



12UPM2000T 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



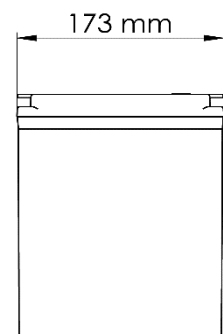
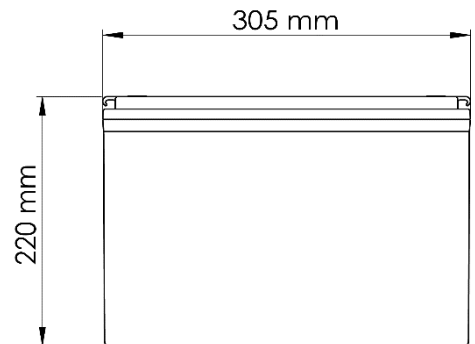
TECHNICAL SPECIFICATIONS:

Electrical specifications:	
Nominal voltage:	12V
Number of cells:	6
Rated capacity:	78 Ah (10 h rate to 1.80 Vpc at 25 °C)
Internal resistance:	6 mOhm (IEC 60 896 -21/22)
Short circuit current:	1 800 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	305 mm	12 inches
Width	173 mm	6.8 inches
Height	220 mm	8.7 inches
Weight	29 kg	63.9 lbs

DRAWINGS:





PERFORMANCE CHARACTERISTICS

DISCHARGE PERFORMANCE AT CONSTANT CURRENT DISCHARGE (A) FOR BATTERY 12UPM2000 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	287.9	205.6	155.0	94.3	70.2	54.7	29.7	21.5	16.9	14.2	12.2	9.5	8.2
1.65	268.3	200.1	153.7	93.1	69.6	53.6	29.5	21.3	16.8	14.1	12.1	9.4	8.1
1.7	251.9	190.1	150.8	89.1	68.1	53.2	29.3	21.2	16.7	14.0	12.0	9.3	8.0
1.75	240.4	180.4	144.2	88.3	67.7	53.1	29.0	21.1	16.6	13.9	11.9	9.2	7.9
1.8	224.8	167.8	133.0	86.3	67.0	50.7	28.6	21.0	16.5	13.8	11.8	9.1	7.8
1.85	200.5	154.4	120.5	81.9	62.6	48.7	27.3	19.1	15.6	13.3	11.5	9.0	7.6

DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER CELL) FOR BATTERY 12UPM2000 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	575.8	411.2	310.0	188.6	140.5	109.4	59.4	43.0	33.9	28.2	24.3	18.7	16.4
1.65	536.7	400.2	307.5	186.2	139.3	107.1	58.9	42.7	33.7	28.1	24.1	18.6	16.2
1.7	503.8	380.1	301.6	178.3	136.2	106.3	58.6	42.5	33.6	27.9	24.0	18.5	16.0
1.75	480.9	360.8	288.4	176.6	135.5	106.2	58.0	42.2	33.3	27.8	23.8	18.4	15.8
1.8	449.7	335.6	265.9	172.6	133.9	101.4	57.2	42.1	33.0	27.6	23.7	18.2	15.6
1.85	401.0	308.8	241.0	163.8	125.2	97.4	54.5	38.1	31.3	26.6	23.1	17.9	15.2

DISCHARGE PERFORMANCE AT CONSTANT POWER DISCHARGE W (PER BLOCK) FOR BATTERY 12UPM2000 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	3460.4	2471.3	1863.1	1133.4	844.1	657.7	356.8	258.3	203.5	169.7	146.0	111.5	93.3
1.65	3225.3	2405.2	1847.9	1118.8	836.9	643.8	354.1	256.4	202.6	168.8	145.1	111.4	93.2
1.7	3027.8	2284.4	1812.8	1071.4	818.4	639.1	352.3	255.5	201.7	167.9	144.2	111.3	93.1
1.75	2890.0	2168.5	1733.1	1061.4	814.3	638.2	348.6	253.7	199.9	167.0	143.3	110.4	92.2
1.8	2702.6	2017.1	1598.3	1037.6	805.0	609.5	344.1	252.8	198.0	166.1	142.4	109.4	91.3
1.85	2409.9	1856.1	1448.3	984.7	752.5	585.4	327.6	229.1	188.0	159.7	138.7	107.7	88.5

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

