

KBG12400 12V 40Ah (C₁₀)

Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge, even if the battery is left discharged for three days, it will recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, specially suitable for motive power applications, such as golf trailer, scrubber, forklift, etc. The deep discharge cycles increased 50% as compared with the AGM battery.



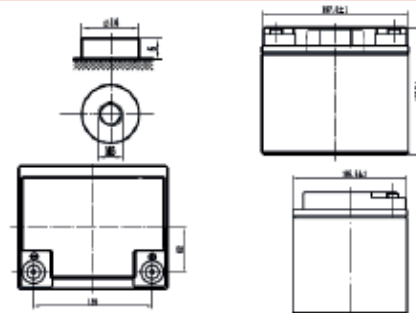
Performance Characteristics

Nominal Voltage	12V	
Design Life	12 years	
Dimensions	Length (mm / inch)	197 / 7.75
	Width (mm / inch)	165 / 6.49
	Height (mm / inch)	170 / 6.69
	Total Height (mm / inch)	170 / 6.69
Approx. Weight	14.7 / 29.8	
Terminal	M6	
Container Material	ABS	
Rated Capacity	40Ah / 2.0A	(20hr, 10.5V / cell, 25°C / 77°F)
	36.6Ah / 3.66A	(10hr, 10.5V / cell, 25°C / 77°F)
	33.5Ah / 6.7A	(5hr, 10.5V / cell, 25°C / 77°F)
	25.3Ah / 25.3A	(1hr, 9.0V / cell, 25°C / 77°F)
Max. Discharge Current	40A (5s)	
Internal Resistance	Approx 9.5mΩ	
Operating Temp. Range	Discharge: -20 - 60°C (-4 - 140°F)	
	Charge: -10 - 60°C (14 - 140°F)	
	Storage: -20 - 60°C (-4 - 140°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Cycle Use Maximum charging current 13A	
	Voltage: 2.40V - 2.48V at 25°C (77° F)	
	Temp. Coefficient: -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	2.20V - 2.30V at 25°C (77° F)	
	Temp. Coefficient: -20mV/°C	
Capacity affected by temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Fully charged Kaise Gel Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Discharge Constant Current (Amperes) at 77°F (25°C)

Voltage/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	72.0	68.9	33.7	21.3	8.90	6.50	3.52	1.94
1.75V	76.0	62.4	35.6	22.3	9.40	6.70	3.66	2.00
1.70V	81.0	66.7	37.4	23.5	9.70	6.90	3.77	2.02
1.65V	85.0	69.1	39.1	24.4	10.1	7.20	3.90	2.08
1.60V	89.0	72.4	40.7	25.3	10.4	7.30	4.01	2.13

Dimensions and Terminal (Unit: mm (inches))



Applications

- Wind and solar energy systems
- Cable TV systems
- Telecommunications
- Electric wheel chairs
- Military equipment
- Emergency lighting
- Power plants
- Medical equipment
- Golf carts

Certifications

ISO 9001:2008 ISO 14001:2008



Discharge End Voltage vs. Discharge Current

Final discharge voltage VCELL	1.8	1.75	1.7	1.6
Discharge current (A)	I ≤ 0.10A	0.25CA ≥ I > 0.10A	0.55CA ≥ I > 0.25CA	I > 0.55CA

Discharge Constant Power (Watts per cell) at 77°F (25°C)

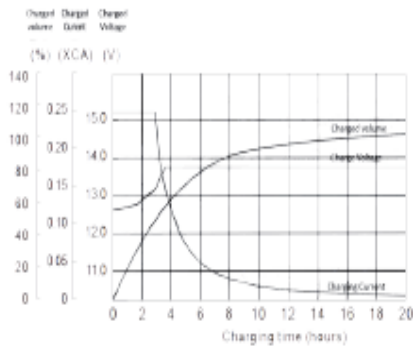
Voltage/cell	10min	15min	30min	45min	1h	2h	3h	5h
1.80V	133	111	64.0	51.7	43.6	24.8	18.5	12.9
1.75V	142	117	67.0	54.3	45.7	26.0	19.4	13.2
1.70V	149	123	70.0	56.6	47.7	26.9	20.0	13.6
1.65V	156	128	73.0	58.6	49.2	27.8	20.6	14.0
1.60V	163	133	76.0	60.5	50.7	28.6	21.2	14.1

[Note] The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

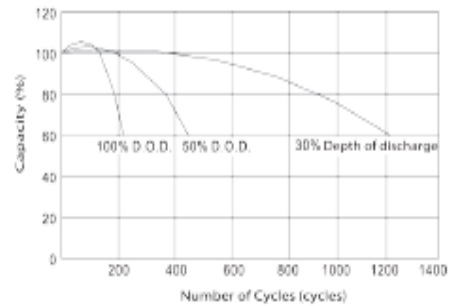
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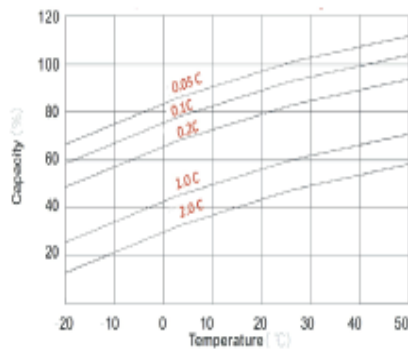
Charging Characteristics (cycle use)



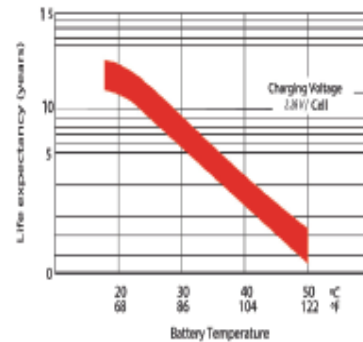
Cycle Life in Relation to Depth of Discharge



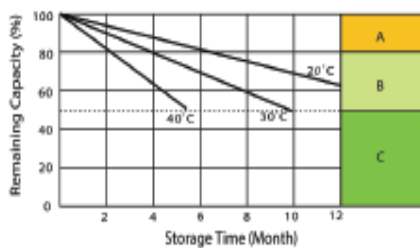
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



- A** No supplementary charge required.
(carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way a below.
 1. Charged for above 3 days of limited current 0.25 CA and constant voltage 2.25V/cell
 2. Charged to above 20 hours limited current 0.25 CA and constant voltage 2.25V/cell
 3. Charged for 8-10 hours at limited current 1.0 CA
- C** Supplementary charge after fail to recover the capacity.
The battery should never be left standing till this is rescued.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.