

# 12AL120 12ALZ120

## AMARON QUANTA™

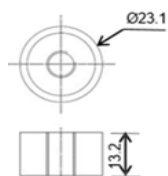
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

In short, the lifeline to your UPS applications

AMARON QUANTA™ is a product of fail- safe, fool-proof battery technology, produced and tested in our premier manufacturing facility. Built to the highest technical competence in its class, the QUANTA is an example of Amara Raja's commitment to bringing the best of technology to your table

It features several firsts for the battery industry like the unique Radgrid™

### TERMINAL LAYOUT

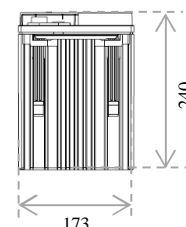
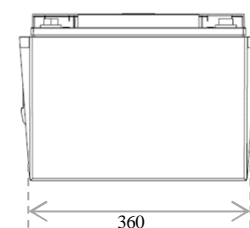
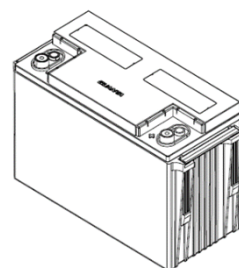


All dimensions are in mm

AMARON®  
**QUANTA**  
LIFE UNINTERRUPTED

## Specification

Nominal Voltage	12V
Rated Capacity	120Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C
Dimensions (±2mm)	Length 393 mm (15.47 in.) Width 173 mm (6.81 in.) Total Height 240 mm (9.45 in.)
Weight (±5%)	36.6 Kg (80.69 lbs)
Terminal Type	M8 x 25mm Copper terminal
Capacity @ 27°C	111.70 Ah (10hr, 11.17 A, 10.5 V/battery) 102.90 Ah (5hr, 20.58 A, 10.2 V/battery) 76.43 Ah (1hr, 76.43 A, 9.6V /battery)
Capacity affected (Temperature at C20 hr rate)	40°C (104°F) 110% 27°C (80.6°F) 100% 0°C (32°F) 80% -15°C (5°F) 60%
Case Material	Standard PPCP (12AL120) FR Version UL 94-V0 (12ALZ120)
Internal Resistance (IR)	Approx. 5.40 mΩ for a fully charged battery (27°C)
Short Circuit Current (As per IEC)	2312 A
Operating Temp. range	-20°C to +60°C (50 to 60°C for shorter duration)
Nominal Operating Temp. range	27°C ± 3°C
Standby use (27°C)	Charging Voltage 13.5 V/battery Charging Current Max. 25% of rated capacity Temp. Compensation ± 18mV/battery/°C
Cyclic use (27°C)	Charging Voltage 13.8 V/battery Charging Current Max. 25% of rated capacity Temp. Compensation ± 30mV/battery/°C
Self-Discharge	< 4% per month at 27°C



### Constant Power Discharge Rating (Watts Per Battery) @ 27°C \*

ECV/ Time	10min	15min	20min	30min	60min	2hrs	3hrs	5hrs	8hrs	10hrs	20hrs
1.60	2860	2354	1913	1453	900	544	397.0	266.0	181.0	146.0	74.0
1.65	2729	2302	1865	1432	880	536	386.5	260.0	177.5	145.0	73.5
1.70	2597	2249	1817	1411	860	528	376.0	254.0	174.0	144.0	73.0
1.75	2465	2197	1769	1390	840	520	365.0	248.0	170.5	143.0	72.5
1.80	2333	2144	1720	1368	819	511	354.0	242.0	167.0	142.0	72.0

### Constant Current Discharge Rating (Amperes) @ 27°C \*

ECV/ Time	10min	15min	20 min	30min	60 min	2 hrs	3 hrs	5 hrs	8hrs	10 hrs	20 hrs
1.60	260.87	206.80	169.0	122.45	76.43	47.26	32.30	22.23	13.79	11.67	6.43
1.65	252.89	200.18	163.45	120.63	75.72	45.35	31.33	21.41	13.49	11.53	6.27
1.70	244.90	193.55	157.9	118.81	75.00	43.43	30.35	20.58	13.19	11.39	6.10
1.75	240.00	190.48	155.8	117.65	73.17	42.86	30.30	20.51	13.11	11.17	6.00
1.80	235.29	184.62	151.9	115.38	71.43	42.55	30.15	20.34	13.04	11.11	5.97

Note:

1. The above data are average values per battery and can be obtained within five charge/discharge cycle
2. A tolerance of ±5% is applicable for the above constant power discharge and constant current discharge values.
3. Recommended to follow IEEE -485 Standard for Battery sizing (In terms of Aging Margin, Design Margin) for Optimal Performance & Life.
4. Considerable Voltage drop across cables, if any shall be considering during battery sizing.

\*\*Design improvement is a continuous process of Amara Raja. As a result, specifications are subject to change without prior notice

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Gotta be a better way



## CAUTION

- ⚡ Avoid short circuit
- ⚡ Don't charge in a sealed container



## THE LONG LIFE UPS BATTERY



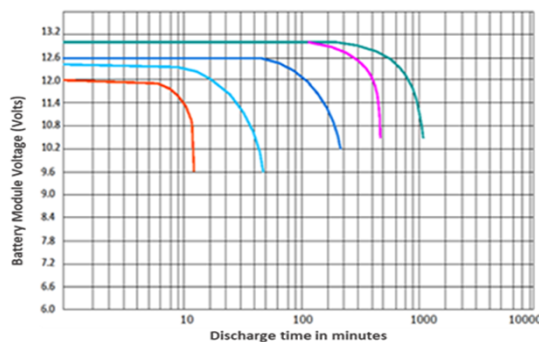
## Performance

A clutch of design features ensures that AMARON QUANTA™

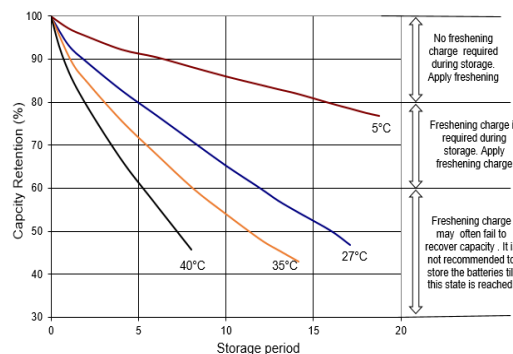
batteries perform predictably and reliably every time

- ✓ Proven AGM technology that ensures maintenance free characteristics
- ✓ A unique heavy duty corrosion-resistant alloy for positive grids to increase cyclic life in tropical
- ✓ Radgrid™ profile provides lower internal resistance and superior high-discharge performance
- ✓ Instacharge™ a patented paste recipe for excellent charge acceptance
- ✓ Low self-discharge rates for extended storage periods
- ✓ Design Float life of upto 10 years
- ✓ Clean and Sleek looks

## Discharge Characteristics



## Shelf Life Characteristics



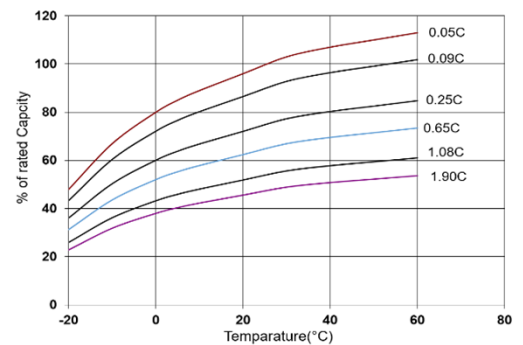
## Compliance

- ✓ JIS C 8702 Certified
- ✓ UL (UL-1989) & CE Certified
- ✓ Complies to IEC61056 & EUROBAT
- ✓ Complies to IS 16220
- ✓ Manufactured in ISO 9001, ISO 14001, ISO45001:2018 certified facilities

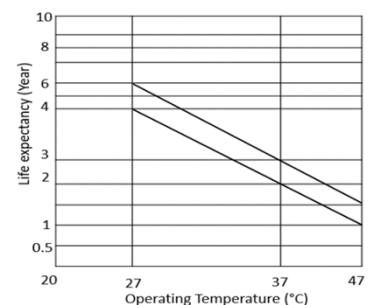
## Applications

- ✓ Data Centers
- ✓ Banks & Financial Markets
- ✓ Network Operations Centers
- ✓ Industrial Process Control Facilities
- ✓ Safety, Surveillance & Security Systems
- ✓ Semiconductor Manufacturing
- ✓ Power Generation Plants
- ✓ Hospital & Testing laboratories

## Temperature Effect on Capacity



## Float Service Life vs. Temperature



## AMARA RAJA ENERGY & MOBILITY LIMITED

(Formerly Known as Amara Raja Batteries Limited)

- **Corporate Operations Office:**  
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ARE&M/IAE/AQ/120Ah; Oct'2023, Rev-01

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