

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

| APPLICATION FOR HCAI SPECIAL SEISMIC | OFFICE USE ONLY |
|---|---|
| CERTIFICATION PREAPPROVAL (OSP) | APPLICATION #: OSP-0556 |
| HCAI Special Seismic Certification Preapproval (OSP) | |
| Type: New X Renewal | |
| Manufacturer Information | |
| Manufacturer: Vertiv Corporation | |
| Manufacturer's Technical Representative: Julian Freeman | |
| Mailing Address: 975 Pittsburgh Drive, Delaware, OH 43015 | |
| Telephone: (740) 833-8910 Email: julian.freeman@ | vertiv.com |
| Product Information | 10. |
| Product Name: UPS and Batteries | E. |
| Product Type: UPS | 2 |
| Product Model Number: EXM UPS with Various Cabinets - See Attachment | s- m |
| General Description: 208V & 480V UPS System. 10-250 kVA.ad Karin | |
| Mounting Description: Rigid, Floor Mounted | |
| Tested Seismic Enhancements: Seismic enhancements made to the test anomalies during the tests shall be incor | units and/or modifications required to address porated into the production units. |
| Applicant Information | |
| | D' |
| Applicant Company Name: TRU Compliance, by Structural Integrity Associa | tes |
| Contact Person: Daniel Zentner | |
| Mailing Address: 233 SW Wilson Ave, Suite 101, BEND, OR 97702 | |
| Telephone: (541) 292-5839 Email: dzentner@struction | nt.com |
| Title: Program Manager | |

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





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| California Licensed Structural Engineer Responsible for the Engineering and Test Report(s) |
|--|
| Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC. |
| Name: Andrew Coughlin California License Number: S6082 |
| Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025 |
| Telephone: (415) 635-8461 Email: acoughlin@structint.com |
| |
| Certification Method |
| GR-63-Core X ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3 |
| Other (Please Specify): |
| FOR CODE CO. |
| Testing Laboratory |
| Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER) |
| Contact Person: Amarnath Kasalanati |
| Mailing Address: 1301 South 46th Street, Blvd 420, Richmond CA 94804 |
| Telephone: (510) 642-6475 By Email: peer_center@berkeley.edu |
| Company Name: QUALTECH/CURTISS WRIGHT/TRENTEC |
| Contact Person: Jerry Newberry |
| Mailing Address: 4600 East Tech Drive, Cincinnati OH 45245 |
| Telephone: (513) 528-7900 Email: jnewberry@curtisswright.com |
| BUILDING |





DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

Seismic Parameters

| Desig | n Basis of Equipment or Components | (Fp/Wp) = 1.45 | | |
|-------|---|--------------------------------------|--------|-------------------------------|
| | SDS (Design spectral response accele | eration at short period, g) = 1.93 | | |
| | ap (Amplification factor) = | 2.5 | | |
| | Rp (Response modification factor) = | 6.0 | | |
| | Ω_0 (System overstrength factor) = | 2.0 | | |
| | Ip (Importance factor) = | 1.5 | | |
| | z/h (Height ratio factor) = | 1 and 0 | | |
| | Natural frequencies (Hz) = | See Attachment | | |
| | Overall dimensions and weight = | See Attachment ODE | - | |
| HCA | Approval (For Office Use Only) | Approval Expires on 08/12/2028 | The | |
| Date: | 8/12/2022 | OSP-0556 | G | |
| Name | e: Mohammad Karim | | Title: | Supervisor, Health Facilities |
| Speci | al Seismic Certification Valid Up to: St | ps (g) = 1.93 | z/h = | See Above |
| Condi | tion of Approval (if applicable): | DATE: 08/12/2022 | 6 | |
| | | PRIVIA BUILDING COD | 1025 | |

1701371-CR-001-R6

| TRU COMPLIANCE |
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| Manufacturer: | Vertiv Corporation | | | | | TAB | LE 1 |
|---|-------------------------------|--------------------|------------------------|---------------|-------------------|-------------------|------------------------------------|
| Model Line: | EXM UPS | | | | | | |
| <i>Certified Product Con</i> Carbon steel housing, 1 | | or 1992 ci | do papolo | | | | |
| carbon steet nousing, 1 | loga. Teal pallet allu uu | ior, toga. si | ue pariets. | | | | |
| | | | | | | | |
| Certified Options Sum | marin | | | | | | |
| See tables 2 - 8 for a co | • | nal compor | ents. | | | | |
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| | | | | | | | |
| Mounting Configuration | on: | | |)E a | | | |
| Base mounted - rigid | | FOR | | L (O) | 1. | | |
| Note: Installed mounting cor | nfiguration must be of simila | r configuratio | n and equiva | lent strength | and stiffness | to those tested. | |
| Ruilding Code: CPC 20 | | Soismis | ortificati | on Limits: | S _{DS} = | 1.93 g z/h=1.0 | <i>I</i> _P = <i>1.5</i> |
| Building Code: CBC 20 | S. | | | XXXXXXXXXXX | S _{DS} ≠ | 1.93 g z/h=0.0 | ·p- 1.3 |
| Model Line | Model | Diı | nensions | (in)6 | Weight | Notes | υυτ |
| Model Elle | Model | Depth | Width | Height | (lb) | Notes | |
| 208V EXM UPS | 10- <mark>40 kVA</mark> | BY39 _{Mo} | har <mark>24</mark> ma | d Karin | 1790 | 0 | 5 |
| | 10-1 <mark>00 kVA</mark> | 39 | 24 | 79 | 1753 | | Interp. |
| | 10-2 <mark>00 kVA</mark> | 39 | 35/1 | /27922 | 1753 | UUT3: standalone | 2, 3 |
| 480V EXM UPS | 30 -20 <mark>0 kVA</mark> | 39 - | 24 | 79 | 1030 | | Interp. |
| | 30-250 kVA | 39 | 33 | 79 | 1356 | UUT4: standalone | 1,4 |
| | 320MM | 39 | 13 | 79 | 1102 | | 6 |
| 208V Battery Cabinets | 600MM | 39 | 24 | 79 | 2477 | | Interp. |
| | 880MM | 39 | 35 | 79 | 3341 | | 2 |
| 480V Battery Cabinets | 880MM | 39 | J_{35} | 79 | 2962 | | Interp. |
| loov Buttery cubinets | 1200MM | 39 | 47 | 79 | 4943 | | 1 |
| 208V Transformer Cabinet | 600MM | 39 | 24 | 79 | 2043 | | 2 |
| 208V Paralleling | 300MM | 39 | 12 | 79 | 263 | | 2 |
| Cabinet | 600MM | 39 | 24 | 79 | 594 | | Interp. |
| | 800MM | 39 | 32 | 79 | 714 | | 2 |
| 480V Maintenance | 200MM | 39 | 8 | 79 | 195 | | Extrap |
| Bypass Cabinets | 300MM | 39 | 12 | 79 | 288 | | Extrap |
| | 600MM | 39 | 24 | 79 | 887 | | 1 |
| | 200MM | 39 | 8 | 79 | 241 | | 5 |
| 208V Maintenance | 300MM | 39 | 12 | 79 | 288 | | Interp. |
| Bypass Cabinets | 600MM | 39 | 24 | 79 | 687 | | Interp |
| | 800MM | 39 | 32 | 79 | 728 | | 6 |
| 208V Bypass | 600MM | 39 | 24 | 79 | | w/225A panelboard | 2 |
| Distribution Cabinet | 600MM | 39 | 24 | 79 | | w/400A panelboard | 2 |
| Wiring Cabinet | 200MM | 39 | 8 | 79 | 132 | | 2 |

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| Manufacturer: Model Line: | Vertiv Corporation EXM UPS | Table Description: Bypass Modules | | | TABLE 2 |
|------------------------------|-------------------------------|-----------------------------------|---|----------------------|---------|
| Building Code: CBC 2022 | | Seismic Certificat | ion Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | / _P = 1.5 | |
| Component Type | Manufacturer | Model | R CODE Description | Note | s UUT |
| | | 2359337 | Used on 208V 40kVA UPS | | 5 |
| | | 2359336 | Used on 208V 100kVA UPS | | Interp |
| Bypass Modules | Vertiv | 2359717 | Used on 208V 200kVA UPS (1/2 bypass kit) | | 2,3 |
| | | 2 <mark>359344</mark> | Used on 208V 200kVA UPS (1/2 bypass kit) | | 2,3 |
| | | 0235007L | Used on 480V 50-200kVA & 50- <mark>250kV</mark> A UPS | | 1,4 |
| | | BY | Aphammad Karim | | |
| | | | | | |
| | | | : 08/12/2022 | | |
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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | Table Description: Power Modules | | | TABLE 3 |
|--------------------------------------|-------------------------------|--|---|----------------------|--------------|
| Building Code: CBC 2022 | | Seismic Certification Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | | / _P = 1.5 | |
| Component Type | Manufacturer | Model | R CODE Description | Not | es UUT |
| Power Modules | Vertiv | 2359335 023500LB | 208V UPS Power Module 480V UPS Power Module | | 2,3,5 1,4 |
| | | A A A A A A A A A A A A A A A A A A A | OSP-0556 | | |
| | | O BY:N | Aphammad Karim | | |
| | | G DAT | E: 08/12/2022 | | |
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| Manufacturer: Model Line: | Vertiv Corporation EXM UPS | Table Description: Batteries | | | TABLE 4 |
|------------------------------|-------------------------------|---|------------------------|----------------------|---------|
| Building Code: CBC 2022 | | Seismic Certification Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | | l _P = 1.5 | |
| Component Type | Manufacturer | Model FC | CODE Description | No | tes UUT |
| | | 12HX100 | 12 V, 21Ah, 22 lbs. | | Extrap. |
| | | 12HX150E | 12 V, 32Ah, 32 lbs. | | 6 |
| | | 12HX205 | 12 V, 44Ah, 43 lbs. | | 5 |
| | | 12HX300 | 12 V, 70 Ah,60 lbs. | | Interp. |
| | | 12HX330 | 12 V, 82 Ah, 71 lbs. | | Interp. |
| | | 12HX400 BY • M | 12 V, 94 Ah, 80 lbs. | | Interp. |
| | | 12HX505 | 12 V, 119 Ah, 103 lbs. | | Interp. |
| | EnerSys DataSafe | 12HX540 | 12 V, 123 Ah, 106 lbs. | | 2, 3 |
| | | 12HX150-FR | 12 V, 32 Ah, 32 lbs. | | Interp. |
| | | 12HX205-FR | 12 V, 44 Ah, 43 lbs. | | 6 |
| Battteries | | 12HX300-FR | 12 V, 70 Ah,60 lbs. | | Interp. |
| (Lead Acid) | | 12HX330-FR | 12 V, 82 Ah, 71 lbs. | | Interp. |
| | | 12HX400-FR | 12 V, 94 Ah, 80 lbs. | | Interp. |
| | | 12HX505-FR | 12 V, 119 Ah, 103 lbs. | | Interp. |
| | | 12HX540-FR | 12 V, 123 Ah, 106 lbs. | | 2 |
| | | HR1500 | 12 V, 29.6Ah, 27 lbs. | | 6 |
| | | HR2000 | 12 V, 48.8Ah, 40 lbs. | | Interp. |
| | | HR3000 | 12 V, 74.4 Ah, 61 lbs. | | Interp. |
| | Deka-Unigy | HR3500 | 12 V, 89.1 Ah, 66 lbs. | | Interp. |
| | | HR4000 | 12 V, 94 Ah, 74 lbs. | | Interp. |
| | | HR5000 | 12 V, 134 Ah, 98 lbs. | | Interp. |
| | | HR5500 | 12 V, 149 Ah, 107 lbs. | | 2, 3 |
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| Vertiv Corporation EXM UPS | XM UPS | | TABLE 4 | |
|-------------------------------|--|---|--|--|
| 2022 | Seismic Certification Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | = 1.5 | | |
| Manufacturer | Model FOR CODE Description | Notes | UUT | |
| | UPS12-150MR 12 V, 34.6 Ah, 27.3 lbs. | | 1 | |
| | UPS12-210MR 12 V, 53.8 Ah, 40 lbs. | | Interp | |
| | UPS12-300MR 12 V, 78.6 Ah, 58.4 lbs. | | Interp | |
| C&D Technologies | UPS12-350MR 12 V, 93.2 Ah, 67.4 lbs. | | Interp | |
| | UPS12-400MR 12 V, 102 Ah, 76 lbs. | | Interp | |
| | UPS12-490MR V 12 V, 139 Ab, 100 bs. | | Interp | |
| | UPS12-540MR 12 V, 149 Ah, 100 lbs. | | 2,3 | |
| | PATE: 08/12/2022 | | | |
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| | EXM UPS 2022 Manufacturer | Seismic Certification Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ I_P Manufacturer Model Description I_P UPS12-150MR 12 V, 34.6 Ah, 27.3 lbs. UPS12-210MR 12 V, 53.8 Ah, 40 lbs. UPS12-300MR UPS12-300MR UPS12-300MR UPS12-300MR 12 V, 78.6 Ah, 58.4 lbs. UPS12-300MR UPS12-400MR UPS12-40 | Seismic Certification Limits: $S_{DS} = 1.93 g \ z/h = 1.0 \ S_{DS} = 1.93 g \ z/h = 0.0$ $I_p = 1.5$ Manufacturer Model Description Notes UPS12-150MR 12 V, 34.6 Ah, 27.3 lbs. UPS12-210MR 12 V, 53.8 Ah, 40 lbs. UPS12-210MR 12 V, 78.6 Ah, 58.4 lbs. UPS12-300MR UPS12-300MR C&D Technologies UPS12-350MR 12 V, 93.2 Ah, 67.4 lbs. UPS12-400MR UPS12-490MR 12 V, 102 Ah, 76 lbs. UPS12-490MR 12 V, 139 Ah, 100 lbs. UPS12-540MR 12 V, 149 Ah, 100 lbs. UPS12-540MR 12 V, 149 Ah, 100 lbs. | |

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| Manufacturer: Model Line: | Vertiv Corporation EXM UPS | Table Description: Panelboards | | | | | TABLE 5 |
|------------------------------|-------------------------------|---|--------------------------------------|----------------------|--------|--|---------|
| Building Code: CBC 2022 | | Seismic Certification Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | | l _P = 1.5 | | | |
| Component Type | Manufacturer | Model | R CODE Description | Not | es UUT | | |
| 225A Panelboard | Square-D | NQM354L2CS | 600MM BDC, 208V, 10-40kVA, 625 lbs. | | 2 | | |
| 400A Panelboard | Square-D | NQM354L4CS | 600MM BDC, 208V, 60-100kVA, 660 lbs. | | 2 | | |
| | | | Ward Ward and Word and William 2 | | | | |
| | | 2 | OSP-0556 | | | | |
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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | | Table Description: Circuit Breakers | | TABLE 6 |
|--------------------------------------|-------------------------------|--------------------|--|----------------------|----------|
| Building Code: CBC 2022 | | Seismic Certificat | ion Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | I _P = 1.5 | - |
| Component Type | Manufacturer | Model | R CODE Description | No | otes UUT |
| | | T3N225TWBAS2 | 208V, 225AF/225AT | DC | 2 |
| | | T6N600TWAS2 | 208V, 600AF/465AT | DC | 1 |
| | | T2S040TW | 208V, 100AF/40AT | | 2 |
| | | T2S050TW | 208V, 100AF/45AT | | Interp. |
| | | T3S060TW | 208V, 225AF/60AT | | Interp. |
| | | T3S070TWRV·N | 208V, 225AF/70AT | | Interp. |
| | | T3S080TW | 208V, 225AF/80AT | | Interp. |
| | | T3S090TW | 208V, 225AF/90AT | | Interp. |
| | | T3S110TW | 208V, 225AF/110AT | | Interp. |
| | | TS125TW | 208V, 225AF/125AT | | Interp. |
| | | T3S150TW | 208V, 225AF/150AT | | Interp. |
| Circuit Breakers | ABB | T3N225TW | 208V, 225AF/225AT | | Interp. |
| | | T3S175TW | 208V, 225AF/175AT | | Interp. |
| | | T5N300TW | 208V, 400AF/225AT | | Interp. |
| | | T5N400TW | 208V, 400AF/350AT | | Interp. |
| | | 609130P2 | 208V, 600AF/300AT | | Interp. |
| | | 604283P2 | 208V, 600AF/400AT | | Interp. |
| | | 546923P1 | 208V, 600AF/600AT | | Interp. |
| | | T5N600BW | 208V, 600AF/600AT | | Interp. |
| | | T6N800TW | 208V, 800AF/800AT | | 1 |
| | | T7S1000BW | 208V, 1000AF/1000AT | | 1 |
| | | XT1SU3040AFF000XXX | 208V, 100AF/40AT | | 2 |
| | | XT1SU3050AFF000XXX | 208V, 100AF/50AT | | Interp. |

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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | | Table Description: Circuit Breakers | | TABLE 6 |
|--------------------------------------|-------------------------------|---|-------------------------------------|----------------------------|---------|
| Building Code: CBC 2022 | | Seismic Certification Limits: S _{DS} = 1.93 g z/h = 1.0 S _{DS} = 1.93 g z/h = 0.0 | | <i>I_P</i> = 1.5 | |
| Component Type | Manufacturer | Model | R CODE Description | No | tes UUT |
| | | XT3SU3060AFF000XXX | 208V, 225AF/60AT | | Interp. |
| | | XT3SU3070AFF000XXX | 208V, 225AF/70AT | | Interp. |
| | | XT3SU3090AFF000XXX | 208V, 225AF/90AT | | Interp. |
| | ABB | XT3SU3110AFF000XXX | 208V, 225AF/110AT | | Interp. |
| | | XT3SU3150AFF000XXX | 208V, 225AF/150AT | | Interp. |
| | | XT3SU3175AFF000XXX | 208V, 225AF/175AT | | Interp. |
| | | XT4NU3225AFF000XXX | 208V, 225AF/225AT | | 1 |
| | | HJF36150U33XYE | 480V, 150AF/150AT | LSI Trip Unit | 2 |
| | | JJF <mark>3625</mark> 0U33XYE | 480V, 250AF/250AT | LSI Trip Unit | Interp. |
| | | LJF36400TU33XTW | 480V, 400AF/350AT | LSI Trip Unit | Interp. |
| | | LJF36500TU33XTW | 480V, 400AF/300AT | LSI Trip Unit | Interp. |
| Circuit Breakers | | LJF36600TU33XTW | 480V, 600AF/450AT | LSI Trip Unit | Interp. |
| | | LGF36400RU33XAE | 208V, 600AF/400AT | LSI Trip Unit | Interp. |
| | | LGF36600TU33X | 208V, 600AF/600AT | LSI Trip Unit | Interp. |
| | Caucaro D | PGF36120U33AYE | 208V, 1200AF/1200AT | LSI Trip Unit | 1 |
| | Square D | HGF36040YE | 208V, 150AF/40AT | | 2 |
| | | HGF36060YE | 208V, 150AF/60AT | | Interp. |
| | | HGF36070YE | 208V, 150AF/70AT | | Interp. |
| | | HGF36150YE | 208V, 150AF/150AT | | Interp. |
| | | HJF36050YE | 480V, 150AF/50AT | | Interp. |
| | | HJF36060TYE | 480V, 150AF/60AT | | Interp. |
| | | HJF36070TYE | 480V, 150AF/70AT | | Interp. |
| | | HJF36080YE | 480V, 150AF/80AT | | Interp. |

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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | Table Description: Circuit Breakers | TABLE 6 | | |
|--------------------------------------|-------------------------------|---|-----------|--|--|
| Building Code: CBC 2 | 2022 | Seismic Certification Limits: $S_{DS} = 1.93 g$ $z/h = 1.0$ $I_P = 1.5$ $S_{DS} = 1.93 g$ $z/h = 0.0$ $I_P = 1.5$ | | | |
| Component Type | Manufacturer | Model FOR CODE Description | Notes UUT | | |
| | | HJF36090YE 480V, 150AF/90AT | Interp. | | |
| | | HJF36110YE 480V, 150AF/110AT | Interp. | | |
| | | HJF36125YE 480V, 150AF/125AT | Interp. | | |
| | | HJF36150YE 480V, 150AF/150AT C | Interp. | | |
| | | JJF36175TYE 480V, 250AF/175AT | Interp. | | |
| | Caucaro D | JJF36200TYE V· 480V, 250AF/200AT | Interp. | | |
| Circuit Breakers | Square D | JJF36225YE 480V, 250AF/225AT | Interp. | | |
| | | LLF37030D88 480V, 600AF/300AT | Interp. | | |
| | | LLF37040D88 480V, 600AF/400AT | Interp. | | |
| | | LLF37045D88 480V, 600AF/450AT | Interp. | | |
| | | LLF37050D88 480V, 600AF/500AT | Interp. | | |
| | | LLF37060D88 480V, 600AF/600AT | 1 | | |
| | Siemens | HFK3B225MA2REX6 208V, 225A | 5 | | |
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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | | Table Description: Transformers | | | | | | |
|--------------------------------------|-------------------------------|---|--|---------------------------------|---------|---------|--|--|--|
| Building Code: CBC 2 | 2022 | Seismic Certificati | on Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | / _P = 1.5 | | | | | |
| Component Type | Manufacturer | Model FO | CODE Description | Not | es | UUT | | | |
| | | 02-818064-10 | 015K 220-208Y//208-220Y K1, 199 lbs. | | | Extrap. | | | |
| | | 02-818054-10 | 015K 480//220-208Y K1, 205 lbs. | | | Extrap. | | | |
| | | 02-818055-10 | 015K 600//220-208Y K1, 203 lbs. | | | Extrap. | | | |
| | | 02-818064-00 | 02-818064-00 020K 220-208Y//208-220Y K1, 238 lbs. | | | Extrap. | | | |
| | | 0 <mark>2-818</mark> 054-00 | 020K 480//220-208Y K1, 232 lbs. | | | Extrap. | | | |
| | | 02-818055-0 <mark>03 V • M</mark> | 020K 600//220-208Y K1, 232 lbs. | | | Extrap. | | | |
| | 02-818063-10 | | 025K 220-208Y//208-220Y K1, 264 lbs. | | Extrap. | | | | |
| | | 02-818053-10 | 025K 480//220-208Y K1, 260 lbs. | | | Extrap. | | | |
| | | 02 <mark>-818</mark> 056-10 | 025K 600//220-208Y K1, 252 lbs. | | | Extrap. | | | |
| | | 02-818009-00 | 030K 208-220//480 K1, 192 lbs. | | | Extrap. | | | |
| | | 02-818063-00 045K 220-208Y//208-220Y K1, 415 lbs. | | | | Extrap. | | | |
| Transformers | Vertiv | 02-818053-00 | 045K 480//220-208Y K1, 425 lbs. | − Material: Cu Winding − Coi | | Extrap. | | | |
| | | 02-818056-00 | 045K 600//220-208Y K1, 424 lbs. | | e | Extrap. | | | |
| | | 02-818062-00 | 050K 220-208Y//208-220Y K1, 425 lbs. | | | Extrap. | | | |
| | | 02-818052-00 | 050K 480//220-208Y K1, 424 lbs. | | | Extrap. | | | |
| | | 02-818057-00 | 050K 600//220-208Y K1, 422 lbs. | | | Extrap. | | | |
| | | 02-818061-00 | 075K 220-208Y//208-220Y K1, 570 lbs. | | | Extrap. | | | |
| | | 02-818051-00 | 075K 480//220-208Y K1, 570 lbs. | | | Extrap. | | | |
| | | 02-818058-00 | 075K 600//220-208Y K1, 570 lbs. | | | Extrap. | | | |
| | | 02-818060-10 | 100K 220-208Y//208-220 K1, 694 lbs. | | | Extrap. | | | |
| | | 02-818050-10 | 100K 480//220-208Y K1, 680 lbs. | | | Extrap. | | | |
| | | 02-818059-10 | 100K 600//220-208Y K1, 686 lbs. | | | Extrap. | | | |
| | | 02-818060-00 | 125K 220-208Y//208-220 K1, 850 lbs. | | | 2 | | | |

TRU Compliance, by Structural Integrity Associates, Inc.

844-TRU-0200 | info@trucompliance.com

1701371-CR-001-R6



| Manufacturer: Model Line: | Vertiv Corporation EXM UPS | | Table Description: Transformers | | TABLE | 7 |
|------------------------------|---|--------|---------------------------------|----------------------|-------|--------------|
| Building Code: CBC 2 | VertiveEXM UPSSeismic Certification Limits: $S_{DS} = 1.93 g$ $S_{DS} = 1.93 g$ $Z/h = 0.0$ $I_P = 1.5$ Seismic Certification Limits: $S_{DS} = 1.93 g$ $Z/h = 0.0$ $I_P = 1.5$ Seismic Certification Limits: $S_{DS} = 1.93 g$ $Z/h = 0.0$ $I_P = 1.5$ Seismic Certification Limits: $S_{DS} = 1.93 g$ $Z/h = 0.0$ $I_P = 1.5$ Seismic Certification Limits: $S_{DS} = 1.93 g$ $Z/h = 0.0$ $I_P = 1.5$ Seismic Certification Limits: $S_{DS} = 1.93 g$ | | | | | |
| Component Type | Manufacturer | Model | - CODE | No | tes | UUT |
| Transformers | Vertiv – | | | Material: Cu Winding | | Interp. 2 |
| | | - SAMA | 2 | | | |
| | | O BY:N | lohammad Karim | | | |
| | | C DATE | : 08/12/2022 | | | |
| | | R | | | | |
| | | VIA | UILDING | | | |
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| <i>Manufacturer: Model Line:</i> | Vertiv Corporation EXM UPS | | Table Description: Accessories | | TABLE 8 |
|--------------------------------------|-------------------------------|--------------------|---|----------------------|---------|
| Building Code: CBC 2 | 022 | Seismic Certificat | ion Limits: $S_{DS} = 1.93 g z/h = 1.0$ $S_{DS} = 1.93 g z/h = 0.0$ | I _P = 1.5 | |
| Component Type | Manufacturer | Model | R CODE Description | Not | es UUT |
| Battery Monitoring System (BDSUI) | Alber | 1111-151 | Optional Battery Monitoring System, 4"x12"x17", 10 lbs. | | 1,2 |
| Global HMI Display | Vertiv | 2359456 | Used in both UPS Voltage models. | | 1,4 |
| DC Monitoring Display Vertiv | | 608195G1 | Used in 208V MBC, monitoring add-on | | 2,3 |
| | | | | | |
| | | BY:N | Aphammad Karim | | |
| | | | | | |
| | | DAT | E: 08/12/2022 | | |
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TRU COMPLIANCE

1701371-CR-001-R6

| UUT | Unit Description | Report Number | Testing Lab | Year Tested | ISO 17025 Accredited? | S _{DS} | z/h | ١ _P |
|------|--|----------------------|---|----------------|--------------------------|-----------------|------------|----------------|
| 1 | 480V EXM Lineup | 1701371-TR-002 R0 | 002 Engineering Research Center (PEER) | 2018 | Yes | 2.00 2.00 | 1.0 0.0 | 1.5 |
| 2 | 208V EXM Lineup | 1701371-TR-001 R1 | Pacific Earthquake Engineering Research Center (PEER) | 2018 | Yes | 2.08 2.08 | 1.0 0.0 | 1.5 |
| 3 | 208V 200kVA EXM UPS | 1701371-TR-001 R1 | Pacific Earthquake Engineering Research Center (PEER) | 2018 | Yes | 1.93 1.93 | 1.0 0.0 | 1.5 |
| 4 | 480V 250kVA EXM UPS | 1701371-TR-002 R0 | Pacific Earthquake Engineering Research Center (PEER) | 2018 | Yes | 1.93 1.93 | 1.0 0.0 | 1. |
| 5 | 208V 40kVA EXM UPS and 200MM MBC | Q1806.0 Rev.1 | Qual Tech NP by Curtiss-Wright | 2018 | Yes | 1.98 2.18 | 1.0 0.0 | 1. |
| 6 | 208 V 320 MM Battery Cabinet and 800 MM MBC | 1701371-TR-002 R0 | Pacific Earthquake Engineering Research Center (PEER) | 2018 | Yes | 2.20 2.20 | 1.0 0.0 | 1. |
| | | BY | lohammad Ka | rim | | | | |
| | | | | | | | | |
| | | | : 08/12/202 | 2 | 019 | | | |
| | | Contraction | | K | ~ | | | |
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1701371-CR-001-R6



| Manufacturer: | Vertiv Corp | poration | | | | | | Γ , | | - |
|--|--------------------|--|------------|---------------------|------------------------|--|---------------------------|------------------------|------------------------|------------------------|
| Model Line: | EXM UPS | | | | | | | Ľ | <u>. 101</u> | L |
| Model Number: | EXM 480V | Lineup | | | Serial N | umber: | N/A | | | |
| Product Constru | uction Summary | ·: | | | | | | | | |
| Carbon steel hou | sing, 16ga. Rear p | panel and door, 18ga. | . side pan | els | | | | | | |
| Options/Subcon | nponent Summa | ary: | | | | | | | | |
| Cabinets: 250kV/ | A UPS (MNL 51SN | 1250NAA01N96, SN: M | 18A2U008 | 8), 1200mm | າ Battery | Cabinet | (MN: 51BE | NXXE2L1 | 1009), 60(| 0mm |
| | | • | | | • | | | | | |
| - | | | | | | | • | 0 | | |
| •• | • | | D. [] | | | | | | • • | |
| PGF36120U33AYE | Ξ, LLF37060D88), | Battery Monitoring S | ystem -BI | SUI (Alber | :1111-15 | 1), Globa | al HMI Disp | olay (Verti | v: 235945 | 56) |
| | | IED. | | | Ms, | | | | | |
| | | | UUT Pr | operties | | | | | | |
| Weight | | Dimension (in) | Mark Marak | | | Lowes | t Natural | Frequen | cy (Hz) | |
| (lb) | Depth | Width | OSHe | ight 56 | Front | -Back | Side | -Side | Ver | tical |
| 7,186 | 39.0 | 103.6 | 79 | 9.0 | 8 | .2 | 7 | .8 | 10 |).9 |
| | | UUT Highest | Passed Se | eismic Run | Informa | ntion | | | | |
| Buildir | ng Code | Test Criter | ia | S _{DS} (g) | z/h | I _P | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
| СВС | . 2022 | | 56 08/ | 2.00 | $2\frac{1.0}{0.0}$ | 1.5 | 3.20 | 2.40 | 1.33 | 0.53 |
| Model Number: EXM 480V Lineup Serial Number: N/A Product Construction Summary: | | | | | | | | | | |
| Carbon steel housing, 16ga. Rear panel and door, 18ga. side panels | | | | | | | | | | |
| Maintenance Bypass Cabinet-MBC (SN: 51MBN45AAOR1009, SN: M18A660024) Subcomponents: Bypass Module (Vertiv:0235007L), Power Module (Vertiv: 023500LB), Batteries(C&D Technologies: UPS12- 150MR), Circuit Breakers (ABB: T6N600TWAS2, T6N800TW, T7\$1000BW, XT4NU3225AFF000XXX), Circuit Breakers (Square D: PGF36120U33AYE, LLF37060D88), Battery Monitoring System -BDSUI (Alber: 1111-151), Global HMI Display (Vertiv: 2359456) UUT Properties Weight Dimension (in) Lowest Natural Frequency (Hz) (lb) Depth Width Height Front-Back Side-Side Vertice 7,186 39.0 103.6 79.0 8.2 7.8 10.9 UUT Highest Passed Seismic Run Information Building Code Test Criteria Sps (g) Z/h Ip A _{FLX+I} (g) A _{RIG-H} (g) A _{FLX-V} (g) | | | | | | | | | | |
| | | | | ANALY | C + | | | | | |
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| 1 | | | | and the set | 1 | 2 | Contraction of the second | 1. 0 | 40 - St. 10- | I |
| | | | | | Front | mountin | g angles | | | |
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| | | The second | | | | | 128 | | | |
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| 1 | | and it. | | | the state | | | | | |
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UUT 1's cabinets were ganged together using four (4) M10 ganging bolts with lock and flat washer at each cabinet junction(front and back). Each cabinet was mounted using Vertiv's seismic mounting brackets (PN: 608812G1 or 605370G2). PN 605370G2 front mounting angles were attached to the cabinet with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. The back mounting angles were attached to the unit with four (4) M10 bolts with lock and flat washers. Cleats were placed over back mounting angles and were attached to the table using four (4) 5/8". 11 Grade 8 bolts with lock and flat washers. PN 608812G1 mounting kits were attached to the cabinets and table in the same manner but with three (3) and (4) M10 bolts per angle, two (2) 5/8"-11 Grade 8 bolts with lock and flat washers (front angle) and two (2) 5/8"-11 Grade 8 bolts with lock and flat washers per cleat (back).

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1701371-CR-001-R6



| | Vertiv Cor | poration | | | | | | 1117 | ว | |
|--|--------------------|-----------------------------------|--|-------------------------------------|--------------------------|---|---|---|-----------------------|--|
| Model Line: EXM UPS UUI 2 Model Number: EXM Lineup Serial Number: N/A Product Construction Summary: N/A Carbon steel housing, 16ga. rear panel and door, 18ga. side panels Descriptions/Subcomponent Summary: Carbon steel housing, 10ga. rear panel and door, 18ga. side panels N/A Descriptions/Subcomponent Summary: Stabinets: 208V 200 kVA UPS (MN: 47SN200UAC01009, SN:M18A1B0006), 880MM BC (MN:47BEUYA92L11009, SN: M18ACG0044), 208V DTC MN:47TXJ260BC0RS09, SN: M18A6U0006), 208V PBC 300MM (MN:47PLU8ACC1S1009, SN:M18A790001), 2208V PBC 800MM | | | | | | | | | | |
| Model Number: | EXM Line | цр | | Serial N | umber: | N/A | | | | |
| Product Constru | uction Summary | V: | | | | | | | | |
| Carbon steel hoι | ısing, 16ga. rear | panel and door, 18ga | a. side panels | | | | | | | |
| | - | | | | | | | | | |
| | | | | | | | | 14), 208V D | тс | |
| - | - | | | | - | | | | | |
| | |)5), BDC 225A (MN:47M | | | | | | | | |
| | | rtiv: 02359717), Bypass | | | | - | | | - | |
| | | eka-Unigy : HR5500), (C | - | | | | | | | |
| | | B: T3N225TWBAS2, T2 | | | | | | | | |
| ransformers (ven | (IV: 02-818060-00, | 02-818059-00), BDC Mo | initoring Display (vert | IV: 608195G | I), Batter | y Monitoring | g System (| vertiv: 111 | .1-151) | |
| | | NEL | | | | | | | | |
| | | | UUT Properties | | | | | | | |
| Weight | | Dimension (in) | un Warth March wheeler XX | | Lowes | st Natural | Frequen | cy (Hz) | | |
| (lb) | Depth | Width | OS Height 56 | Front | -Back | Side | -Side | Ver | tical | |
| (10) | Deptil | | 000000 | | | | | | | |
| 10,242 | 39.0 | 203.0 | 79.0 | | 5.7 | | .2 | 7 | .4 | |
| | - | 203.0 | | 6 | 5.7 | | .2 | 7 | .4 | |
| 10,242 | - | 203.0 | 79.0 Passed Seismic R | e un Inform | 5.7 | 9 | 1 | 7 A _{FLX-V} (g) | • | |
| 10,242 Buildi | 39.0 | 203.0 UUT Highest | 79.0 Passed Seismic R eria S _{DS} (g) 2.08 | e un Inform | ation | 9 | 1 | <u>ا</u> | • | |
| 10,242 Buildi | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic R ria Sps (g) 156 08/ 2.08 | e un Inform z/h 1.0 0.0 | .7 ation I₽ 1.5 | 9 А_{FLX-H} (g) 3.33 | А_{гід-н} (g) 2.50 | A_{FLX-V} (g) 1.39 | A _{RIG-V} (g | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic R ria S _{DS} (g) 156 8/ 2.08 | e un Inform z/h 1.0 0.0 | .7 ation I₽ 1.5 | 9 А_{FLX-H} (g) 3.33 | A _{RIG-H} (g) | A_{FLX-V} (g) 1.39 | A _{RIG-V} (g | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic R ria Sps (g) 156 08/ 2.08 | e un Inform z/h 1.0 0.0 | .7 ation I₽ 1.5 | 9 А_{FLX-H} (g) 3.33 | А_{гід-н} (g) 2.50 | A_{FLX-V} (g) 1.39 | A _{RIG-V} (§ | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic R ria Sps (g) 156 08/ 2.08 | e un Inform z/h 1.0 0.0 | .7 ation I₽ 1.5 | 9 А_{FLX-H} (g) 3.33 | А_{гід-н} (g) 2.50 | A_{FLX-V} (g) 1.39 | A _{RIG-V} (§ | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic Rest gria Sps (g) 156 2.08 Rear mounting ang | z/h 1.0 0.0 gle and clear | .7 ation I₽ 1.5 | 9 А _{FLX-H} (g) 3.33 М1 | A _{RIG-H} (g) 2.50 0 Ganging I | A _{FLX-V} (g) 1.39 Bolts | A _{RIG-V} (§ | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic R ria Sps (g) 156 08/ 2.08 | z/h 1.0 0.0 gle and clear | .7 ation I₽ 1.5 | 9 А _{FLX-H} (g) 3.33 М1 | А_{гід-н} (g) 2.50 | A _{FLX-V} (g) 1.39 Bolts | A _{RIG-V} (§ | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic Rest gria Sps (g) 156 2.08 Rear mounting ang | z/h 1.0 0.0 gle and clear | .7 ation I₽ 1.5 | 9 А _{FLX-H} (g) 3.33 М1 | A _{RIG-H} (g) 2.50 0 Ganging I | A _{FLX-V} (g) 1.39 Bolts | A _{RIG-V} (§ | |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic Rest gria Sps (g) 156 2.08 Rear mounting ang | z/h 1.0 0.0 gle and clear | .7 ation I₽ 1.5 | 9 А _{FLX-H} (g) 3.33 М1 | A _{RIG-H} (g) 2.50 0 Ganging I | A _{FLX-V} (g) 1.39 Bolts | A _{RIG-V} (| |
| 10,242 Buildi CBC | 39.0 ng Code | 203.0 UUT Highes Test Crite | 79.0 Passed Seismic Rest gria Sps (g) 156 2.08 Rear mounting ang | z/h 1.0 0.0 gle and clear | .7 ation I₽ 1.5 | 9 А _{FLX-H} (g) 3.33 М1 | A _{RIG-H} (g) 2.50 0 Ganging I | A _{FLX-V} (g) 1.39 Bolts | A _{RIG-V} (| |

Cabinets in UUT 2 were ganged together using four (4) M10 ganging bolts, lock washers and flat washer at each cabinet junction(front and back). Each cabinet was mounted using Vertiv's seismic mounting brackets: PN 605370G1, 605370G2, or 607949G1. PN 605370G2 front mounting angles were attached to the cabinet with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4): 5/8"-11 Grade 8 bolts, lock washers, and flat washers. Rear mounting angles were attached to the unit with four (4): M10 bolts, lock washers, and flat washers. Cleats were placed over rear mounting angles and were attached to the table using four (4): 5/8"-11 Grade 8 bolts, lock washers, and flat washers. PN 607949G1 mounting kits were attached to the cabinets and table in the same manner but with three (3) M10 bolts per angle and two (2) 5/8"-11 Grade 8 bolts, lock washers, and flat washers. PN 607949G1 mounting kits were attached to the cabinets and table in the same manner but with three (3) M10 bolts per angle and two (2) 5/8"-11 Grade 8 bolts, lock washers, and flat washers. The cabinet shake table with two (2): 5/8"-11 Grade 8 bolts, lock washers, and flat washers. The thumb screw will be fitted by manufacturer with (1) M6 thumb screw as an additional measure to secure doors. The thumb screw will be installed at the top corner of the front cabinet door on the same side as the door latch. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

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| Manufacturer: | Vertiv Co | rporatio | n | | | | | | 1 | JUT | 2 |
|-------------------|------------------|----------|---------------|------------------|--------------------|------------|----------------|------------------------|------------------------|------------------------|-----------------------|
| Model Line: | EXM UPS | | | | | | | | | | 5 |
| Model Number: | 47SN200U | JAC0110 | 00 | | | Serial N | umber: | M18A1B0 | 0004 | | |
| Product Constru | - | | | | | | | | | | |
| Carbon steel hous | sing, 16ga. rear | panel ar | nd door, 18ga | a. side panels | S | | | | | | |
| | | | | | | | | | | | |
| Options/Subcom | nonent Summ | arv | | | | | | | | | |
| Power Module (Ve | - | - | EnerSvs Dat | aSafe: 12HX | 540. Deka | -Unigy: H | IR5500. | C&D Techr | nologies: | UPS12-54 | OMR). |
| Bypass Module (V | | | | | | | | | lotogics. | 01012 01 | 01111, |
| | | - | | DCOI |)E a | | · | | | | |
| | | | F | JK COL | | | | | | | |
| | | | JEV I | | | Ys) | | | | | |
| | | Ľ | | UUT Prop | perties | | T | | | | |
| Weight | | Din | nension (in) | lmWerl/Maserlind | WXXXXXXXX | | Lowes | st Natural | Frequen | 1 | |
| (lb) | Depth | 8 | Width | OS Height 56 | | Front-Back | | Side-Side | | Vertical | |
| 1,753 | 39.0 | | 34.5 | 79. | | | .1 | 10 |).2 | 18 | 3.6 |
| | | | | t Passed Sei. | | Inform | ation | | | 1 | |
| Buildin | g Code | | Test Crite | eria | $S_{DS}(g)$ | z/h | I _P | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g |
| CBC | 2022 | | ICC-ESAC | 156 08/1 | $2^{1,93}_{1,202}$ | 2 1.0 | 1.5 | 3.09 | 2.32 | 1.29 | 0.52 |
| Toot Mountine D | ataila | Z | | | 1.93 | 0.0 | 6 | | | | |
| Test Mounting D | etails: | | T | | | ARD . | N/ | | | | |
| | | | P | | | Re | ar mou | nting angl | e and cle | eat | |
| | | | VIA | | | | | | | | |
| M6 Th | umb Screw | | | BUILD | NO | 1 | | | | 5 <u>5</u> 3 | |
| | | | | | | | | | | | |
| | ANNUAL COLOR | | | | | | | | 1 | | |
| | ebert.cxM | | - | | | | Front | mounting | g angle | | |
| | | / | 1 | | | | 1 | - | | | |
| | | 1 | | | | | | ©© | <u> </u> | • | - |
| | | | | | | 3 | | 3 | - | | |
| | | | | | | Nº 2 | | | | 0 | |

Seismic mount kit (PN 605370G2) front mounting angles were attached to the cabinet with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. The rear mounting angles was attached to the unit with four (4): M10 bolts, lock washers and flat washers. Cleats were placed over back mounting angles and were attached to the table using four (4): 5/8"-11 Grade 8 bolts, lock washers and flat washers. Each cabinet will be fitted by manufacturer with (1) M6 thumb screw as an additional measure to secure doors. The thumb screw will be installed at the top corner of the front cabinet door on the same side as the door latch.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1701371-CR-001-R6



| Manufacturer: | | rporation | | | | | JUT | Л |
|------------------|------------------|---|---|----------------------|-------------------------|--------------------------|------------------------|-----------------------|
| Model Line: | EXM UPS | | | | | | | 4 |
| Model Number: | | NAA01345 | | Serial Numb | <i>er:</i> M18A2L | 10006 | | |
| Product Constru | - | - | | | | | | |
| Carbon steel hou | sing, 16ga. Rear | r panel and door, 18g | a. side panels | | | | | |
| | | | | | | | | |
| Options/Subcon | nponent Summ | narv: | | | | | | |
| · · | - | - | tiv: 023500LB), Globa | l HMI Display | (Vertiv: 23594 | 156) | | |
| , | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | , | , | | |
| | | | RCODEC | | | | | |
| | | DFL | JK COBL (| DAA | | | | |
| | | NED | | MAS | | | | |
| | | <u> </u> | UUT Properties | <u> </u> | | | | |
| Weight | | Dimension (in) | | | west Natura | | 1 | |
| (lb) | Depth | Width | OS Height 56 | Front-Bac | 111 | Side-Side | | tical |
| 1,356 | 39.0 | 33.0 | 79.0 | 5.0 | | 7.7 | 2 | 0.2 |
| | | | t Passed Seismic Rur | | | | <u> </u> | <u> </u> |
| Buildir | g Code | Test Crite | | | P A _{FLX-H} (g |) A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g |
| CBC | 2022 | ICC-ESAC | $156 \ 08/12/202$ | $\frac{1.0}{2.00}$ 1 | .5 3.09 | 2.32 | 1.29 | 0.52 |
| Toot Mounting D | ataila | Z | 1.93 | 0.0 | | | | |
| Test Mounting D | etans: | | | | e, e, . | ×. | | |
| | | | | | 1 | | | |
| C. Hereiter | | VIA | | COV P | | | | - |
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| | | \\\\\\\Liebe | ert _e exm | | | | | |
| | | | Power System | | | | | |
| | | | | | | | | |
| | | MUMMUM | | | | | | |
| | | | | | | | | 2 |
| | | | | | | | | |

Seismic mount kit (PN 605370G2) front mounting angles were attached to the cabinet with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. The back mounting angles were attached to the unit with four (4) M10 bolts with lock and flat washers. Cleats were placed over back mounting angles and were attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. PN 605370G1 mounting kits were attached to the cabinets and table in the same manner but with three (3) M10 bolts per angle, two (2) 5/8"-11 Grade 8 bolts with lock and flat washers per cleat (back). Front skin of MBC attached using one (1) self tapping 1/4" screw at upper right corner of door.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

1701371-CR-001-R6



| Manufacturer: | Vertiv Corp | oration | | | | | | | | - |
|-----------------------|---------------------|---------------------|------------------|----------------------|------------|----------------|------------------------|------------------------|------------------------|-----------------------|
| Model Line: | EXM UPS | | | | | | | | JUT | 5 |
| Model Number: | EXM UPS 20 | 08V w/200mm Batte | ry Cabinet | t | Serial N | umber: | 47SA03DA | CM0QS ar | nd M17HZ | B0074 |
| Product Constru | uction Summary: | | | | | | | | | |
| Carbon steel hou | ising, 16ga. Rear p | anel and door, 18ga | . side pane | els | | | | | | |
| | | | | | | | | | | |
| Options/Subcor | nponent Summal | ry: | | | | | | | | |
| | = | emens Circuit Break | (er (HFK3B | 3225MA2RI | EX6), Batt | teries - Ei | nerSys Dat | a Safe (12 | 2HX205) | |
| | | | | | | | | | | |
| | | - (| RCO | DEC | | | | | | |
| | | EDFC | | operties | Ms | | | | | |
| Weight | | Dimension (in) | | | | Lowes | st Natural | Frequen | cy (Hz) | |
| (lb) | Depth | Width | n Height | | Front-Back | | Side-Side | | Ver | tical |
| 2,031 | 39.1 | 31.8 | OSP ₇ | 9.3556 | 1. | 3.6 | 6 | .9 | 24 | 4.7 |
| | | UUT Highest | Passed Se | eismic Rul | n Inform | ation | | - | | |
| Buildi | ng Code | Test Crite | fið hamn | S _{DS} (g) | rinz/h | I _P | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (|
| СВС | 2022 | ICC-ES AC1 | .56 | 1.98 | 1.0 | 1.5 | 3.17 | 2.38 | 1.46 | 0.59 |
| | | DATI | : 08/ | $\frac{2.18}{2/202}$ | 2 0.0 | Vo l | | | | <u> </u> |
| Test Mounting L | Details: | Z | <u>seaaaaaaa</u> | 3333333333 | R | ear moi | unting an | gle and | cleat | |
| | 9° | NORMAN A | | | | No | | | . 1 | |
| | | | | | 1.3 | | Ö | 0 | C - | |
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| | | | | | HIII | | | | | |
| | | 8 | | | | | | | All and a second | |
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| | | | and the second | 1 | 10 - 10 | a de | in | - | | |
| and the second second | | | | 1. | | .0 | | | | Contraction of the |

Seismic mounting kit (P/N 605370G1) front mounting angle was attached to the UPS with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. Each back mounting angle was attached to the UPS unit with four (4) M10 bolts with lock and flat washers. Cleats were placed over back mounting angles and were attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. Seismic mounting kit (P/N 607949G2) for the MBC cabinet, was attached to the cabinets and table in the same manner but with three (3) M10 bolts per angle, two (2) 5/8"-11 Grade 8 bolts with lock and flat washers bolts with lock and flat washers per cleat (back). Front skin of MBC attached using two(2)M6 x 35mm cap screws.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

OSP-0556

1701371-CR-001-R6



| Manufacturer: | Vertiv Co | rporatio | 'n | | | | | | | | r | |
|---|-------------------|----------------------|---------------------------------------|--------------|---------------------|-----------|----------------|------------------------|------------------------|------------------------|-----------------------|--|
| Model Line: | EXM UPS | | | | | | | | | JUT | 6 | |
| Model Number: | EXM 208\ | / Lineup | | | | Serial N | umber: | N/A | | | | |
| Product Constru | uction Summar | y: | | | | | | | | | | |
| Carbon steel hou | ısing, 16ga. Rear | [.] panel a | nd door, 18ga | ı. side pa | nels | | | | | | | |
| | | | | | | | | | | | | |
| Ontions/Cubes | | | | | | | | | | | | |
| <i>Options/Subcor</i> Cabinets: 208V 3 | = | - | /NI·47RPEMX5 | 21 10582 | SN-M18FCG | 0026) an | 4 208V 8 | 00MM Maii | ntonanco | Bynass | ahinot | |
| (MN: 47MBU48C0 | | | | 2210302 | SN.MIOLCO | 0020) an | u 200 v 0 | | internative | bypass c | abiliet | |
| Subcomponents | | | | 50E, 12H | X205-FR) an | d (Deka-l | Jnigy: HI | R1500) | | | | |
| • | , | , | FC | RCC | JDF C | 2 | 0, | , | | | | |
| | | | EQ. | | | MS | | | | | | |
| | | | S. | υυτ Ρ | roperties | | | | | | | |
| Weight | | Dir | nension (in) | | <u> </u> | | Lowes | st Natural | Frequen | cy (Hz) | | |
| (lb) | Depth | 4 | Width | OSR | eight 56 | Front | -Back | Side | -Side | Ver | ertical | |
| 1,830 | 39.0 | | 44.0 | | 79.0 | 5 | .5 | 9 | .2 | 12 | 2.8 | |
| | | | UUT Highest | Passed S | Seismic Rur | Informa | ntion | | | | - | |
| Buildi | ng Code | | Test Crite | ria | S _{DS} (g) | z/h | I _P | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g | |
| CBC | 2022 | | ICC-ESAC1 | 56 08 | /1 2.20 | 2 1.0 | 1.5 | 3.52 | 2.64 | 1.47 | 0.59 | |
| | | Y | C C C C C C C C C C C C C C C C C C C | | 2.20 | 0.0 | 10 | 0.01 | 2.0.1 | | 0.00 | |
| Test Mounting L | Details: | | | | | | ~ | | | | | |
| 1 | | | Rear m | nounting | angles | | | Front | mounti | ng | | |
| A | | | | and clear | | -02 | | á | angles | | | |
| | | 10 | A | SLITI | DING | | 10 million | | | | | |
| | | | | OIL | UIN | 1 1 | | | | | 11 /. | |
| | | 2 | | | | | | | | 0 0 | | |
| | | | | - | | / | • | San Sta | | | 4 | |
| and the second se | | - | | | No. | 1 | | 10 | | 24 | | |
| - Mar | | | 1 | 1 | Ser and | 1. | | | | | | |
| | | | | 1000 | | | | Contraction of the | | State State State | | |

UUT 6's cabinets were ganged together using four (4) M10 ganging bolts with lock and flat washer at each cabinet junction(front and back). Each cabinet was mounted using Vertiv's seismic mounting brackets (PN: 607962G1 or 605370G2). PN 605370G2 front mounting angles were attached to the cabinet with eight (8) M10 bolts with lock and flat washers and attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. The back mounting angles were attached to the unit with four (4) M10 bolts with lock and flat washers. Cleats were placed over back mounting angles and were attached to the table using four (4) 5/8"-11 Grade 8 bolts with lock and flat washers. PN 607962G1 mounting kits were attached to the cabinets and table in the same manner but with three (3) M10 bolts per angle, two (2) 5/8"-11 Grade 8 bolts with lock and flat washers (front angle) and two (2) 5/8"-11 Grade 8 bolts with lock and flat washers per cleat (back).

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.