

12V 60Ah Front Terminal AGM VRLA Battery

Product characteristics:

- Valve-regulated lead-acid battery
- Stationary and reserve power applications
- EUROBAT design life definition: Very Long Life 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: 60 Ah (10 h rate to 1.80 Vpc at 20 °C)
- Internal resistance: 8.48 mOhm (IEC 60 896 -21/22)
- Short circuit current: 1 508 A (IEC 60 896 -21/22)
- Float charge voltage: 2.27 V per cell (Vpc) at 20 °C

Design features:

- Design life at 20 °C: Very Long Life 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: -20 °C to +60 °C (maximum)
+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%
- Central degassing system: Available
- Flame arrestor: Available
- Storage temperatures: -20 °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: Front
- Terminal sealing: Mechanical + epoxy double sealing
- Terminal type: Brass; Female; M8 thread
- Terminal torque: 7 Nm
- Terminal cover: Available
- Carrying Handles: Available (2)
- Connectors and bolts: Supplied as standard

Applicable standards:

- IEC 60896 - 21/22 • IEC 61427 - 1/2 • IEEE 1184
- EN 50272 - 2 • IEC 61056 - 1 • IEEE 1187 / 1188

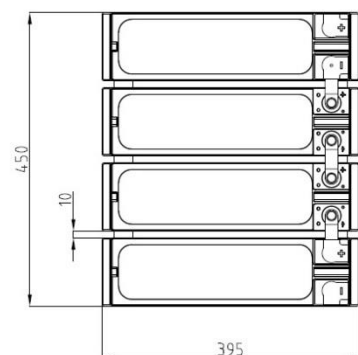
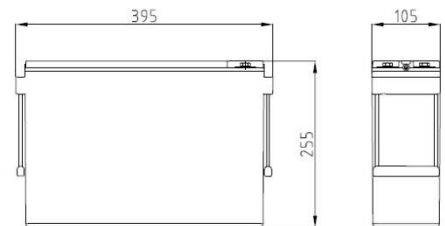
Manufacture standards:

- ISO 9001, ISO 14001, OHSAS 18001, AQAP 2110

Physical characteristics:

	SI Units	US Units
Length	395 mm	15.5 inches
Width	105 mm	4.1 inches
Height	255 mm	10.4 inches
Weight	22.2 kg	48.9 lbs

Drawings:



Performance characteristics:

BATTERY DISCHARGE PERFORMANCE AT 20 °C												
Battery capacity at constant current discharge (Ah) for battery 12MVR65TA at 20 °C												
Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	13	22	31	37.7	43.9	48.2	51.3	53.8	55.6	59.3	61.8	66.1
1.65	12	22	31	37.5	43.7	48.0	51.1	53.5	55.4	59.0	61.5	65.8
1.70	12	21	31	37.3	43.4	47.8	50.8	53.2	55.1	58.7	61.2	65.5
1.75	12	21	30	37.0	43.0	47.3	50.3	52.7	54.5	58.2	60.6	64.8
1.80	12	21	30	36.6	42.6	46.8	49.8	52.2	54.0	57.6	60.0	64.2
1.85	12	20	29	35.7	41.5	45.6	48.6	50.9	52.7	56.2	58.5	62.6

Discharge performance at constant current discharge (A) for battery 12MVR65TA at 20 °C												
Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	152	86	62	37.7	21.9	16.1	12.8	10.8	9.3	7.4	6.2	3.31
1.65	149	86	62	37.5	21.8	16.0	12.8	10.7	9.2	7.4	6.2	3.29
1.70	147	86	61	37.3	21.7	15.9	12.7	10.6	9.2	7.3	6.1	3.27
1.75	145	85	61	37.0	21.5	15.8	12.6	10.5	9.1	7.3	6.1	3.24
1.80	144	84	60	36.6	21.3	15.6	12.5	10.4	9.0	7.2	6.0	3.21
1.85	140	82	59	35.7	20.8	15.2	12.2	10.2	8.8	7.0	5.9	3.13

Discharge performance at constant power discharge (W per cell) for battery 12MVR65TA at 20 °C												
Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	304	173	124	75.4	43.9	32.1	25.7	21.5	18.5	14.8	12.4	6.61
1.65	295	172	123	75.0	43.7	32.0	25.5	21.4	18.5	14.8	12.3	6.58
1.70	293	171	122	74.6	43.4	31.7	25.4	21.3	18.4	14.7	12.2	6.55
1.75	291	170	121	73.9	43.0	31.4	25.1	21.1	18.2	14.5	12.1	6.48
1.80	288	168	120	73.2	42.6	31.2	24.9	20.9	18.0	14.4	12.0	6.42
1.85	281	164	117	71.4	41.5	30.4	24.3	20.4	17.6	14.0	11.70	6.26

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	45 °C	
From 5 to 59 minutes	0.70	0.80	0.90	0.95	1	1.05	1.10	1.13	1.15	1.16	
From 1 to 20 hours	0.82	0.88	0.94	0.97	1	1.03	1.05	1.08	1.09	1.10	

BATTERY CHARGE CONDITIONS AT 20 °C			
Charge regime: constant voltage and limited current (IU)			
Charge current limit	Float charge voltage	Equalization charge voltage	Boost charge voltage
0.1 – 0.25C ₁₀ A Recommended: 0.20C ₁₀ A	2.27 V per cell at 20 °C; Temperature correction: -3 mV / cell / °C	2.32 V per cell at 20 °C Recommended: every 3 months for 24h during long time float operation	2.40 V per cell at 20 °C Temperature correction: -4 mV / cell / °C
Float application: 0.20C ₁₀ A / 2.27 V per cell at 20 °C		Cycling applications: 0.20C ₁₀ A / 2.40 V per cell at 20 °C; Recharge Ah input at least 105% from previous discharge Ah	

