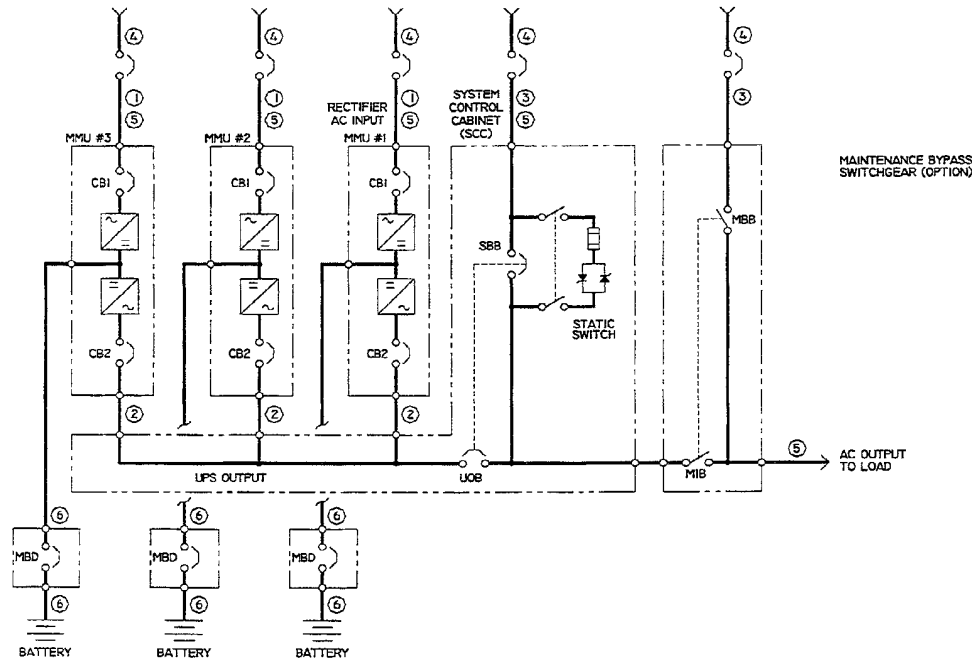


LIEBERT® SERIES 610™, 300-450kVA, MULTI-MODULE SYSTEMS - SITE PLANNING DATA



Notes for Tables 1 - 3

- Nominal rectifier AC input current (considered continuous) is based on full rated output load. Maximum current includes nominal input current and maximum battery recharge current (considered noncontinuous). Continuous and noncontinuous current limits are defined in NEC 100. Maximum input current is controlled by current limit setting which is adjustable. Values shown for maximum setting are 125% of nominal input current. Standard factory setting is 115%.
- Nominal AC output current (considered continuous) is based on full rated output load. Maximum current includes nominal output current and overload current for 10 minutes.
- Bypass AC input current (considered continuous) is based on full rated output load.
- Feeder protection (by others in external equipment) for rectifier AC input and bypass AC input is recommended to be provided by separate overcurrent protection devices.
- UPS output load cables must be run in separate conduit from input cables.
- Power cable from module DC bus to battery should be sized for a total maximum 2.0 volt line drop (power cable drop plus return cable drop as measured at the module) at maximum discharge current.
- Grounding conductors to be sized per NEC 250-122. Neutral conductors to be sized for full capacity—per NEC 310-15 (b)(4)—for systems with 4-wire loads and half capacity for systems with 3-wire loads.
NOTE: A neutral conductor is required from each Multi-Module Unit output to the System Control Cabinet and from each SCC to the Power-Tie™ cabinet, if applicable. See grounding diagrams in the Installation Manual.
- Rectifier AC Input: 3-phase, 3-wire, plus ground
AC Output to Load: 3-phase, 3- or 4-wire, plus ground
Bypass AC Input to SCC: 3-phase, 3- or 4-wire, plus ground
Module DC Input from Battery: 2-wire (positive and negative), plus ground
Module Input to SCC: 3-phase, 4-wire, plus ground
- All wiring is to be in accordance with National and Local Electrical Codes.
- Minimum overhead clearance is 2 ft. (0.6m) above the UPS.
- Top or bottom cable entry through removable access plates. Cut plate to suit conduit size.
- Control wiring and power cables must be run in separate conduits. Control wiring must be stranded tinned conductors.
- 7% maximum reflected input harmonic current and 0.92 lagging input power factor at full load with optional input filter.
- Dimensions and weights do not include the System Control Cabinet required for Multi-Module Systems.



Table 1 Site planning data—600V input

UPS Rating		AC Output Voltage	Options		Rectifier AC Input Current		Inverter Output Current		Required Battery Disconnect Rating (A)	Max. Battery Current at End of Discharge (A)	Max. Heat Dissipation Full Load BTU/h (kWH)	Dimensions	Approx. Weight Unpacked	Floor Loading Concentrated Loading
kVA	kW	VAC	Input Filter	Input Xformer	Nom	Max	Nom	Max				WxDxH: in. (mm)	lb. (kg)	lb./ft. ² (kg/m ²)
300	240	600	NO	NO	291	363	289	361	600	648	56,950 (16.7)	72x35x78 (1829x889x1981)	4550 (2064)	260 (1269)
300	240	600	YES	NO	269	337	289	361	600	648	59,750 (17.5)		4720 (2141)	270 (1318)
300	240	600	NO	YES	295	369	289	361	600	648	71,250 (20.9)	96x35x78 (2438x889x1981)	6450 (2926)	276 (1348)
300	240	600	YES	YES	274	342	289	361	600	648	74,150 (21.7)		6620 (3003)	284 (1387)
300	240	208	NO	NO	292	365	833	1041	600	651	61,650 (18.1)	72x35x78 (1829x889x1981)	5000 (2268)	286 (1396)
300	240	208	YES	NO	271	338	833	1041	600	651	64,500 (18.9)		5170 (2345)	295 (1440)
300	240	208	NO	YES	297	371	833	1041	600	651	76,100 (22.3)	96x35x78 (2438x889x1981)	7100 (3221)	304 (1484)
300	240	208	YES	YES	275	344	833	1041	600	651	79,050 (23.1)		7270 (3298)	312 (1523)
400	320	600	NO	NO	387	484	385	481	800	864	75,950 (22.2)	72x35x78 (1829x889x1981)	5350 (2427)	306 (1494)
400	320	600	YES	NO	359	449	385	481	800	864	79,700 (23.3)		5520 (2504)	315 (1538)
400	320	600	NO	YES	394	492	385	481	800	864	94,950 (27.8)	96x35x78 (2438x889x1981)	7250 (3289)	311 (1518)
400	320	600	YES	YES	365	456	385	481	800	864	98,855 (28.9)		7420 (3366)	318 (1553)
400	320	208	NO	NO	390	487	1110	1388	800	868	82,200 (24.1)	72x35x78 (1829x889x1981)	6050 (2744)	346 (1689)
400	320	208	YES	NO	361	451	1110	1388	800	868	86,000 (25.2)		6220 (2821)	355 (1733)
400	320	208	NO	YES	396	495	1110	1388	800	868	101,450 (29.7)	96x35x78 (2438x889x1981)	8150 (3697)	349 (1704)
400	320	208	YES	YES	367	459	1110	1388	800	868	105,400 (30.9)		8320 (3774)	357 (1743)
See Notes (p. 1):			13	—	1,4,5,7,8,9,11,12		2,3,5,7,8,9,11,12		6	6,8,9,11,12	—	14	14	—

Table 2 Site planning data—480V input

UPS Rating		AC Output Voltage	Options		Rectifier AC Input Current		Inverter Output Current		Required Battery Disconnect Rating (A)	Max. Battery Current at End of Discharge (A)	Max. Heat Dissipation Full Load BTU/h (kWH)	Dimensions	Approx. Weight Unpacked	Floor Loading Concentrated Loading
kVA	kW	VAC	Input Filter	Input Xformer	Nom	Max	Nom	Max				WxDxH: in. (mm)	lb. (kg)	lb./ft. ² (kg/m ²)
300	240	480	NO	NO	361	452	361	451	600	648	52,300 (15.3)	72x35x78 (1829x889x1981)	4150 (1882)	237 (1157)
300	240	480	YES	NO	335	419	361	451	600	648	55,100 (16.1)		4320 (1960)	247 (1206)
300	240	480	NO	YES	367	459	361	451	600	648	66,400 (19.4)	96x35x78 (2438x889x1981)	6050 (2744)	259 (1265)
300	240	480	YES	YES	340	425	361	451	600	648	69,300 (20.3)		6220 (2821)	267 (1304)
300	240	208	NO	NO	363	454	833	1041	600	651	56,950 (16.7)	72x35x78 (1829x889x1981)	4400 (1996)	251 (1225)
300	240	208	YES	NO	337	421	833	1041	600	651	59,750 (17.5)		4570 (2073)	261 (1274)
300	240	208	NO	YES	369	461	833	1041	600	651	71,250 (20.9)	96x35x78 (2438x889x1981)	6500 (2948)	279 (1362)
300	240	208	YES	YES	342	428	833	1041	600	651	74,150 (21.7)		6670 (3025)	286 (1396)
300	270	480	NO	NO	406	508	361	451	800	729	58,820 (17.2)	72x35x78 (1829x889x1981)	4420 (2005)	252 (1233)
300	270	480	YES	NO	376	469	361	451	800	729	58,820 (17.2)		4590 (2082)	262 (1281)
300	270	480	NO	YES	413	516	361	451	800	729	74,717 (21.9)	96x35x78 (2438x889x1981)	6050 (2744)	259 (1265)
300	270	480	YES	YES	382	477	361	451	800	729	74,717 (21.9)		6220 (2821)	267 (1304)
400	320	480	NO	NO	482	602	481	601	800	864	69,700 (20.4)	72x35x78 (1829x889x1981)	4850 (2200)	277 (1352)
400	320	480	YES	NO	447	558	481	601	800	864	73,450 (21.5)		5020 (2277)	287 (1401)
400	320	480	NO	YES	490	612	481	601	800	864	88,550 (25.9)	96x35x78 (2438x889x1981)	6750 (3062)	289 (1411)
400	320	480	YES	YES	454	567	481	601	800	864	92,400 (27.1)		6920 (3139)	297 (1450)
400	320	208	NO	NO	484	605	1110	1388	800	868	75,950 (22.2)	72x35x78 (1829x889x1981)	5100 (2313)	291 (1421)
400	320	208	YES	NO	449	561	1110	1388	800	868	79,700 (23.3)		5270 (2390)	301 (1470)
400	320	208	NO	YES	492	615	1110	1388	800	868	94,950 (27.8)	96x35x78 (2438x889x1981)	7200 (3266)	309 (1509)
400	320	208	YES	YES	456	570	1110	1388	800	868	98,850 (28.9)		7370 (3343)	316 (1543)
400	360	480	NO	NO	542	677	481	601	1000	972	78,450 (23.0)	72x35x78 (1829x889x1981)	5050 (2291)	289 (1411)
400	360	480	YES	NO	502	628	481	601	1000	972	82,600 (24.2)		5220 (2368)	298 (1455)
400	360	480	NO	YES	551	688	481	601	1000	972	99,600 (29.2)	96x35x78 (2438x889x1981)	7550 (3425)	324 (1582)
400	360	480	YES	YES	510	638	481	601	1000	972	103,950 (30.4)		7720 (3502)	331 (1616)
450	360	480	NO	NO	542	677	541	677	1000	972	78,450 (23.0)	72x35x78 (1829x889x1981)	5050 (2291)	289 (1411)
450	360	480	YES	NO	502	628	541	677	1000	972	82,600 (24.2)		5220 (2368)	298 (1455)
450	360	480	NO	YES	551	688	541	677	1000	972	99,600 (29.2)	96x35x78 (2438x889x1981)	7550 (3425)	324 (1582)
450	360	480	YES	YES	510	638	541	677	1000	972	103,950 (30.4)		7720 (3502)	331 (1616)
See Notes (p. 1):			13	—	1,4,5,7,8,9,11,12		2,3,5,7,8,9,11,12		6	6,8,9,11,12	—	14	14	—

Table 3 Site planning data—208V input

UPS Rating		AC Output Voltage	Options		Rectifier AC Input Current		Inverter Output Current		Required Battery Disconnect Rating (A)	Max. Battery Current at End of Discharge (A)	Max. Heat Dissipation Full Load BTU/h (kWH)	Dimensions	Approx. Weight Unpacked	Floor Loading Concentrated Loading
kVA	kW	VAC	Input Filter	Input Xformer	Nom	Max	Nom	Max				WxDxH: in. (mm)	lb. (kg)	lb./ft.² (kg/m²)
300	240	208	NO	NO	847	1059	833	1041	600	651	66,400 (19.4)	72x35x78 (1829x889x1981)	5350 (2427)	306 (1494)
300	240	208	YES	NO	785	982	833	1041	600	651	69,300 (20.3)		5520 (2504)	315 (1538)
300	240	208	NO	YES	861	1077	833	1041	600	651	81,000 (23.7)	96x35x78 (2438x889x1981)	7450 (3379)	319 (1557)
300	240	208	YES	YES	798	998	833	1041	600	651	84,000 (24.6)		7620 (3456)	327 (1597)
See Notes (p. 1):			13	—	1,4,5,7,8,9,11,12		2,3,5,7,8,9,11,12		6	6,8,9,11,12	—	14	14	—

System Control Cabinets

Multi-Module Systems are provided with a System Control Cabinet. Cabinets are available to match load current. **Table 4** shows dimensions and weights for SCCT cabinets.

Table 4 System Control Cabinet data - SCCT

Type	Amps	Overall dimensions - WxDxH: in. (mm)	Weight - lb. (kg)
SCCT	360-1200	37x37x78 (940x940x1981)	1000 (454)
SCCT	1600	62x48x78 (1575x1219x1981)	1525 (692)
SCCT	2000	62x48x78 (1575x1219x1981)	2850 (1293)
SCCT	2500-3000	62x60x78 (1575x1524x1981)	3100 (1406)
SCCT	4000	138x60x78 (3505x1524x1981)	5850 (2653)



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 SL-25136_REV03_02-08

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