

# 12AL065 12ALZ065

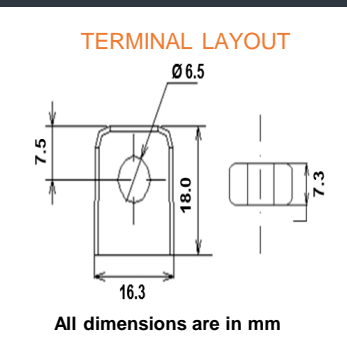
## AMARON QUANTA™

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

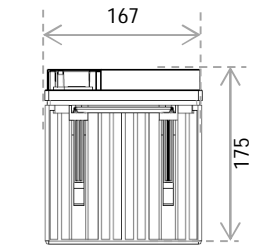
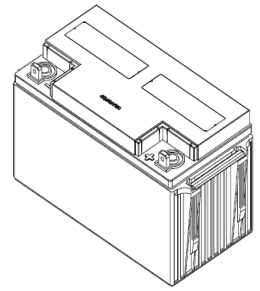
AMARON QUANTA™ is a product of fail- safe, fool-proof battery technology, produced and tested in our premier manufacturing facility. Built to the highest technical competence in its class, the QUANTA is an example of Amara Raja's commitment to bringing the best of technology to your table

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



## 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	
Internal Resistance (IR)	Approx. 9.4 mΩ for a fully charged battery (27°C)	
	UL 94-V0 (12ALZ065)	
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.





### 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

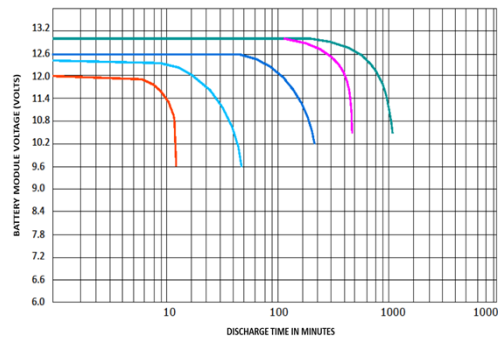
## Compliance

- ✓ 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

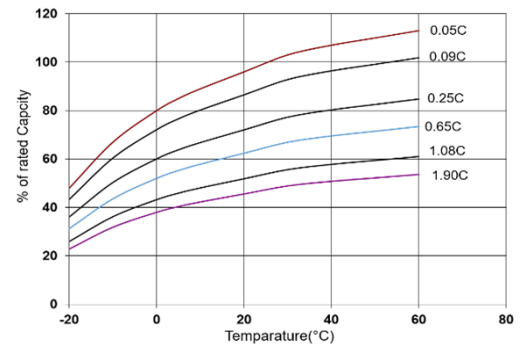
## Applications

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

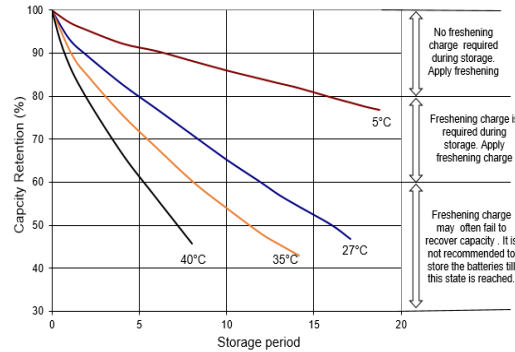
### Discharge Characteristics



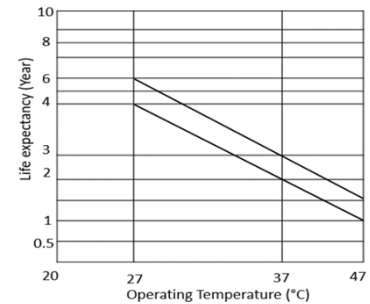
### Temperature Effect on Capacity



### 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**  
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ARBL/AE/AQ/65Ah; May'2022; Rev-00

# 12AL075 12ALZ075

## AMARON QUANTA™

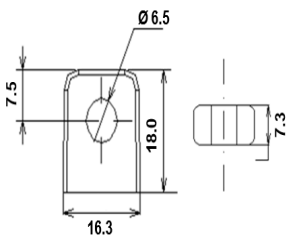
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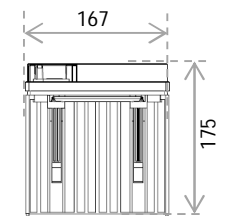
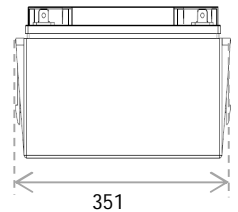
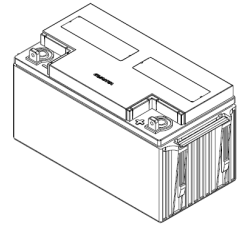
### TERMINAL LAYOUT



All dimensions are in mm

## 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:

- 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
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## Performance

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- ✓ 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
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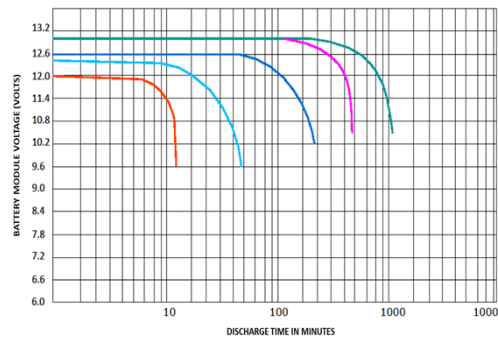
## Compliance

- ✓ 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

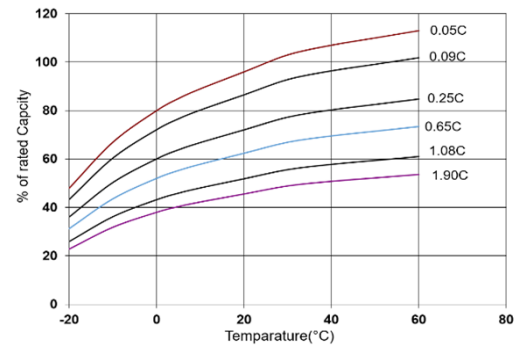
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- ✓ Data Centers
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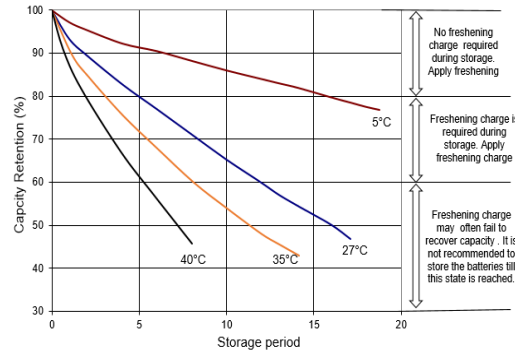
### Discharge Characteristics



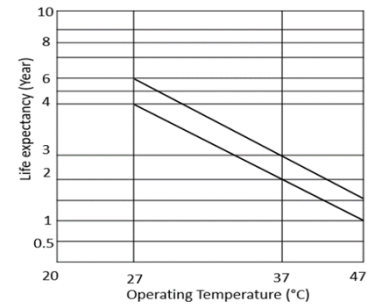
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



## AMARA RAJA BATTERIES LIMITED

- **CORPORATE OPERATIONS OFFICE:**  
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ARBL/AE/AQ/75Ah: May'2022, Rev-00

# 12AL084 12ALZ084

## AMARON QUANTA™

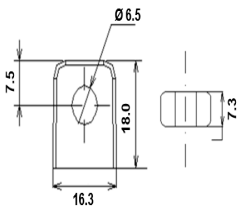
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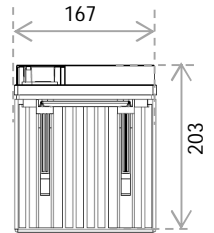
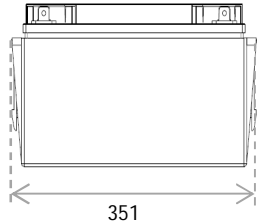
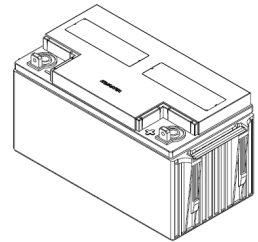
### TERMINAL LAYOUT



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)
	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 (12AL084)
Case Material	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 \*

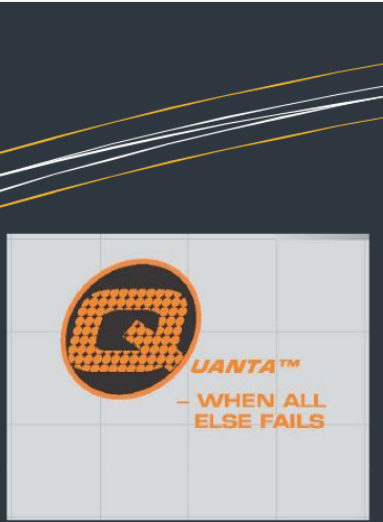
ECV/ Time	10min	15min	20min	30min	60min	2hrs	3hrs	5hrs	8hrs	10hrs	20hrs
1.60	2103	1761	1322	1032	590	381	297.0	193.0	126.0	105.0	52.0
1.65	2085	1721	1309	1000	580	376	285.0	190.0	124.0	104.5	51.5
1.70	2067	1681	1295	967	570	370	273.0	187.0	122.0	104.0	51.0
1.75	2032	1650	1271	951	558	363	271.5	184.0	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

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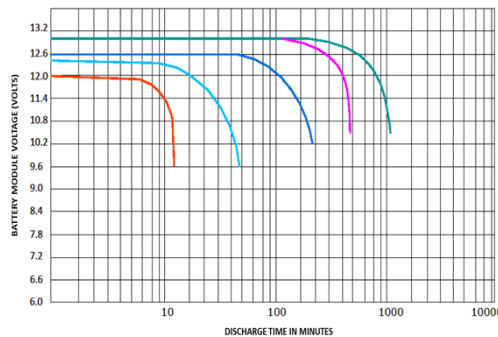
**Compliance**

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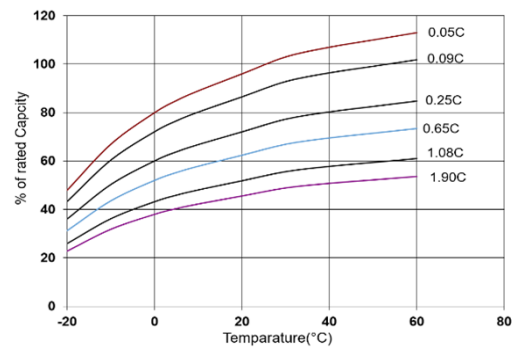
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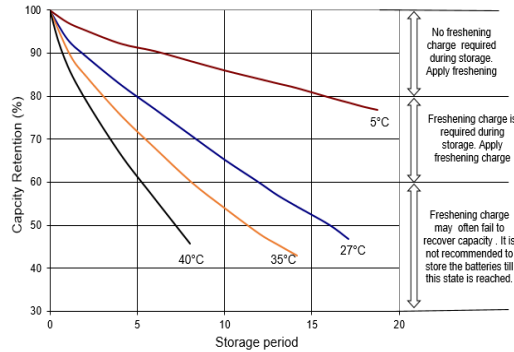
**Discharge Characteristics**



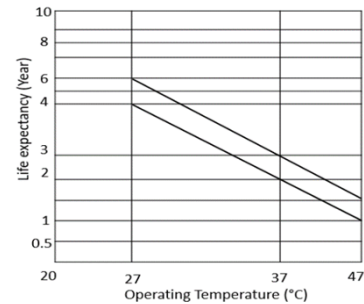
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

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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

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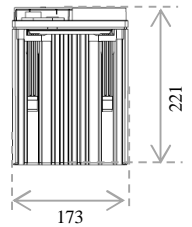
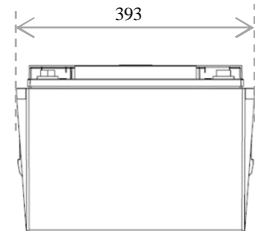
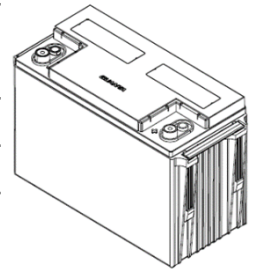
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## Specification

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)
	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 (12AL100N)
Case Material	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

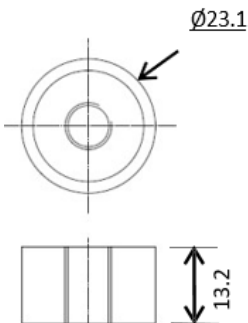
### Constant Current Discharge Rating (Amperes) @ 27°C \*

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

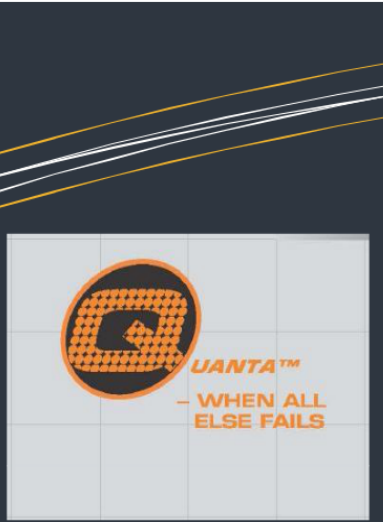
Note:

- 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.

### TERMINAL LAYOUT



All dimensions are in mm



**CAUTION**

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



**Performance**

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- ✓ 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

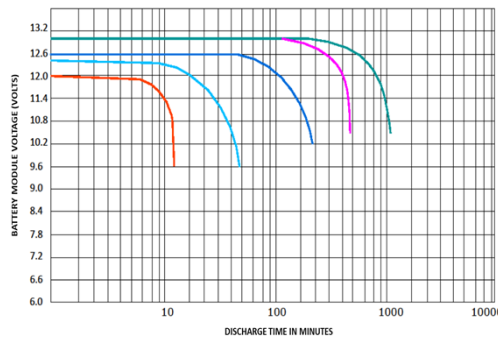
**Compliance**

- ✓ 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

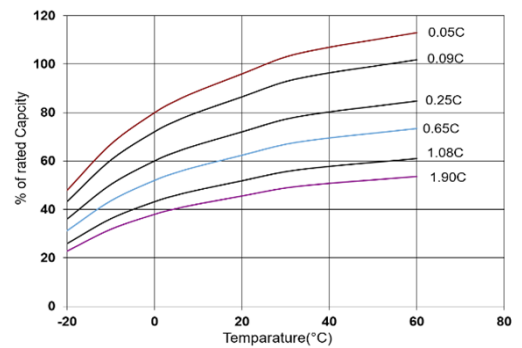
**Applications**

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

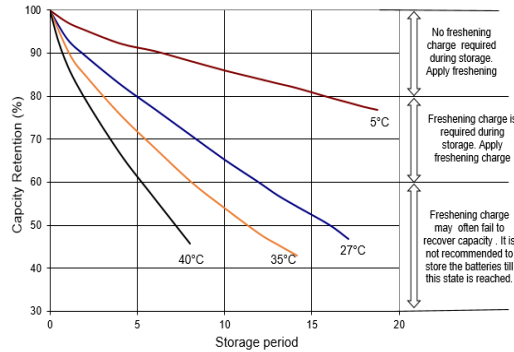
**Discharge Characteristics**



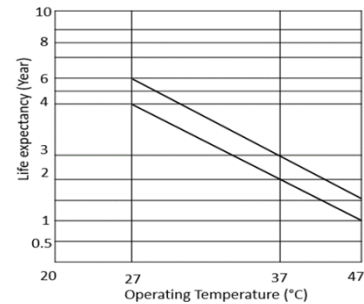
**Temperature Effect on Capacity**



**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)  
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- **Manufacturing Facility-2**  
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ARBL/AE/AQ/100Ah; May'2022, Rev-00

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



# 12AL120 12ALZ120

## AMARON QUANTA™

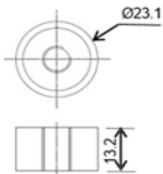
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

In short, the lifeline to your UPS applications

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

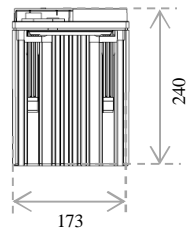
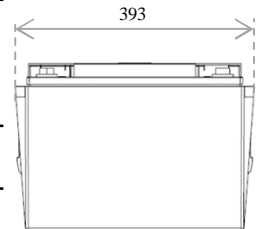
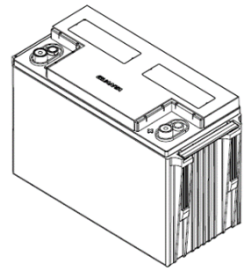
### TERMINAL LAYOUT



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)
	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 (12AL120)
Case Material	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 \*

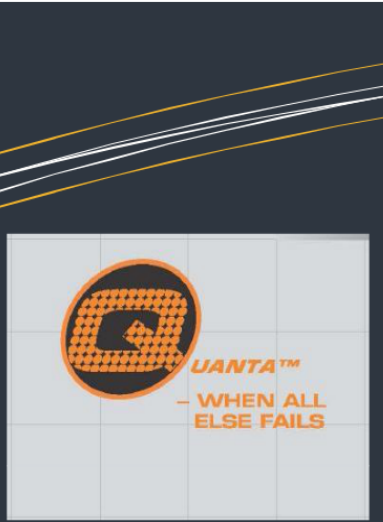
ECV/ Time	10min	15min	20min	30min	60min	2hrs	3hrs	5hrs	8hrs	10hrs	20hrs
1.60	2860	2354	1913	1453	900	544	397.0	266.0	181.0	146.0	74.0
1.65	2729	2302	1865	1432	880	536	386.5	260.0	177.5	145.0	73.5
1.70	2597	2249	1817	1411	860	528	376.0	254.0	174.0	144.0	73.0
1.75	2465	2197	1769	1390	840	520	365.0	248.0	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.



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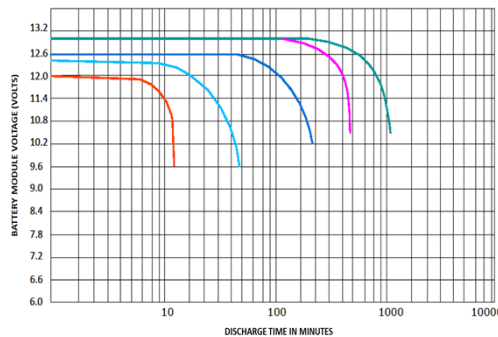
**Compliance**

- ✓ JIS C 8702 Certified
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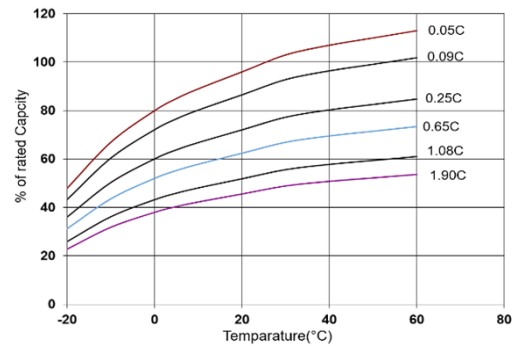
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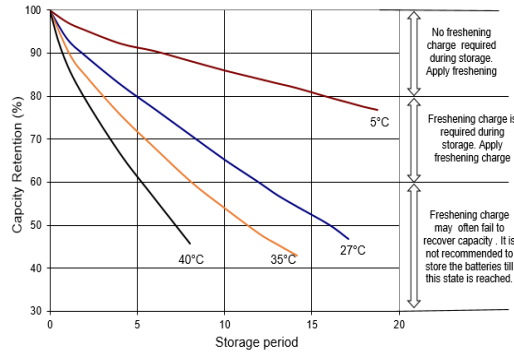
**Discharge Characteristics**



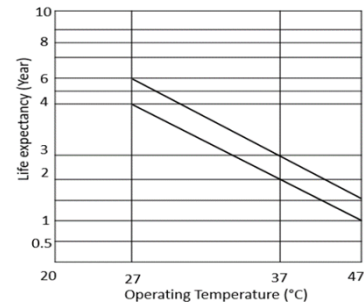
**Temperature Effect on Capacity**



**Shelf Life Characteristics**



**Float Service Life vs. Temperature**



**AMARA RAJA BATTERIES LIMITED**

- **CORPORATE OPERATIONS OFFICE:**  
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ARBL/AE/AQ/120Ah; May'2022, Rev-00

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# 12AL130 12ALZ130

## AMARON QUANTA™

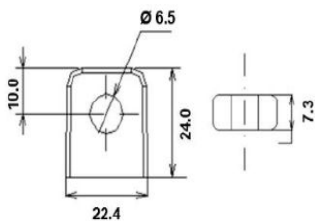
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It features several firsts for the battery industry like the unique Radgrid™

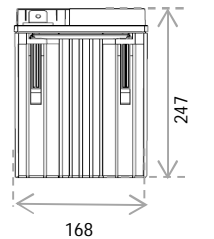
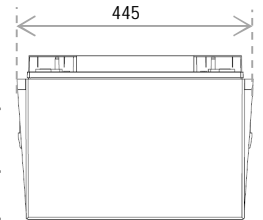
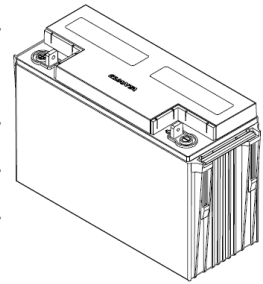
### TERMINAL LAYOUT



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.
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## THE LONG LIFE UPS BATTERY



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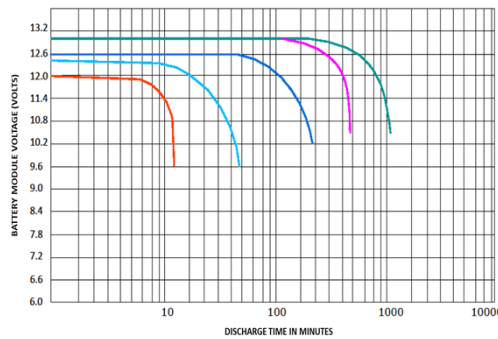
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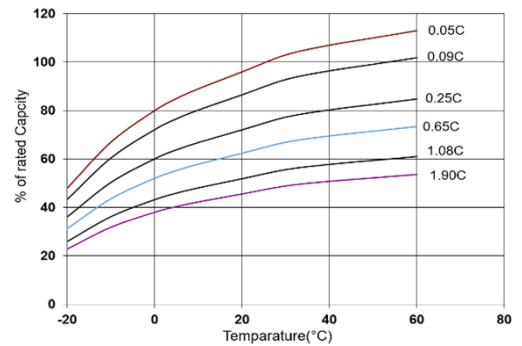
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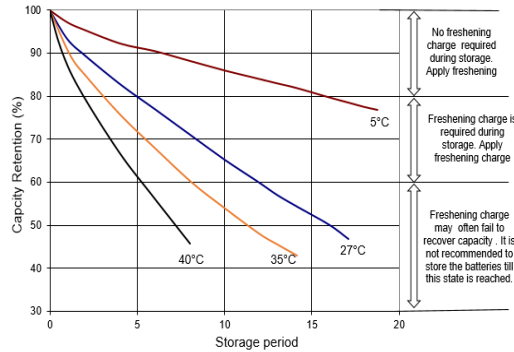
### Discharge Characteristics



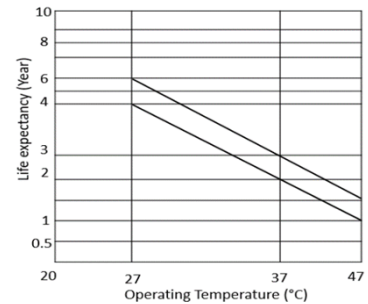
### Temperature Effect on Capacity



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

# 12AL150 12ALZ150

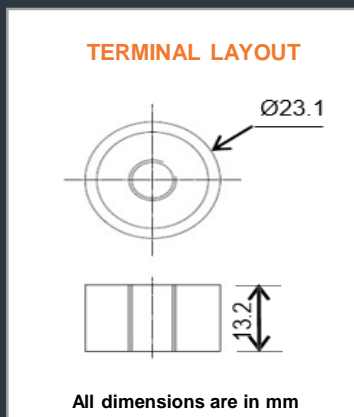
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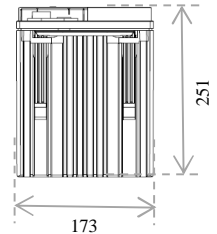
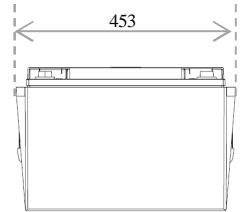
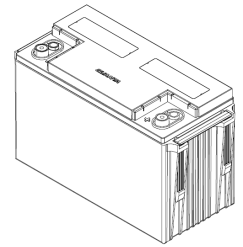
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## Specification

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)
	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 (12AL150)
Case Material	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:  
 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



## 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

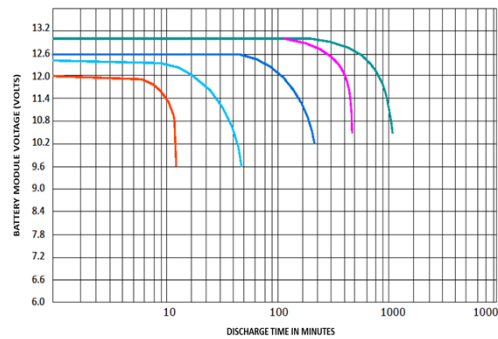
## Compliance

- ✓ 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

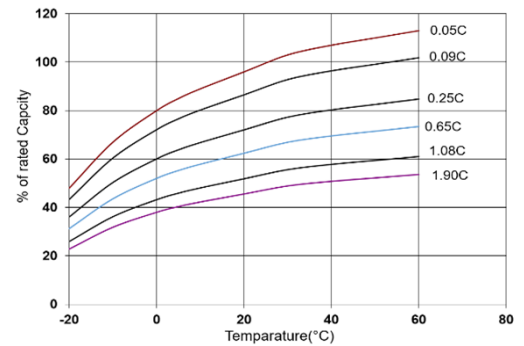
## Applications

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

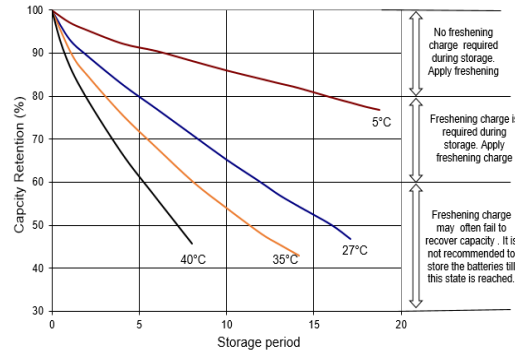
### Discharge Characteristics



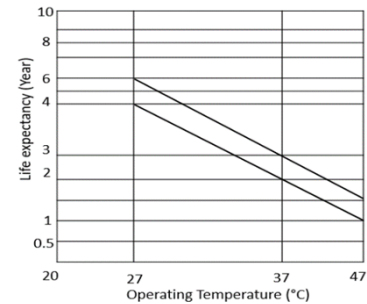
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



## AMARA RAJA BATTERIES LIMITED

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[www.amararajabatteries.com](http://www.amararajabatteries.com)
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- **Manufacturing Facility-2**  
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ARBL/AE/AQ/150Ah; May'2022, Rev-00

# 12AL160 12ALZ160

## AMARON QUANTA™

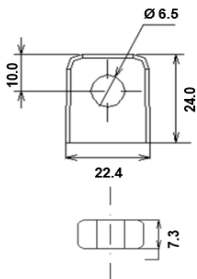
The industrial segment SMF-VRLA (Valve Regulated Lead Acid) battery for UPS applications is built to perform.

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™

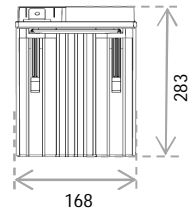
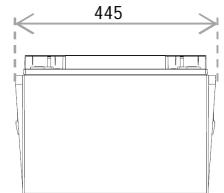
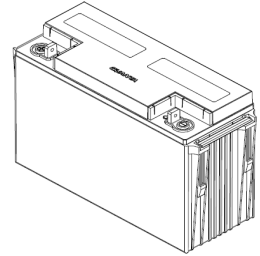
### TERMINAL LAYOUT



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)
	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 (12AL160)
Case Material	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

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## THE LONG LIFE UPS BATTERY



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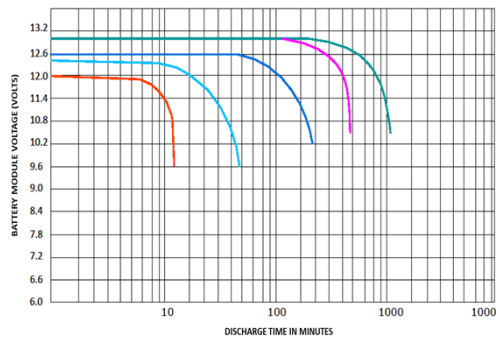
## Compliance

- ✓ 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

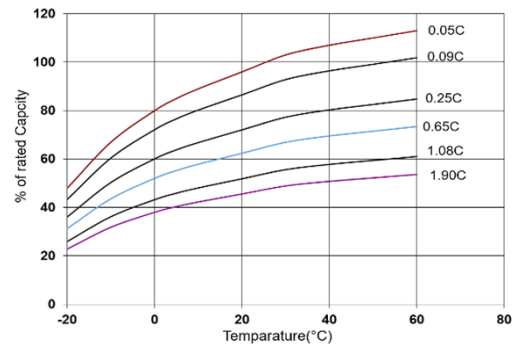
## Applications

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

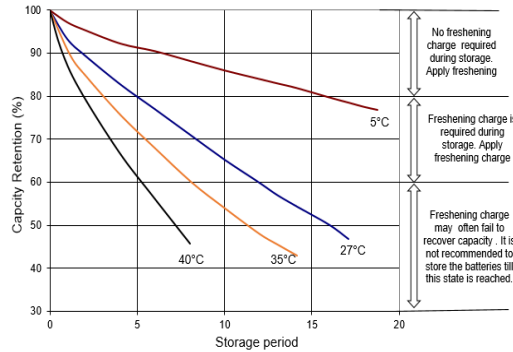
### Discharge Characteristics



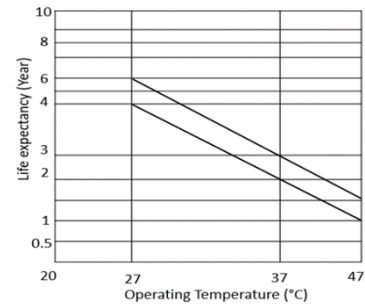
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



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



# 12AL200N 12ALZ200N

## AMARON QUANTA™

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

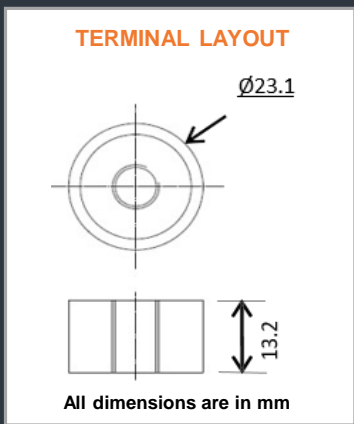
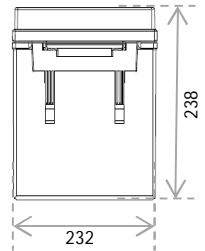
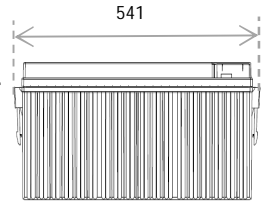
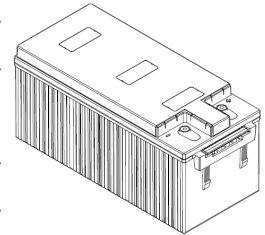
In short, the lifeline to your UPS applications

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%
	Case Material	Standard PPCP (12AL200N) 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.  
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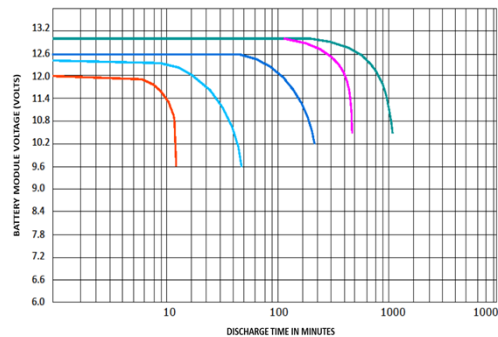
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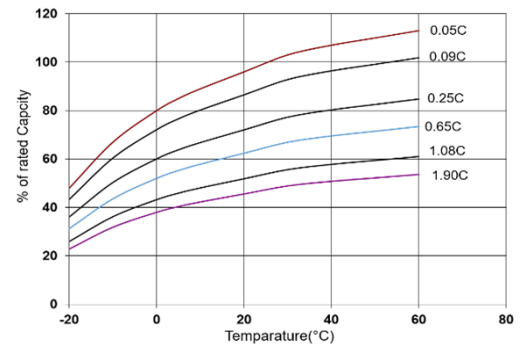
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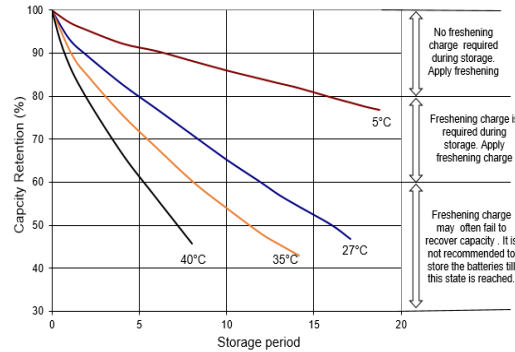
### Discharge Characteristics



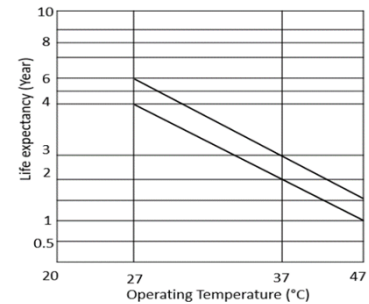
### Temperature Effect on Capacity



### Shelf Life Characteristics



### Float Service Life vs. Temperature



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