



# ALPHA HOUSE powered by MONBAT®

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## 12UPM1800 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



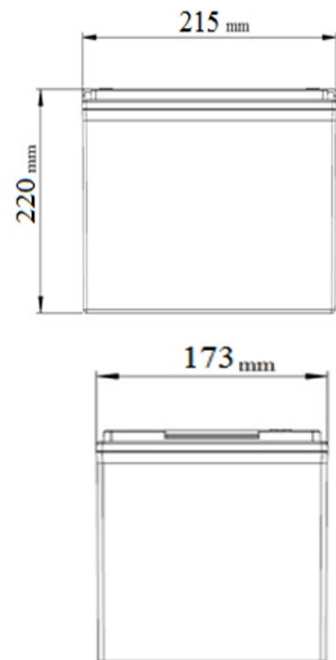
### TECHNICAL SPECIFICATIONS:

Electrical specifications:	
Nominal voltage:	12V
Number of cells:	6
Rated capacity:	55 Ah (10 h rate to 1.80 Vpc at 25 °C)
Internal resistance:	8.1 mOhm (IEC 60 896 -21/22)
Short circuit current:	1 572 A (IEC 60 896 -21/22)
Float charge voltage:	2.27 V per cell (Vpc) at 25 °C
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; M6 thread
Terminal torque:	7 Nm
Transport terminal cover:	Available
Carrying Handles:	Available
Connectors and bolts:	Supplied as standard
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	

### PHYSICAL CHARACTERISTICS:

	SI Units	US Units
Length	215 mm	8.5 inches
Width	173 mm	6.8 inches
Height	220 mm	8.7 inches
Weight	22 kg	48.5 lbs

### DRAWINGS:





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## PERFORMANCE CHARACTERISTICS

### DISCHARGE PERFORMANCE AT CONSTANT CURRENT DISCHARGE (A) FOR BATTERY 12UPM1800 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	209.0	153.0	114.0	70.0	46.0	39.2	21.5	15.5	12.1	10.1	8.7	6.6	5.7
1.65	193.0	147.0	113.0	69.0	45.0	38.3	21.3	15.3	12.1	10.0	8.6	6.6	5.6
1.7	179.0	138.0	111.0	66.0	44.0	38.0	21.1	15.2	12.0	10.0	8.5	6.6	5.6
1.75	169.0	130.0	105.0	65.0	44.0	37.9	20.8	15.1	11.8	9.9	8.5	6.5	5.6
1.8	156.0	121.0	96.0	63.0	43.0	36.1	20.5	15.0	11.7	9.8	8.4	6.5	5.5
1.85	138.0	111.0	86.0	59.0	40.0	34.6	19.5	13.6	11.1	9.4	8.2	6.3	5.4

### DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER CELL) FOR BATTERY 12UPM1800 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	406.0	306.0	233.0	147.0	97.0	84.3	46.4	33.6	26.5	22.1	19.0	14.5	12.1
1.65	378.0	298.0	231.0	146.0	97.0	82.5	46.1	33.4	26.4	22.0	18.9	14.5	12.1
1.7	355.0	283.0	227.0	139.0	94.0	81.9	45.8	33.3	26.2	21.9	18.8	14.5	12.1
1.75	339.0	269.0	217.0	138.0	94.0	81.8	45.4	33.0	26.0	21.7	18.6	14.4	12.0
1.8	317.0	250.0	200.0	135.0	93.0	78.1	44.8	32.9	25.8	21.6	18.5	14.4	11.9
1.85	283.0	230.0	181.0	128.0	87.0	75.1	42.6	29.8	24.5	20.8	18.1	14.0	11.5

### DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER BLOCK) FOR BATTERY 12UPM1800 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	2438.0	1841.0	1401.0	886.0	585.0	506.7	279.1	202.0	159.2	132.7	114.2	87.1	72.8
1.65	2272.0	1791.0	1390.0	875.0	580.0	496.0	276.9	200.5	158.4	132.0	113.5	87.1	72.8
1.7	2133.0	1701.0	1363.0	838.0	567.0	492.5	275.5	199.8	157.7	131.3	112.8	87.1	72.8
1.75	2036.0	1615.0	1303.0	830.0	565.0	491.7	272.6	198.4	156.3	130.6	112.1	86.4	72.1
1.8	1904.0	1502.0	1202.0	811.0	558.0	469.6	269.1	197.7	154.9	129.9	111.3	86.4	71.4
1.85	1698.0	1382.0	1089.0	770.0	522.0	451.1	256.2	179.1	147.0	124.9	108.5	84.2	69.2

### 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

