

40  
years  
1970-2010

CELEBRATING 40 YEARS  
OF INNOVATION

**POWER SONIC**

# RECHARGEABLE VRLA BATTERIES PHR HIGH RATE SERIES



## Features

- Superb high-rate discharge characteristics that ensure reliable performance in UPS applications for up to 10 years
- Flame Retardant ABS case and cover to UL 94 V-O for superior performance
- Proven VRLA Absorbent Glass Mat (AGM) Technology that guarantees safe operation without maintenance and "non-restricted article" status for transportation
- Precision plate pasting for higher consistency
- Patented dual-paste process for enhanced active material bonding
- Computer guided volumetric electrolyte control for precision filling
- Approved for transport by air. D.O.T., I.A.T.A. and F.A.A. certified. UL recognized
- Lead-calcium alloy grids and the use of high purity lead account for superior shelf-life characteristics
- 100% load testing to ensure uniform capacity

**We've Got The Power.™**

# Constant Current - Constant Power Charts for PHR Batteries

PHR-12100	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	62.5	47.7	39.0	33.0	25.7	19.5	15.8	9.40	6.86	5.44	4.51	3.88	3.05	2.54	1.32
1.80V	71.2	52.8	42.2	34.9	27.2	20.6	16.8	9.88	7.12	5.61	4.67	4.01	3.15	2.61	1.35
1.75V	81.1	56.4	44.8	37.3	28.3	21.3	17.3	10.20	7.32	5.74	4.75	4.08	3.22	2.66	1.38
1.70V	89.1	60.3	46.8	38.6	29.2	21.9	17.7	10.40	7.47	5.88	4.87	4.19	3.29	2.71	1.40
1.67V	94.8	63.0	48.9	40.1	30.1	22.5	18.2	10.60	7.62	5.98	4.98	4.28	3.34	2.75	1.43
1.60V	98.5	65.1	50.5	41.5	31.1	23.0	18.6	10.80	7.76	6.12	5.10	4.37	3.41	2.81	1.47
1.85V	121.5	93.3	76.8	65.3	51.0	38.9	31.7	18.9	13.9	11.0	9.18	7.91	6.26	5.22	2.74
1.80V	137.1	102.2	82.2	68.4	53.6	40.8	33.4	19.8	14.3	11.3	9.45	8.13	6.42	5.33	2.77
1.75V	154.5	108.1	86.6	72.3	55.3	41.7	34.1	20.2	14.6	11.5	9.55	8.23	6.52	5.42	2.82
1.70V	167.8	114.3	89.2	74.2	56.6	42.6	34.8	20.5	14.8	11.7	9.72	8.39	6.61	5.47	2.85
1.67V	177.1	118.7	92.8	76.3	57.9	43.4	35.5	20.8	15.0	11.8	9.89	8.53	6.70	5.54	2.89
1.60V	181.9	121.3	94.8	78.2	59.3	44.0	35.9	21.0	15.2	12.0	10.0	8.62	6.77	5.61	2.94

PHR-12150	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	102.3	73.7	59.1	49.4	37.9	28.3	22.6	12.7	9.04	7.06	5.85	5.01	3.93	3.26	1.72
1.80V	118.2	82.7	65.2	53.7	40.7	29.9	23.8	13.2	9.31	7.28	6.02	5.15	4.03	3.35	1.75
1.75V	132.8	89.9	70.3	57.2	42.7	31.2	24.7	13.5	9.54	7.46	6.15	5.25	4.11	3.41	1.79
1.70V	144.0	96.6	74.9	60.5	44.6	32.3	25.5	13.9	9.70	7.60	6.27	5.37	4.20	3.48	1.82
1.67V	156.0	103.3	79.1	63.6	46.4	33.3	26.2	14.2	10.0	7.78	6.41	5.48	4.31	3.54	1.85
1.60V	166.8	109.2	82.7	66.6	48.4	34.4	26.8	14.6	10.2	7.98	6.58	5.63	4.40	3.62	1.90
1.85V	199.0	144.2	116.2	97.6	75.4	56.4	45.2	25.6	18.3	14.3	11.9	10.2	8.05	6.71	3.55
1.80V	227.6	160.2	127.1	105.1	80.1	59.3	47.4	26.3	18.7	14.7	12.2	10.4	8.22	6.85	3.59
1.75V	253.0	172.4	135.7	111.1	83.4	61.2	48.9	26.9	19.0	14.9	12.4	10.6	8.33	6.94	3.66
1.70V	271.2	183.3	142.9	116.2	86.3	62.9	49.9	27.4	19.3	15.1	12.5	10.8	8.45	7.03	3.70
1.67V	291.5	194.5	150.0	121.4	89.3	64.5	51.2	28.0	19.7	15.4	12.7	10.9	8.62	7.12	3.75
1.60V	308.1	203.4	155.2	125.9	92.2	65.9	51.7	28.3	20.0	15.7	13.0	11.1	8.73	7.21	3.81

PHR-12200	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	111.4	77.6	64	55.6	44.6	34.2	28	17.12	13.04	10.72	9.1	7.88	6.26	5.2	2.88
1.80V	137	92.6	74.2	62.8	49.4	37.4	30.2	18.18	13.7	11.26	9.48	8.22	6.5	5.4	2.9
1.75V	162.2	104.8	81.8	68.4	52.6	39.6	31.8	18.96	14.2	11.62	9.74	8.42	6.68	5.5	2.92
1.70V	184	115.6	88.6	73.4	55.4	41.2	33	19.74	14.66	11.9	9.98	8.64	6.78	5.6	2.98
1.67V	202	124.2	93.8	77	57.6	42.8	34.4	20.4	15.02	12.16	10.2	8.8	6.88	5.66	3.02
1.60V	212	129.4	97.6	79.6	59.2	43.8	35.2	21	15.38	12.46	10.42	8.98	7.02	5.76	3.04
1.85V	262.3	196.5	166.3	143.9	110.9	81.1	65.0	38.5	27.7	21.9	18.3	15.8	12.6	10.5	5.46
1.80V	308.7	221.1	186.4	157.0	118.1	85.3	68.0	39.9	28.6	22.5	18.8	16.2	12.9	10.8	5.65
1.75V	353.2	242.4	199.6	166.5	122.7	88.3	70.0	41.0	29.2	22.9	19.0	16.4	13.1	10.9	5.75
1.70V	378.4	261.2	211.5	175.2	127.6	90.6	71.8	41.4	29.7	23.3	19.3	16.7	13.3	11.0	5.81
1.67V	406.6	274.0	225.1	183.2	131.4	93.3	73.7	42.3	30.0	23.6	19.6	16.9	13.4	11.2	5.89
1.60V	432.7	289.8	232.3	189.0	134.8	95.6	75.2	42.7	30.4	24.0	20.0	17.2	13.6	11.3	5.98

PHR-12300	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	187.0	144.2	126.0	110.2	85.0	63.6	51.2	29.1	20.7	16.2	13.5	11.6	9.19	7.70	4.02
1.80V	214.5	158.9	138.1	118.8	89.5	65.9	52.9	30.0	21.4	16.7	13.9	12.0	9.46	7.86	4.10
1.75V	244.0	178.4	150.2	126.0	93.3	68.0	54.3	30.9	21.9	17.1	14.2	12.3	9.66	8.00	4.17
1.70V	268.6	193.4	160.1	134.1	98.1	70.9	55.9	31.4	22.4	17.6	14.6	12.5	9.82	8.14	4.24
1.67V	297.2	210.6	171.2	140.2	102.3	73.0	57.5	32.0	22.8	17.8	14.8	12.6	9.99	8.28	4.31
1.60V	326.7	227.3	180.7	147.6	106.3	75.7	58.8	32.6	23.1	18.2	15.1	12.9	10.2	8.43	4.36
1.85V	363.7	282.0	247.8	217.9	168.9	127.0	102.5	58.4	41.9	32.9	27.4	23.7	18.8	15.8	8.30
1.80V	413.0	307.7	269.0	232.7	176.4	130.6	105.2	59.9	42.9	33.7	28.1	24.3	19.3	16.1	8.42
1.75V	465.0	342.2	290.0	244.5	182.2	133.6	107.2	61.3	43.7	34.3	28.6	24.7	19.6	16.3	8.53
1.70V	506.0	366.8	305.4	257.5	189.6	137.9	109.5	61.9	44.4	34.9	29.1	25.0	19.8	16.5	8.61
1.67V	555.3	396.5	324.6	267.6	196.7	141.4	112.0	62.7	44.9	35.3	29.4	25.2	20.0	16.7	8.72
1.60V	603.6	423.4	339.1	279.0	202.3	145.1	113.5	63.3	45.1	35.7	29.7	25.5	20.2	16.8	8.73

# Constant Current - Constant Power Charts for PHR Batteries (continued)

PHR-12350	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	209.8	171.1	145.5	123.1	95.0	69.9	56.5	33.7	24.4	19.1	15.8	13.6	10.7	8.84	4.63
1.80V	234.8	190.7	158.5	133.1	100.7	73.4	59.2	65.0	25.1	19.8	16.3	14.0	10.9	9.07	4.75
1.75V	262.2	209.2	171.4	142.2	105.8	76.7	61.6	35.8	25.7	20.1	16.7	14.3	11.2	9.25	4.86
1.70V	290.7	226.9	182.4	151.3	111.2	80.1	63.5	36.6	26.2	20.6	17.1	14.6	11.4	9.43	4.94
1.67V	321.5	242.8	195.3	159.6	116.5	82.8	65.3	37.3	26.7	21.0	17.3	14.9	11.6	9.59	5.03
1.60V	348.8	258.8	205.6	166.7	120.4	85.8	67.5	38.3	27.2	21.4	17.7	15.2	11.9	9.76	5.16
1.85V	408.1	334.7	286.3	243.4	188.8	139.6	113.2	67.8	49.2	38.8	32.2	27.7	21.8	18.2	9.58
1.80V	452.1	369.2	308.6	260.6	198.3	145.4	117.7	69.9	50.4	39.8	33.1	28.3	22.3	18.6	9.76
1.75V	499.6	401.3	330.8	276.0	206.7	150.7	121.6	71.1	51.3	40.3	33.5	28.9	22.7	18.8	9.93
1.70V	547.6	430.4	348.0	290.7	214.9	155.8	124.3	72.1	52.0	41.1	34.1	29.2	23.0	19.1	10.0
1.67V	600.7	457.2	370.3	304.6	223.9	160.4	127.2	73.1	52.7	41.6	34.4	29.6	23.3	19.3	10.2
1.60V	644.5	482.0	385.7	315.2	229.1	164.4	130.2	74.5	53.2	42.0	34.9	29.9	23.6	19.4	10.3

PHR-12400	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	216.5	183.3	159.3	136.4	104.9	76.9	61.6	35.8	26.4	21.2	17.8	15.4	12.3	10.3	5.38
1.80V	264.0	210.3	176.9	149.5	112.4	82.9	65.6	37.7	27.6	22.0	18.5	15.9	12.6	10.5	5.50
1.75V	297.0	230.3	193.6	161.7	119.7	86.8	68.9	39.5	28.7	22.6	18.8	16.3	12.9	10.7	5.63
1.70V	335.3	254.1	209.9	173.9	128.0	91.8	72.5	41.1	29.6	23.2	19.3	16.6	13.2	10.9	5.72
1.67V	363.0	275.2	227.0	186.8	135.3	96.5	75.9	42.4	30.4	23.8	19.8	17.0	13.5	11.1	5.82
1.60V	390.7	298.7	243.3	198.3	142.6	100.3	78.4	43.8	31.2	24.6	20.3	17.5	13.8	11.3	5.98
1.85V	421.2	358.6	313.4	269.7	208.5	153.4	123.4	71.9	53.3	42.9	36.1	31.4	25.2	21.2	11.1
1.80V	508.2	407.2	344.5	292.7	221.4	164.2	130.4	75.5	55.4	44.4	37.4	32.3	25.8	21.5	11.3
1.75V	565.9	441.9	373.7	313.9	233.7	170.6	136.0	78.5	57.2	45.3	37.8	32.8	26.2	21.8	11.5
1.70V	631.6	482.1	400.4	334.0	247.6	178.7	142.0	81.1	58.7	46.2	38.4	33.3	26.6	22.1	11.6
1.67V	678.3	518.2	430.4	356.5	260.1	186.8	148.0	83.2	60.0	47.2	39.2	33.8	26.9	22.3	11.8
1.60V	721.9	556.4	456.5	374.9	271.3	192.4	151.4	85.1	61.1	48.2	40.0	34.5	27.3	22.5	12.0

PHR-12500	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V	286	219	182	157	121	89.5	75.4	44.6	34.9	28.4	23.1	20.1	16.2	13.5	7.4
1.80V	383	280	220	186	143	104	84.5	48.7	37.6	30.3	24.8	21.5	17.2	14	7.5
1.75V	432	308	240	200	149	108	88.4	50.5	38.3	31	25.5	22.1	17.5	14.3	7.6
1.70V	476	336	256	210	155	112	91.2	51.8	39.3	31.8	26.1	22.6	17.7	14.6	7.7
1.67V	525	362	272	223	163	115	93.3	52.5	41	32.9	26.9	23.1	18	14.9	7.8
1.60V	579	393	291	238	173	120	94.2	54.8	42.2	33.9	27.8	23.6	18.2	15.1	7.9
1.85V	497.8	416.3	366.4	329.0	261.1	199.4	162.9	96.6	70.3	56.2	47.3	41.1	32.7	27.3	14.3
1.80V	583.6	464.8	403.5	355.1	278.1	210.8	171.7	100.2	72.9	57.7	48.3	41.8	33.3	27.7	14.6
1.75V	661.2	521.8	438.3	377.7	290.8	219.8	179.2	103.3	75.0	59.3	49.5	42.9	33.9	28.0	14.8
1.70V	722.4	555.3	462.8	397.6	303.2	228.4	185.4	106.7	76.5	60.3	50.4	43.4	34.3	28.3	15.0
1.67V	777.5	591.1	492.0	416.4	317.3	237.7	191.8	109.9	78.2	61.7	51.1	44.1	34.6	28.6	15.2
1.60V	829.6	628.8	511.8	429.8	325.9	242.2	195.1	110.8	78.8	61.9	51.5	44.3	34.6	28.6	15.2

## Quality is Always #1

We employ IQC, PQC and ISO 9001 quality management systems to test materials, monitor manufacturing processes and evaluate finished products prior to shipment. All our batteries are 100% tested with advanced computer equipment prior to being released for sale.

Power-Sonic management and staff are committed to providing the best possible service to satisfy our customer's needs, and fulfill our undertaking to deliver top grade products on time and at a competitive price.

Our batteries meet international standards including JIS, DIN and IEC and have UL certification.



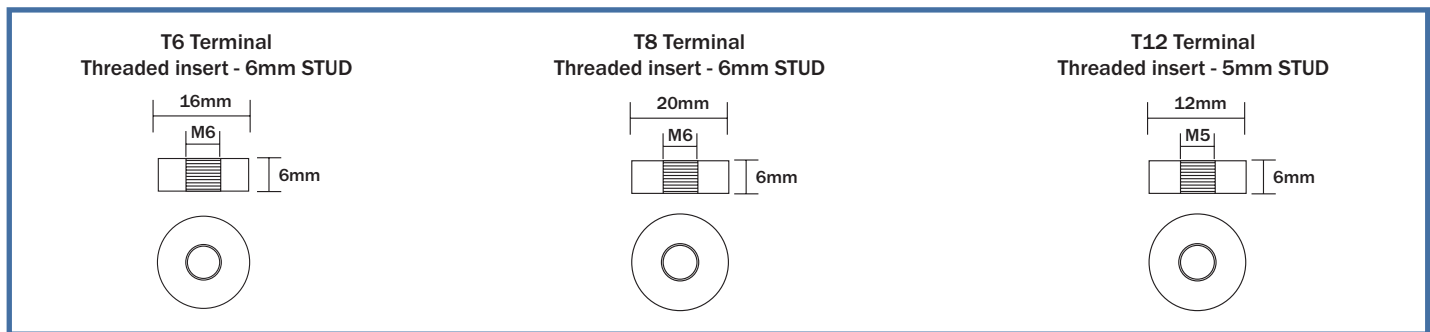
# High-Rate Discharge, Long Life Design / PHR Series

Model	Nominal Voltage (V)	Watts per Cell @ 15-min.	Rated Capacity (A.H.)		Length		Width		Height		Ht. Over Terminal		Weight		Standard Terminals
			20-hr.		in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	
PHR-12100*	12	93	27		6.46	164	4.92	125	6.89	175	6.50	165	17.4	7.9	T12
PHR-12150*	12	150	36		7.68	195	5.12	130	6.46	164	6.57	167	22.5	10.2	T6
PHR-12200*	12	225	58		9.02	229	5.43	138	7.87	200	7.99	203	38.1	17.3	T6
PHR-12300*	12	324	82		10.20	259	6.61	168	8.19	208	8.31	211	52.5	23.8	T6
PHR-12350*	12	370	95		12.00	305	6.61	168	8.15	207	8.27	210	60.4	27.4	T6
PHR-12400*	12	430	110		12.81	326	6.69	170	8.39	213	8.50	216	69.2	31.4	T8
PHR-12500*	12	492	150		13.19	335	6.77	172	10.83	275	10.94	278	92.6	42.0	T8

\* FR: UL94 V-0 flame retardant case & cover

All data subject to change without notice.

## Terminal Configurations



## Further Information

Please refer to our website [www.power-sonic.com](http://www.power-sonic.com) for a complete range of useful downloads, such as product catalogs, specification sheets, technical manual, material safety data sheets (MSDS), ISO certification, etc.

## About Power-Sonic

Providing our customers with reliable, yet economical, products is the corner stone of the Power-Sonic mission. The Power-Sonic Corporation has been a leading force since 1970 in the supply of high quality cost effective batteries. Power-Sonic markets an extensive range of rechargeable sealed lead acid batteries worldwide. These batteries envelop a broad spectrum of electronic and industrial applications, either as the prime or standby power source. Engineers and buyers continue to insist on Power-Sonic batteries, wherever reliable and cost effective DC power is required.

Power-Sonic is dedicated to continual product development to improve the performance and reliability of our product range. New batteries are constantly being introduced to meet the ever evolving needs of industry. We strive to produce batteries with superior performance characteristics and value, through advanced engineering and state-of-the art manufacturing processes, coupled with the use of premium raw materials.

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