



## 12UPM5500 TOP TERMINAL AGM VRLA

### PRODUCT CHARACTERISTICS:

- Valve-regulated lead-acid battery
- UPS and reserve power applications
- EUROBAT design life definition: Long Life 10 - 12 years
- Extremely long float life performance
- Superior cycling endurance
- Compact design with high energy density
- ETSI Rack integration
- Low installation cost, maintenance free product
- Sealed for leak-proof operation
- Delivered ready for use
- Non-hazardous cargo for ground, sea and air transport
- Fully recyclable product



### TECHNICAL SPECIFICATIONS:

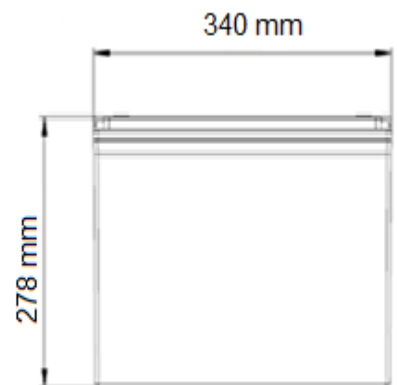
### PHYSICAL CHARACTERISTICS:

Electrical specifications:	
Nominal voltage:	12V
Number of cells:	6
Rated capacity:	140 Ah (10 h rate to 1.80 Vpc at 25 °C)
Internal resistance:	3.5 mOhm (IEC 60 896 -21/22)
Short circuit current:	3500 A (IEC 60 896 -21/22)
Float charge voltage:	2.27 V per cell (Vpc) at 25 °C

	SI Units	US Units
Length	340 mm	13.4 inches
Width	173 mm	6.8 inches
Height	278 mm	10.9 inches
Weight	49 kg	108 lbs

Design features:	
Design life at 20 °C:	Long Life 10 - 12 years
Plates:	Tick Flat Pasted
Active material:	Very high purity virgin lead
Grid alloy:	Lead-Calcium-Tin alloy
Electrolyte:	Sulphuric acid, Analytical grade
Separator:	Absorbing Glass Mat (AGM)
Operating temperature:	-10 °C to +50 °C +15 °C to +25 °C (recommended)
Venting valve:	Rubber, one way, self resealing Opening pressure: 1.7 PSI Resealing pressure: 1.5 PSI
Internal gas recombination efficiency:	more than 99%
Flame arrestor:	Available
Storage temperatures:	-10 °C to +40 °C
Self discharge:	Less than 2.0% per month at 20°C
Storability without recharging:	Up to 6 months at 20°C
Shelf life:	Up to 1 year
Container / lid material:	Shock resistant ABS FR; flammability class UL94 V0
Terminal position:	Top
Terminal sealing:	Mechanical + epoxy double sealing
Terminal type:	Brass; Female; M8 thread
Terminal torque:	7 Nm
Transport terminal cover:	Available
Carrying Handles:	Available
Connectors and bolts:	Supplied as standard

### DRAWINGS:



Applicable standards and recommendations:	
IEC 60896 - 21/22; EN 50272 - 2; IEC 61427 - 1/2; IEC 61056 - 1; BS 6290 - 4 IEEE 1184; IEEE 1187; IEEE 1188	

Manufacture standards:	
ISO 9001; ISO 14001; OHSAS 18001; AQAP 2110	



## PERFORMANCE CHARACTERISTICS

### DISCHARGE PERFORMANCE AT CONSTANT CURRENT DISCHARGE (A) FOR BATTERY 12UPM5500 AT 25°C

Uf, Vpc	5 min	10 min	15 min	30 min	45 min	1 h	2h	3 h	4 h	5 h	6 h	8 h	10 h
1.6	533.0	389.0	291.0	178.0	117.0	99.7	54.7	39.4	30.9	25.7	22.1	16.8	14.4
1.65	491.0	374.0	289.0	175.0	115.0	97.6	54.2	39.0	30.7	25.5	21.9	16.8	14.4
1.7	456.0	352.0	283.0	167.0	112.0	96.8	53.8	38.8	30.5	25.4	21.7	16.8	14.3
1.75	430.0	332.0	267.0	165.0	111.0	96.5	53.1	38.4	30.1	25.1	21.5	16.6	14.1
1.8	398.0	307.0	245.0	160.0	110.0	91.9	52.2	38.3	29.8	24.9	21.4	16.6	14.0
1.85	351.0	281.0	219.0	151.0	102.0	88.0	49.7	34.6	28.3	24.0	20.8	16.1	13.7

### DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER CELL) FOR BATTERY 12UPM5500 AT 25°C

Uf, Vpc	5 min	10 min	15 min	30 min	45 min	1 h	2h	3 h	4 h	5 h	6 h	8 h	10 h
1.6	931.0	703.0	535.0	339.0	223.0	193.5	106.6	77.1	60.8	50.7	43.6	33.3	27.8
1.65	868.0	684.0	531.0	334.0	222.0	189.4	105.7	76.6	60.5	50.4	43.3	33.3	27.8
1.7	815.0	650.0	521.0	320.0	217.0	188.1	105.1	76.3	60.2	50.1	43.1	33.3	27.8
1.75	778.0	617.0	498.0	317.0	216.0	187.8	104.2	75.8	59.7	49.9	42.8	33.0	27.5
1.8	727.0	574.0	459.0	310.0	213.0	179.3	102.7	75.5	59.1	49.6	42.5	33.0	27.3
1.85	648.0	528.0	416.0	294.0	199.0	172.2	97.8	68.4	56.1	47.7	41.4	32.2	26.4

### DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER BLOCK) FOR BATTERY 12UPM5500 AT 25°C

Uf, Vpc	5 min	10 min	15 min	30 min	45 min	1 h	2h	3 h	4 h	5 h	6 h	8 h	10 h
1.6	5586.0	4218.0	3210.0	2034.0	1338.0	1161.0	639.6	462.4	364.8	304.2	261.6	199.5	166.8
1.65	5208.0	4104.0	3186.0	2004.0	1332.0	1136.0	634.2	459.6	363.0	302.4	259.8	199.5	166.8
1.7	4890.0	3900.0	3126.0	1920.0	1302.0	1129.0	630.6	457.8	361.2	300.6	258.6	199.5	166.8
1.75	4668.0	3702.0	2988.0	1902.0	1296.0	1127.0	625.2	454.8	358.2	299.4	256.8	197.9	165.1
1.8	4362.0	3444.0	2754.0	1860.0	1278.0	1076.0	616.2	453.0	354.6	297.6	255.0	197.9	163.5
1.85	3888.0	3168.0	2496.0	1764.0	1194.0	1033.0	586.8	410.4	336.4	286.2	248.4	193.0	158.6

### TEMPERATURE CORRECTION FACTOR OF CAPACITY AT CONSTANT CURRENT DISCHARGE

Discharge time	-10 °C	0 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	50 °C
From 5 to 59 minutes	0.70	0.80	0.90	0.95	0.97	1.00	1.05	1.10	1.13	1.15
From 1 to 20 hours	0.82	0.88	0.94	0.97	0.98	1.00	1.03	1.05	1.07	1.08

### BATTERY CHARGE CONDITIONS AT 25° CONSTANT VOLTAGE AND LIMITED CURRENT (IU)

Charge current limit	Float charge voltage	Equalization charge voltage	Boost charge voltage
0.1 – 0.25C10 A Recommended: 0.20C10 A	2.27 V per cell at 25 °C; Temperature correction: -3 mV / cell / oC	2.32 V per cell at 25 °C Recommended: every 3 months for 24h during long time float operation	2.40 V per cell at 25°C Temperature correction: -4 mV / cell / oC

Float application: 0.20C10 A / 2.27 V per cell at 25 °C

Cycling applications: 0.20C10 A / 2.40 V per cell at 25 °C; Recharge Ah input at least 105% from previous discharge Ah

