



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

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

OFFICE USE ONLY

APPLICATION #: OSP-0529

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: RPS S.p.A

Manufacturer's Technical Representative: Nicola Caglia

Mailing Address: Viale Europa, 7, 37045 Legnago VR, Italy

Telephone: (390) 266-3271

Email: n.caglia@riello-ups.com

Product Information

Product Name: UPS and Batteries

Product Type: UPS

Product Model Number: Master HP UL

General Description: Uninterruptible power supplies containing fans, power and bypass modules, inductors, switches, transformers, fuse & fuse holders, terminal blocks, capacitors, contactors, and bus bars.

Mounting Description: Rigid, Base Mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: The VMC Group

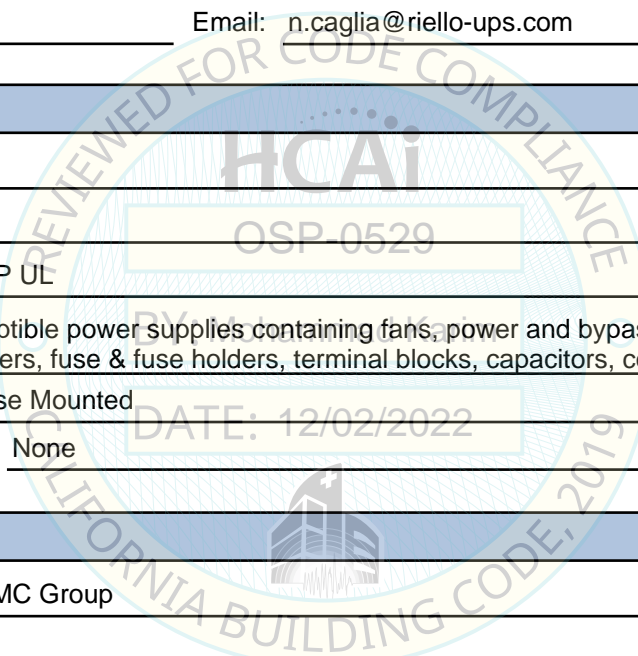
Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: john.giuliano@thvmcgroup.com

Title: President





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

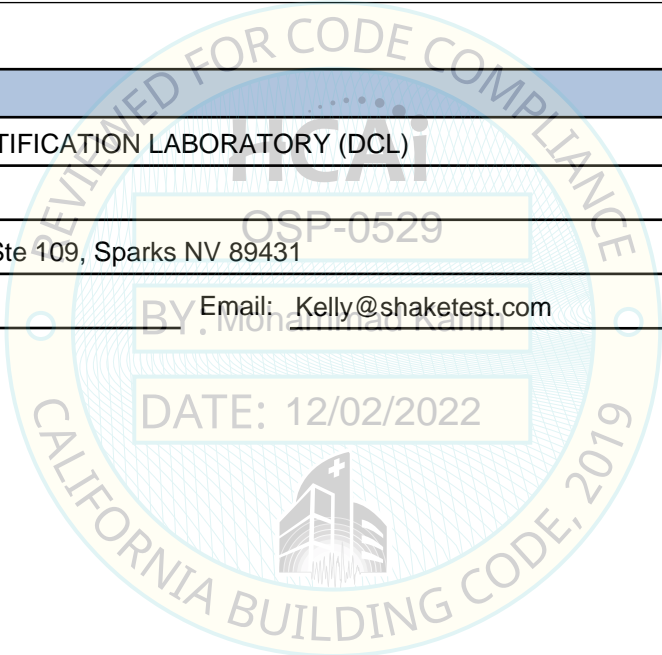
Company Name: THE VMC GROUP
Name: Kenneth Tarlow California License Number: S2851
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)
Contact Person: Kelly Laplace
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431
Telephone: (775) 358-5085 Email: Kelly@shaketest.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.13 for SDS=2.5 at z/h=0 and 1.44 for SDS=2.0 at z/h=1.0

SDS (Design spectral response acceleration at short period, g) = 2.50 at z/h =0 and 2.00 at z/h=1.0

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 12/02/2028

Date: 12/2/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 12/02/2022

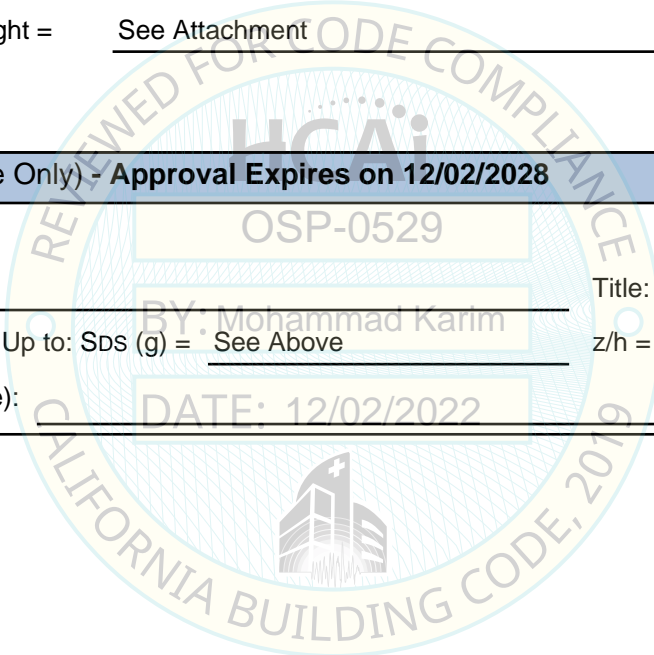


Table 1 - Certified Uninterruptable Power Supplies Matrix

Model Number	Rating [kVA]	Input Voltage	Current [A]	Enclosure Material	NEMA Rating	Enclosure Dimensions [in]			Weight [lbs]	Manufacturer	UUT
						Height	Width	Depth			
DMHTK65GNB94	65	480V	125	Galvanized Carbon Steel	1	75	31.5	33.5	1,500	Riello	Extrapolated
DMHTK80GNB94	80		150			75	31.5	33.5	1,500		Extrapolated
EMHTM10GNB94	100		175			75	31.5	33.5	1,610		Extrapolated
EMHTM13GNB94 (FLU-125-00-S)	125		200			75	31.4	33.5	1,750		UUT-01
EMHTM16HNB94	160		300			75	39.4	35.9	1,852		Interpolated
EMHTM16HNB96	160		300			75	58.4	35.9	2,205		Interpolated
EMHTM20HNB94	200		350			75	39.4	35.9	1,984		Interpolated
EMHTM20HNB96	200		350			75	58.4	35.9	2,337		Interpolated
FMHTM25HNB94	250		400			75	39.4	35.9	2,469		Interpolated
FMHTM25HNB96 (FLU-250-T-S)	250		400			75	58.4	35.9	2,700		UUT-02

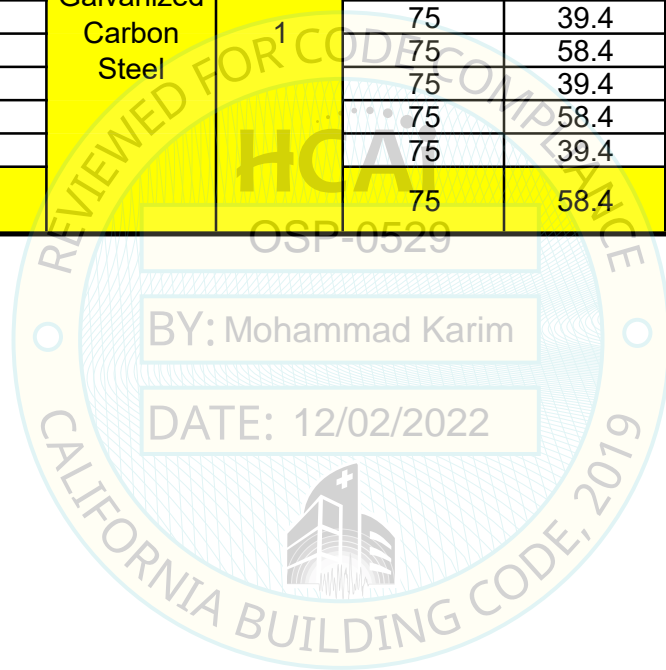


Table 2 - Certified Subcomponents: Fans & Motor Assemblies

Model	Rating	Manufacturer	Weight [lbs]	UUT
W2S130-AA03-01	223CFM / 380m ³ /h	Ebm-Papst	2.4	UUT-01
W2E200-HK38-01	544CFM / 925m ³ /h		4.6	UUT-01, UUT-02

Table 3 - Certified Subcomponents: Power Modules

Model	Rating	Manufacturer	Weight [lbs]	UUT
SEMIX 223GB12E4	1200V 200A	SEMIKRON	0.7	Extrapolated
SEMIX 303GB12E4	1200V 300A		0.7	UUT-01
SEMIX 453GB12E4	1200V 450A		0.7	UUT-02
CM200DX-24S	1200V 200A	MITSUBISHI	0.8	Extrapolated
CM300DX-24S	1200V 300A		0.8	UUT-01
CM450DX-24S	1200V 450A		0.8	UUT-02

Table 4 - Certified Subcomponents: Bypass Modules

Model	Rating	Manufacturer	Weight [lbs]	UUT
SKKT 162/16E	SCR 1200V 160A	SEMIKRON	0.4	UUT-01
SKKT273/16E	SCR 1400V 250A		0.9	UUT-02

Table 5 - Certified Subcomponents: Inductors

Model	Rating	Manufacturer	Weight [lbs]	UUT
C7387	185uH - 110A	ELETTROMIL	29.0	Extrapolated
C7391	0.15mH - 145A		30.9	Extrapolated
C7043	0.125mH - 170A		30.9	UUT-01
C8321/0	0.095mH - 215A		37.5	Interpolated
C8328/0	0.075mH - 270A		41.9	Interpolated
C7849	0.06mH - 335A		61.7	UUT-02
C7386	1.125mH - 110A		62.0	Interpolated
C7390	0.72mH - 240 DC		70.6	Interpolated
C7042	0.6mH - 295A DC		79.4	UUT-01
C8323/0	0.47mH - 380A DC		94.8	Interpolated
C7385	900uH - 190A DC		104.0	Interpolated
C8324/0	0.375mH - 475A DC		110.3	Interpolated
C8065/0	0.3mH - 590A DC		110.3	UUT-02
C7389	0.90mH - 145A		114.7	Interpolated
C7041	0.75mH - 170A		127.9	UUT-01
C8327/0	0.55mH - 215A		154.4	Interpolated
C8322/0	0.45mH - 270A		172.0	Interpolated
C7850	0.34mH - 335A		198.5	UUT-02

Table 6 - Certified Subcomponents: Switches

Model	Rating	Manufacturer	Weight [lbs]	UUT
OT160E3	125A 600V	ABB	2.2	Extrapolated
OT200U03P	200A 600V		4.0	UUT-01
OT400U03P	400A 600V		7.5	UUT-02

Table 7 - Certified Subcomponents: Terminal Blocks

Model	Rating	Manufacturer	Weight [lbs]	UUT
BP100	20 A	CABUR	< 0.2	UUT-01, UUT-02

Table 8 - Certified Subcomponents: Transformers

Model	Rating	Material	Manufacturer	Weight [lbs]	UUT
C7384	80kVA	Aluminum	ELETTROMIL	629.0	Extrapolated
C7388	100kVA		ELETTROMIL	694.6	Extrapolated
C7040	125kVA		ELETTROMIL	771.8	UUT-01
C8325/0	160kVA		ELETTROMIL	771.8	Interpolated
C8326/0	200kVA		ELETTROMIL	860.0	Interpolated
C7848	250kVA		ELETTROMIL	1014.3	UUT-02
95945403	TRASF 100VA230-400/400V 50-60	Copper	P.M.A.	4.4	UUT-01, UUT-02
95945402	TRASF 100VA 230-480/400 50-60		P.M.A.	4.4	UUT-01, UUT-02
95980010	AUTOT.3F+N 440-480/400V 1k2VA		P.M.A.	8.8	UUT-01, UUT-02

Table 9 - Certified Subcomponents: Current Transformers

Model	Rating	Manufacturer	Weight [lbs]	UUT
HAS 200-S	SENSOR CORR OPEN LOOP 200A	LEM	< 0.2	Extrapolated
HAS 300-S	SENSOR CORR OPEN LOOP 300A		< 0.2	UUT-01
HAS 500-S	SENSOR CORR OPEN LOOP 500A		< 0.2	UUT-02
151085	TA 200/0.2A	SIRIO	0.8	UUT-01
150461	TA 400/0.2A		0.8	UUT-01, UUT-02

Table 10 - Certified Subcomponents: Fuse Holders

Model	Rating	Manufacturer	Weight [lbs]	UUT
B305050	690V - 32A	FERRAZ	< 0.2	UUT-01, UUT-02
USCC1	600V - 30A		< 0.2	UUT-02
002541000	690V - 32A	ETI	< 0.2	UUT-01, UUT-02

Table 11 - Certified Subcomponents: Capacitors

Model	Material	Manufacturer	Weight [lbs]	UUT
416.84.4180	Polyurethane Resin / PPM Film	DUCATI	0.9	Extrapolated
416.84.4310			1.2	UUT-01
416.84.4521			2.0	UUT-02
416.84.3631			2.0	Interpolated
416.84.3691			2.0	Interpolated
416.84.3751			2.4	UUT-01, UUT-02
APUX472X450DJ1	Aluminium Electrolytic	ITELCOND	2.5	Extrapolated
APUX682X450DJ1			2.5	UUT-01
APUX103X450DJ1			2.5	UUT-02

Table 12 - Certified Subcomponents: Contactors

Model	Rating	Manufacturer	Weight [lbs]	UUT
3RT1015-1BB41	15A - 24Vdc	SIEMENS	0.6	UUT-01, UUT-02
3RT1054-6AP36	160A - 220V		7.0	Interpolated
3RT1055-6AP36	185A - 220V		7.1	UUT-01
3RT1064-6AP36	275A - 220V		13.7	Interpolated
3RT1065-6AP36	330A - 220V		14.0	Interpolated
3RT1466-6AP36	400A - 220V		14.0	UUT-02

Table 13 - Certified Subcomponents: Fuses

Model	Rating	Manufacturer	Weight [lbs]	UUT
KTK-R-4/10	400mA CC 600Vac 10x38	BUSSMANN	< 0.2	UUT-02
170M1318*	125A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1368**	125A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1319*	160A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1369**	160A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1320*	200A aR 700Vdc 200kA	BUSSMANN	0.3	UUT-01, UUT-02
170M1370**	200A aR 700Vdc 200kA	BUSSMANN	0.3	UUT-01, UUT-02
170M1321	250A aR 690Vac 200kA	BUSSMANN	0.3	Interpolated
170M1321*	250A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1371**	250A aR 700Vdc 200kA	BUSSMANN	0.3	Interpolated
170M1322	315A aR 690Vac 200kA	BUSSMANN	0.3	UUT-02
170M1322*	315A aR 700Vdc 200kA	BUSSMANN	0.3	UUT-01
170M1372**	315A aR 700Vdc 200kA	BUSSMANN	0.3	UUT-01
170M2620**	350A aR 690Vac 200kA	BUSSMANN	0.3	UUT-02
170M2670***	350A aR 690Vac 200kA	BUSSMANN	0.3	UUT-02
002625102	4A gR 900Vdc 10x38	ETI	< 0.2	UUT-01, UUT-02
ATQR-4/10	400mA CC 600Vac 10x38	FERRAZ	< 0.2	UUT-02
Q1014567	2A gR 690v 10x38	FERRAZ	< 0.2	UUT-02
W1014572	4A gR 690V 10x38	FERRAZ	< 0.2	UUT-01, UUT-02
DCT4-2	4A gR 900Vdc 10x38	FERRAZ	< 0.2	UUT-01, UUT-02
M330038	125A aR 690V 200kA	FERRAZ	0.3	Interpolated
N330039	160A aR 690V 200kA	FERRAZ	0.3	Interpolated
P330040	200A aR 690V 200kA	FERRAZ	0.3	UUT-01
Q330041	250A aR 690Vac 200kA	FERRAZ	0.3	Interpolated
R330042	315A aR 690Vac 200kA	FERRAZ	0.3	UUT-02
50 179 06.2	2A gR 690v 10x38	SIBA	< 0.2	UUT-02
50 179 06.4	4A gR 690V 10x38	SIBA	< 0.2	UUT-01, UUT-02
50 215 26.4	4A gR 900Vdc 10x38	SIBA	< 0.2	UUT-01, UUT-02
20 292 21.125*	125A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 20.125**	125A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 21.160*	160A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 20.160**	160A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 21.200*	200A aR 700Vdc 200kA	SIBA	0.3	UUT-01, UUT-02
20 292 20.200**	200A aR 700Vdc 200kA	SIBA	0.3	UUT-01, UUT-02
20 292 21.250*	250A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 20.250**	250A aR 700Vdc 200kA	SIBA	0.3	Interpolated
20 292 21.315*	315A aR 700Vdc 200kA	SIBA	0.3	UUT-01
20 292 20.315**	315A aR 700Vdc 200kA	SIBA	0.3	UUT-01
20 189 21.350*	350A aR 690Vac 200kA	SIBA	0.3	UUT-02
20 189 20.350**	350A aR 690Vac 200kA	SIBA	0.3	UUT-02

Notes

1. * - No Indicator
2. ** - With Visual Indicator
3. *** - Type T Indicator (microswitch)

Table 14 - Certified Subcomponents: Bus Bars

Part Number	Description	Material	Manufacturer	Weight [lbs]	UUT
0SBAA0028A	BARRA CU ALT-1 MOD.INV MPS HP	Copper	Riello	0.2	UUT-01, UUT-02
0SBAA0031A	BARRA CU N-COND.INV MPS HP			0.2	UUT-01, UUT-02
0SBAA0096A	BARRA CU COMM ALT-1 MPS HP120			0.2	UUT-01
0SBAA0097A	BARRA CU COMM ALT-2 MPS HP120			0.2	UUT-01
0ULSBAA0001A	BARRA CU TERRA			0.4	UUT-01
0ULSBAA0002A	BARRA CU INPUT 1 FASE A			0.7	UUT-01
0ULSBAA0003A	BARRA CU INPUT 1 FASE B			0.4	UUT-01
0ULSBAA0004A	BARRA CU INPUT 1 FASE C			0.4	UUT-01
0ULSBAA0005A	BARRA CU INPUT FASE N			0.2	UUT-01
0ULSBAA0006A	BARRA CU OUTPUT FASE N			0.4	UUT-01
0ULSBAA0007A	BARRA CU INPUT 2 FASE C			0.2	UUT-01
0ULSBAA0008A	BARRA CU INPUT 2 FASE B			0.2	UUT-01
0ULSBAA0009A	BARRA CU INPUT 2 FASE A			0.1	UUT-01
0ULSBAA0010A	BARRA CU IN/OUT			0.2	UUT-01
0ULSBAA0011A	BARRA CU SHUNT N > TERRA			0.2	UUT-01
0ULSBAA0012A	BARRA CU +/- BATTERIA			1.3	UUT-01
0ULSBAA0013A	BARRA CU COLL TL OUT			0.2	UUT-01
0ULSBAA0014A	BARRA CU NEUTRO			0.7	UUT-01
0ULSBAA0015A	BARRA CU INPUT 1-2 FASE A			0.2	UUT-01
0ULSBAA0016A	BARRA CU COLL TL IN			0.2	UUT-01
0ULSBAA0017A	BARRA CU INPUT 1-3 FASE B			0.2	UUT-01
0ULSBAA0018A	BARRA CU SUPP LEM			0.1	UUT-01
0ULSBAA0019A	BARRA CU Neg Input Fusibile			0.2	UUT-01
0ULSBAA0020A	BARRA CU NEG OUTPUT FUSIBILE			0.2	UUT-01
0ULSBAA0021A	BARRA CU NEG MOD INV/RD			0.7	UUT-01, UUT-02
0ULSBAA0022A	BARRA CU POS MOD INV/RD			0.7	UUT-01, UUT-02
0ULSBAA0024A	BARRA CU NEG COND INV/RAD			0.7	UUT-01, UUT-02
0ULSBAA0025A	BARRA CU POS COND INV/RD			0.4	UUT-01, UUT-02
0ULSBAA0026A	BARRA CU INPUT 1-2 FASE B			0.4	UUT-01
0ULSBAA0027A	BARRA CU INPUT 1-3 FASE C			0.1	UUT-01
0ULSBAA0028A	BARRA CU INPUT 1-2 FASE C			0.2	UUT-01
0ULSBAA0029A	BARRA CU OUTPUT 1 FASE A			0.9	UUT-01
0ULSBAA0030A	BARRA CU OUTPUT 2 FASE A			0.2	UUT-01
0ULSBAA0031A	BARRA CU OUTPUT 3 FASE A			0.2	UUT-01
0ULSBAA0032A	BARRA CU OUTPUT 1 FASE B			0.7	UUT-01
0ULSBAA0033A	BARRA CU OUTPUT 2 FASE B			0.2	UUT-01
0ULSBAA0034A	BARRA CU OUTPUT 3 FASE B			0.4	UUT-01
0ULSBAA0035A	BARRA CU OUTPUT 1 FASE C			0.2	UUT-01
0ULSBAA0036A	BARRA CU OUTPUT 2 FASE C			0.4	UUT-01
0ULSBAA0037A	BARRA CU OUTPUT 3 FASE C			0.2	UUT-01
0ULSBAA0038A	BARRA CU COM MODULI			0.4	UUT-01
0ULSBAA0039A	BARRA CU COMM ALT HIP 125 UL			0.2	UUT-01
0ULSBAA0040A	BARRA CU NEG TY1 MOD INV			0.2	UUT-01
0ULSBAA0041B	BARRA CU POS MOD INV			0.2	UUT-01
0ULSBAA0042A	BARRA CU NEG TY2 MOD INV			0.2	UUT-01
0ULSBAA0043A	BARRA CU DA SW A COM STAT			1.1	UUT-01
0ULSBAA0044A	BARRA CU ALT-2 MOD RD-INV HIP			0.2	UUT-01
0ULSBAA0045A	BARRA CU ALT-1 MOD RD-INV HIP			0.1	UUT-01
0ULSBAA0046A	BARRA CU GND SK FILTRO			0.1	UUT-01
0ULSBAA0047A	BARRA CU NEG MOD RD/BATT			0.2	UUT-01
0ULSBAA0048B	BARRA CU POS MOD RD/BATT			0.2	UUT-01
0ULSBAA0049A	BARRA CU COLL MODULI			0.1	UUT-01
0ULSBAA0050A	BARRA CU OUT FUSE FASE A	0.1	UUT-01		
0ULSBAA0051A	BARRA CU OUT FUSE FASE B	0.1	UUT-01		
0ULSBAA0052A	BARRA CU OUT FUSE FASE C	0.1	UUT-01		
0ULSBAA0053A	BARRA CU FASE A	0.1	Interpolated		

Table 14 - Certified Subcomponents: Bus Bars (Continued)

Part Number	Description	Material	Manufacturer	Weight [lbs]	UUT
0ULSBAA0054A	BARRA CU FASE B	Copper	Riello	0.1	Interpolated
0ULSBAA0055A	BARRA CU FASE C			0.1	Interpolated
0ULSBAA0056A	BARRA CU BYPASS FASE A			0.1	Interpolated
0ULSBAA0057A	BARRA CU BYPASS IN FASE B			0.1	Interpolated
0ULSBAA0058A	BARRA CU BYPASS IN FASE C			0.1	Interpolated
0ULSBAA0059A	BARRA CU BYPASS OUT FASE B			0.1	Interpolated
0ULSBAA0060A	BARRA CU BYPASS OUT FASE C			0.1	Interpolated
0ULSBAA0061A	BARRA CU NEUTRO IN/OUT			0.1	Interpolated
0ULSBAA0062A	BARRA CU BOND N TERRA			0.1	Interpolated
0ULSBAA0063A	BARRA CU COMM INPUT			0.1	Interpolated
0ULSBAA0064A	BARRA CU +/- BATTERIA 80			0.1	Interpolated
0ULSBAA0065A	BARRA CU ALT-3 MOD INV MHT			0.1	UUT-02
0ULSBAA0066A	BARRA CU MOD COM ST-1 MHT			0.1	UUT-02
0ULSBAA0067A	BARRA CU MOD COM ST-2 MHT			0.7	UUT-02
0ULSBAA0068A	BARRA CU MOD COM ST-3 MHT			0.4	UUT-02
0ULSBAA0069A	BARRA CU MOD COM ST-4 MHT			0.2	UUT-02
0ULSBAA0070A	BARRA CU MOD COM ST-5 MHT			0.9	UUT-02
0ULSBAA0071A	BARRA CU MOD COM ST-6 MHT			0.4	UUT-02
0ULSBAA0072A	BARRA CU MOD COM ST-7 MHT			0.2	UUT-02
0ULSBAA0073A	BARRA CU NEG MOD INV SX			0.2	UUT-02
0ULSBAA0074A	BARRA CU POS MOD INV SX			0.2	UUT-02
0ULSBAA0075A	BARRA CU POS MOD INV DX			0.2	UUT-02
0ULSBAA0076A	BARRA CU NEG MOD INV DX			0.2	UUT-02
0ULSBAA0077A	BARRA CU COM INV			0.1	UUT-02
0ULSBAA0078A	BARRA CU NEUTRO IN SK FILTRO			0.1	UUT-02
0ULSBAA0079A	BARRA CU NEUTRO INPUT			0.4	UUT-02
0ULSBAA0080A	BARRA CU BOND N - TERRA			0.1	Interpolated
0ULSBAA0081A	BARRA CU TERRA MHT UL			0.1	Interpolated
0ULSBAA0082A	BARRA CU POS BATT			1.3	UUT-02
0ULSBAA0083A	BARRA CU NEG BATT			1.3	UUT-02
0ULSBAA0084A	BARRA CU SWIN-SWOUT FASE A			0.4	UUT-02
0ULSBAA0085A	BARRA CU SWIN-SWOUT FASE B			0.7	UUT-02
0ULSBAA0086A	BARRA CU SWIN-SWOUT FASE C			0.7	UUT-02
0ULSBAA0087A	BARRA CU COLL TL IN FASE A			0.4	UUT-02
0ULSBAA0088A	BARRA CU COLL TL IN FASE B			0.4	UUT-02
0ULSBAA0089A	BARRA CU COLL TL IN FASE C			0.4	UUT-02
0ULSBAA0090A	BARRA CU TERRA SK FILTRO			0.1	UUT-02
0ULSBAA0091A	BARRA CU NEUTRO OUT SK FILTRO			0.1	UUT-02
0ULSBAA0092A	BARRA CU SWBY FASE A			0.1	UUT-02
0ULSBAA0093A	BARRA CU SWBY FASE B			0.1	UUT-02
0ULSBAA0094A	BARRA CU SWBY FASE C			0.1	UUT-02
0ULSBAA0095A	BARRA CU SWOUT FUSE			0.2	UUT-02
0ULSBAA0096A	BARRA CU COLL TL OUT FASE A			0.2	UUT-02
0ULSBAA0097A	BARRA CU COLL TL OUT FASE B			0.2	UUT-02
0ULSBAA0098A	BARRA CU COLL TL OUT FASE C			0.2	UUT-02
0ULSBAA0099A	BARRA CU COLL SWOUT CS			0.7	UUT-02
0ULSBAA0100A	BARRA CU NEUTRO OUTPUT			2.0	UUT-02
0ULSBAA0101A	BARRA CU NEG MODULI	1.8	UUT-02		
0ULSBAA0102A	BARRA CU POS MODULI	1.1	UUT-02		
0ULSBAA0103A	BARRA CU POS COLL MODULO	0.2	UUT-02		
0ULSBAA0104A	BARRA CU NEG COLL MODULO	0.1	UUT-02		
0ULSBAA0105A	BARRA CU NEG COLL MOD TY1	0.2	UUT-02		
0ULSBAA0105A	BARRA CU NEG COLL MOD TY1	0.2	UUT-02		

Table 14 - Certified Subcomponents: Bus Bars (Continued)

Part Number	Description	Material	Manufacturer	Weight [lbs]	UUT
0ULSBAA0106A	BARRA CU NEUTRO TCE	Copper	Riello	1.8	UUT-02
0ULSBAA0107A	BARRA CU BOND N-TERRA TCE			0.4	UUT-02
0ULSBAA0108A	BARRA CU POS TCE			1.1	UUT-02
0ULSBAA0109A	BARRA CU NEG TCE			0.7	UUT-02
0ULSBAA0110A	BARRA CU IN-OUT BATT TCE			1.8	UUT-02
0ULSBAA0111A	BARRA CU FASE A TCE			0.9	UUT-02
0ULSBAA0112A	BARRA CU FASE B TCE			0.7	UUT-02
0ULSBAA0113A	BARRA CU FASE C TCE			0.4	UUT-02
0ULSBAA0114A	BARRA CU IN-OUT FASE TCE			0.9	UUT-02
0ULSBAA0115A	BARRA CU OUT-BY TCE			0.2	UUT-02
0ULSBAA0116A	BARRA CU FASE C SWMB OUT TCE			2.0	UUT-02
0ULSBAA0117A	BARRA CU FASE B SWMB OUT TCE			2.0	UUT-02
0ULSBAA0118A	BARRA CU FASE A SWMB OUT TCE			1.8	UUT-02
0ULSBAA0119A	BARRA CU FASE C SWMB BY TCE			2.2	UUT-02
0ULSBAA0120A	BARRA CU FASE B SWMB BY TCE			2.2	UUT-02
0ULSBAA0121A	BARRA CU FASE A SWMB BY TCE			2.0	UUT-02
0ULSBAA0122A	BARRA CU COMM IN-BY TCE			0.9	UUT-02
0ULSBAA0123A	BARRA CU NEG COLL MOD TY2			0.7	UUT-02
0ULSBAA0124A	BARRA CU NEG COLL MOD TY3			0.4	UUT-02
0ULSBAA0136A	BARRA CU FLEX 32x1x5 L=730			2.2	UUT-02
0ULSBAA0137A	BARRA CU FLEX 32x1x5 L=500			1.8	UUT-02
0ULSBAA0141A	BARRA CU FLEX 20x1x4 L=290			0.4	UUT-02
0ULSBAA0142A	BARRA CU N OUTPUT N INPUT			0.2	UUT-02
0ULSBAA0143A	BARRA CU SWIN-SWBY FASE A			0.1	Interpolated
0ULSBAA0144A	BARRA CU SWIN-SWBY FASE B			0.1	Interpolated
0ULSBAA0145A	BARRA CU SWIN-SWBY FASE C			0.1	Interpolated
0ULSBAA0146A	BARRA CU INPUT COMM TY1			0.2	Interpolated
0ULSBAA0147A	BARRA CU INPUT COMM TY2			0.2	Interpolated
0ULSBAA0148A	BARRA CU NEG COLL MOD TY4			0.2	UUT-02
0ULSBAA0149A	BARRA CU SWIN FUSE			0.2	UUT-02
0ULSBAA0150A	BARRA CU SWOUT FUSE			0.2	UUT-02
0ULSBAA0155A	Barra Cu Flex 32x1x4 L=560			0.9	UUT-02
0ULSBAA0156A	Barra Cu Flex 32x1x4 L=500			1.3	UUT-02
0ULSBAA0157A	Barra Cu Flex 32x1x4 L=530			1.5	UUT-02
0ULSBAA0158A	BARRA CU PH A TL2-FUSE			0.4	UUT-02
0ULSBAA0159A	BARRA CU PH B TL2-FUSE			0.2	UUT-02
0ULSBAA0160A	BARRA CU PH C TL2-FUSE	0.4	UUT-02		
0ULSBAA0161A	BARRA CU PH A TL3-FUSE	0.2	UUT-02		
0ULSBAA0162A	BARRA CU PH B TL3-FUSE	0.2	UUT-02		
0ULSBAA0163A	BARRA CU PH C TL3-FUSE	0.2	UUT-02		
0ULSBAA0164A	BARRA CU BLOCCO FUSE MHT UL	0.1	UUT-02		
0ULSBAA0165A	BARRA CU BATT MOD RD-INV MHT	0.1	UUT-02		
0ULSBAA0166A	BARRA CU PIASTRA NEGATIVO MHT	0.4	UUT-02		
0ULSBAA0167A	BARRA CU IN BATT MHT	0.1	Extrapolated		

Table 15 - Certified Miscellaneous Subcomponents

Model	Description	Material	Manufacturer	Weight [lbs]	UUT
9L..2077.03.	MPS-HP Int.AC+RC SCR 80k	FR4 (fiberglass cloth with an epoxy resin)	Riello	0.5	Extrapolated
9L..2077.02.	MPS-HP Int.AC+RC SCR 100k		Riello	0.5	Extrapolated
9L..2077.01.	MPS-HP Int.AC+RC SCR 125k		Riello	0.5	UUT-01
9L..2077.04.	MPS-HP Int.AC+RC SCR 250k		Riello	0.5	UUT-02
9L..2108.03.	Board MHT Interf. V-I 100k PF 0.9		Riello	0.1	UUT-01, UUT-02
9L..2108.04.	Board MHT Interf. V-I 125k PF 0.9		Riello	0.1	UUT-01
9L..2108.01.	Board MHT Interf. V-I 160k PF 0.9		Riello	0.1	UUT-01, UUT-02
9L..2108.02.	Board MHT Interf. V-I 200k PF 0.9		Riello	0.1	UUT-01, UUT-02
9L..2108.05.	Board MHT Interf. V-I 250k PF 0.9		Riello	1.0	UUT-01, UUT-02
9LAB2090B01APT	Sentry can interface I/O Expander		Riello	0.5	UUT-01, UUT-02
9LAB2090B01BPT	Sentry can interface I/O Expander		Riello	0.5	UUT-01, UUT-02
9L..2074.01.	Suppressor Board		Riello	0.3	Interpolated
9L..2074.02.	Board filter X-Y		Riello	0.3	UUT-01
9L..2098.01.	Sentry Contactors single Driver MPS		Riello	0.4	Interpolated
9L..2128.01.	Board filter X-Y MPS		Riello	1.0	Interpolated
9L..2117.01	Board filter RF Battery		Riello	0.2	UUT-02
9L..2100.01.	Board filter EMC		Riello	0.3	UUT-01, UUT-02
9L..2102.01.	Sentry MPS Driver IGBT smd		Riello	0.1	UUT-01, UUT-02
9L..2120.01.	Board MPS Global power supply UL		Riello	2.0	UUT-01, UUT-02
9L..2034.01.	Board Parallel		Riello	0.2	UUT-01, UUT-02
9..2076.01.	Interf.contr.inv.SMT Coll		Riello	0.3	UUT-01, UUT-02
9..2032.01.	Sentry MS System Board		Riello	0.5	UUT-01, UUT-02
9..2112.01.	Sentry MPS IGBT rectifier control		Riello	0.6	UUT-01, UUT-02
9..2124.01.	MPS Control Board panel graph		Riello	0.2	UUT-01, UUT-02
9..2101.02.	S.MPS Parallel RJ45 Flat		Riello	0.1	UUT-01
9L..2113.01.	Board MPS RS-232		Riello	0.1	UUT-02
9L..2078.01	MPS static switch driver Sentry		Riello	0.3	UUT-01, UUT-02
9..2132.01.	Board Display graph 8 key ov. C		Riello	0.6	UUT-01, UUT-02
YSKCSA2AUL	SNMP Ethernet Card		Riello	0.3	UUT-01, UUT-02





UNIT UNDER TEST (UUT) Summary Sheet

UUT-1

Test Report: 97462-1502

Model Line	Model Number	Manufacturer
Master HP UL	EMHTM13GNB94 (FLU-125-00-S)	RPS S.p.A

Product Construction Summary

Galvanized Carbon Steel

Options / Subcomponent Summary

Fans & motors: 223 & 544 CFM / 380 & 925 m³/h; Power module:1200V/300A; Bypass Module:1200V/160A; Inductors:0,125mH-170A, 0,6mH-295A DC, 0,75mH-170A; switch:200A/600V; Transformer:125kVA; Current Transformers:300A, 500A, 200/0.2A; Fuse Holder:690V-32A; Terminal Block:20A; Capacitors: DUCATI & ITELCOND; Contactors:15A-24Vdc, 185A-220V; Fuses:Bussman, ETI, FERRAZ, SIBA; Bus Bars: See Table14.

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Width	Depth	Height	F-B	S-S	V
1,750	31.4	33.5	75.0	9.0	9.3	18.5

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-
		2.50	0.0	1.5	-	-	1.68	0.68

Test Mounting Details

UUT-1 was rigidly mounted to the shake table using (6) 3/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-2

Test Report: 97462-1502a

Model Line	Model Number	Manufacturer
Master HP UL	FMHTM25HNB96 (FLU-250-T-S)	RPS S.p.A

Product Construction Summary

Galvanized Carbon Steel

Options / Subcomponent Summary

Fan & motor: 544 CFM / 925 m3/h; Power module:1200V/450A; Bypass Module:1400V/250A;
 Inductors:0,06mH-335A, 0,3mH-590A DC, 0,34mH-335A; switch:400A/600V; Transformer:250kVA; Current Transformers:500A,
 400/0.2A; Fuse Holders:690V-32A, 600V-30A; Terminal Block:20A; Capacitors: DUCATI & ITELCOND; Contactors:15A-24Vdc,
 400A-220V; Fuses:Bussman, ETI, FERRAZ, SIBA; Bus Bars: See Table14.

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Width	Depth	Height	F-B	S-S	V
2,700	58.4	35.9	75.0	10.3	7.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-
		2.50	0.0	1.5	-	-	1.68	0.68

Test Mounting Details

UUT-2 was rigidly mounted to the shake table using (20) 3/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.