

PURE **Pb⁺**

PURE LEAD PLUS
The Smart Choice to Back you Up.

C&D
TECHNOLOGIES.

PLP

12-1121



BENEFITS



Reduce Operating Costs - Long life pure lead technology reduces battery replacements by up to 40% over traditional VRLA batteries*



Reduce Footprint - Extensive portfolio to reduce footprint by up to 28% and battery quantity by up to 40% vs leading competitors



Increased Reliability - Designed specifically for safely handling sub-5 minutes of runtime without sacrificing long-term performance



Reduce Cooling Costs - Save on cooling costs and improve your environmental footprint with improved temperature on standard warranty

*Assumes a replacement cycle based on standard warranty of 3 years for VRLA and 5 years for PLP over a 15-year UPS life

FEATURES

- 12+ year design life @ 25°C (77°F) with storage capability of 2 years at 25°C (77°F) with minimum upkeep
- Standard warranty of 5 years at 30°C (86 F)
- MSE's Advanced proprietary paste processing for high active material utilization resulting in low float
- Patented Long-Life Alloy in the grids to minimize grid growth, reduce gassing, and extend battery life
- Available in both Top terminal and TFA (True Front Access) formats
- Our TFA design maximizes energy density and minimizes internal resistance by providing a direct connection from the plates to the terminals
- Published rates down to 1 minute
- Patented UL Recognized Flame-arresting vents in each cell for safety
- Thermally welded and helium leak tested case-to-cover bond ensures a robust leak proof seal
- Can be operated in any orientation

TECHNICAL DATA

MODEL	CONSTANT CURRENT			CONSTANT POWER RATINGS		DIMENSIONS (L*W*H*TOTAL HEIGHT)								WEIGHT	
	C8 1.75 @25°C	C20 1.75 @25°C	C10 1.80 @20°C	5 MIN	15 MIN	LENGTH		WIDTH		HEIGHT		TOTAL HEIGHT		LBS	KG
						MM	Inches	MM	Inches	MM	Inches	MM	Inches		
UPS12-305PLP	74	78	69	571	315	260.9	10.3	173.4	6.8	200.3	7.9	203.5	8.0	58.4	26.5
UPS12-355PLP	88	94	83	685	366	305.8	12.0	173.4	6.8	201.6	7.9	204.8	8.1	67.4	30.5
UPS12-405PLP	95	104	90	710	402	340.9	13.4	172.7	6.8	213.2	8.4	216.4	8.5	75.8	34.4
UPS12-495PLP	130	140	123	813	492	344.7	13.6	172.7	6.8	274.5	10.8	277.7	10.9	100.0	45.4
UPS12-545PLP	137	146	128	920	542	344.7	13.6	172.7	6.8	274.5	10.8	277.7	10.9	100.0	45.4
UPS12-605PLP	139	148	132	969	603	344.7	13.6	172.7	6.8	274.5	10.8	277.7	10.9	109.0	49.4
UPS12-675PLPF	172	179	163	1100	671	559.0	22.0	125.0	4.9	278.7	11.0	278.7	11.0	124.6	56.50
UPS12-705PLPF	191	206	181	1166	707	559.0	22.0	125.0	4.9	320.0	12.6	320.0	12.6	149.0	67.5
UPS12-1005PLPF	238	254	227	1600	1010	559.0	22.0	154.0	6.1	320.0	12.6	320.0	12.6	188.0	85.3

ADDITIONAL DATA

MODEL	VOLTAGE	TERMINAL	CELLS PER UNIT	MAXIMUM DISCHARGE CURRENT (AMPS)	SHORT CIRCUIT CURRENT (AMPS @ 0.1 SEC)	TERMINAL TYPE	TERMINAL TORQUE
UPS12-305PLP	12	Top	6	800	3600	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-355PLP	12	Top	6	800	4200	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-405PLP	12	Top	6	800	4700	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-495PLP	12	Top	6	800	5000	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-545PLP	12	Top	6	800	5000	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-605PLP	12	Top	6	800	5000	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-675PLPF	12	Front	6	800	5100	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-705PLPF	12	Front	6	900	5500	1/4-20 UNC	110 in.-lbs. (12.4 N-m)
UPS12-1005PLPF	12	Front	6	1200	6048	Insert (M8)	160 in.-lbs (18 N-m)

Note: Additional product details available on the C&D Battery Sizing Program at www.cdstandbypower.net. Cabinet systems also available.

* Constant power ratings are to 1.67 VPC @ 77°F (25°C) and capacity rated to 1.75 VPC @ 77°F (25°C). Above ratings do not include interunit connector voltage drops.

** For reference only. Individual baselines recommended for diagnostic purposes.

SPECIFICATIONS

OPERATING TEMPERATURE RANGE WITH TEMPERATURE COMPENSATION	Discharge: -40°F (-40°C) to +140°F (+60°C) Charge: -10°F (-23°C) to +140°F (+60°C)
NOMINAL OPERATING TEMPERATURE RANGE	+74°F (+23°C) to +80°F (+27°C)
RECOMMENDED MAXIMUM CHARGING CURRENT LIMIT	C20/5 amperes (20 hr. rate)
FLOAT CHARGE VOLTAGE	13.65 ± 0.15 VDC average per 12V unit
MAXIMUM AC RIPPLE (CHARGER)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C/20 (20 hr. rate)
SELF DISCHARGE	Batteries can be stored up to 24 months at +77°F (+25°C) before freshening charge is required. Batteries stored at temperatures greater than +77°F (+25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D brochure 41-7272, Self-Discharge and Inventory Control for details.
EQUALIZE AND CYCLE SERVICE CHARGE VOLTAGE	14.40 to 14.80 VDC average per 12V unit @ +77°F (+25°C)
TERMINAL: INSERTED	Top Terminal Batteries: 1/4-20 UNC Bolt Front Terminal Batteries: 1/4-20 UNC Bolt / Insert (M8)
TERMINAL HARDWARE INITIAL TORQUE: INSERTED TERMINAL	Top Terminal Batteries: 110 in.-lbs (12.4 N-m) Front Terminal Batteries 160 in.-lbs (M8) or 110 in.-lbs (1/4-20)



FRONT TERMINAL

UPS12-675PLPF

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77F (+25C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75	1271	1189	1114	1046	985	761	622	528	409	308	248
1.70	1373	1287	1207	1134	1066	813	657	553	423	315	252
1.67	1504	1377	1270	1178	1100	831	671	565	431	319	254
1.65	1547	1414	1303	1207	1125	844	680	571	434	320	254
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	103.9	62.4	44.9	28.9	18.9	15.3	12.9	7.9	6.6		
1.85	117.2	69.1	49.4	31.6	20.6	16.7	14.1	8.6	7.2		
1.80	121.6	71.3	51.1	32.8	21.3	17.3	14.6	8.9	7.5		
1.75	125.6	72.7	51.9	33.1	21.5	17.4	14.7	9.0	7.5		

UPS12-705PLPF

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77F (+25C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					1074	808	636	550	441	334	274
1.70	1393	1393	1279	1175	1140	864	676	576	454	339	276
1.67	1425	1425	1308	1201	1166	910	707	589	458	342	277
1.65	1443	1443	1325	1217	1181	928	710	596	462	343	278
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	105.1	62.4	47.1	31.1	20.9	17.2	14.7	9.3	7.9		
1.85	121.0	69.8	50.3	32.9	22.1	18.2	15.5	9.7	8.2		
1.80	127.2	72.6	52.6	35.0	23.4	19.2	16.3	10.0	8.4		
1.75	134.7	75.2	54.4	36.0	23.9	19.6	16.6	10.3	8.7		

UPS12-1005PLPF

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77F (+25C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					1441	1112	917	771	596	436	349
1.70	1898	1898	1748	1612	1553	1195	993	810	612	446	357
1.67	1955	1955	1801	1660	1600	1230	1010	832	622	452	361
1.65	1992	1992	1835	1691	1630	1251	1025	842	629	456	363
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	148.5	84.7	60.6	39.1	25.6	20.9	17.8	11.1	9.4		
1.85	168.0	96.1	67.9	43.2	28.1	22.9	19.4	12.0	10.2		
1.80	181.1	102.0	71.3	45.0	29.3	23.9	20.2	12.5	10.6		
1.75	187.5	104.1	72.1	45.4	29.7	24.3	20.6	12.7	10.7		

UPS12-305PLP

TOP TERMINAL



END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					516	362	294	235	177	131	103
1.70	869	743	667	593	549	382	307	244	182	133	105
1.67	900	775	696	618	571	394	315	249	186	135	106
1.65	917	794	713	632	584	401	320	252	187	136	107
1.60	953	818	731	645	595	406	324	256	190	138	109
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	42.9	26.0	18.8	12.2	8.0	6.5	5.5	3.4	2.8		
1.85	49.1	28.5	20.2	12.9	8.5	6.9	5.8	3.6	3.0		
1.80	52.1	29.5	21.0	13.6	9.0	7.3	6.2	3.8	3.2		
1.75	53.1	30.1	21.5	14.0	9.3	7.5	6.4	3.9	3.3		

UPS12-355PLP

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					599	429	340	275	208	152	120
1.70	1006	873	782	701	659	454	353	283	213	155	122
1.67	1045	905	811	728	685	472	366	293	218	158	124
1.65	1074	933	837	751	707	485	375	299	222	160	125
1.60	1154	967	863	773	726	496	381	304	225	161	126
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	47.5	28.5	20.4	13.0	8.4	6.8	5.8	3.5	2.9		
1.85	53.7	32.0	23.1	15.2	10.2	8.4	7.1	4.4	3.8		
1.80	59.5	34.6	24.7	16.1	10.7	8.8	7.4	4.6	3.9		
1.75	62.8	36.5	26.1	16.8	11.0	9.0	7.6	4.7	4.0		

Note: Specifications subject to change without notification. Above ratings do not include interunit connector voltage drops.



UPS12-405PLP

TOP TERMINAL



END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					624	466	375	314	236	172	135
1.70	1115	931	824	746	684	495	392	326	244	177	139
1.67	1159	969	857	775	710	511	402	333	248	179	140
1.65	1204	1013	892	803	733	521	408	336	250	181	142
1.60	1286	1059	926	830	756	533	416	342	253	183	143
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	50.5	29.6	21.7	14.7	10.1	8.3	7.1	4.4	3.7		
1.85	57.4	34.2	24.5	16.0	10.8	8.9	7.6	4.8	4.1		
1.80	63.2	36.9	26.2	17.1	11.5	9.4	8.0	5.1	4.3		
1.75	67.9	38.6	27.5	17.9	11.9	9.8	8.3	5.2	4.4		

UPS12-495PLP

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					701	543	445	385	303	230	185
1.70	1070	972	893	823	776	589	471	404	314	236	189
1.67	1129	1023	938	863	813	612	492	416	321	239	191
1.65	1148	1051	966	888	835	627	502	424	326	242	193
1.60	1268	1117	1015	927	869	644	512	431	330	245	194
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	73.3	43.0	31.2	20.8	14.1	11.6	9.9	6.3	5.3		
1.85	82.3	48.5	34.9	22.8	15.2	12.5	10.6	6.6	5.6		
1.80	87.5	51.7	36.9	23.9	15.9	13.0	11.0	6.8	5.8		
1.75	92.3	53.9	38.3	24.7	16.3	13.3	11.3	7.0	5.9		

Note: Specifications subject to change without notification. Above ratings do not include interunit connector voltage drops.

UPS12-545PLP

TOP TERMINAL



END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					765	582	477	409	320	241	193
1.70	1207	1106	1003	925	874	643	517	437	334	248	197
1.67	1270	1158	1053	973	920	677	542	456	346	254	200
1.65	1331	1220	1105	1017	959	698	555	466	352	258	203
1.60	1367	1259	1137	1045	983	710	562	470	354	259	204
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	75.8	44.4	32.3	21.4	14.5	11.9	10.2	6.4	5.4		
1.85	84.1	49.6	35.7	23.4	15.7	12.9	11.0	6.9	5.8		
1.80	90.7	53.2	38.2	24.8	16.5	13.5	11.5	7.1	6.0		
1.75	99.8	57.0	40.4	26.0	17.1	14.0	11.8	7.3	6.2		

UPS12-605PLP

END POINT VOLTS/CELL	CONSTANT POWER DISCHARGE RATINGS - WATTS PER CELL @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN MINUTES)										
	1	2	3	4	5	10	15	20	30	45	60
1.75					868	690	557	465	352	261	209
1.70	1329	1202	1095	1006	946	727	582	479	358	263	210
1.67	1396	1261	1142	1047	969	753	603	496	366	267	212
1.65	1413	1277	1158	1061	990	761	606	499	368	268	213
1.60	1484	1337	1208	1106	1040	799	630	518	379	273	216
END POINT VOLTS/CELL	CONSTANT CURRENT DISCHARGE RATINGS - AMPS @ +77°F (+25°C)										
	OPERATING TIME TO END POINT VOLTAGE (IN HOURS)										
	1	2	3	5	8	10	12	20	24		
1.90	89.3	51.0	36.0	23.1	15.1	12.3	10.3	6.4	5.4		
1.85	98.0	55.1	38.8	25.1	16.5	13.3	11.2	6.9	5.8		
1.80	103.8	58.1	41.2	26.6	16.9	13.9	11.7	7.2	6.1		
1.75	104.8	59.0	41.7	26.7	17.4	14.4	11.9	7.4	6.2		

Note: Specifications subject to change without notification. Above ratings do not include interunit connector voltage drops.

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