

RID HR 3500

12V 140AH - 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: 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)
- Short circuit current: 2.27 V per cell (Vpc) at 25 °C

Design features:

- Design life at 20 °C: Long Life 10 - 12 years
- Plating: 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 (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: -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: 7Nm
- Terminal cover: Available
- Carrying Handle: Available
- 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:

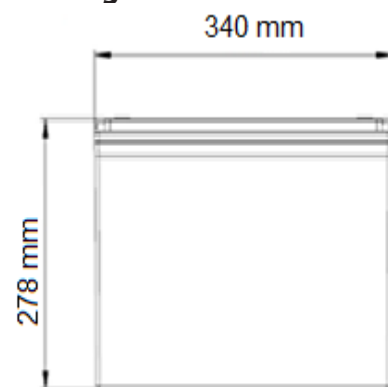
- ISO 9001, ISO 14001, OHSAS 18001, AQAP 2110



Physical characteristics:

	SI Units	US Units
Length	340 mm	13.4 inches
Width	173 mm	6.8 inches
Height	278 mm	10.9 inches
Weight	45.5 kg	100 lbs

Drawings:



RID HR 3500

Discharge performance at constant current discharge (a) for battery RID HR 3500 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	16.80	14.42
1.65	491.0	374.0	289.0	175.0	115.0	97.6	54.2	39.0	30.7	25.5	21.9	16.77	14.35
1.7	456.0	352.0	283.0	167.0	112.0	96.8	53.8	38.8	30.5	25.4	21.7	16.75	14.28
1.75	430.0	332.0	267.0	165.0	111.0	96.5	53.1	38.4	30.1	25.1	21.5	16.58	14.14
1.8	398.0	307.0	245.0	160.0	110.0	91.9	52.2	38.3	29.8	24.9	21.4	16.56	14.00
1.85	351.0	281.0	219.0	151.0	102.0	88.0	49.7	34.6	28.3	24.0	20.8	16.12	13.65

Discharge performance at constant power discharge w (per cell) for battery RID HR 3500 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	33.25	27.80
1.65	868.0	684.0	531.0	334.0	222.0	189.4	105.7	76.6	60.5	50.4	43.3	33.25	27.80
1.7	815.0	650.0	521.0	320.0	217.0	188.1	105.1	76.3	60.2	50.1	43.1	33.25	27.80
1.75	778.0	617.0	498.0	317.0	216.0	187.8	104.2	75.8	59.7	49.9	42.8	32.98	27.53
1.8	727.0	574.0	459.0	310.0	213.0	179.3	102.7	75.5	59.1	49.6	42.5	32.98	27.25
1.85	648.0	528.0	416.0	294.0	199.0	172.2	97.8	68.4	56.1	47.7	41.4	32.16	26.44

Discharge performance at constant power discharge w (per block) for battery RID HR 3500 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	199.50	86.74
1.65	5208.0	4104.0	3186.0	2004.0	1332.0	1136.0	634.2	459.6	363.0	302.4	259.8	199.50	86.74
1.7	4890.0	3900.0	3126.0	1920.0	1302.0	1129.0	630.6	457.8	361.2	300.6	258.6	199.50	86.74
1.75	4668.0	3702.0	2988.0	1902.0	1296.0	1127.0	625.2	454.8	358.2	299.4	256.8	197.88	85.89
1.8	4362.0	3444.0	2754.0	1860.0	1278.0	1076.0	616.2	453.0	354.6	297.6	255.0	197.88	85.02
1.85	3888.0	3168.0	2496.0	1764.0	1194.0	1033.0	586.8	410.4	336.4	286.2	248.4	192.96	82.49

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	0.7	0.8	0.9	0.95	0.97	1	1.05	1.1	1.13	1.15
From 1 to 20 hours	0.82	0.88	0.94	0.97	0.98	1	1.03	1.05	1.07	1.08

Battery charge conditions at 25°C 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

