

Facility Planning Data Sheet

9700A Series 100 - 225 kVA UPS (208in/208out)

Power Rating		UPS AC Input							Battery System			AC Output			Mechanical Information				
		Voltage		kVA		Current		Minimum Input	External Overcurrent Protection	Nominal Voltage	Full Load	Maximum Discharge	Voltage	Current Nominal	External Overcurrent Protection	Dimensions W x D x H	Weight	Floor Loading	Heat Rejection
kVA	kW	Vac/ Freq.	Nom.	Max.	Nom.	Max.	AWG or kcmil		VDC	kW	A	Vac	A		Inch	Lbs	Lbs/ Ft ²	kBTU/ Hr	CFM
100	80	208 / 60Hz	90.2	103.1	250	286	2x3/0 or larger	400A	360	86.5	298	208	278	350A	35.4x29.5x79.7	1900	262	28.7	3040
150	120	208 / 60Hz	135.3	154.6	376	429	2x300 or larger	600A	360	129.7	448	208	416	600A	47.2x29.5x79.7	2350	243	43.0	4550
225	180	208 / 60Hz	203.0	231.9	563	644	3x300 or larger	800A	360	195.0	673	208	625	800A	55.1x29.5x79.7	3300	292	64.5	6830
Notes:					1	2	3,4,10,13,A,B,C	4,7,9	5		6,10		1	4,7,8,11	11,12				

Notes:

1. Nominal (Nom.) current based on rated load.
2. Maximum (Max.) current based on converter overload rating.
3. Input and output cables typically run in separate conduits.
4. If initial load is less than UPS' rated output, it is recommended that AC input, battery, and AC output wiring and overcurrent protection be sized to UPS' full load rating to accommodate possible future expansion.
5. Nominal battery voltage assumed to be 2.0 volts/cell (lead technology).
6. DC cables should be sized for not more than a 2.0% line drop at maximum discharge current.
7. Suggested AC output overcurrent protection based on continuous full load current per CEC Rules 30-714 and 34-018. 80% rated breakers assumed.
8. Grounding conductors to be sized per CEC Table 16 and applicable rules. Neutral conductors to be sized per CEC Rule 4-022.
 - AC Input: 3 ϕ , 3 wire + ground.
For single input feed, neutral conductor required for bypass.
For single input feed, jumper bypass and converter phase conductors.
 - Bypass Input: 3 ϕ , 4 wire + ground.
 - AC Output: 3 ϕ , 4 wire + ground.
 - DC Input: 2 wire (Positive and Negative) + ground.
9. Input neutral conductor not required if main feed is from a delta-wye input isolation transformer AND both the Bypass and AC Inputs are fed from wye side. Neutral derived on wye side.
10. All wiring to be in accordance with all applicable national and/or local electrical codes.
11. Minimum access clearance per UPS drawings or Owner's Manual.
12. Cable entry from bottom. Punch plates accordingly. *(Side access possible. Top access possible with available side mounted wire way. Consult MEPPI for specifics.)*
13. Control wiring and power wiring to be run in separate conduits.

Additional Notes:

- i. For site configurations including emergency generators, engine generator to be sized and equipped for UPS applications. Generator equipped with governor for frequency regulation and regulator for voltage stability recommended. Note: UPS' reflected current distortion is 3% max at full load and 6% max at 50% load.
 - ii. For site configurations equipped with an external Maintenance Bypass Switch circuit, UPS must be on internal Static Bypass before transferring to external Maintenance Bypass. Consult Factory for further information.
 - iii. For site configurations including automatic transfer switches, transfer switch to be equipped with "neutral delay position" option to minimize phase shift during operation. Transfer switch equipped with auxiliary contact for control of UPS input current when on generator recommended. Consult transfer switch manufacturer for required transfer switch options and sizing.
 - A. Not more than 3 conductors in raceway assumed; ambient temperature of 30 °C (86 °F) assumed.
 - B. Temperature rating of conductors: 75 °C (167 °F). Reference Table 2 of CEC, 75 °C column, using copper conductors. 75 °C (167 °F) cable terminal connectors assumed.
 - C. Reference: CEC handbook 1994. Consult local codes for possible variations.
- D. RATINGS OF CABLES AND OVERCURRENT DEVICES SUPPLIED FOR INFORMATION ONLY. USER TO CONSULT WITH ITS ENGINEERING SERVICES BEFORE ADOPTING.**



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Facility Planning Data Sheet

9700 Series 100 - 225 kVA UPS (480-208)

Power Rating		UPS AC Input (480V)							Battery System			AC Output (208V)		Mechanical Information					
		Voltage		kVA		Current		Minimum Input AWG	External Overcurrent Protection	Nominal Voltage	Full Load kW	Maximum Discharge	Current Nominal	External Overcurrent Protection	Dimensions W x D x H	Weight Lbs	Floor Loading Lbs/ Ft ²	Heat Rejection kBTU/ Hr	Cooling Air CFM
		Vac/ Freq.	Nom.	Max.	Nom.	Max.													
kVA	kW	Vac/ Freq.	Nom.	Max.	Nom.	Max.	AWG	Protection	Voltage	kW	Discharge	Nominal	Protection	W x D x H	Lbs	Lbs/ Ft ²	kBTU/ Hr	CFM	
100	80	480 / 60Hz	93	106	111	127	1 x 3/0 or larger	175A	360 VDC	87	300	278	350A	65.4x29.9x79.7	3,675	248	32	2800	
150	120	480 / 60Hz	139	157	167	189	1x250 mcm or larger	250A	360 VDC	130	450	416	600A	79.2x29.9x79.7	4,225	223	42	3900	
225	180	480 / 60Hz	208	233	250	280	2 x 4/0 or larger	400A	360 VDC	196	675	625	800A	99.1x29.9x79.7	5,630	274	63	5200	
Notes:					1	2	A,B,C	4,7,9,10,11	5		6,13	1	4,7,8,11	11,12					

Notes:

- Nominal (Nom) current is based on full rated output load.
- Maximum (Max.) current is short duration for battery recharge conditions.
- UPS input cables must be run in separate conduit from output cables.
- If a higher capacity UPS module is to be installed in the future, it is recommended that the AC input, battery, and AC output wiring and over current protection be sized initially for the future unit.
- Nominal battery voltage is shown at 2.0 volts/ cell per NEC 480-2.
- Power cables from UPS DC link to batteries should be sized for a total maximum 2.0 volt line drop (measured at the UPS) at maximum discharge current.
- Recommended AC output overcurrent protection represents 125% of maximum continuous full load current per NEC 220-3 (a). 80% rated breakers used.
- Grounding conductors to be sized per NEC Article 250-95 and NEC Table 250-95. Neutral conductors to be per NEC Article 310-15 Note 10.
 - AC Input: 3 ϕ , 3 wire, ground. **For single feeds, neutral conductor required for bypass.**
 - Bypass Input: 3 ϕ , 4 wire, ground.
 - AC Output: 3 ϕ , 4 wire, ground.
 - DC Input: 2, wire (Positive and Negative), ground.
- Input neutral conductor not required if main feed is from a delta-wye input isolation transformer AND both the Bypass and AC Inputs are fed from wye side. Neutral derived from wye side.
- All wiring is to be in accordance with national and local electrical codes.
- Minimum access clearance is 3 feet in front and 1 foot above UPS.
- Bottom cable entry through removable access plates. Cut plate to suit conduit size then replace.
- Control wiring and power wiring MUST be run in separate conduit.
- Bypass wiring to be sized for 125% of rated load.

Additional Notes:

- For site configurations including emergency generators, engine generator to be sized and equipped for UPS applications. Generator equipped with governor for frequency regulation and regulator for voltage stability recommended. Note: UPS' reflected current distortion is 3% max at full load and 6% max at 50% load.
- For site configurations including automatic transfer switches, transfer switch to be equipped with "neutral delay position" option to minimize phase shift during operation. Transfer switch equipped with auxiliary contact for control of UPS input current when on generator recommended. Consult transfer switch manufacturer for required transfer switch options and sizing.
- For site configurations equipped with an external Maintenance Bypass Switch circuit, UPS must be on internal Static Bypass before transferring to external Maintenance Bypass. Consult Factory for further information.
 - Not more than 3 conductors in raceway; based on ambient temperature of 30 °C (86 °F).
 - Temperature rating of conductors: 90 °C (194 °F). Reference Table 310-16 of NEC, 75 °C column, using copper conductors. 75 °C (167 °F) cable terminal connectors assumed.
 - Reference: NEC handbook 1996. Consult local codes for possible variations.

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Facility Planning Data Sheet

9700 Series 100 - 225 kVA UPS (600-208)

Power Rating		UPS AC Input (600V)						Battery System			AC Output (208V)		Mechanical Information						
		Voltage		kVA		Current		Minimum Input	External Overcurrent	Nominal	Full Load	Maximum	Current	External Overcurrent	Dimensions	Weight	Floor Loading	Heat Rejection	Cooling Air
		kVA	kW	Vac/ Freq.	Nom.	Max.	Nom.	Max.	AWG	Protection	Voltage	kW	Discharge	Nominal	Protection	W x D x H	Lbs	Lbs/ Ft ²	kBTU/ Hr
100	80	600 / 60Hz	93	106	89	102	1 x 2/0 or larger	150A	360 VDC	87	300	278	350A	65.4x29.9x79.7	3,675	248	32	2800	
150	120	600 / 60Hz	139	157	134	151	1 x 4/0 or larger	200A	360 VDC	130	450	416	600A	79.2x29.9x79.7	4,225	223	48	3900	
225	180	600 / 60Hz	208	233	200	224	1x350 mcm or larger	300A	360 VDC	196	675	625	800A	99.1x29.9x79.7	5,630	274	72	5200	
Notes:						1	2	A,B,C	4,7,9,10,11	5		6,13	1	4,7,8,11	11,12				

Notes:

- Nominal (Nom) current is based on full rated output load.
- Maximum (Max.) current is short duration for battery recharge conditions.
- UPS input cables must be run in separate conduit from output cables.
- If a higher capacity UPS module is to be installed in the future, it is recommended that the AC input, battery, and AC output wiring and over current protection be sized initially for the future unit.
- Nominal battery voltage is shown at 2.0 volts/ cell per NEC 480-2.
- Power cables from UPS DC link to batteries should be sized for a total maximum 2.0 volt line drop (measured at the UPS) at maximum discharge current.
- Recommended AC output overcurrent protection represents 125% of maximum continuous full load current per NEC 220-3 (a). 80% rated breakers used.
- Grounding conductors to be sized per NEC Article 250-95 and NEC Table 250-95. Neutral conductors to be per NEC Article 310-15 Note 10.
 - AC Input: 3 ϕ , 3 wire, ground. **For single feeds, neutral conductor required for bypass.**
 - Bypass Input: 3 ϕ , 4 wire, ground.
 - AC Output: 3 ϕ , 4 wire, ground.
 - DC Input: 2, wire (Positive and Negative), ground.
- Input neutral conductor not required if main feed is from a delta-wye input isolation transformer AND both the Bypass and AC Inputs are fed from wye side. Neutral derived from wye side.
- All wiring is to be in accordance with national and local electrical codes.
- Minimum access clearance is 3 feet in front and 1 foot above UPS.
- Bottom cable entry through removable access plates. Cut plate to suit conduit size then replace.
- Control wiring and power wiring MUST be run in separate conduit.
- Bypass wiring to be sized for 125% of rated load.

Additional Notes:

- For site configurations including emergency generators, engine generator to be sized and equipped for UPS applications. Generator equipped with governor for frequency regulation and regulator for voltage stability recommended. Note: UPS' reflected current distortion is 3% max at full load and 6% max at 50% load.
- For site configurations including automatic transfer switches, transfer switch to be equipped with "neutral delay position" option to minimize phase shift during operation. Transfer switch equipped with auxiliary contact for control of UPS input current when on generator recommended. Consult transfer switch manufacturer for required transfer switch options and sizing.
- For site configurations equipped with an external Maintenance Bypass Switch circuit, UPS must be on internal Static Bypass before transferring to external Maintenance Bypass. Consult Factory for further information.
 - Not more than 3 conductors in raceway or cable ; based on ambient temperature of 30 °C (86 °F).
 - Temperature rating of conductors:75 °C (167 °F) . Type RW 75/TW 75. Per Table 2 of CE Code.
 - Reference: CE Code handbook 1994. Consult local codes for possible variations.

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