

APPENDIX A – Installation Planning Guide (IPG)

Installation Planning Guide for 1000kVA UPS

Standard System: 480V Input, 480V Output

General Mechanical Information								
Dimensions (W x D x H)	Weight	Floor Loading	Approximate Full-Load Heat Rejection	Mechanical Clearance (Inches) from UPS for Ventilation and Maintenance Access				
Inches	Lbs.	Lbs./ft. ²	kBtu/Hr	Top	Front	Bottom	Sides**	Back
118.2" x 35.5" x 80.7"*	6613	227	112.8	24"	39"	0"	0"	0"

* Height includes removable an housing – Frame height is 78.7."

** 0" clearance for peripheral equipment, 1" clearance for walls.

Primary AC Input (480V 3-Phase / 3-Wire)				
Maximum Input Power Demand Normal Mode (Recharge Mode)			Suggested External Overcurrent Protection	External Feeder Wire Size: Min. – Max. Per Phase
kVA	PF	Amps	Amps	AWG or kcmil at 75° C Temp. Rating
1045 (1113)	> 0.99	1256 (1340)	1600 AT	(5) 600 kcmil – (6) 500 kcmil

Alternate (Bypass) AC Input (480V 3-Phase / 3-Wire)				
Maximum Input Power Demand			Suggested External Overcurrent Protection	External Feeder Wire Size: Min. – Max. Per Phase
kVA	PF	Amps (Max.)	Amps	AWG or kcmil at 75° C Temp. Rating
1000	1.0	1203	1600 AT	(5) 600 kcmil – (6) 500 kcmil

Battery Input (480VDC Nominal)			
Battery Capacity Required for Full Load Output	Maximum Discharge at Full Load Output	Suggested External Overcurrent Protection	External Feeder Wire Size: Min. – Max.
kWB	Amps DC	Amps	AWG or kcmil at 75° C Temp. Rating
1036 @ 1.0 PF	2715	3000 AT	(8) 600 kcmil – (10) 400 kcmil

AC Output (480V 3-Phase / 3-Wire)			
Rated Output Power			External Feeder Wire Size: Min. – Max. Per Phase
kVA	PF	Amps	AWG or kcmil at 75° C Temp. Rating
1000	1.0	1203	(5) 600 kcmil – (6) 500 kcmil

Important Notes: - Maximum input current is limited to 108% of the full-load input current. - Output load conductors are to be installed in separate conduit from input conductors. - Control wires and power wires are to be installed in separate conduits. - Recommended AC input and output overcurrent protection based on continuous full load current per NEC. - Wiring shall comply with all applicable national and local electrical codes. - Grounding conductors to be sized per NEC Article 250-122. Neutral conductors to be sized per NEC Article 310.15. - Primary AC Input: 3ϕ, 3-wire + ground. - Alternate AC Input: 3ϕ, 3-wire + ground. - AC Output: 3ϕ, 3-wire + ground. - DC Input: 2-wire (Positive/Negative) + ground. - Nominal battery voltage based on the use of VRLA type batteries (2.0 volts/cell nominal). - Maximum battery discharge current based on lowest permissible discharge voltage of 1.67 VPC. - DC wires should be sized to allow not more than a 2-volt drop at maximum discharge current. - Weights do not include batteries or other auxiliary equipment external to the UPS.		- Cable sizing calculations based on the following assumptions: - Minimum size is smallest size based on ampacity at 30 °C. - Maximum size cable is based on cable bend radius limitations at the UPS terminals. - Not more than 3 current-carrying conductors installed in conduit in ambient temperature of 30 °C. - Temperature rating of copper conductors/terminals: 75 °C in conduit. - Reference: 2005 NEC Handbook, Table 310.16. NOTE: Consult latest edition of applicable national and local codes for possible variations. - Ratings of wires and overcurrent devices are suggested minimums. Consult with a registered Professional Engineer within your local area for proper size selections.
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