

Battery sizing according to time and power value

Grezzago 01.02.2023

UPS model	AURIGA HP
UPS nominal rating	160,000 kVA
Battery string design	60 x12V _{DC}
Sizing method	IEEE 485

Voltage window

Maximum voltage:	817,20 V _{DC}
Minimum voltage:	600,12 V _{DC}
Cell number range:	360

Calculation criteria

U float charge:	2,27 V _{pc}
Uf interpolated:	Activated
Temperature:	25 °C
Temperature factor:	1,000
Aging factor:	1,000
Margin factor:	1,000
Total factor:	1,000

Power value

Time set:	30 min	pre-set or calculated
Nominal rating:	20,000 kVA	pre-set
CosPhi:	1	pre-set
Efficiency DC-AC:	95,000 %	pre-set

Battery

Battery model:	PTX 12- 40	calculated
Battery type:	VRLA AGM 12V	
Part code:	OCBE12 40	
Number of cells:	360	range: 600,12÷817,2 VDC
String quantity:	1	
Final voltage:	1,667 V _{DC}	

Battery bank design

1	string(s) 60x12VDC 40Ah
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