

# 12AL065 12ALZ065

## AMARON QUANTA™

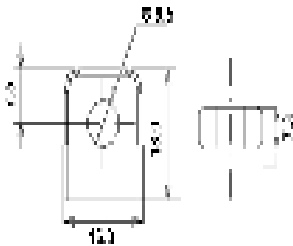
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

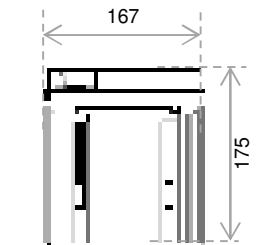
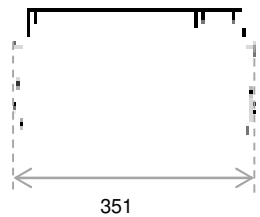
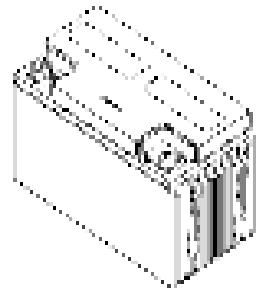
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|  |   |
|--|---|
| Nominal Voltage                                | 12V   |
| Rated Capacity                                 | 65Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C        |
| Dimensions (±2mm)                              | Length 351 mm (13.82 in.)                         |
|  | Width 167 mm (6.57 in.)                           |
|  | Total Height 175 mm (6.89 in.)                    |
| Weight (±5%)                                   | 19.20 Kg (42.33 lbs)                              |
| Terminal Type                                  | M6 x 20 mm Bolted                                 |
| Capacity @ 27°C                                | 55.90 Ah (10hr, 5.59 A, 10.5 V/battery)           |
|  | 51.40 Ah (5hr, 10.29 A, 10.2 V/battery)           |
|  | 36.30 Ah (1hr, 36.3 A, 9.6V /battery)             |
|  | 40°C (104°F) 110%                                 |
| Capacity affected (Temperature at C20 hr rate) | 27°C (80.6°F) 100%                                |
|  | 0°C (32°F) 80%                                    |
|  | -15°C (5°F) 60%                                   |
|  | Standard PPCP (12AL065)                           |
| Case Material                                  | FR Version UL 94-V0 (12ALZ065)                    |
| Internal Resistance (IR)                       | Approx. 9.4 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 1382 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      | 1368  | 1120  | 898   | 682   | 412   | 248  | 172.0 | 118.0 | 77.0 | 67.0  | 31.0  |
| 1.65      | 1345  | 1101  | 887   | 671   | 408   | 245  | 171.0 | 117.0 | 76.5 | 66.5  | 30.5  |
| 1.70      | 1322  | 1081  | 876   | 660   | 403   | 242  | 170.0 | 116.0 | 76.0 | 66.0  | 30.0  |
| 1.75      | 1299  | 1041  | 848   | 640   | 392   | 239  | 169.0 | 115.0 | 75.0 | 65.0  | 29.5  |
| 1.80      | 1276  | 1000  | 820   | 620   | 380   | 236  | 168.0 | 114.0 | 74.0 | 64.0  | 29.0  |

### 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      | 126.47 | 101.10 | 80.23  | 60.87 | 36.36  | 22.06 | 15.07 | 11.12 | 6.90 | 5.83   | 3.48   |
| 1.65      | 122.62 | 96.75  | 77.30  | 58.44 | 35.90  | 21.17 | 14.62 | 10.71 | 6.75 | 5.76   | 3.40   |
| 1.70      | 118.77 | 92.41  | 74.37  | 56.00 | 35.44  | 20.27 | 14.16 | 10.29 | 6.60 | 5.69   | 3.31   |
| 1.75      | 114.29 | 90.32  | 73.68  | 55.45 | 35.00  | 20.00 | 14.14 | 10.26 | 6.56 | 5.59   | 3.25   |
| 1.80      | 112.00 | 88.89  | 71.79  | 54.90 | 33.49  | 19.86 | 14.07 | 10.17 | 6.52 | 5.56   | 3.23   |

Note:

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



## 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

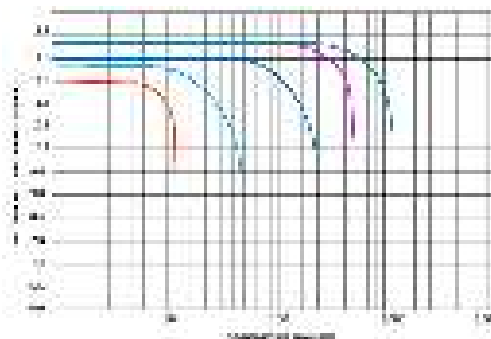
## Compliance

- ✓ 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

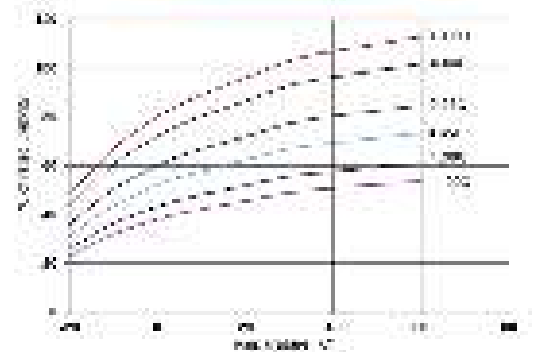
## Applications

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

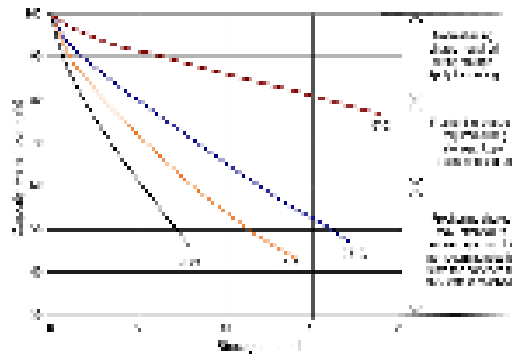
### Discharge Characteristics



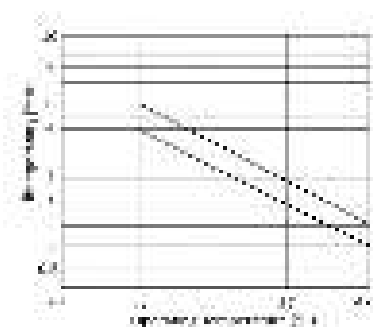
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



**THE LONG LIFE  
UPS BATTERY**

## AMARA RAJA BATTERIES LIMITED

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/65Ah: May'2022, Rev-00

# 12AL075 12ALZ075

## AMARON QUANTA™

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

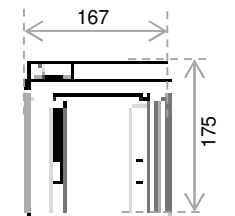
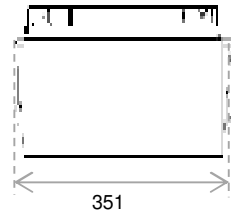
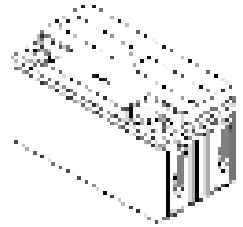
In short, the lifeline to your UPS applications

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™

## Specification

|  |   |
|--|---|
| Nominal Voltage                                | 12V   |
| Rated Capacity                                 | 75Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C        |
| Dimensions (±2mm)                              | Length 351 mm (13.82 in.)                         |
|  | Width 167 mm (6.57 in.)                           |
|  | Total Height 175 mm (6.89 in.)                    |
| Weight (±5%)                                   | 23.0 Kg (44.09lbs)                                |
| Terminal Type                                  | M6 x 20 mm Bolted                                 |
| Capacity @ 27°C                                | 55.70 Ah (5hr, 11.15 A, 10.2 V/battery)           |
|  | 42.21 Ah (1hr, 42.21 A, 9.6V /battery)            |
|  | 29.33Ah (15min, 117.33A, 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 (12AL075)                           |
|  | FR Version UL 94-V0 (12ALZ075)                    |
| Internal Resistance (IR)                       | Approx. 5.0 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 2367 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 |
|-----------|-------|-------|-------|-------|-------|------|------|------|------|
| 1.60      | 1810  | 1400  | 1122  | 852   | 515   | 310  | 215  | 147  | 96.0 |
| 1.70      | 1763  | 1351  | 1095  | 825   | 504   | 302  | 213  | 145  | 94.5 |
| 1.75      | 1679  | 1300  | 1060  | 800   | 489   | 298  | 211  | 143  | 93.7 |
| 1.80      | 1595  | 1250  | 1025  | 775   | 475   | 295  | 210  | 142  | 93.0 |

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

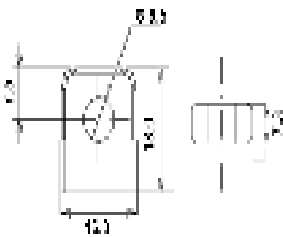
| ECV/ Time | 10min  | 15min  | 20 min | 30min | 60 min | 2 hrs | 3 hrs | 5 hrs | 8hrs |
|-----------|--------|--------|--------|-------|--------|-------|-------|-------|------|
| 1.60      | 146.79 | 117.33 | 93.12  | 70.65 | 42.21  | 25.60 | 17.50 | 12.04 | 7.47 |
| 1.70      | 137.86 | 107.26 | 86.32  | 65.00 | 41.14  | 23.53 | 16.44 | 11.15 | 7.15 |
| 1.75      | 132.65 | 104.84 | 85.53  | 64.36 | 40.63  | 23.21 | 16.41 | 11.11 | 7.10 |
| 1.80      | 130.00 | 103.17 | 83.33  | 63.73 | 38.88  | 23.05 | 16.33 | 11.02 | 7.07 |

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.



### TERMINAL LAYOUT



All dimensions are in mm

## 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

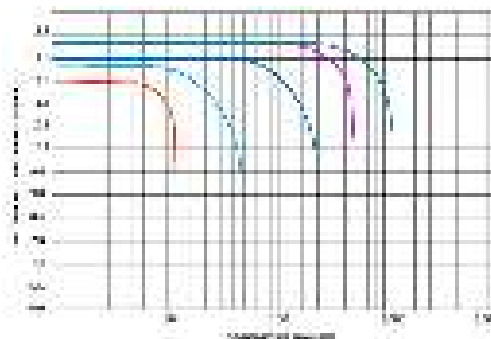
## Compliance

- ✓ 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

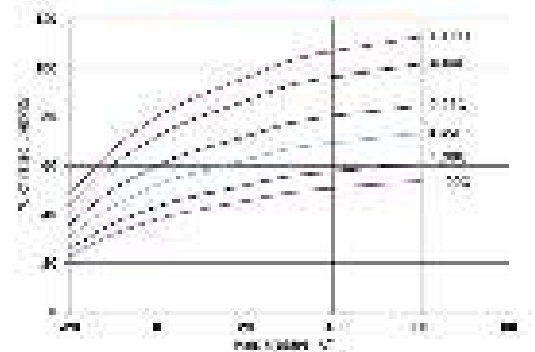
## Applications

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

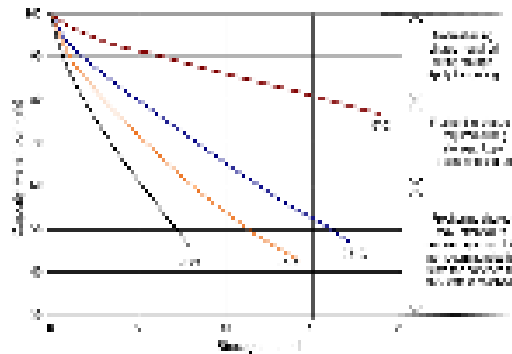
### Discharge Characteristics



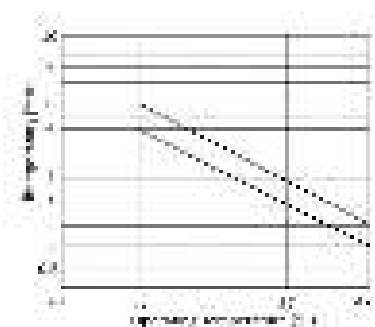
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



### CAUTION

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



**THE LONG LIFE  
UPS BATTERY**

## AMARA RAJA BATTERIES LIMITED

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/75Ah: May/2022, Rev-00

# 12AL084 12ALZ084

## AMARON QUANTA™

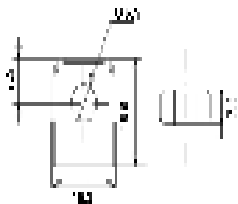
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

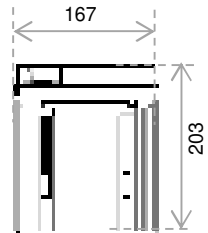
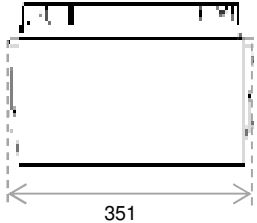
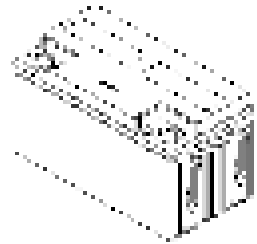
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|  |  |
|--|--|
| Nominal Voltage                                | 12V  |
| Rated Capacity                                 | 84Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C         |
| Dimensions (±2mm)                              | Length 351 mm (13.82 in.)                          |
|  | Width 167 mm (6.57 in.)                            |
|  | Total Height 203 mm (7.99 in.)                     |
| Weight (±5%)                                   | 27.0 Kg (59.52lbs)                                 |
| Terminal Type                                  | M6 x 20 mm Bolted                                  |
| Capacity @ 27°C                                | 78.20 Ah (10hr, 7.82 A, 10.5 V/battery)            |
|  | 72.05 Ah (5hr, 14.41 A, 10.2 V/battery)            |
|  | 54.55 Ah (1hr, 54.55 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 (12AL084)                            |
|  | FR Version UL 94-V0 (12ALZ084)                     |
| Internal Resistance (IR)                       | Approx. 3.54 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 2420 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      | 2103  | 1761  | 1322  | 1032  | 590   | 381  | 297.0 | 193.0 | 126.0 | 105.0 | 52.0  |
| 1.65      | 2085  | 1721  | 1309  | 1000  | 580   | 376  | 285.0 | 190.0 | 124.0 | 104.5 | 51.5  |
| 1.70      | 2067  | 1681  | 1295  | 967   | 570   | 370  | 273.0 | 187.0 | 122.0 | 104.0 | 51.0  |
| 1.75      | 2032  | 1650  | 1271  | 951   | 558   | 363  | 271.5 | 184.0 | 120.5 | 103.0 | 50.5  |
| 1.80      | 1917  | 1619  | 1246  | 934   | 545   | 356  | 270.0 | 181.0 | 119.0 | 102.0 | 50.0  |

### 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      | 189.70 | 151.62 | 120.34 | 91.30 | 54.55  | 33.08 | 22.61 | 15.56 | 9.66 | 8.17   | 4.50   |
| 1.65      | 183.93 | 145.12 | 115.95 | 87.65 | 53.86  | 31.74 | 21.93 | 14.99 | 9.45 | 8.07   | 4.39   |
| 1.70      | 178.15 | 138.61 | 111.55 | 84.00 | 53.16  | 30.40 | 21.24 | 14.41 | 9.23 | 7.97   | 4.27   |
| 1.75      | 171.43 | 135.48 | 110.53 | 83.17 | 52.50  | 30.00 | 21.21 | 14.36 | 9.18 | 7.82   | 4.20   |
| 1.80      | 168.00 | 133.33 | 107.69 | 82.35 | 50.24  | 29.79 | 21.11 | 14.24 | 9.13 | 7.78   | 4.18   |

Note:

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





**CAUTION**

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



**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

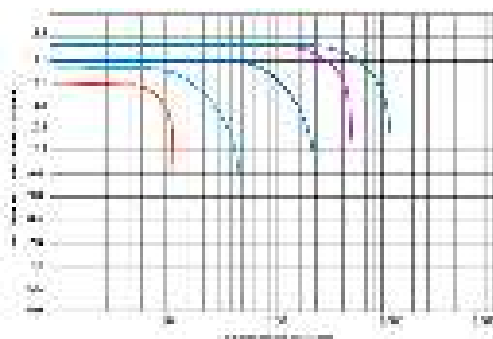
**Compliance**

- ✓ 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

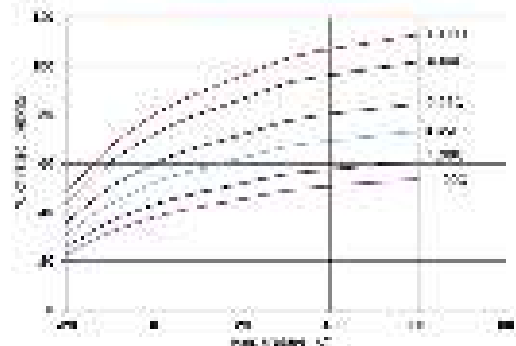
**Applications**

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

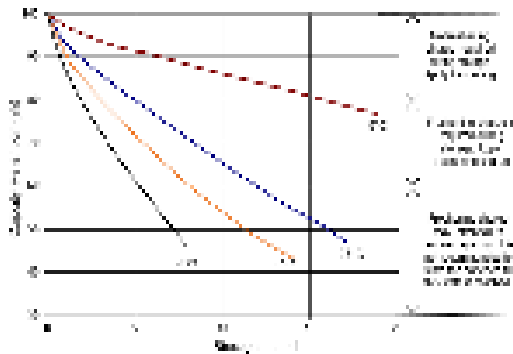
**Discharge Characteristics**



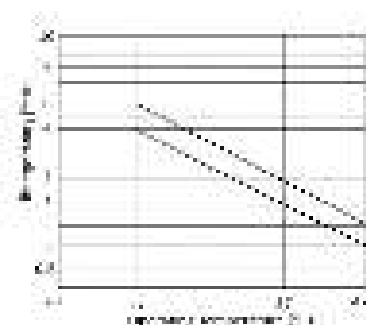
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/84Ah: May'2022, Rev-00

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

# 12AL100N 12ALZ100N

## AMARON QUANTA™

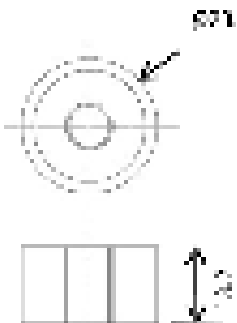
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

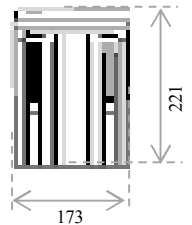
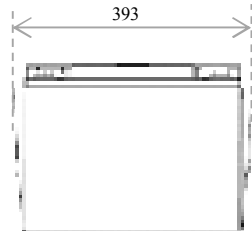
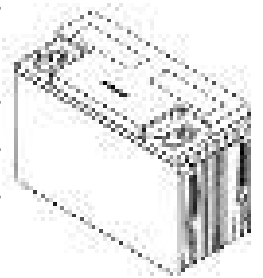
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|  |  |
|--|--|
| Nominal Voltage                                | 12V  |
| Rated Capacity                                 | 100Ah / 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 221 mm (8.70 in.)                     |
| Weight (±5%)                                   | 31.5 Kg (69.44 lbs)                                |
| Terminal Type                                  | M8 x 25mm Copper terminal                          |
| Capacity @ 27°C                                | 93.10 Ah (10hr, 9.31 A, 10.5 V/battery)            |
|  | 85.75Ah (5hr, 17.15 A, 10.2 V/battery)             |
|  | 63.70 Ah (1hr, 63.70 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 (12AL100N)                           |
|  | FR Version UL 94-V0 (12ALZ100N)                    |
| Internal Resistance (IR)                       | Approx. 5.60 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 2220 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      | 2416  | 2010  | 1500  | 1209  | 750   | 453  | 331.0 | 222.0 | 151.0 | 122.0 | 62.0  |
| 1.65      | 2362  | 1947  | 1438  | 1183  | 734   | 447  | 322.0 | 217.0 | 148.0 | 121.0 | 61.5  |
| 1.70      | 2308  | 1883  | 1376  | 1157  | 717   | 440  | 313.0 | 212.0 | 145.0 | 120.0 | 61.0  |
| 1.75      | 2254  | 1820  | 1364  | 1131  | 700   | 433  | 304.0 | 207.0 | 142.0 | 119.0 | 60.5  |
| 1.80      | 2200  | 1756  | 1352  | 1105  | 683   | 426  | 295.0 | 202.0 | 139.0 | 118.0 | 60.0  |

### 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      | 217.39 | 172.41 | 140.80 | 102.04 | 63.69  | 39.39 | 26.92 | 18.53 | 11.49 | 9.72   | 5.36   |
| 1.65      | 210.74 | 166.85 | 136.10 | 100.52 | 63.09  | 37.79 | 26.10 | 17.84 | 11.24 | 9.60   | 5.22   |
| 1.70      | 204.10 | 161.30 | 131.50 | 99.00  | 62.50  | 36.19 | 25.29 | 17.15 | 10.99 | 9.49   | 5.09   |
| 1.75      | 200.00 | 158.70 | 129.80 | 98.00  | 61.00  | 35.71 | 25.25 | 17.09 | 10.93 | 9.31   | 5.00   |
| 1.80      | 196.10 | 153.80 | 126.50 | 96.20  | 59.50  | 35.46 | 25.13 | 16.95 | 10.87 | 9.26   | 4.97   |

Note:

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

## 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

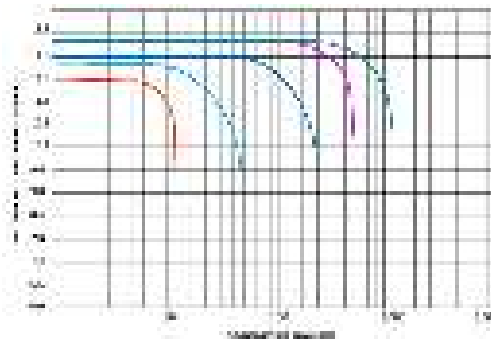
## Compliance

- ✓ 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

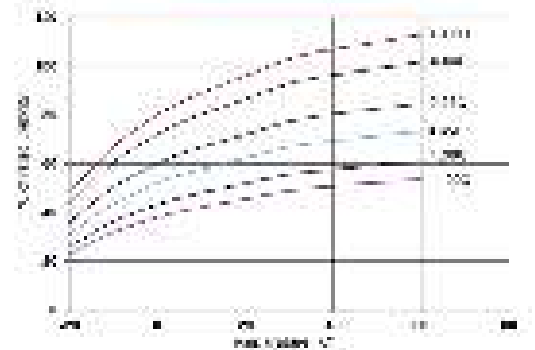
## Applications

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

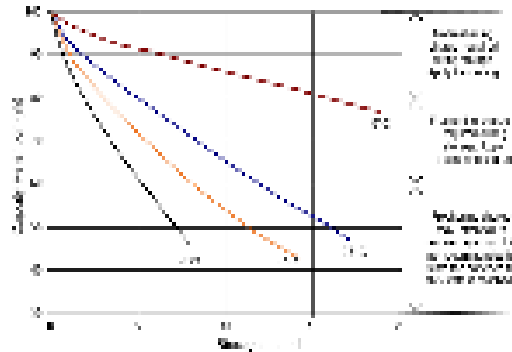
### Discharge Characteristics



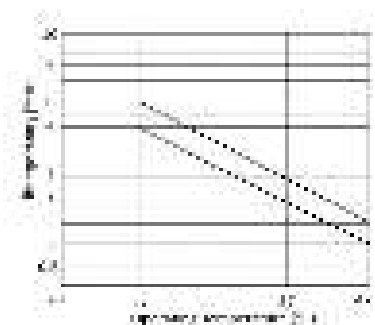
### Temperature Effect on Capacity



### Shelf Life Characteristics

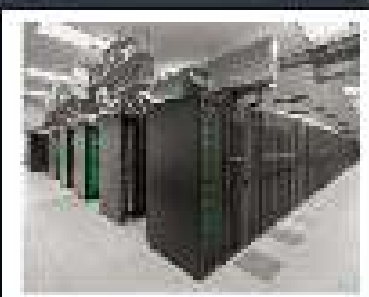


### Float Service Life vs. Temperature



### CAUTION

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



**THE LONG LIFE  
UPS BATTERY**

## AMARA RAJA BATTERIES LIMITED

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/100Ah; May/2022; Rev-00

# 12AL120 12ALZ120

## AMARON QUANTA™

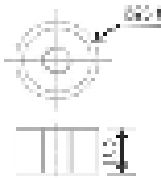
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

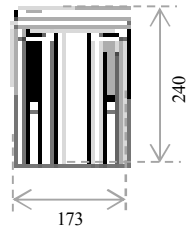
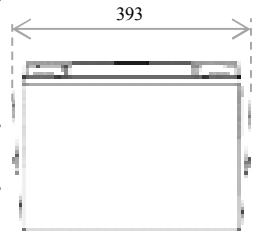
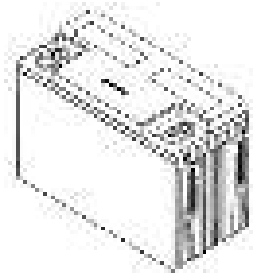
### TERMINAL LAYOUT



All dimensions are in mm

## 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)     |
| 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:

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





**CAUTION**

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



**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

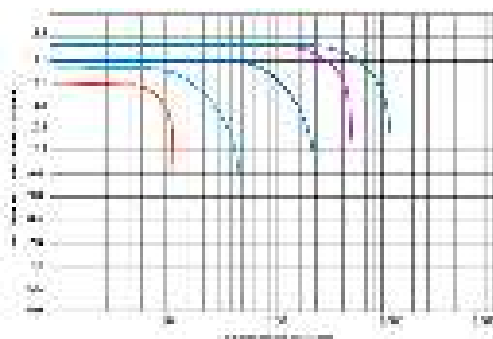
**Compliance**

- ✓ 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

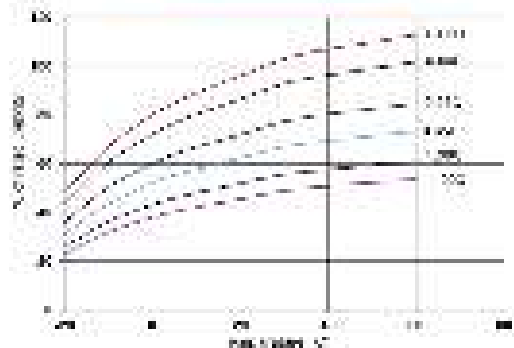
**Applications**

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

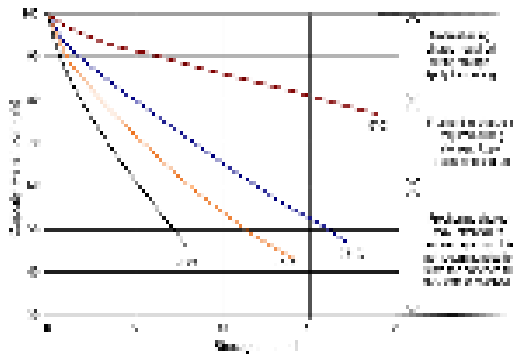
**Discharge Characteristics**



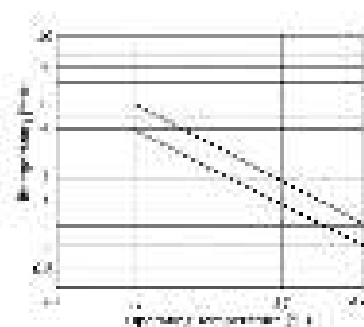
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/120Ah; May'2022; Rev-00

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

# 12AL130 12ALZ130

## AMARON QUANTA™

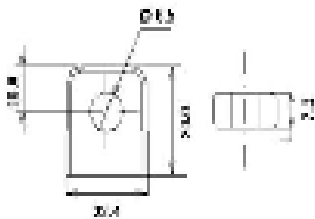
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

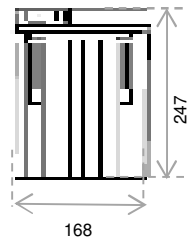
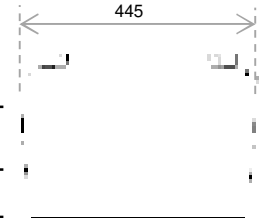
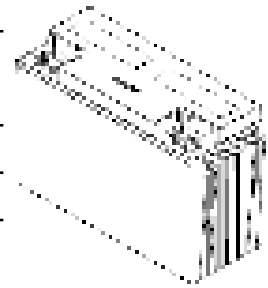
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|  |  |
|--|--|
| Nominal Voltage                                | 12V  |
| Rated Capacity                                 | 130Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C        |
| Dimensions (±2mm)                              | Length 445 mm (17.52 in.)                          |
|  | Width 168 mm (6.61 in.)                            |
|  | Total Height 247 mm (9.72 in.)                     |
| Weight (±5%)                                   | 42.0 Kg (92.59 lbs)                                |
| Terminal Type                                  | M6 x 25mm Bolted                                   |
| Capacity @ 27°C                                | 121.00 Ah (10hr, 12.10 A, 10.5 V/battery)          |
|  | 111.50 Ah (5hr, 22.30 A, 10.2 V/battery)           |
|  | 84.42 Ah (1hr, 84.42 A, 9.6V /battery)             |
|  | 40°C (104°F) 110%                                  |
| Capacity affected (Temperature at C20 hr rate) | 27°C (80.6°F) 100%                                 |
|  | 0°C (32°F) 80%                                     |
|  | -15°C (5°F) 60%                                    |
|  | Standard PPCP (12AL130)                            |
| Case Material                                  | FR Version UL 94-V0 (12ALZ130)                     |
| Internal Resistance (IR)                       | Approx. 4.54 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 2803 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      | 3128  | 2602  | 1965  | 1608  | 919   | 557  | 403.0 | 279.0 | 183.0 | 148.0 | 79.0  |
| 1.65      | 3073  | 2543  | 1945  | 1558  | 904   | 549  | 400.0 | 274.5 | 179.0 | 147.5 | 78.5  |
| 1.70      | 3017  | 2483  | 1924  | 1508  | 889   | 541  | 397.0 | 270.0 | 176.5 | 147.0 | 78.0  |
| 1.75      | 2886  | 2365  | 1888  | 1482  | 861   | 532  | 394.0 | 266.0 | 173.0 | 146.0 | 77.5  |
| 1.80      | 2755  | 2247  | 1852  | 1456  | 833   | 522  | 391.0 | 262.0 | 170.0 | 145.0 | 77.0  |

### 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      | 293.59 | 234.66 | 186.25 | 141.30 | 84.42  | 51.20 | 34.99 | 24.09 | 14.94 | 12.64  | 6.96   |
| 1.65      | 284.70 | 224.60 | 179.40 | 135.70 | 83.40  | 49.10 | 33.90 | 23.20 | 14.60 | 12.50  | 6.80   |
| 1.70      | 275.72 | 214.52 | 172.64 | 130.00 | 82.28  | 47.05 | 32.88 | 22.30 | 14.29 | 12.33  | 6.61   |
| 1.75      | 265.31 | 209.68 | 171.05 | 128.71 | 81.25  | 46.43 | 32.83 | 22.22 | 14.21 | 12.10  | 6.50   |
| 1.80      | 260.00 | 206.35 | 166.67 | 127.45 | 77.75  | 46.10 | 32.66 | 22.03 | 14.13 | 12.04  | 6.47   |

Note:

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





**CAUTION**

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



**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

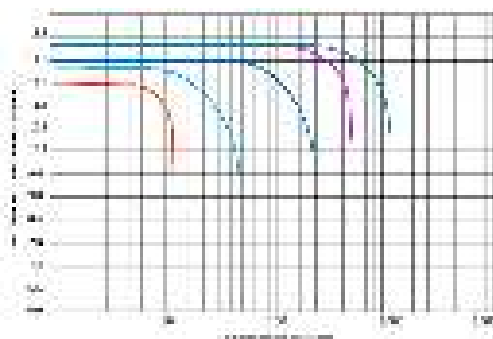
**Compliance**

- ✓ 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

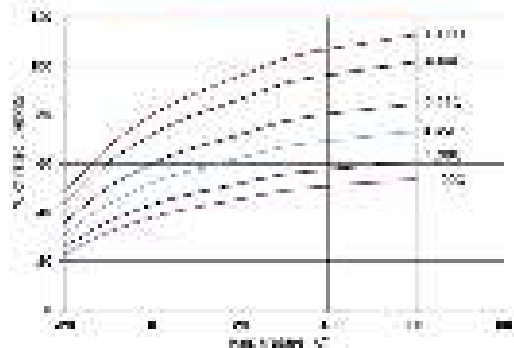
**Applications**

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

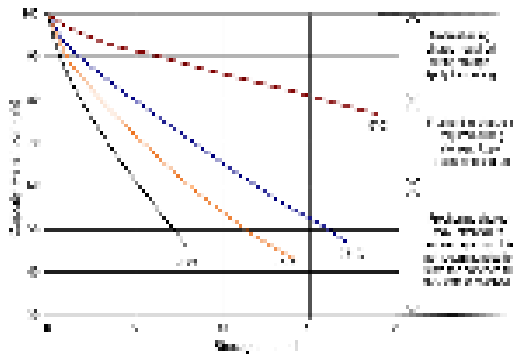
**Discharge Characteristics**



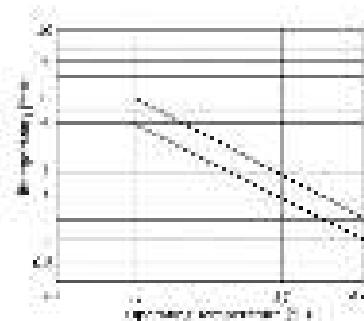
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/130Ah; May'2022; Rev-00

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

# 12AL150 12ALZ150

## AMARON QUANTA™

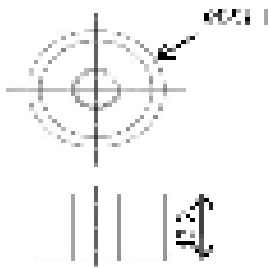
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

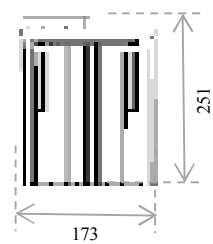
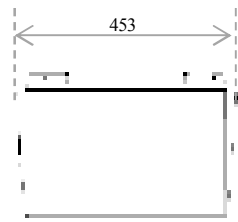
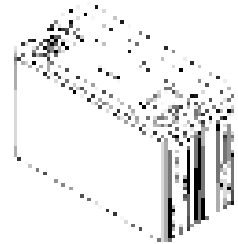
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|                                    |   |
|------------------------------------|---|
| Nominal Voltage                    | 12V   |
| Rated Capacity                     | 150Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C               |
| Dimensions (±2mm)                  | Length 453 mm (17.83 in.)                                 |
|                                    | Width 173 mm (6.81 in.)                                   |
|                                    | Total Height 251 mm (9.88 in.)                            |
| Weight (±5%)                       | 45.0 Kg (99.21 lbs)                                       |
| Terminal Type                      | M8 x 25mm Copper terminal                                 |
| Capacity @ 27°C                    | 139.70 Ah (10hr, 13.97 A, 10.5 V/battery)                 |
|                                    | 128.65 Ah (5hr, 25.73 A, 10.2 V/battery)                  |
|                                    | 95.54 Ah (1hr, 95.54 A, 9.6V /battery)                    |
|                                    | Capacity affected (Temperature at C20 hr rate)            |
| Case Material                      | Standard PPCP (12AL150)<br>FR Version UL 94-V0 (12ALZ150) |
| Internal Resistance (IR)           | Approx. 4.86 mΩ for a fully charged battery (27°C)        |
| Short Circuit Current (As per IEC) | 2633 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      | 3594  | 2801  | 2269  | 1817  | 1125  | 680  | 495.0 | 340.0 | 225.0 | 183.0 | 93.0  |
| 1.65      | 3441  | 2764  | 2223  | 1786  | 1100  | 670  | 483.5 | 325.5 | 219.0 | 181.5 | 92.5  |
| 1.70      | 3288  | 2727  | 2177  | 1755  | 1075  | 659  | 470.0 | 318.0 | 213.0 | 180.0 | 92.0  |
| 1.75      | 3135  | 2690  | 2127  | 1724  | 1050  | 649  | 456.0 | 310.0 | 210.0 | 178.5 | 91.0  |
| 1.80      | 2982  | 2570  | 2078  | 1693  | 1024  | 638  | 442.0 | 302.0 | 207.0 | 177.0 | 90.0  |

### 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      | 326.09 | 258.62 | 211.26 | 153.06 | 95.54  | 59.08 | 40.38 | 27.79 | 17.24 | 14.59  | 8.03   |
| 1.65      | 316.11 | 250.28 | 204.31 | 150.79 | 94.65  | 56.69 | 39.16 | 26.76 | 16.87 | 14.41  | 7.83   |
| 1.70      | 306.12 | 241.94 | 197.36 | 148.51 | 93.75  | 54.29 | 37.94 | 25.73 | 16.49 | 14.23  | 7.63   |
| 1.75      | 300.00 | 238.10 | 194.80 | 147.06 | 91.46  | 53.57 | 37.88 | 25.64 | 16.39 | 13.97  | 7.50   |
| 1.80      | 294.12 | 230.77 | 189.80 | 144.23 | 89.29  | 53.19 | 37.69 | 25.42 | 16.30 | 13.89  | 7.46   |

Note:

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



## 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

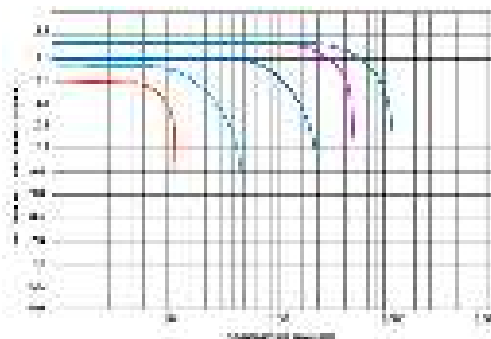
## Compliance

- ✓ 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

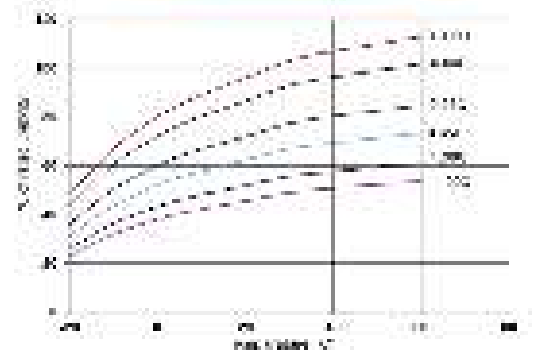
## Applications

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

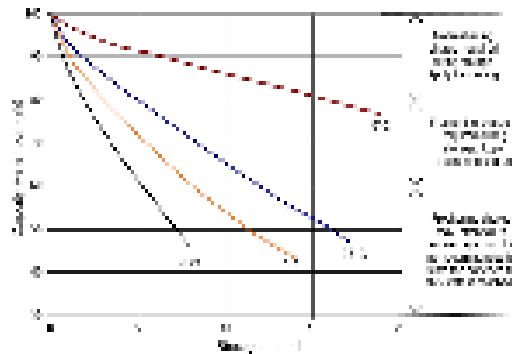
### Discharge Characteristics



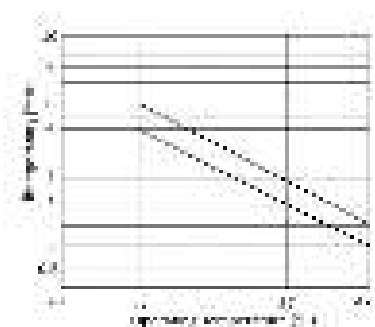
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



**THE LONG LIFE  
UPS BATTERY**

## AMARA RAJA BATTERIES LIMITED

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/150Ah; May/2022; Rev-00

# 12AL160 12ALZ160

## AMARON QUANTA™

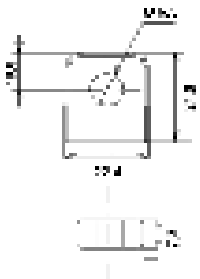
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

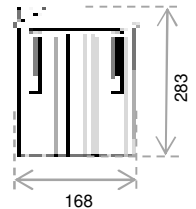
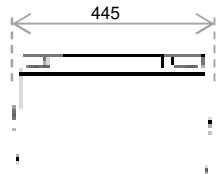
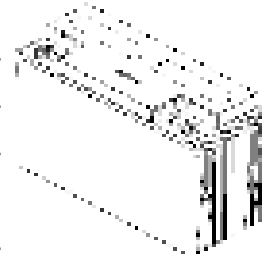
### TERMINAL LAYOUT



All dimensions are in mm

## Specification

|  |  |
|--|--|
| Nominal Voltage                                | 12V  |
| Rated Capacity                                 | 160Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C        |
| Dimensions (±2mm)                              | Length 445 mm (17.52 in.)                          |
|  | Width 168 mm (6.61 in.)                            |
|  | Total Height 283 mm (11.14 in.)                    |
| Weight (±5%)                                   | 52.0 Kg (114.64 lbs)                               |
| Terminal Type                                  | M6 x 25mm bolted                                   |
| Capacity @ 27°C                                | 149.00 Ah (10hr, 14.90 A, 10.5 V/battery)          |
|  | 137.20 Ah (5hr, 27.44 A, 10.2 V/battery)           |
|  | 103.90 Ah (1hr, 103.90 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 (12AL160)                            |
|  | FR Version UL 94-V0 (12ALZ160)                     |
| Internal Resistance (IR)                       | Approx. 4.35 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 2984 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      | 3696  | 3102  | 2519  | 1979  | 1131  | 686  | 497.0 | 344.0 | 227.0 | 185.0 | 98.0  |
| 1.65      | 3631  | 3031  | 2394  | 1918  | 1113  | 676  | 493.0 | 338.5 | 220.5 | 182.0 | 97.0  |
| 1.70      | 3564  | 2961  | 2369  | 1856  | 1094  | 666  | 489.0 | 333.0 | 214.0 | 181.0 | 96.0  |
| 1.75      | 3410  | 2820  | 2324  | 1824  | 1060  | 655  | 485.0 | 327.5 | 211.0 | 179.5 | 95.5  |
| 1.80      | 3255  | 2679  | 2279  | 1792  | 1026  | 643  | 481.0 | 322.0 | 208.0 | 178.0 | 95.0  |

### 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      | 346.89 | 279.77 | 229.23 | 173.91 | 103.90 | 63.02 | 43.07 | 29.65 | 18.39 | 15.56  | 8.57   |
| 1.65      | 336.33 | 267.77 | 220.85 | 166.96 | 102.58 | 60.46 | 41.77 | 28.55 | 17.99 | 15.37  | 8.35   |
| 1.70      | 325.77 | 255.77 | 212.48 | 160.00 | 101.27 | 57.91 | 40.47 | 27.44 | 17.59 | 15.18  | 8.14   |
| 1.75      | 313.47 | 249.98 | 210.53 | 158.42 | 100.00 | 57.14 | 40.40 | 27.35 | 17.49 | 14.90  | 8.00   |
| 1.80      | 307.02 | 246.02 | 205.13 | 156.86 | 95.69  | 56.74 | 40.20 | 27.12 | 17.39 | 14.81  | 7.96   |

Note:

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





**CAUTION**

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



**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

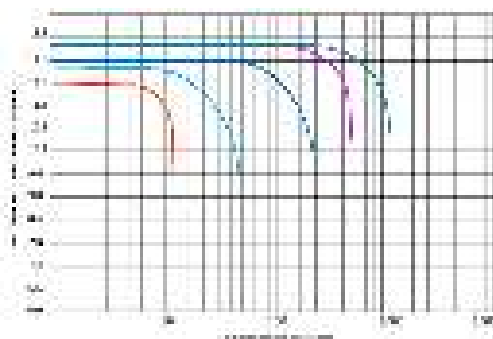
**Compliance**

- ✓ 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

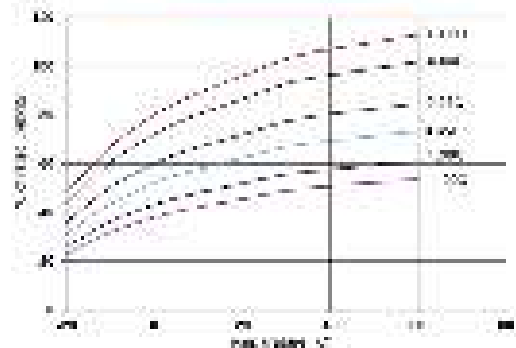
**Applications**

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

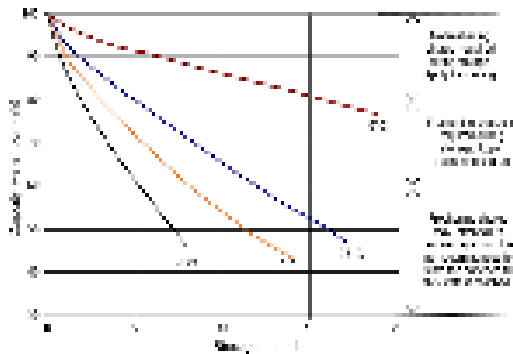
**Discharge Characteristics**



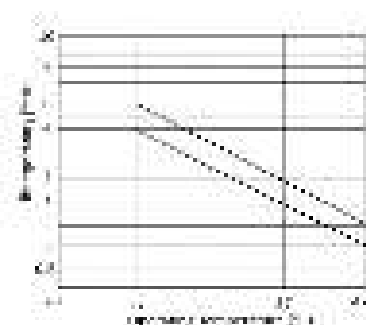
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/160Ah; May'2022; Rev-00

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

# 12AL200N 12ALZ200N

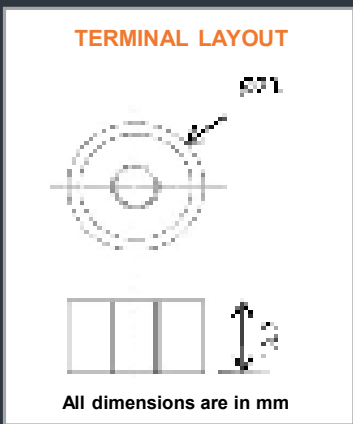
## AMARON QUANTA™

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

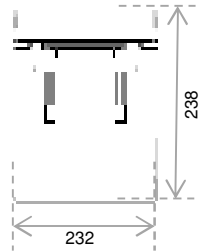
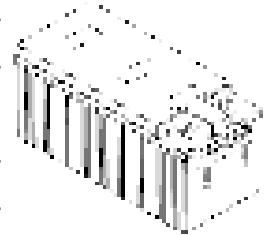
AMARON QUANTA™ is a product of fail- safe, fool-proof battery technology, produced and tested in our premier manufacturing facility. Built to the highest technical competence in its class, the QUANTA is an example of Amara Raja's commitment to bringing the best of technology to your table

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



## Specification

|  |  |
|--|--|
| Nominal Voltage                                | 12V  |
| Rated Capacity                                 | 200Ah / C <sub>20</sub> Hr / 1.75VPC / 27°C        |
| Dimensions (±2mm)                              | Length 541 mm (21.30 in.)                          |
|  | Width 232 mm (9.31 in.)                            |
|  | Total Height 238 mm (9.37 in.)                     |
| Weight (±5%)                                   | 61.0 Kg (134.84 lbs)                               |
| Terminal Type                                  | M8 x 25mm Copper terminal                          |
| Capacity @ 27°C                                | 186.00 Ah (10hr, 18.60 A, 10.5 V/battery)          |
|  | 171.50 Ah (5hr, 34.30 A, 10.2 V/battery)           |
|  | 126.60 Ah (1hr, 126.6 A, 9.6V /battery)            |
|  | 40°C (104°F) 110%                                  |
| Capacity affected (Temperature at C20 hr rate) | 27°C (80.6°F) 100%                                 |
|  | 0°C (32°F) 80%                                     |
|  | -15°C (5°F) 60%                                    |
|  | Standard PPCP (12AL200N)                           |
| Case Material                                  | FR Version UL 94-V0 (12ALZ200N)                    |
| Internal Resistance (IR)                       | Approx. 3.49 mΩ for a fully charged battery (27°C) |
| Short Circuit Current (As per IEC)             | 3655 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                             |



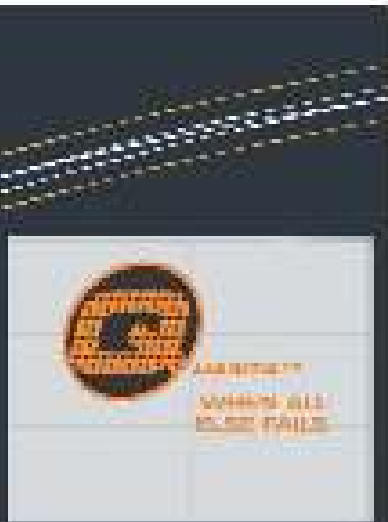
### Constant Power Discharge Rating (Watts Per Battery) @ 27°C \*

| ECV/ Time | 10min | 15min | 20min | 30min | 60min | 2hrs | 3hrs | 5hrs | 8hrs | 10hrs | 20hrs |
|-----------|-------|-------|-------|-------|-------|------|------|------|------|-------|-------|
| 1.60      | 4851  | 4183  | 3144  | 2675  | 1473  | 892  | 652  | 437  | 297  | 240   | 122   |
| 1.65      | 4766  | 4088  | 3112  | 2592  | 1448  | 881  | 634  | 427  | 292  | 238   | 121   |
| 1.70      | 4679  | 3992  | 3079  | 2508  | 1424  | 867  | 617  | 418  | 286  | 236   | 120   |
| 1.75      | 4476  | 3803  | 3021  | 2466  | 1381  | 853  | 599  | 408  | 280  | 234   | 119   |
| 1.80      | 4273  | 3614  | 2962  | 2422  | 1336  | 839  | 581  | 398  | 274  | 232   | 118   |

### 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      | 425.50 | 327.90 | 266.70 | 200.00 | 126.60 | 78.80 | 53.80 | 37.00 | 23.00 | 19.50  | 10.70  |
| 1.65      | 416.90 | 325.30 | 265.00 | 199.00 | 125.80 | 75.60 | 52.20 | 35.70 | 22.50 | 19.20  | 10.50  |
| 1.70      | 408.20 | 322.60 | 263.20 | 198.00 | 125.00 | 72.40 | 50.60 | 34.30 | 22.00 | 18.90  | 10.20  |
| 1.75      | 400.00 | 317.50 | 256.40 | 196.10 | 122.00 | 71.40 | 50.50 | 34.20 | 21.90 | 18.60  | 10.00  |
| 1.80      | 392.20 | 307.70 | 250.00 | 192.30 | 119.00 | 70.90 | 50.20 | 33.90 | 21.70 | 18.50  | 9.90   |

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.



**CAUTION**

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



**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

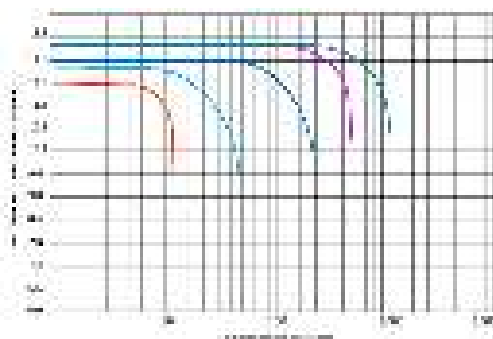
**Compliance**

- ✓ 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

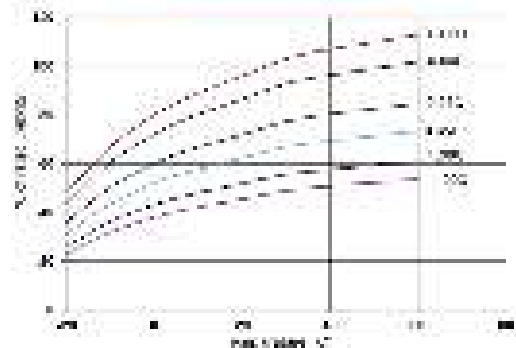
**Applications**

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

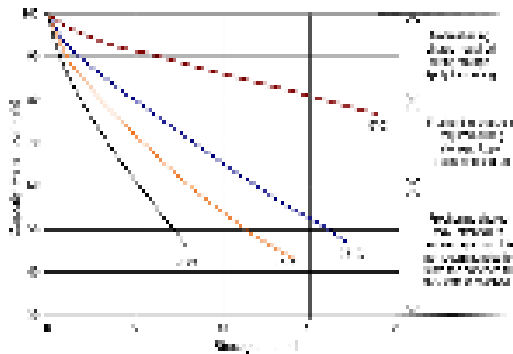
**Discharge Characteristics**



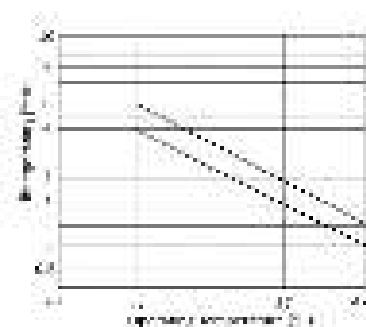
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
Terminal A, 1-18/1/AMR/NR, Nanakramguda, Gachibowli, Hyderabad-500032, INDIA, [E-Mail: mkte@amararaja.com](mailto:mkte@amararaja.com)  
[www.amararajabatteries.com](http://www.amararajabatteries.com)
- **REGISTERED OFFICE & Manufacturing Facility-1:**  
UNIT-I, Karakambadi - 517520, Tirupati, Andhra Pradesh, INDIA, TEL: +91-877-2265000, FAX: +91-877-2285600
- **Manufacturing Facility-2**  
UNIT-II, Nunegundlapalle, Bangarupalyam, Chittoor - 517416. Andhra Pradesh, INDIA



ARBL/AE/AQ/200Ah; May'2022; Rev-00

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