### SVB intern ZENITH AGM-Batterien

**deep cycle heavy duty** empfohlen für häufige Entladungen bis 80% Entladetiefe / recommended for frequent discharges to 80% DOD

**Standard-Type** geeignet für alle Anwendungen mit empfohlener Entladetiefe bis

siehe Seite 2 / see page 2 50% /

suitable for all applications with recommended discharge to 50%

DOD

wartungsfrei / maintenance free

kipp- und auslaufsicher / tilt- and leak-proof

• unempfindlich gegen Vibrationen / resistant to vibrations

empfohlener Ladestrom 10 - 30 % der Kapazität / of capacity

zyklisch / cycle 14,5V ~ 14,9 V @ 25°C / 77°F deep cycle heavy duty

14,6V ~ 14,8 V @ 25°C / 77°F Standard-type

Erhaltungsladung / float 13,6 V ~ 13,8 V @ 25°C / 77°F

nicht die Batterieanschlüsse kurzschließen / don't short circuite battery terminals

• nicht unter luftdichten Bedingungen laden / don't charge under airtight conditions

nicht zerlegen, nicht fallen lassen / don't disassemble, don't drop

• nicht Flammen oder Funken aussetzen / don't expose to flames or sparks

• von Kindern fernhalten / keep out of the reach of children

SVB Artikel- / item number	ZENITH-Type	Kapazität / capacity (K20 @ 25°C / 77°F)	CCA (EN) / (30-sec. Amp. to 7,2 V (= 1,2V/cell) @ -18°C / 0°F)	Reservekapazität / reserve capacity 25 A, minutes to 10,5 V (1,75 V/cell) @ 27°C / 80F	Anschlüsse / terminals	Maximaler Entladestrom / max discharge current 5 sec. @ 25°C / 77°F	Gewicht / weight	Datenblatt auf Seite / datasheet on page
	deep cycle heavy duty							
15087	ZL 120135	35 Ah	190 - 230 A (190 A)	52 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	450 A	ca. 11,5 kg / ~ 25,35 lbs	3
15088	ZL 120155	55 Ah	430 - 510 A (400 A)	96 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	825 A	ca. 17,6 kg / ~ 38,5 lbs	4
15089	ZL 120175	85 Ah	510 - 600 A (510 A)	148 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	1000 A	ca. 25,1 kg / ~ 55,3 lbs	5
15090	ZL 120185	105 Ah	550 - 660 A (550 A)	175 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	1050 A	ca. 30,2 kg / ~ 66,6 lbs	6
15091	ZL 121100	120 Ah	750 - 900 A (820 A)	279 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	1400 A	ca. 44,3 kg / ~ 97,5 lbs	7
15092	ZL1201115	150 Ah	900 - 1050 A (900 A)	285 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	1500 A	ca. 45,5 kg / ~ 100,1 lbs	8
15093	ZL 1201130	215 Ah	950 - 1150 A (no data)	420 minutes	M8 Bolzen / bolt - outer thread & SAE-Konus "automotive post"	2000 A	ca. 60 kg / ~ 132,3 lbs	9
15094	ZL 1201145	260 Ah	1200 - 1400 A (no data)	578 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	2600 A	ca. 78,2 kg / ~ 172,4 lbs	10

SVB intern	ZENITH AGM-Batterien		SVB	Gelsenkirchener Str. 25-27 D - 28199 Bremen Verkauf: (0421) 57290 - 0 Telefax: (0421) 57290 - 40
		04-13WPO	Spezialversand für Yacht- und Bootszubehör	e-mail: info@svb.de Internet: www.svb.de
		Seite 1 von 18		

SVB Artikel- / item number	ZENITH-Type	Kapazität / capacity (K20 @ 25°C / 77°F)	CCA (EN) / (30-sec. Amp. to 7,2 V (= 1,2V/cell) @ -18°C / 0°F)	Reservekapazität / reserve capacity 25 A, minutes to 10,5 V (1,75 V/cell) @ 27°C / 80F	Anschlüsse / terminals	Maximaler Entladestrom / max discharge current 5 sec. @ 25°C / 77°F	Gewicht / weight	Datenblatt auf Seite / datasheet on page
	Standard							
14985	ZGL 120048	35 Ah	190 - 230 A	52 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	330 A	ca. 10,2 kg / ~ 22,4 lbs	11
14986	ZGL 120058	55 Ah	430 - 510 A	96 minutes	6 minutes  M6 Innengewinde / inner thread & SAE-Konus "automotive post"		ca. 18 kg / ~ 39,6 lbs	12
14987	ZGL 120070	80 Ah	510 - 600 A	148 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	750 A	ca. 23,5 kg / ~ 52,8 lbs	13
14988	ZGL 120078	100 Ah	550 - 660 A	175 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	1000 A	ca. 30 kg / ~ 66 lbs	14
14989	ZGL 120085	120 Ah	750 - 900 A	279 minutes	M6 Innengewinde / inner thread & SAE-Konus "automotive post"	1200 A	ca. 32 kg / ~ 70,4 lbs	15
14990	ZGL 120088	160 Ah	900 - 1050 A	285 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	1500 A	ca. 44,5 kg / ~ 97,9 lbs	16
14991	ZGL 120094	210 Ah	950 - 1150 A	420 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	2000 A	ca. 60 kg / ~ 132 lbs	17
14992	ZGL 120098	260 Ah	1200 - 1400 A	578 minutes	M8 Innengewinde / inner thread & SAE-Konus "automotive post"	2600 A	ca. 74 kg / ~ 12,8 lbs	18

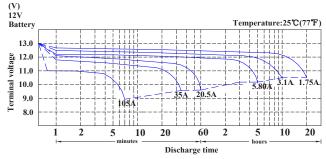
(technische Änderungen vorbehalten)

SVB intern	ZENITH AGM-Batterien		SVB	Gelsenkirchener Str. 25-27 D - 28199 Bremen  Verkauf: (0421) 57290 - 0 Telefax: (0421) 57290 - 40  e-mail: info@svb.de
		04-13/WPO	Spezialversand für Yacht- und Bootszubehör	Internet: www.svb.de
		Seite 2 von 18		

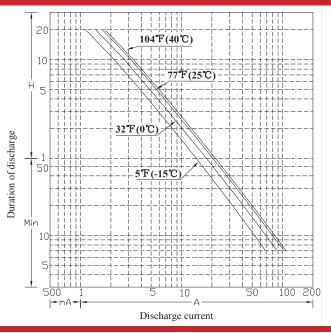


# Constant Current Discharge Rating Amperes @ 25°C (77°F) Cut off voltage V/cell 30M 45M 1H 2H 3H 5H 8H 10H 12H 20H 24H 1.75V 35 26.3 20.6 10.7 7.9 5.6 3.9 3.2 2.7 1.8 1.5

(with terminals)  Dimension Height 155mm (6.10 inches 196mm (7.72 inches 196mm)	No	ominal Voltage	12V
(with terminals)  Dimension Height 155mm (6.10 inches 196mm (7.72 inches 196mm)	Rated Ca	apacity (20 hour rate)	35Ah
Length 196mm (7.72 inch			167mm (6.57 inches)
	Dimension	Height	155mm (6.10 inches)
100 101		Length	196mm (7.72 inches)
Width 131mm (5.16 inch		Width	131mm (5.16 inches)
Weight Approx. 11.5kg (25		Weight	Approx. 11.5kg (25.35 lb



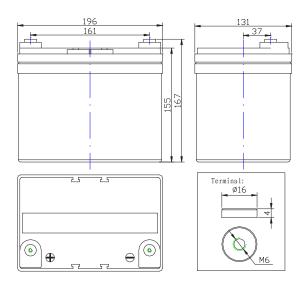
## Duration of discharge vs. Discharge current



This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specification are subject to modification without notice. Contact U.B.S. UNION BATTERY SERVICE for the latest information.



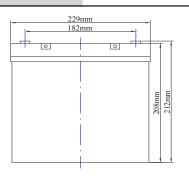
#### Characteristics 20 hour rate (1.75A to 10.5Volts) Capacity 35AH 25°C (77°F) 10 hour rate (3.1A to 10.5Volts) 31AH 5 hour rate (5.8A to 10.2Volts) 29AH Full charged Battery 25°C (77°F) $9m\Omega$ Internal Resistance Capacity affected 40°C (104°F) 102% by Temperature 25°C (77°F) 100% (20 hour rate) 0°C (32°F) 85% -15°C (5°F) 65% Self-Discharge Capacity after 3 month storage 91% 25°C (77°F) Capacity after 6 month storage 82% Capacity after 12 month storage 64% Standard Terminal М6 Max. Discharge 450A (5s) Current 25°C (77°F) Cranking Performance Cranking Amps 230A (30-sec amps to 7.2V @ 0°C (32°F) **Cold Cranking Amps** 190A (30-sec amps to 7.2V @ -18°C (0°F) **Reserve Capacity** @ 25Amps 52Min (Minutes to 10.5V @ 75Amps at 27°C (80°F) Charging Cycle Initial Charging Current 7A Or Small (Constant 14.5V~14.9V/ 25°C (77°F) Voltage) 13.6V~13.8V/ 25°C (77°F) Float





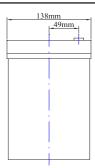
#### Characteristics 20 hour rate (2.75A to 10.5Volts) Capacity 55AH 25°C (77°F) 10 hour rate (5A to 10.5Volts) 50AH 5 hour rate (9A to 10.2Volts) 45AH Full charged Battery 25°C (77°F) $8\text{m}\Omega$ Internal Resistance 40°C (104°F) 102% Capacity affected by Temperature 25°C (77°F) 100% (20 hour rate) 0°C (32°F) 85% -15°C (5°F) 65% Self-Discharge Capacity after 3 month storage 91% 25°C (77°F) Capacity after 6 month storage 82% Capacity after 12 month storage 64% Standard Terminal М6 Max. Discharge 825A (5s) Current 25°C (77°F) 480A Cranking Performance Cranking Amps (30-sec amps to 7.2V @ 0°C (32°F) **Cold Cranking Amps** 400A (30-sec amps to 7.2V @ -18°C (0°F) 96Min **Reserve Capacity** @ 25Amps (Minutes to 10.5V @ 75Amps 21Min at 27°C (80°F) Charging Cycle Initial Charging Current 11A Or Small (Constant 14.5V~14.9V/ 25°C (77°F)

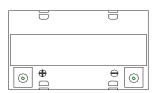
13.6V~13.8V/ 25°C (77°F)

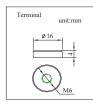


Float

Voltage)







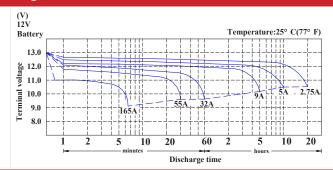
## ZL120155

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

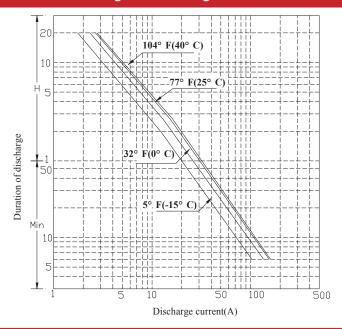
Cut off voltage V/cell 1.75V	30M	45M	1H	2H	3Н	5H	8H	10H	12H	20H	24H
1.75V	55	41	31.3	16.6	12.5	8.7	6	4.95	4.22	2.75	2.3

Specificatio	ns						
No	ominal Voltage	12V					
Rated Ca	apacity (20 hour rate)	55Ah					
	Total Height (with terminals)	212mm (8.53 inches)					
Dimension	Height	208mm (8.19 inches)					
	Length	229mm (9.02 inches)					
	Width	138mm (5.43 inches)					
	Weight	Approx. 17.6 kg (38.5 lbs)					

### Discharge characteristics 25°C (77°F)



### Duration of discharge vs. Discharge current





**Specifications** 



# ZL120175

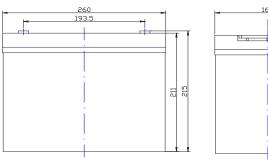
## Constant Current Discharge Rating Amperes @ 25°C (77°F)

Cut off voltage V/cell											
1.75V	79	58	48.3	25.6	19.2	13.5	9.2	7.65	6.52	4.25	3.56

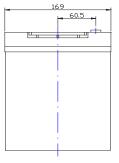
Characteristics		
Capacity 25°C (77°F)	20 hour rate (4.25A to 10.5Volts) 10 hour rate (7.65A to 10.5Volts) 5 hour rate (13.9A to 10.2Volts)	85AH 76.5AH 69.5AH
Internal Resistance	Full charged Battery 25°C (77°F)	5.3mΩ
Capacity affected by Temperature (20 hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Standard Terminal	M6	
Max. Discharge Current 25°C (77°F)	1000A (5s)	
Cranking Performance	Cranking Amps (30-sec amps to 7.2V @ 0°C (32°F) Cold Cranking Amps (30-sec amps to 7.2V @ -18°C (0°F)	600A 510A
Reserve Capacity (Minutes to 10.5V at 27°C (80°F)	@ 25Amps @ 75Amps	148Min 34Min
Charging	Cycle Initial Charging Current 17A Or S	mall

14.5V~14.9V/ 25°C (77°F)

13.6V~13.8V/ 25°C (77°F)



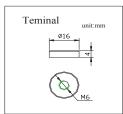
Float





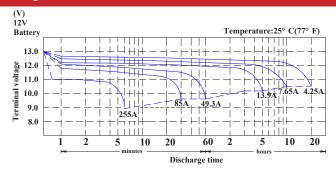
(Constant

Voltage)

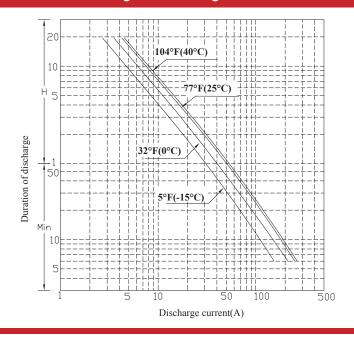


#### 12V Nominal Voltage Rated Capacity (20 hour rate) 85Ah Total Height 215mm (8.46 inches) (with terminals) Dimension Height 211mm (8.31 inches) Length 260mm (10.24 inches) Width 169mm (6.69 inches) Weight Approx. 25.1 kg (55.34lbs)

### Discharge characteristics 25°C (77°F)



### Duration of discharge vs. Discharge current



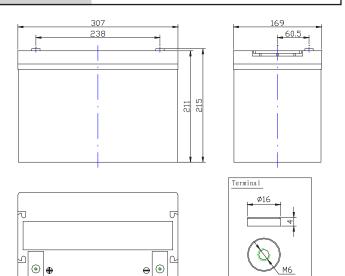




## Constant Current Discharge Rating Amperes @ 25°C (77°F)

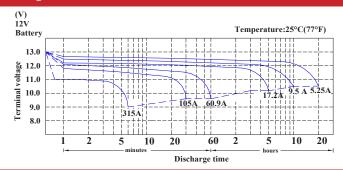
Cut off voltage V/cell											
1.75V	97.7	72.5	59.6	31.6	16.7	11.4	9.5	8.1	5.3	4.4	

Characteristics		
Capacity 25°C (77°F)	20 hour rate (5.25A to 10.5Volts) 10 hour rate (9.5A to 10.5Volts) 5 hour rate (17.2A to 10.2Volts)	105AH 95AH 86AH
Internal Resistance	Full charged Battery 25°C (77°F)	4mΩ
Capacity affected by Temperature (20 hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Standard Terminal	M6	
Max. Discharge Current 25°C (77°F)	1050A (5s)	
Cranking Performance	Cranking Amps (30-sec amps to 7.2V @ 0°C (32°F) Cold Cranking Amps (30-sec amps to 7.2V @ -18°C (0°F)	660A 550A
Reserve Capacity (Minutes to 10.5V at 27°C (80°F)	@ 25Amps @ 75Amps	175Min 43Min
Charging (Constant Voltage)	Cycle Initial Charging Current 21A Or S 14.5V~14.9V/ 25°C (77°F) Float 13.6V~13.8V/ 25°C (77°F)	mall

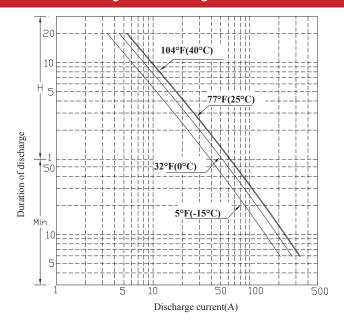


#### **Specifications** Nominal Voltage 12V Rated Capacity (20 hour rate) 105Ah Total Height 215mm (8.46 inches) (with terminals) Dimension Height 211mm (8.31 inches) Length 307mm (12.09 inches) Width 169mm (6.69 inches) Weight Approx. 30.2 kg (66.58 lbs)

## Discharge characteristics 25°C (77°F)



### Duration of discharge vs. Discharge current





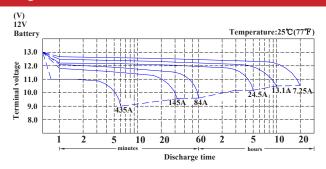


## Constant Current Discharge Rating Amperes @ 25°C (77°F)

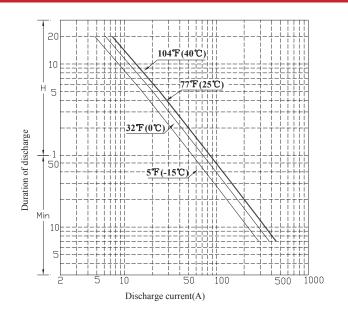
Cut off voltage V/cell	30M	45M	1H	2H	3H	5H	8H	10H	12H	20H	24H
1.75V	135.3	99.9	82,4	43.7	32.9	23	15.8	13.1	11.1	7.25	6.1

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	145Ah
	Total Height (with terminals)	287mm (11.30 inches)
Dimension	Height	281mm (11.06 inches)
	Length	341mm (13.43 inches)
	Width	173mm (6.81 inches)
	Weight	Approx. 44.3 kg (97.46lbs)

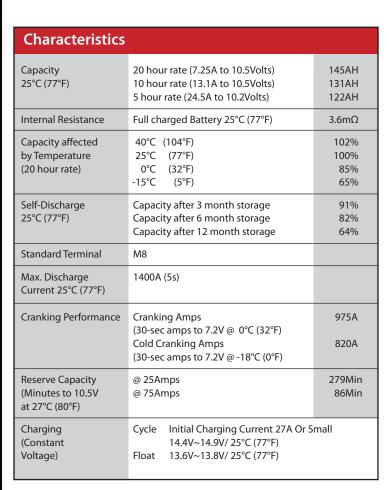
### Discharge characteristics 25°C (77°F)

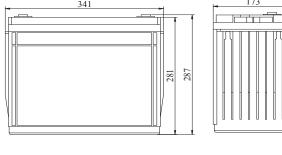


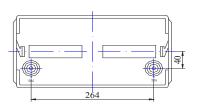
### Duration of discharge vs. Discharge current

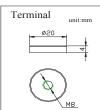










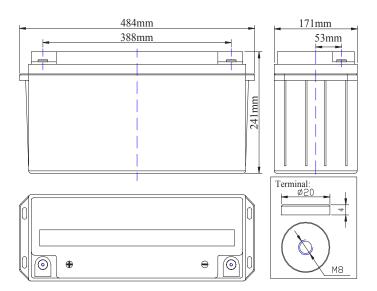




## Constant Current Discharge Rating Amperes @ 25°C (77°F)

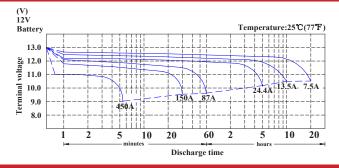
Cut off voltage V/cell											
1.75V	140	103	85.3	45.2	34	23.8	16.3	13.5	11.5	7.5	6.28

Charactaristics		
Characteristics		
Capacity 25°C (77°F)	20 hour rate (7.5A to 10.5Volts) 10 hour rate (13.5A to 10.5Volts) 5 hour rate (24.6A to 10.2Volts)	160AH 135AH 123AH
Internal Resistance	Full charged Battery 25°C (77°F)	2.8mΩ
Capacity affected by Temperature (20 hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Standard Terminal	M8	
Max. Discharge Current 25°C (77°F)	1500A (5s)	
Cranking Performance	Cranking Amps (30-sec amps to 7.2V @ 0°C (32°F) Cold Cranking Amps (30-sec amps to 7.2V @ -18°C (0°F)	1070A 900A
Reserve Capacity (Minutes to 10.5V at 27°C (80°F)	@ 25Amps @ 75Amps	285Min 82Min
Charging (Constant Voltage)	Cycle Initial Charging Current 30A Or S 14.5V~14.9V/ 25°C (77°F) Float 13.6V~13.8V/ 25°C (77°F)	mall

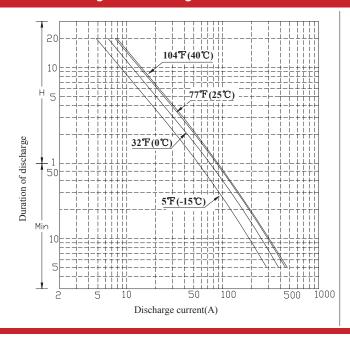


#### **Specifications** Nominal Voltage 12V Rated Capacity (20 hour rate) 160Ah Total Height 241mm (9.49 inches) (with terminals) Dimension Height 241mm (9.49 inches) Length 484mm (19.06 inches) Width 171mm (6.73 inches) Weight Approx. 45.5 kg (100.1lbs)

## Discharge characteristics 25°C (77°F)



### **Duration of discharge vs. Discharge current**





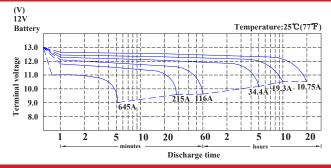


## Constant Current Discharge Rating Amperes @ 25°C (77°F)

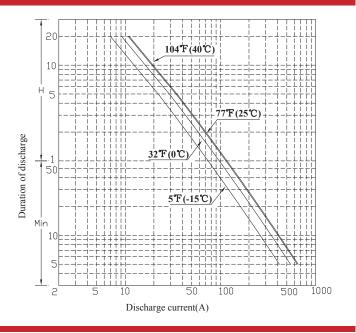
Cut off voltage V/cell											
1.75V	195	148	112	66.1	50.6	33.7	22.7	19.3	16.5	10.8	9.1

Specificatio	Specifications										
No	ominal Voltage	12V									
Rated Ca	apacity (20 hour rate)	215Ah									
	Total Height (with terminals)	372mm (14.65 inches)									
Dimension	Height	352mm (13.86 inches)									
	Length	381mm (15,00 inches)									
	Width	178mm (7,01 inches)									
	Weight	Approx. 60,0 kg (132.28lbs)									

### Discharge characteristics 25°C (77°F)

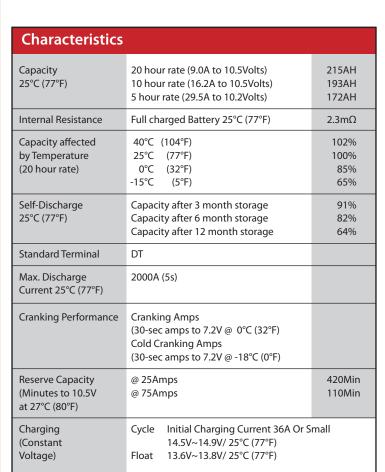


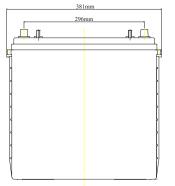
## **Duration of discharge vs. Discharge current**

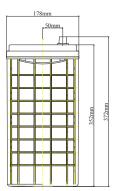


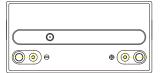


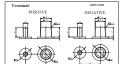










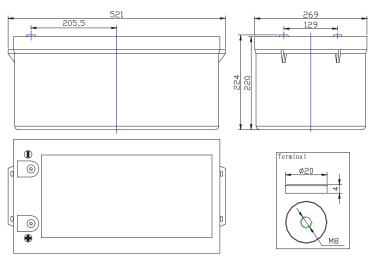




## Constant Current Discharge Rating Amperes @ 25°C (77°F)

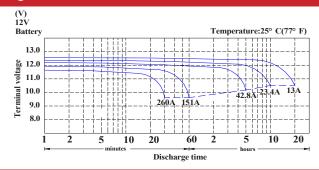
Cut off voltage V/cell											
1.75V	233	172	147.8	78.3	58.9	41.3	28.3	23.4	19.93	13.0	10.8

Characteristics		
Capacity 25°C (77°F)	20 hour rate (13A to 10.5Volts) 10 hour rate (23.4A to 10.5Volts) 5 hour rate (42.8A to 10.2Volts)	260AH 234AH 213AH
Internal Resistance	Full charged Battery 25°C (77°F)	1.8mΩ
Capacity affected by Temperature (20 hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Standard Terminal	M8	
Max. Discharge Current 25°C (77°F)	2600A (5s)	
Cranking Performance	Cranking Amps (30-sec amps to 7.2V @ 0°C (32°F) Cold Cranking Amps (30-sec amps to 7.2V @ -18°C (0°F)	
Reserve Capacity (Minutes to 10.5V at 27°C (80°F)	@ 25Amps @ 75Amps	578Min 145Min
Charging (Constant Voltage)	Cycle Initial Charging Current 52A Or S 14.5V~14.9V/ 25°C (77°F) Float 13.6V~13.8V/ 25°C (77°F)	mall

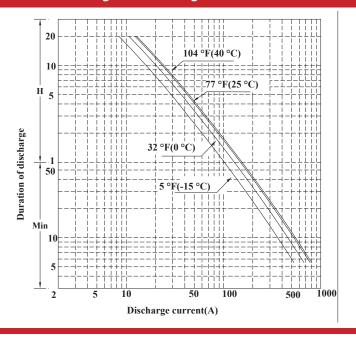


#### **Specifications** Nominal Voltage 12V Rated Capacity (20 hour rate) 260Ah Total Height 224mm (8.82 inches) (with terminals) Dimension Height 220mm (8.66 inches) Length 521mm (20.51 inches) Width 269mm (10.59 inches) Weight Approx. 78.2 kg (172.40lbs)

## Discharge characteristics 25°C (77°F)



### **Duration of discharge vs. Discharge current**







Characteristics

## **ZGL120048**

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

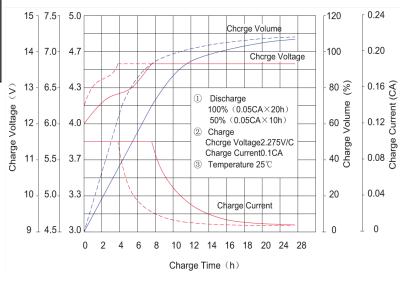
F.V/Time	5M	10M	15M 53.87	30M	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
10.5	87.82	64.72	53.87	36.07	20.96	11.7	8.481	6.99	5.69	3.99	3.366	1.733

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	35Ah
	Total Height (with terminals)	159mm (6.264 inches)
Dimension	Height	159mm (6.264 inches)
	Length	195mm (7.683 inches)
	Width	130mm (5.122 inches)
	Weight	Approx. 10.2kg (22.44lbs)

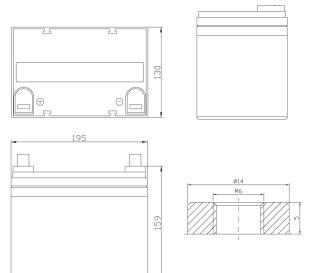
## Discharge characteristics 25°C (77°F)

	13	6.5	4.3												
<u>S</u>	12-	6.0	4.0											$\forall$	
Terminal Voltage	11-	5.5	3.7												0.05C
Termi	10-	5.0	3.3						0.	0. 62C	35C	0.16	C 0.0	93C	
	9 -	4.5	3.0			30		10	;						
	_	_	0.6	1.2	3	6	12	30	1	2		5	10	20	24
			-			min		 )iech	arge	• Time		ŀ	Hr		-

## Charge characteristic Curve for standby use



20 hour rate 35AH Capacity 25°C (77°F) 5 hour rate 29.8AH Internal Resistance Full charged Battery 25°C (77°F) 9mΩ Capacity affected 40°C (104°F) 107% by Temperature 25°C (77°F) 100% 0°C (32°F) (20 hour rate) 76% -10°C (14°F) 66% Self-Discharge Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using. Standard Terminal Max. Discharge 330A (5s) Current 25°C (77°F) Final Discharge Voltage V/cell 1.75V 1.70V 1.60V 0.2< (A) < 1.0C Discharge Current (A) (A) ≤0.2C (A) ≥1.0C Charging Initial Charging Current 9.9A Or Small (Constant 14.6V~14.8V/ 25°C (77°F) 13.6V~13.8V/ 25°C (77°F) Voltage) **Container Material** A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be avaible upon request.





55AH

6mΩ

107%

100%

76%

66%

1.60V

(A) ≥1.0C

48.0AH



Characteristics

Internal Resistance

Capacity affected

by Temperature

(20 hour rate)

Self-Discharge

Standard Terminal Max. Discharge

Current 25°C (77°F)

Discharge Current (A)

Final Discharge Voltage V/cell

Charging

(Constant

Voltage)

**Container Material** 

Capacity 25°C (77°F) 20 hour rate

40°C (104°F)

(77°F)

(32°F)

(14°F)

25°C

0°C

550A (5s)

1.75V

(A) ≤0.2C

-10°C

Full charged Battery 25°C (77°F)

Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using.

1.70V

0.2< (A) < 1.0C

14.6V~14.8V/ 25°C (77°F)

13.6V~13.8V/ 25°C (77°F)

can be avaible upon request.

Initial Charging Current 16.5A Or Small

A.B.S. (UL94-HB), Flammability resistance of UL94-V1

5 hour rate

# **ZGL120058**

### Constant Current Discharge Rating Amperes @ 25°C (77°F)

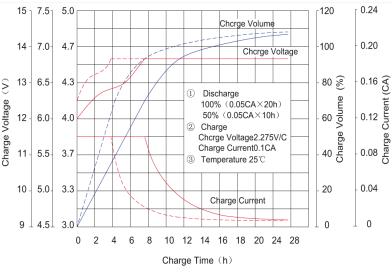
F.V/Time			15M									
10.5	146.4	107.9	89.79	60.12	34.93	19.5	14.14	11.6	9.49	6.66	5.610	2.888

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	55Ah
	Total Height (with terminals)	235mm (9.259 inches)
Dimension	Height	210mm (8.274 inches)
	Length	229mm (9.0226 inches)
	Width	138mm (5.4372 inches)
	Weight	Approx. 18.0 kg (39.6lbs)

## Discharge characteristics 25°C (77°F)

	13	6.5	4.3												
(S	12-	6.0	4.0											$\forall$	
Terminal Voltage	11-	5.5	3.7											0.0	05C
Termi	10-	5.0-	3.3							0.62	0.35	0.160	0.09	93C	
	9 -	4.5	3.0			3	С		10						
	_	_	0.6	1.2	3	6	12		30	1	2	5	10	20	24
			_			min						H	łr		
			'					1	Disch	narge 1	Time				

## Charge characteristic Curve for standby use



Charge Time (h)

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specification are subject to modification without notice. Contact U.B.S. UNION BATTERY SERVICE for the latest information.





## **ZGL120070**

### Constant Current Discharge Rating Amperes @ 25°C (77°F)

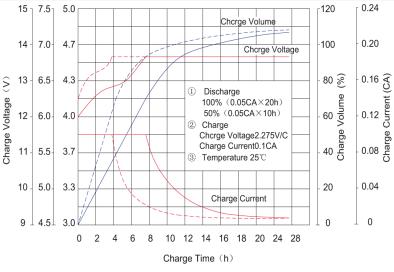
			15M									
10.5	199.5	147.1	122.4	81.97	47.62	26.6	19.27	15.9	12.9	9.08	7.650	3.938

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	80Ah
	Total Height (with terminals)	235mm (7.212 inches)
Dimension	Height	210mm (7.092 inches)
	Length	260mm (13.79 inches)
	Width	169mm (6.57 inches)
	Weight	Approx. 23.5 kg (52.8lbs)

## Discharge characteristics 25°C (77°F)

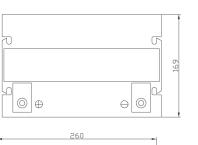
	13	6.5	4.3												
(V)	12-	6.0	4.0												
Terminal Voltage	11-	5.5	3.7												0.05C
Termi	10-	5.0-	3.3							0.63	0.35 2C	0.16 C	C 0.09	93C	
	9 -	4.5	3.0			3	BC		10						
	_	_	0.6	1.2	3	6	12		30	1	2	5	10	20	24
			-			min		1	Disch	narge	Time	ŀ	Hr		

## Charge characteristic Curve for standby use

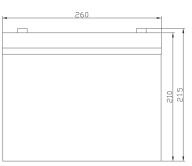


014 M6

Characteristics HA08 Capacity 20 hour rate 25°C (77°F) 5 hour rate 68AH Internal Resistance Full charged Battery 25°C (77°F) 6mΩ Capacity affected 40°C (104°F) 107% by Temperature 25°C (77°F) 100% 0°C (32°F) (20 hour rate) 76% -10°C (14°F) 66% Batteries can be stored for more Self-Discharge than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries befor using. Standard Terminal Max. Discharge 750A (5s) Current 25°C (77°F) Final Discharge Voltage V/cell 1.75V 1.70V 1.60V (A) ≤0.2C Discharge Current (A) 0.2< (A) < 1.0C (A) ≥1.0C Charging Initial Charging Current 22.5A Or Small (Constant 14.6V~14.8V/ 25°C (77°F) 13.6V~13.8V/ 25°C (77°F) Voltage) A.B.S. (UL94-HB), Flammability resistance of UL94-V1 **Container Material** can be avaible upon request.









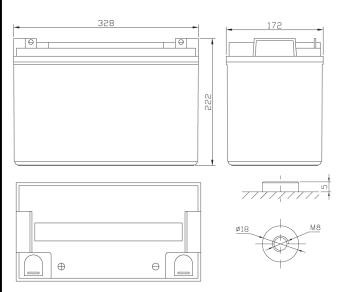


#### Characteristics 20 hour rate 100AH Capacity 25°C (77°F) 5 hour rate 85.0AH Internal Resistance Full charged Battery 25°C (77°F) $5m\Omega$ Capacity affected 40°C (104°F) 107% by Temperature 25°C (77°F) 100% 0°C (32°F) (20 hour rate) 76% -10°C (14°F) 66% Self-Discharge Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using. Standard Terminal Max. Discharge 1000A (5s) Current 25°C (77°F) Final Discharge Voltage V/cell 1.75V 1.70V 1.60V Discharge Current (A) (A) ≤0.2C 0.2< (A) < 1.0C (A) ≥1.0C Charging Initial Charging Current 36A Or Small (Constant 14.6V~14.8V/ 25°C (77°F)

13.6V~13.8V/ 25°C (77°F)

can be avaible upon request.

A.B.S. (UL94-HB), Flammability resistance of UL94-V1



Voltage)

**Container Material** 

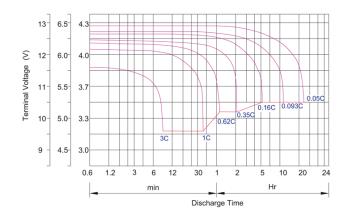
# **ZGL120078**

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

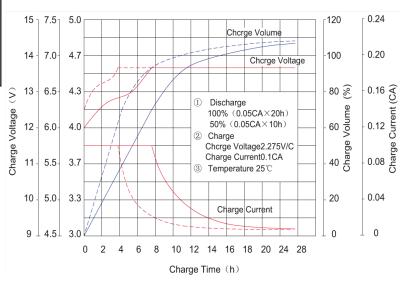
F.V/Time			15M									
10.5	266.1	196.1	163.2	109.3	63.50	35.4	25.70	21.20	17.2	12.1	10.20	5.25

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	pacity (20 hour rate)	100Ah
	Total Height (with terminals)	222mm (8.74 inches)
Dimension	Height	222mm (8.74 inches)
	Length	328mm (12.91 inches)
	Width	172mm (6.77 inches)
	Weight	Approx. 30.0 kg (66lbs)

### Discharge characteristics 25°C (77°F)



### Charge characteristic Curve for standby use



This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries.

Cell and battery designs/specification are subject to modification without notice. Contact U.B.S. UNION BATTERY

SERVICE for the latest information.

DIVISION OF Service

www.zenithdcbattery.com



## **ZGL120085**

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

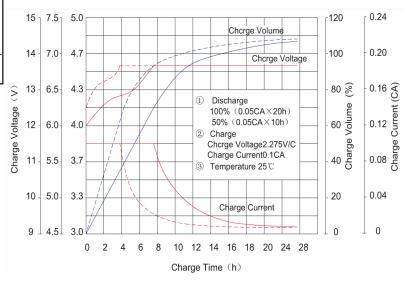
			15M									
10.5	309.7	235.3	195.9	131.1	76.20	42.5	30.84	25.44	20.7	14.5	12.24	6.301

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	120Ah
	Total Height (with terminals)	222mm (8.746inches)
Dimension	Height	222mm (8.746 inches)
	Length	328mm (12.923 inches)
	Width	172mm (6.776 inches)
	Weight	Approx. 32.0 kg (70.4lbs)

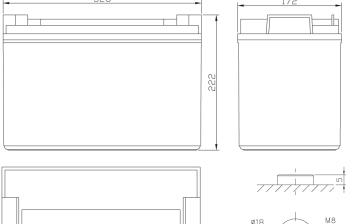
## Discharge characteristics 25°C (77°F)

	13	6.5	4.3												
(S	12-	6.0	4.0												
Terminal Voltage	11-	5.5	3.7											0.	05C
Termi	10-	5.0	3.3							0.62	0.35	0.16 C	C 0.09	93C	
	9 -	4.5	3.0			30			10	-					
		_	0.6	1.2	3	6	12	;	30	1	2	5	10	20	24
			_			min						H	łr		
			'					D	isch	arge '	Time				

## Charge characteristic Curve for standby use



Characteristics 20 hour rate (13A to 10.5Volts) 120AH Capacity 25°C (77°F) 5 hour rate (42.8A to 10.2Volts) 102.0AH Internal Resistance Full charged Battery 25°C (77°F)  $4m\Omega$ Capacity affected 40°C (104°F) 107% by Temperature 25°C (77°F) 100% 0°C (32°F) (20 hour rate) 76% -10°C (14°F) 66% Self-Discharge Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries befor using. Standard Terminal Max. Discharge 1200A (5s) Current 25°C (77°F) Final Discharge Voltage V/cell 1.75V 1.70V 1.60V Discharge Current (A) (A) ≤0.2C 0.2< (A) < 1.0C (A) ≥1.0C Charging Initial Charging Current 36A Or Small (Constant 14.6V~14.8V/ 25°C (77°F) 13.6V~13.8V/ 25°C (77°F) Voltage) **Container Material** A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be avaible upon request.





160AH

 $4m\Omega$ 

107%

100%

76%

66%

136.0AH



Characteristics

Internal Resistance

Capacity affected

by Temperature

(20 hour rate)

Self-Discharge

Standard Terminal Max. Discharge

Current 25°C (77°F)

Capacity 25°C (77°F) 20 hour rate

40°C (104°F)

25°C (77°F)

(32°F)

(14°F)

0°C

1500A (5s)

-10°C

Full charged Battery 25°C (77°F)

Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using.

5 hour rate

# **ZGL120088**

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

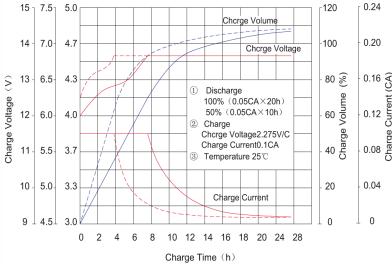
			15M									
10.5	387.1	285.3	244.8	159.0	95.25	53.2	38.55	31.80	25.8	18.7	15.30	7.87

Specificatio	ns	
No	ominal Voltage	12V
Rated Ca	apacity (20 hour rate)	160Ah
	Total Height (with terminals)	240mm (9.44 inches)
Dimension	Height	240mm (9.44 inches)
	Length	483mm (19.01 inches)
	Width	170mm (6.69 inches)
	Weight	Approx. 44.5 kg (97.9lbs)

## Discharge characteristics 25°C (77°F)

	13	6.5	4.3												
<u>S</u>	12-	6.0	4.0											$\forall$	
Terminal Voltage	11-	5.5	3.7												0.05C
Termi	10-	5.0	3.3						0.	0. 62C	35C	0.16	C 0.0	93C	
	9 -	4.5	3.0			30		10	;						
	_	_	0.6	1.2	3	6	12	30	1	2		5	10	20	24
			-			min		 )iech	arge	• Time		ŀ	Hr		-

## Charge characteristic Curve for standby use



Final Discharge Voltage V/cell 1.75V 1.70V 1.60V Discharge Current (A) (A) ≤0.2C 0.2< (A) < 1.0C (A) ≥1.0C Charging Initial Charging Current 45A Or Small (Constant 14.6V~14.8V/ 25°C (77°F) 13.6V~13.8V/ 25°C (77°F) Voltage) A.B.S. (UL94-HB), Flammability resistance of UL94-V1 **Container Material** can be avaible upon request.

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specification are subject to modification without notice. Contact U.B.S. UNION BATTERY SERVICE for the latest information.



www.zenithdcbattery.com



#### Characteristics 20 hour rate 210AH Capacity 25°C (77°F) 5 hour rate 178.5AH Internal Resistance Full charged Battery 25°C (77°F) $4m\Omega$ Capacity affected 40°C (104°F) 107% by Temperature 25°C (77°F) 100% (32°F) 0°C (20 hour rate) 76% -10°C (14°F) 66% Self-Discharge Batteries can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using. Standard Terminal Max. Discharge 2000A (5s) Current 25°C (77°F) Final Discharge Voltage V/cell 1.75V 1.70V 1.60V Discharge Current (A) (A) ≤0.2C 0.2< (A) < 1.0C (A) ≥1.0C

Initial Charging Current 60A Or Small

A.B.S. (UL94-HB), Flammability resistance of UL94-V1

14.6V~14.8V/ 25°C (77°F)

13.6V~13.8V/ 25°C (77°F)

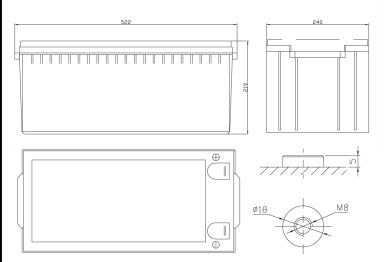
can be avaible upon request.

Charging

(Constant

Voltage)

**Container Material** 



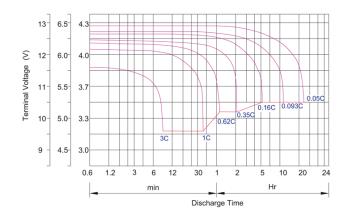
# **ZGL120094**

### Constant Current Discharge Rating Amperes @ 25°C (77°F)

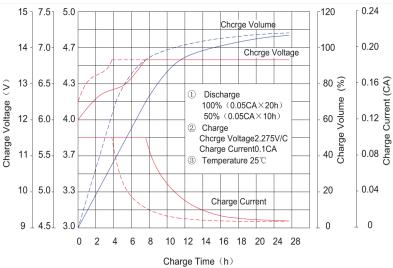
			15M									
10.5	516.2	392.2	326.5	218.6	127.0	70.9	51.40	42.40	34.5	24.2	20.40	10.50

Specifications									
No	ominal Voltage	12V							
Rated Ca	apacity (20 hour rate)	210Ah							
	Total Height (with terminals)	219mm (8.62 inches)							
Dimension	Height	219mm (8.62 inches)							
	Length	522mm (20.55 inches)							
	Width	240mm (9.44 inches)							
	Weight	Approx. 60.0 kg (132.0lbs)							

### Discharge characteristics 25°C (77°F)



### Charge characteristic Curve for standby use







# **ZGL120098**

## Constant Current Discharge Rating Amperes @ 25°C (77°F)

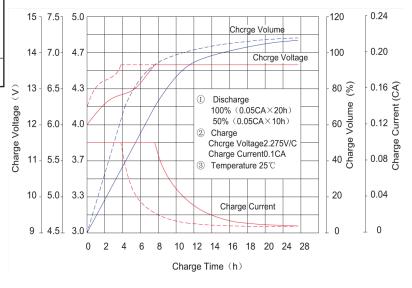
			15M									
10.5	671.1	494.6	424.4	275.6	165.1	92.2	66.82	55.12	44.8	31.5	26.52	13.65

Specifications									
No	ominal Voltage	12V							
Rated Ca	apacity (20 hour rate)	260Ah							
	Total Height (with terminals)	225mm (8.85 inches)							
Dimension	Height	220mm (8.66 inches)							
	Length	520mm (20.47 inches)							
	Width	268mm (10.55 inches)							
	Weight	Approx. 74.0 kg (162.8lbs)							

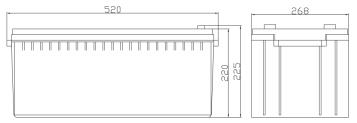
## Discharge characteristics 25°C (77°F)

	13	6.5	4.3												
(V)	12-	6.0	4.0												
Terminal Voltage	11-	5.5	3.7							$\downarrow$				0	.05C
Termi	10-	5.0-	3.3							0.6	0.35 2C	0.16 5C	C 0.09	93C	
	9 -	4.5	3.0			3	C		10						
	_		0.6	1.2	3	6	12		30	1	2	5	10	20	24
			-	min Hr Discharge Time								-			

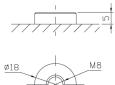
## Charge characteristic Curve for standby use



Characteristics									
Capacity 25°C (77°F)	20 hour ra 5 hour rate	260AH 221AH							
Internal Resistance	Full charge	3.5mΩ							
Capacity affected by Temperature (20 hour rate)	40°C (104 25°C (77 0°C (32 -10°C (14	107% 100% 76% 66%							
Self-Discharge Batteries	can be stored for more than 6 months at 25°C. Self- discharge ratio less than 3% per month at 25°C. Please charge batteries before using.								
Standard Terminal	M8								
Max. Discharge Current 25°C (77°F)	2600A (5s)								
Final Discharge Voltage V/cell	1.75V	1.70V	1.60V						
Discharge Current (A)	(A) ≤0.2C	0.2< (A) < 1.0C	(A) ≥1.0C						
Charging (Constant Voltage)	Cycle Initial Charging Current 78A Or Sma 14.6V~14.8V/ 25°C (77°F) Float 13.6V~13.8V/ 25°C (77°F)								
Container Material A.B.S. (UL94-HB), Flammability resistance of Ul can be avaible upon request.									







This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specification are subject to modification without notice. Contact U.B.S. UNION BATTERY SERVICE for the latest information.



www.zenithdcbattery.com