | 33 |
| 32 |                                 | 32 |
| 31 | AR8122BLK Shelf                 | 31 |
| 30 |                                 | 30 |
| 29 |                                 | 29 |
| 28 |                                 | 28 |
| 27 |                                 | 27 |
| 26 |                                 | 26 |
| 25 |                                 | 25 |
| 24 |                                 | 24 |
| 23 |                                 | 23 |
| 22 |                                 | 22 |
| 21 |                                 | 21 |
| 20 |                                 | 20 |
| 19 | <b>SRT5KRMXLT-IEC (120 lb)</b>  | 19 |
| 18 | <i>uses module #1 - qty 2</i>   | 18 |
| 17 |                                 | 17 |
| 16 |                                 | 16 |
| 15 | <b>SRT6KRMXLT (4U) (132 lb)</b> | 15 |
| 14 | <i>uses module #1 - qty 2</i>   | 14 |
| 13 |                                 | 13 |
| 12 |                                 | 12 |
| 11 |                                 | 11 |
| 10 | <b>SRT10KRMXLT (246 lb)</b>     | 10 |
| 9  | <i>uses module #1 - qty 4</i>   | 9  |
| 8  |                                 | 8  |
| 7  |                                 | 7  |
| 6  |                                 | 6  |
| 5  | <b>SRT192RMBP2 (200 lb)</b>     | 5  |
| 4  | <i>uses module #1 - qty 4</i>   | 4  |
| 3  |                                 | 3  |
| 2  |                                 | 2  |
| 1  |                                 | 1  |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR-PR040246-16 UUT1**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.04”W x 42.2”D x 80.25”H, 1300 lbs, Center of Gravity Height = 32”  
 Floor mounted using (8) M12-1.75x30mm bolts.

APC Products in Test Configuration:

| Item# | APC Part #      | Description                                        |
|-------|-----------------|----------------------------------------------------|
| 1     | SRT3000RMXLA-NC | APC Smart-UPS SRT 3000VA RM 120V w/Network Card    |
| 2     | SRT5KRMXLT-IEC  | APC Smart-UPS SRT 5000VA RM 208V IEC               |
| 3     | SRT6KRMXLT      | APC Smart-UPS SRT 6000VA RM 208V                   |
| 4     | SRT10KRMXLT     | APC Smart-UPS SRT 10000VA RM 208V                  |
| 5     | SRT72RMBP       | APC Smart-UPS RT 72V RM Battery Pack               |
| 6     | SRT192RMBP2     | APC Smart-UPS SRT 192V 8kVA and 10kVA Battery Pack |
| 7     | AR8122BLK       | Shelf                                              |

Internal Components of APC Products:

| Item # | Battery Module Part # | Description       | Battery Manufacturer                                                                                         | Manufacture Part #                        |
|--------|-----------------------|-------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1      | OM-816336             | Battery Module #1 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |
| 2      | 911-9012A             | Battery Module #2 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |
| 3      | 911-1086A             | Battery Module #3 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

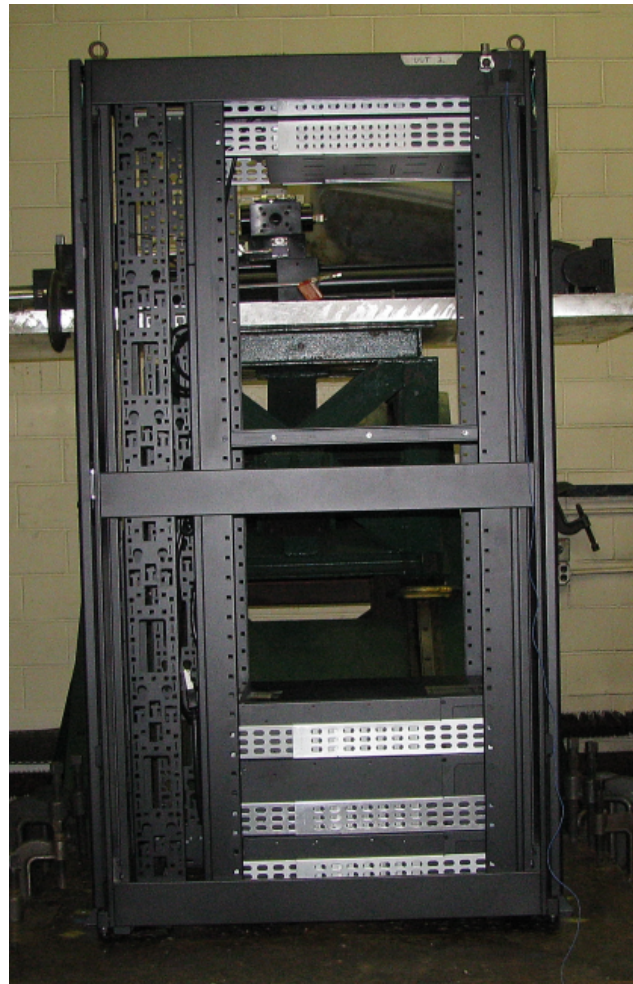
**TR-PR040246-16 UUT2**

Smart-UPS On-Line in 4-Post Commercial Rack Enclosure (AR3100SP1)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.63”W x 41.35”D x 78.4”H, 850 lbs, Center of Gravity Height = 28.5”  
 Floor mounted using (8) M12-1.75x30mm bolts.

| Building Code              | Test Criteria | S <sub>DS</sub> (g) | z/h                                                                                                                | Horizontal         |                    | Vertical           |                    |
|----------------------------|---------------|---------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                            |               |                     |                                                                                                                    | A <sub>FLX-H</sub> | A <sub>RIG-H</sub> | A <sub>FLX-V</sub> | A <sub>RIG-V</sub> |
| CBC 2016                   | ICC-ES AC 156 | 1.92                | 1                                                                                                                  | 3.07               | 2.30               | 1.29               | 0.52               |
| <b>Natural Frequencies</b> |               |                     | <b>Test Results</b>                                                                                                |                    |                    |                    |                    |
| <b>F-B</b>                 | <b>S-S</b>    | <b>V</b>            | The UUT maintained structural integrity and functionality after the AC156 test. Unit full of contents during test. |                    |                    |                    |                    |
| 4.5                        | 2.7           | >33.3               |                                                                                                                    |                    |                    |                    |                    |

Test configuration is shown below:

|    |                                                                  |    |
|----|------------------------------------------------------------------|----|
| 42 | <b>SRT2200RMXLA-NC</b> (58 lb)<br><i>uses module #3 - qty 1</i>  | 42 |
| 41 |                                                                  | 41 |
| 40 | <b>SRT96RMBP</b> (95 lb)<br><i>uses module #2 - qty 2</i>        | 40 |
| 39 |                                                                  | 39 |
| 38 |                                                                  | 38 |
| 37 |                                                                  | 37 |
| 36 |                                                                  | 36 |
| 35 |                                                                  | 35 |
| 34 |                                                                  | 34 |
| 33 |                                                                  | 33 |
| 32 |                                                                  | 32 |
| 31 |                                                                  | 31 |
| 30 |                                                                  | 30 |
| 29 |                                                                  | 29 |
| 28 |                                                                  | 28 |
| 27 |                                                                  | 27 |
| 26 |                                                                  | 26 |
| 25 |                                                                  | 25 |
| 24 | <b>AR8122BLK Shelf</b>                                           | 24 |
| 23 |                                                                  | 23 |
| 22 |                                                                  | 22 |
| 21 |                                                                  | 21 |
| 20 |                                                                  | 20 |
| 19 |                                                                  | 19 |
| 18 |                                                                  | 18 |
| 17 |                                                                  | 17 |
| 16 |                                                                  | 16 |
| 15 |                                                                  | 15 |
| 14 |                                                                  | 14 |
| 13 |                                                                  | 13 |
| 12 |                                                                  | 12 |
| 11 |                                                                  | 11 |
| 10 | <b>SRT5KRMXLT-IEC</b> (120 lb)<br><i>uses module #1 - qty 2</i>  | 10 |
| 9  |                                                                  | 9  |
| 8  |                                                                  | 8  |
| 7  | <b>SRT6KRMXLT</b> (4U) (132 lb)<br><i>uses module #1 - qty 2</i> | 7  |
| 6  |                                                                  | 6  |
| 5  |                                                                  | 5  |
| 4  |                                                                  | 4  |
| 3  | <b>SRT192RMBP2</b> (200 lb)<br><i>uses module #1 - qty 4</i>     | 3  |
| 2  |                                                                  | 2  |
| 1  |                                                                  | 1  |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR-PR040246-16 UUT2**

Smart-UPS On-Line in 4-Post Commercial Rack Enclosure (AR3100SP1)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.63”W x 41.35”D x 78.4”H, 850 lbs, Center of Gravity Height = 28.5”  
 Floor mounted using (8) M12-1.75x30mm bolts.

APC Products in Test Configuration:

| Item# | APC Part #      | Description                                        |
|-------|-----------------|----------------------------------------------------|
| 1     | SRT2200RMXLA-NC | APC Smart-UPS SRT 2200VA RM 120V w/Network Card    |
| 2     | SRT5KRMXLT-IEC  | APC Smart-UPS SRT 5000VA RM 208V IEC               |
| 3     | SRT6KRMXLT      | APC Smart-UPS SRT 6000VA RM 208V                   |
| 4     | SRT96RMBP       | APC Smart-UPS RT 96V RM Battery Pack               |
| 5     | SRT192RMBP2     | APC Smart-UPS SRT 192V 8kVA and 10kVA Battery Pack |
| 6     | AR8122BLK       | Shelf                                              |

Internal Components of APC Products:

| Item # | Battery Module Part # | Description       | Battery Manufacturer                                                                                         | Manufacture Part #                        |
|--------|-----------------------|-------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1      | OM-816336             | Battery Module #1 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |
| 2      | 911-9012A             | Battery Module #2 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |
| 3      | 911-1086A             | Battery Module #3 | Leoch<br>CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | LP12-5-4<br>HR1221WF2<br>WP5-12<br>BP5-12 |

OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 1)**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)

14 ga Cold Rolled Steel, NEMA 1

23.04"W x 42.2"D x 80.25"H, 1200 lbs, Center of Gravity Height = 32"

Floor mounted using (8) M12 8.8x30 bolts.

| Building Code              | Test Criteria    | S <sub>Ds</sub> (g) | z/h                                                                                                                | Horizontal         |                    | Vertical           |                    |
|----------------------------|------------------|---------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                            |                  |                     |                                                                                                                    | A <sub>FLX-H</sub> | A <sub>RIG-H</sub> | A <sub>FLX-V</sub> | A <sub>RIG-V</sub> |
| CBC 2016                   | ICC-ES<br>AC 156 | 1.92                | 1                                                                                                                  | 3.07               | 2.30               | 1.28               | 0.51               |
| <b>Natural Frequencies</b> |                  |                     | <b>Test Results</b>                                                                                                |                    |                    |                    |                    |
| <b>F-B</b>                 | <b>S-S</b>       | <b>V</b>            | The UUT maintained structural integrity and functionality after the AC156 test. Unit full of contents during test. |                    |                    |                    |                    |
| 9.0                        | 5.2              | >33.3               |                                                                                                                    |                    |                    |                    |                    |

Test configuration is shown below:

|    |                                  |    |
|----|----------------------------------|----|
| 42 |                                  | 42 |
| 41 | SURTA2200RMXL2U UPS              | 41 |
| 40 |                                  | 40 |
| 39 | SURTA48RMXLBP2U UPS Battery Pack | 39 |
| 38 |                                  | 38 |
| 37 |                                  | 37 |
| 36 |                                  | 36 |
| 35 |                                  | 35 |
| 34 |                                  | 34 |
| 33 |                                  | 33 |
| 32 |                                  | 32 |
| 31 | AR8122BLK Shelf                  | 31 |
| 30 |                                  | 30 |
| 29 |                                  | 29 |
| 28 |                                  | 28 |
| 27 |                                  | 27 |
| 26 |                                  | 26 |
| 25 |                                  | 25 |
| 24 | AR8122BLK Shelf                  | 24 |
| 23 |                                  | 23 |
| 22 |                                  | 22 |
| 21 |                                  | 21 |
| 20 |                                  | 20 |
| 19 |                                  | 19 |
| 18 |                                  | 18 |
| 17 |                                  | 17 |
| 16 | AP9626 Step Down Transformer     | 16 |
| 15 |                                  | 15 |
| 14 | SURT6000RMXL3U UPS               | 14 |
| 13 |                                  | 13 |
| 12 |                                  | 12 |
| 11 |                                  | 11 |
| 10 |                                  | 10 |
| 9  | SURT10000RMXL6U UPS              | 9  |
| 8  |                                  | 8  |
| 7  |                                  | 7  |
| 6  |                                  | 6  |
| 5  | SURT192RMXLBP3U UPS Battery Pack | 5  |
| 4  |                                  | 4  |
| 3  |                                  | 3  |
| 2  |                                  | 2  |
| 1  |                                  | 1  |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 1)**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)

14 ga Cold Rolled Steel, NEMA 1

23.04"W x 42.2"D x 80.25"H, 1200 lbs, Center of Gravity Height = 32"

Floor mounted using (8) M12 8.8x30 bolts.

APC Products in Test Configuration:

| Item# | APC Part #      | Description                                                          |
|-------|-----------------|----------------------------------------------------------------------|
| 1     | SURTA2200RMXL2U | APC Smart-UPS RT 2200VA RM 120V                                      |
| 2     | SURTA48RMXLBP2U | APC Smart-UPS RT 48V RM Battery Pack                                 |
| 3     | AP9626          | APC Step-Down Transformer RM 2U 208V IN 120V OUT; w/5-20 Receptacles |
| 4     | SURT6000RMXL3U  | APC Smart-UPS RT 6000VA Rack Tower 208V                              |
| 5     | SURT10000RMXL6U | APC Smart-UPS RT 10,000VA Rack Tower 208V                            |
| 6     | SURT192RMXLBP3U | APC Smart-UPS RT 192V RM Battery Pack                                |
| 7     | AR8122BLK       | Shelf                                                                |

Internal Components of APC Products:

| Item # | Battery Module Part # | Description       | Battery Manufacturer                           | Manufacture Part # |
|--------|-----------------------|-------------------|------------------------------------------------|--------------------|
| 1      | 911-0041A             | Battery Module #5 | Exide Industries                               | EP1234WFR          |
| 2      | 911-0041A             | Battery Module #5 | Shenzhen Center Power Tech Co. LTD<br>(Vision) | CP1290             |
| 3      | N/A                   | N/A               | N/A                                            | N/A                |
| 4      | OM-1863B              | Battery Module #4 | CSB Battery                                    | HR1221WF2          |
| 5      | OM-1863B              | Battery Module #4 | CSB Battery                                    | HR1221WF2          |
| 6      | OM-1863B              | Battery Module #4 | CSB Battery                                    | HR1221WF2          |
| 7      | N/A                   | N/A               | N/A                                            | N/A                |

OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 6)**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.04"W x 42.2"D x 80.25"H, 1650 lbs, Center of Gravity Height = 37"  
 Floor mounted using (8) M12 8.8x30 bolts.

| Building Code              | Test Criteria    | S <sub>DS</sub> (g) | z/h                                                                                                                | Horizontal         |                    | Vertical           |                    |
|----------------------------|------------------|---------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                            |                  |                     |                                                                                                                    | A <sub>FLX-H</sub> | A <sub>RIG-H</sub> | A <sub>FLX-V</sub> | A <sub>RIG-V</sub> |
| CBC 2016                   | ICC-ES<br>AC 156 | 1.89                | 1                                                                                                                  | 3.02               | 2.27               | 1.27               | 0.51               |
| <b>Natural Frequencies</b> |                  |                     | <b>Test Results</b>                                                                                                |                    |                    |                    |                    |
| <b>F-B</b>                 | <b>S-S</b>       | <b>V</b>            | The UUT maintained structural integrity and functionality after the AC156 test. Unit full of contents during test. |                    |                    |                    |                    |
| 6.92                       | 4.09             | >33.3               |                                                                                                                    |                    |                    |                    |                    |

Test configuration is shown below:

|    |                     |    |
|----|---------------------|----|
| 42 |                     | 42 |
| 41 | SURTA1500RML2U UPS  | 41 |
| 40 |                     | 40 |
| 39 |                     | 39 |
| 38 |                     | 38 |
| 37 |                     | 37 |
| 36 |                     | 36 |
| 35 |                     | 35 |
| 34 |                     | 34 |
| 33 | SURTD3000RMLT3U UPS | 33 |
| 32 |                     | 32 |
| 31 |                     | 31 |
| 30 |                     | 30 |
| 29 |                     | 29 |
| 28 | SURT8000RMLT6U UPS  | 28 |
| 27 |                     | 27 |
| 26 |                     | 26 |
| 25 |                     | 25 |
| 24 |                     | 24 |
| 23 |                     | 23 |
| 22 |                     | 22 |
| 21 |                     | 21 |
| 20 | SURT20KRMXLT UPS    | 20 |
| 19 | SURT192RMLBP2       | 19 |
| 18 |                     | 18 |
| 17 |                     | 17 |
| 16 |                     | 16 |
| 15 |                     | 15 |
| 14 |                     | 14 |
| 13 |                     | 13 |
| 12 |                     | 12 |
| 11 |                     | 11 |
| 10 |                     | 10 |
| 9  |                     | 9  |
| 8  |                     | 8  |
| 7  |                     | 7  |
| 6  | SYA4K8RMP UPS       | 6  |
| 5  |                     | 5  |
| 4  |                     | 4  |
| 3  |                     | 3  |
| 2  |                     | 2  |
| 1  |                     | 1  |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 6)**

Smart-UPS On-Line in 4-Post Seismic Rack Enclosure (AR2145BLK)  
 14 ga Cold Rolled Steel, NEMA 1  
 23.04”W x 42.2”D x 80.25”H, 1650 lbs, Center of Gravity Height = 37”  
 Floor mounted using (8) M12 8.8x30 bolts.

APC Products in Test Configuration:

| Item# | APC Part #      | Description                             |
|-------|-----------------|-----------------------------------------|
| 1     | SURTA1500RMXL2U | APC Smart-UPS RT 1500VA Rack Tower 120V |
| 2     | SURTD3000RMXL3U | APC Smart-UPS RT 3000VA Rack Tower 208V |
| 3     | SURT8000RMXL6U  | APC Smart-UPS RT 8000VA Rack Tower 208V |
| 4     | SURT20KRMXL     | APC Smart-UPS RT 20kVA RM 208V          |
| 5     | SURT192RMXLBP2  | APC Smart-UPS RT 192V RM Battery Pack   |
| 6     | SYA4K8RMP       | APC Symmetra LX 4kVA                    |

Internal Components of APC Products:

| Item # | Battery Module Part # | Description       | Battery Manufacturer                                                                                | Manufacture Part #              |
|--------|-----------------------|-------------------|-----------------------------------------------------------------------------------------------------|---------------------------------|
| 1      | 911-0041A             | Battery Module #5 | Shenzhen Center Power Tech Co. LTD (Vision)                                                         | CP1290                          |
| 2      | OM-1863B              | Battery Module #4 | CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | HR1221WF2<br>WP5-12<br>BP5-12   |
| 3      | OM-1863B              | Battery Module #4 | CSB Battery                                                                                         | HR1221WF2                       |
| 4      | OM-1863B              | Battery Module #4 | CSB Battery                                                                                         | HR1221WF2                       |
| 5      | SYBT5                 | 10-Battery Module | CSB Battery<br>Kung Long Batteries Industrial Co., LTD<br>E-Power Trading Limited (B&B Battery Co.) | HR1234WF2<br>WP1234W<br>HR1234W |

OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 7)**

Smart-UPS On-Line in 4-Post Commercial Rack Enclosure (AR3100SP1)

14 ga Cold Rolled Steel, NEMA 1

23.63”W x 41.35”D x 78.4”H, 800 lbs, Center of Gravity Height = 28”

Floor mounted using (4) M12 8.8x30 bolts.

| Building Code              | Test Criteria    | S <sub>Ds</sub> (g) | z/h                                                                                                                | Horizontal         |                    | Vertical           |                    |
|----------------------------|------------------|---------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                            |                  |                     |                                                                                                                    | A <sub>FLX-H</sub> | A <sub>RIG-H</sub> | A <sub>FLX-V</sub> | A <sub>RIG-V</sub> |
| CBC 2016                   | ICC-ES<br>AC 156 | 1.94                | 1                                                                                                                  | 3.10               | 2.33               | 1.30               | 0.52               |
| <b>Natural Frequencies</b> |                  |                     | <b>Test Results</b>                                                                                                |                    |                    |                    |                    |
| <b>F-B</b>                 | <b>S-S</b>       | <b>V</b>            | The UUT maintained structural integrity and functionality after the AC156 test. Unit full of contents during test. |                    |                    |                    |                    |
| 5.98                       | 2.79             | >33.3               |                                                                                                                    |                    |                    |                    |                    |

Test configuration is shown below:

|    |                                  |    |
|----|----------------------------------|----|
| 42 |                                  | 42 |
| 41 | SURTA2200RMXL2U UPS              | 41 |
| 40 |                                  | 40 |
| 39 | SURTA48RMXLBP2U UPS Battery Pack | 39 |
| 38 |                                  | 38 |
| 37 |                                  | 37 |
| 36 |                                  | 36 |
| 35 |                                  | 35 |
| 34 |                                  | 34 |
| 33 |                                  | 33 |
| 32 |                                  | 32 |
| 31 |                                  | 31 |
| 30 |                                  | 30 |
| 29 |                                  | 29 |
| 28 |                                  | 28 |
| 27 |                                  | 27 |
| 26 |                                  | 26 |
| 25 |                                  | 25 |
| 24 |                                  | 24 |
| 23 |                                  | 23 |
| 22 |                                  | 22 |
| 21 |                                  | 21 |
| 20 |                                  | 20 |
| 19 |                                  | 19 |
| 18 |                                  | 18 |
| 17 |                                  | 17 |
| 16 |                                  | 16 |
| 15 |                                  | 15 |
| 14 |                                  | 14 |
| 13 |                                  | 13 |
| 12 |                                  | 12 |
| 11 |                                  | 11 |
| 10 |                                  | 10 |
| 9  |                                  | 9  |
| 8  |                                  | 8  |
| 7  | AP9626 Step Down Transformer     | 7  |
| 6  |                                  | 6  |
| 5  | SURT6000RMXL3U UPS               | 5  |
| 4  |                                  | 4  |
| 3  |                                  | 3  |
| 2  | SURT192RMXLBP3U UPS Battery Pack | 2  |
| 1  |                                  | 1  |



OSP APPLICATION  
 APC – Smart-UPS On-Line  
 III. UUT Summary Sheets

**TR63570-12-I (Rack 7)**

Smart-UPS On-Line in 4-Post Commercial Rack Enclosure (AR3100SP1)

14 ga Cold Rolled Steel, NEMA 1

23.63"W x 41.35"D x 78.4"H, 800 lbs, Center of Gravity Height = 28"

Floor mounted using (4) M12 8.8x30 bolts.

APC Products in Test Configuration:

| Item# | APC Part #     | Description                                                          |
|-------|----------------|----------------------------------------------------------------------|
| 1     | SURTA2200RML2U | APC Smart-UPS RT 2200VA RM 120V                                      |
| 2     | SURTA48RMLB2U  | APC Smart-UPS RT 48V RM Battery Pack                                 |
| 3     | AP9626         | APC Step-Down Transformer RM 2U 208V IN 120V OUT; w/5-20 Receptacles |
| 4     | SURT6000RMLT3U | APC Smart-UPS RT 6000VA Rack Tower 208V                              |
| 5     | SURT192RMLB3U  | APC Smart-UPS RT 192V RM Battery Pack                                |

Internal Components of APC Products:

| Item # | Battery Module Part # | Description       | Battery Manufacturer                           | Manufacture Part # |
|--------|-----------------------|-------------------|------------------------------------------------|--------------------|
| 1      | 911-0041A             | Battery Module #5 | Exide Industries                               | EP1234WFR          |
| 2      | 911-0041A             | Battery Module #5 | Shenzhen Center Power Tech Co. LTD<br>(Vision) | CP1290             |
| 3      | N/A                   | N/A               | N/A                                            | N/A                |
| 4      | OM-1863B              | Battery Module #4 | CSB Battery                                    | HR1221WF2          |
| 5      | OM-1863B              | Battery Module #4 | CSB Battery                                    | HR1221WF2          |