ATB-GEL-DCG12-50

Deep-cycle gel. Tough on heat and cycling.

A 12 V 53 Ah gel VRLA battery for solar, deep-cycle, mobility and marine use. The gelled electrolyte gives strong deep-cycle life and tolerance to heat and irregular charging. Sealed, maintenance-free and non-spillable, with M6 bolt terminals.



12 V	53 Ah	500 A	16.7 kg
NOMINAL VOLTAGE	C20 CAPACITY @ 25°C	MAX DISCHARGE (5 S)	APPROX. WEIGHT

Sealed gel VRLA

Valve-regulated oxygen-recombination design. Maintenance-free and non-spillable: no electrolyte topping and no acid handling.

M6 bolt terminals

Threaded M6 terminals for secure bolted cable connections in UPS and standby systems.

Gelled electrolyte

Fumed-silica gel immobilises the electrolyte for deep-cycle life and heat tolerance.

Standard footprint

230 × 138 × 215 mm case.

SPECIFICATIONS

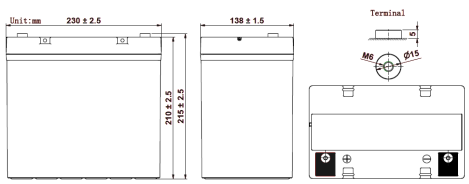
MECHANICAL

Length	**230 mm ±2.5**
Width	**138 mm ±1.5**
Container height	**210 mm ±2.5**
Overall height	**215 mm ±2.5**
Approx. weight	**16.7 kg ±3%**
Container material	**ABS, UL94-HB (UL94-V0 optional)**
Terminal type	**M6 bolt terminal**

ELECTRICAL

Nominal voltage	**12 V**
Chemistry	**GEL VRLA (sealed)**
Capacity, 20 hr (C20)	**53 Ah**
Capacity, 10 hr (C10)	**50 Ah**
Capacity, 5 hr (C5)	**43 Ah**
Rating basis	**to 1.80 V/cell @ 25°C**
Float voltage @ 25°C	**13.5 – 13.8 V**
Equalizing voltage @ 25°C	**14.4 – 15.0 V**
Max charge current	**15 A**
Max discharge current	**500 A (5 s)**
Internal resistance (charged)	**≈ 10.5 mΩ**
Operating temp. (dis / chg)	**−15°C~50°C / −15°C~40°C**
Storage temp.	**−15°C~40°C**

CONTAINER DRAWING — DIMENSIONS IN MM



ATB-GEL-DCG12-50 — technical data

CONSTANT CURRENT DISCHARGE @ 25°C · UNIT: A

F.V (V/cell) / Time	10 min	15 min	30 min	1 h	3 h	5 h	10 h	20 h
1.60 V	92.1	78.8	50.2	31.6	13.9	9.32	5.28	2.84
1.67 V	89.0	76.4	47.3	30.6	13.8	9.27	5.24	2.82
1.70 V	84.6	73.4	46.0	30.1	13.6	9.10	5.19	2.80
1.75 V	80.9	69.9	44.0	29.1	13.2	8.82	5.14	2.72
1.80 V	74.6	64.6	42.1	26.0	12.7	8.60	5.00	2.66
1.85 V	65.7	57.0	36.2	23.5	11.5	8.16	4.90	2.53

CONSTANT POWER DISCHARGE @ 25°C · UNIT: W/CELL

F.V (V/cell) / Time	10 min	15 min	30 min	1 h	3 h	5 h	10 h	20 h
1.60 V	160	140	90.0	59.3	26.5	18.1	10.3	5.43
1.67 V	158	138	86.1	58.0	26.4	18.0	10.3	5.38
1.70 V	152	134	84.3	57.1	26.0	17.8	10.2	5.33
1.75 V	148	129	81.4	55.8	25.6	17.3	10.2	5.22
1.80 V	138	121	78.6	50.2	24.7	16.8	9.88	5.06
1.85 V	124	108	68.4	45.6	22.6	16.0	9.71	4.85

EFFECT OF TEMPERATURE ON CAPACITY (10 HR)

Temperature	Capacity (10 HR)
40 °C	102%
25 °C	100%
0 °C	85%
−15 °C	65%

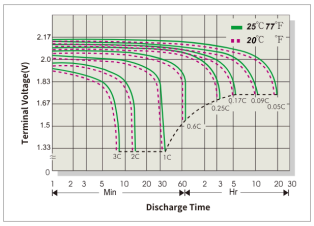
SELF-DISCHARGE CHARACTERISTICS

Storage time	Remaining capacity
3 months	91%
6 months	82%
12 months	64%

CHARACTERISTIC CURVES

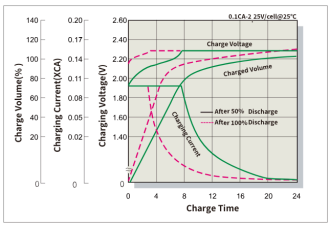
Discharge Characteristics

TERMINAL VOLTAGE (V/CELL) vs DISCHARGE TIME · 25°C / 20°C



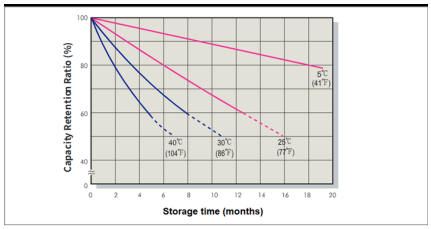
Charging Characteristics

0.1 CA · 2.25 V/CELL @ 25°C



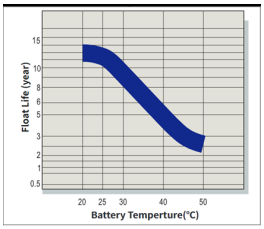
Capacity Retention (Self-Discharge)

CAPACITY RETENTION RATIO vs STORAGE TIME



Float Service Life

FLOAT LIFE vs BATTERY TEMPERATURE · 2.25 V/CELL



STANDARDS & QUALITY

Gel VRLA batteries produced by an ATB-approved manufacturing partner whose VRLA batteries are UL-recognized components under UL 1989, in facilities certified to ISO 9001, ISO 14001 and ISO 45001. Sealed, non-spillable VRLA construction.

Values are subject to variation of ±5% under normal manufacturing processes. Technical specifications are subject to change without prior notice. Curves represent typical performance for the gel VRLA cell platform at the stated reference conditions. This product is engineered, specified and branded by ATB Power. E&OE. © ATB Power.