

KBL12400 12V 40Ah

The KAISE LONG LIFE Series 10 years has been designed for different applications, such as UPS, electric and telecommunications applications that require a long useful life.



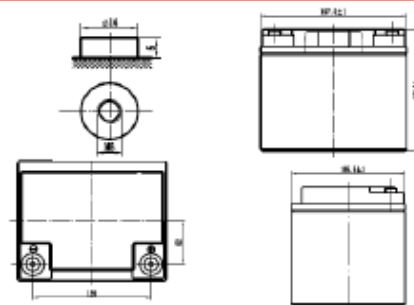
Performance Characteristics

Nominal Voltage	12V	
Dimensions	Length (mm / inch)	197.5 / 7.78
	Width (mm / inch)	165.5 / 6.52
	Height (mm / inch)	170 / 6.69
	Total Height (mm / inch)	170 / 6.69
Approx. Weight	[Kg / lbs] 13.8 / 30.4	
Design Life	10 years	
Terminal	M6	
Container Material	ABS	
Rated Capacity	41 Ah / 4.10A	(10hr, 1.70V / cell, 25°C / 77°F)
	34.9 Ah / 6.97A	(5hr, 1.70V / cell, 25°C / 77°F)
	24.2 Ah / 24.2A	(1hr, 1.70V / cell, 25°C / 77°F)
Max. Discharge Current	400A (5s)	
Internal Resistance	Approx 9.7mΩ	
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 ± 6°F)	
Cycle Use	Initial Charging Current less than 8A	
	Voltage: 2.30VPC - 2.40VPC at 25°C (77°F)	
	Temp. Coefficient: -30mV/°C	
Standby Use	Initial Charging Current less than 8A	
	2.25VPC - 2.30VPC 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 Long Life 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.	

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

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	69.9	55.2	35.8	23.5	9.43	6.66	4.00	2.11
1.75V	73.6	61.0	36.1	23.9	9.65	6.83	4.05	2.15
1.70V	77.8	64.5	37.3	24.2	9.89	6.97	4.10	2.18
1.65V	82.2	67.1	38.7	24.6	10.1	7.10	4.15	2.20
1.60V	86.5	70.7	39.9	24.9	10.3	7.22	4.20	2.22

Dimensions and Terminal (Unit: mm (inches))



Applications

UPS
Telecommunications equipment
Solar energy systems
Cable TV
Power station
Marine equipment
Military equipment
Emergency power systems
Railway systems

Certifications

ISO 9001:2008 ISO 14001:2008



Discharge Current vs. Discharge Voltage

Final discharge voltage VCELL	1.8	1.75	1.7	1.6
Discharge current (A)	1 ≤ 0.1CA	0.25CA ≥ 1 > 0.1CA	0.55CA ≥ 1 > 0.25CA	1 > 0.55CA

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

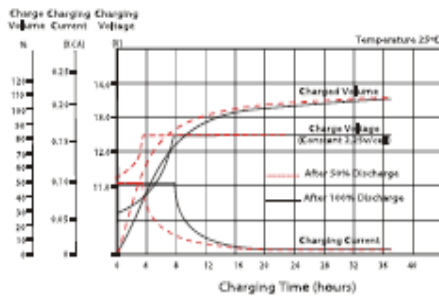
Volts/cell	10min	15min	30min	45min	1h	2h	3h	5h
1.80V	130	109	71.3	55.4	46.7	25.8	19.6	13.3
1.75V	138	113	73.8	56.6	47.5	26.2	20.0	13.4
1.70V	144	117	76.3	57.8	48.3	26.6	20.3	13.6
1.65V	152	120	78.8	59.0	49.2	27.1	20.7	13.8
1.60V	158	124	81.2	60.2	49.9	27.5	21.0	14.0

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

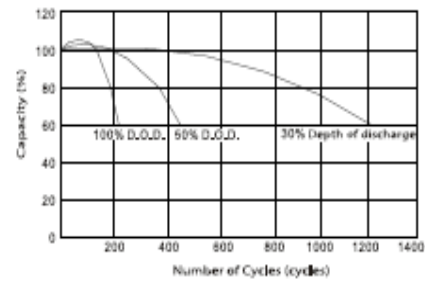
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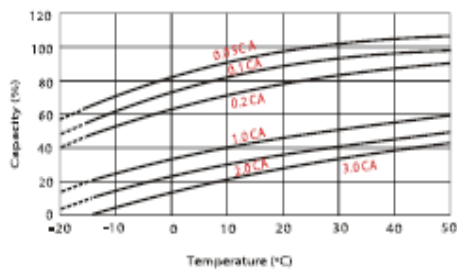
Charging Characteristics (float use)



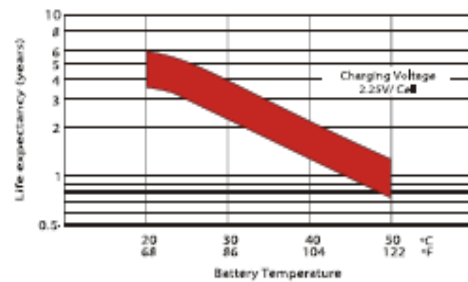
Cycle Life in Relation to Depth of Discharge



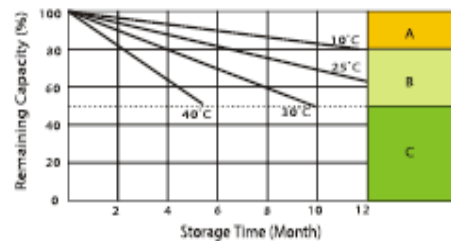
Temperature Effects in Relation to Battery Capacity



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 as below:
 1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
 2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.40V / cell.
 3. Charged for 8-10 hours at limited current 0.05 CA.
- C** Supplementary charge after fail to recover the capacity
The battery should never be left standing till this is reached.

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

