

genesisTM NP RANGE SUMMARY



Sealed Rechargeable, Valve Regulated Lead-Acid Batteries

GENERAL SPECIFICATIONS

GENESIS™ NPH BATTERY SERIES

Type	FR Type*	Volts	Nominal Capacity (10hr rate-Ah)	Length		Width		Overall Height incl. Terminals		Weight		Layout	Terminal Illustration
				mm	(in.)	mm	(in.)	mm	(in.)	kgs.	(lbs)		
-----	NPH2-12FR	12	2	68	2.68	51	2.01	88	3.46	0.84	1.85	2	A
NPH3.2-12	NPH3.2-12FR		3.2	134	5.28	67	2.64	64	2.52	1.38	3.05	3	A/C

GENESIS™ NP BATTERY SERIES

Type	FR Type*	Volts	Nominal Capacity (20hr rate-Ah)	Length		Width		Overall Height incl. Terminals		Weight		Layout	Terminal Illustration
				mm	(in.)	mm	(in.)	mm	(in.)	kgs.	(lbs)		
NP1-6	NP1-6FR	6	1.0	51	2.01	42	1.65	57	2.24	0.28	0.61	5	A
NP1.2-6	NP1.2-6FR		1.2	97	3.82	25	0.98	56	2.20	0.30	0.67	1	A
NP2.8-6	NP2.8-6FR		2.8	67	2.64	33	1.30	105	4.13	0.59	1.30	5	A/C
NP3-6	NP3-6FR		3.0	134	5.28	33	1.30	67	2.64	0.69	1.53	1	A
NP3.2-6	NP3.2-6FR		3.2	66	2.60	33	1.30	104	4.09	0.59	1.30	5	A
NP3.8-6	NP3.8-6FR		3.8	66	2.60	33	1.30	125	4.92	0.75	1.65	1	A
NP4-6	NP4-6FR		4.0	70	2.76	47	1.85	105	4.15	0.80	1.76	5	A/C
NP4.5-6	NP4.5-6FR		4.5	70	2.76	47	1.85	105	4.15	0.86	1.90	5	A/C
NP5-6	NP5-6FR		5.0	70	2.76	47	1.85	105	4.15	0.95	2.10	5	A/C
NP7-6	NP7-6FR		7.0	151	5.95	33	1.30	100	3.94	1.28	2.83	1	A/C
NP8.5-6	NP8.5-6FR		8.5	98	3.86	56	2.20	118	4.65	1.60	3.53	9	A/C
NP10-6	NP10-6FR		10.0	151	5.95	50	1.97	101	3.98	1.99	4.38	1	A/C
NP12-6	NP12-6FR		12.0	151	5.95	50	1.97	101	3.98	2.04	4.48	1	A/C
NP0.8-12	NP0.8-12FR	12	0.8	96	3.78	25	0.98	61	2.42	0.37	0.82	7	H/I
NP1.2-12	NP1.2-12FR		1.2	97	3.82	48	1.89	56	2.20	0.57	1.25	3	A
NP2-12	NP2-12FR		2.0	150	5.91	20	0.79	89	3.50	0.70	1.54	8	B
NP2.12-C	NP2.12CFR		2.0	182	7.17	24	0.93	61	2.40	0.73	1.61	6	L
NP2.3-12	NP2.3-12FR		2.3	178	7.01	35	1.38	67	2.64	1.02	2.15	1	A
NP2.6-12	NP2.6-12FR		2.6	134	5.28	67	2.64	66	2.60	1.36	3.00	3	A
NP2.9-12	NP2.9-12FR		2.9	79	3.11	56	2.20	105	4.13	1.24	2.73	1	A/C
NP3-12	NP3-12FR		3.0	132	5.20	33	1.30	105	4.13	1.18	2.60	1	A/C
NP3.4-12	NP3.4-12FR		3.4	134	5.28	67	2.64	67	2.64	1.39	3.06	3	A/C
NP4-12	NP4-12FR		4.0	90	3.54	70	2.76	107	4.21	1.70	3.74	1	A/C
NP4.5-12	NP4.5-12FR		4.5	90	3.54	70	2.76	107	4.21	1.76	3.88	1	A/C
NP5-12	NP5-12FR		5.0	90	3.54	70	2.76	107	4.21	1.81	4.00	1	A/C
NP7-12	NP7-12FR		7.0	151	5.95	65	2.56	100	3.94	2.59	5.72	4	A/C
NP12-12	NP12-12FR		12.0	151	5.95	98	3.86	100	3.94	4.06	8.95	4	C
NP18-12	NP18-12FR		17.2	181	7.13	76	3.00	167	6.57	6.17	13.60	2	D/E
NP24-12	NP24-12FR		24.0	166	6.54	175	6.89	125	4.92	9.07	20.00	2	C/D/E
NP33-12	NP33-12FR		33.0	197	7.76	131	5.16	158+	6.22+	11.79	26.00	1	E/F
NP35-12	NP35-12FR		35.0	198	7.80	132	5.20	170	6.69	12.61	27.80	1	F
NP38-12	NP38-12FR		38.0	197	7.76	165	6.50	172	6.77	14.59	32.16	2	F/G
NP55-12	NP55-12FR		56.3	229	9.02	138	5.43	207+	8.15+	18.01	39.70	1	M/G
NP65-12	NP65-12FR		65.0	350	13.78	166	6.54	174	6.85	23.63	52.10	2	F/G
NP75-12	NP75-12FR		77.5	259	10.20	169	6.65	208+	8.19+	26.50	58.42	1	M/G
NP90-12	NP90-12FR		90.0	304	11.97	168	6.61	229+	9.02	31.18	68.74	1	M/G
NP100-12	NP100-12FR		100.0	329	12.95	174	6.85	214+	8.43+	32.94	72.62	1	J/G
NP120-12	NP120-12FR		120.0	407	16.02	173	6.81	235	9.25	38.41	84.68	1	J/G
NP150-12	NP150-12FR		150.0	483	19.02	170	6.69	241	9.49	47.13	103.90	1	J/G
NP200-12	NP200-12FR		200.0	520	20.47	260	10.24	208	8.19	73.00	160.93	3	K/G

DATASAFE™ NPX BATTERY SERIES

Type	FR Type*	Volts	Watts/Cell to 1.67 End Voltage	Nominal Capacity (20hr rate-Ah)	Length		Width		Overall Height incl. Terminals		Weight		Layout	Terminal Illustration
					mm	(in.)	mm	(in.)	mm	(in.)	kgs.	(lbs)		
NPX-35-6	NPX-35-6FR	6	35W/Cell	8	151	5.95	33	1.30	100	3.94	1.43	3.15	1	A/C
NPX-50	NPX-50FR		50W/Cell	13	151	5.95	50	1.97	100	3.94	2.09	4.60	1	A/C
NPX-25	NPX-25FR	12	23W/Cell	5	90	3.54	70	2.75	107	4.21	1.95	4.30	1	A/C
NPX-35	NPX-35FR		35W/Cell	8	151	5.95	65	2.56	100	3.94	2.75	6.06	4	A/C
NPX-80	NPX-80FR		80W/Cell	20	181	7.13	76	2.39	167	6.57	6.35	14.00	2	D/E
NPX-100	NPX-100FR		95W/Cell	28	166	6.54	125	4.92	175	6.89	9.70	21.38	2	D/E
NPX-135	NPX-135FR		135W/Cell	33	197	7.76	131	5.16	158+	6.22	11.94	26.32	1	E/F
NPX-150	NPX-150FR		150W/Cell	40	197	7.76	165	6.50	172	6.77	14.29	31.50	2	F/G

FOOTNOTES:

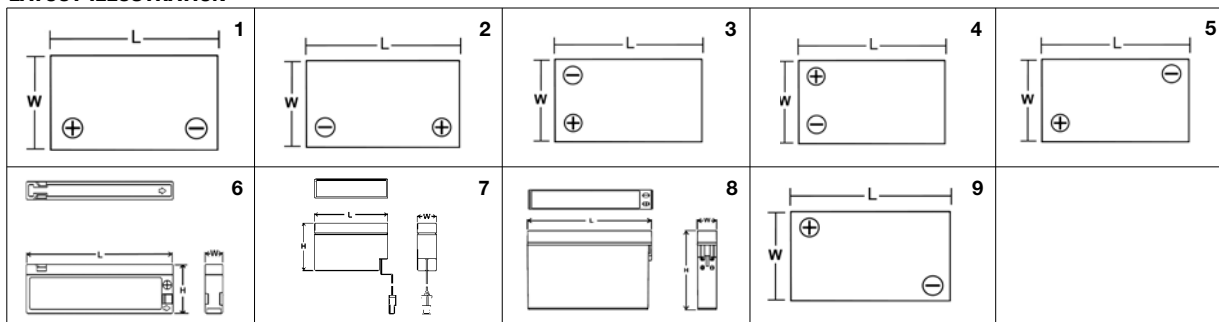
* FR: UL94-VO, Flame Retardant Case and Cover (Oxygen index 28)
 + Height is top cover. Overall Height, including terminal is dependent on the terminal configuration
 Recognized by UL File No. MH16464

NOTE: All dimensions are +/- 0.08 inches (2mm); Weights are +/- 5%

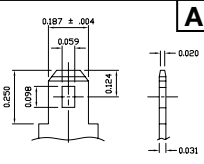
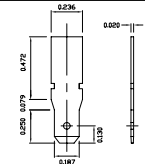
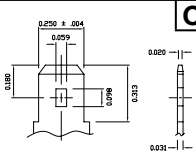
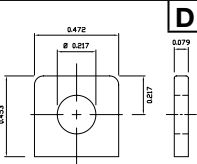
Torque Specifications:

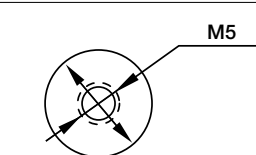
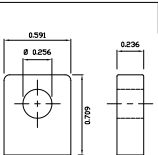
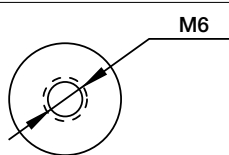
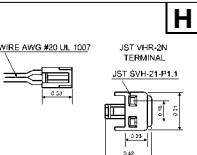
M5 bolt: 26.6 lbf.in (3Nm) +/- 5%
 M6 bolt: 44.31 lbf.in (5Nm) +/- 5%
 M5 receptacle: 35.4 lbf.in (4Nm) +/- 5%
 M6 receptacle: 65 lbf.in (6.8Nm) +/- 5%

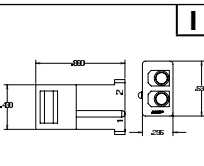
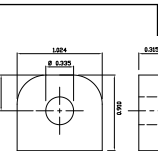
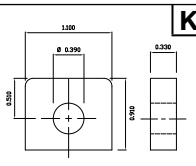
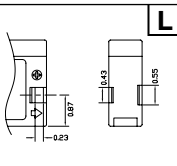
LAYOUT ILLUSTRATION

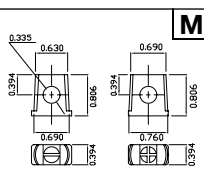


TERMINAL ILLUSTRATION

 A INCH = MM <table><tr><td>0.250</td><td>6.35</td></tr><tr><td>0.187 ± .004</td><td>4.75</td></tr><tr><td>0.124</td><td>3.15</td></tr><tr><td>0.098</td><td>2.49</td></tr><tr><td>0.059</td><td>1.50</td></tr><tr><td>0.031</td><td>0.79</td></tr><tr><td>0.020</td><td>0.51</td></tr><tr><td>0.004</td><td>0.10</td></tr></table>	0.250	6.35	0.187 ± .004	4.75	0.124	3.15	0.098	2.49	0.059	1.50	0.031	0.79	0.020	0.51	0.004	0.10	 B INCH = MM <table><tr><td>0.472</td><td>11.99</td></tr><tr><td>0.250</td><td>6.35</td></tr><tr><td>0.236</td><td>5.99</td></tr><tr><td>0.187</td><td>4.75</td></tr><tr><td>0.130</td><td>3.30</td></tr><tr><td>0.079</td><td>2.01</td></tr><tr><td>0.020</td><td>0.51</td></tr></table>	0.472	11.99	0.250	6.35	0.236	5.99	0.187	4.75	0.130	3.30	0.079	2.01	0.020	0.51	 C INCH = MM <table><tr><td>0.313</td><td>7.95</td></tr><tr><td>0.250</td><td>6.35</td></tr><tr><td>0.180</td><td>4.57</td></tr><tr><td>0.098</td><td>2.49</td></tr><tr><td>0.059</td><td>1.50</td></tr><tr><td>0.031</td><td>0.79</td></tr><tr><td>0.020</td><td>0.51</td></tr><tr><td>0.004</td><td>0.10</td></tr></table>	0.313	7.95	0.250	6.35	0.180	4.57	0.098	2.49	0.059	1.50	0.031	0.79	0.020	0.51	0.004	0.10	 D INCH = MM <table><tr><td>0.472</td><td>11.99</td></tr><tr><td>0.453</td><td>11.51</td></tr><tr><td>0.217</td><td>5.51</td></tr><tr><td>0.079</td><td>2.01</td></tr></table>	0.472	11.99	0.453	11.51	0.217	5.51	0.079	2.01
0.250	6.35																																																								
0.187 ± .004	4.75																																																								
0.124	3.15																																																								
0.098	2.49																																																								
0.059	1.50																																																								
0.031	0.79																																																								
0.020	0.51																																																								
0.004	0.10																																																								
0.472	11.99																																																								
0.250	6.35																																																								
0.236	5.99																																																								
0.187	4.75																																																								
0.130	3.30																																																								
0.079	2.01																																																								
0.020	0.51																																																								
0.313	7.95																																																								
0.250	6.35																																																								
0.180	4.57																																																								
0.098	2.49																																																								
0.059	1.50																																																								
0.031	0.79																																																								
0.020	0.51																																																								
0.004	0.10																																																								
0.472	11.99																																																								
0.453	11.51																																																								
0.217	5.51																																																								
0.079	2.01																																																								
Faston Tab: 187	Faston Tab: 187	Faston Tab: 250	M5 Bolt Fastened Terminal																																																						

 E M5	 F INCH = MM <table><tr><td>0.709</td><td>18.01</td></tr><tr><td>0.551</td><td>14.00</td></tr><tr><td>0.256</td><td>6.50</td></tr><tr><td>0.236</td><td>5.99</td></tr></table>	0.709	18.01	0.551	14.00	0.256	6.50	0.236	5.99	 G M6	 H INCH = MM <table><tr><td>0.530</td><td>13.46</td></tr><tr><td>0.420</td><td>10.67</td></tr><tr><td>0.310</td><td>7.87</td></tr><tr><td>0.230</td><td>5.84</td></tr><tr><td>0.160</td><td>4.06</td></tr></table>	0.530	13.46	0.420	10.67	0.310	7.87	0.230	5.84	0.160	4.06
0.709	18.01																				
0.551	14.00																				
0.256	6.50																				
0.236	5.99																				
0.530	13.46																				
0.420	10.67																				
0.310	7.87																				
0.230	5.84																				
0.160	4.06																				
M5 Threaded Receptacle	M6 Bolt Fastened Terminal	M6 Threaded Receptacle	JST No. VHR-2N																		

 I INCH = MM <table><tr><td>0.860</td><td>21.84</td></tr><tr><td>0.530</td><td>13.46</td></tr><tr><td>0.430</td><td>10.92</td></tr><tr><td>0.295</td><td>7.49</td></tr></table>	0.860	21.84	0.530	13.46	0.430	10.92	0.295	7.49	 J INCH = MM <table><tr><td>1.024</td><td>26.01</td></tr><tr><td>0.910</td><td>23.11</td></tr><tr><td>0.430</td><td>10.92</td></tr><tr><td>0.335</td><td>8.51</td></tr><tr><td>0.315</td><td>8.00</td></tr></table>	1.024	26.01	0.910	23.11	0.430	10.92	0.335	8.51	0.315	8.00	 K INCH = MM <table><tr><td>1.100</td><td>27.94</td></tr><tr><td>0.910</td><td>23.11</td></tr><tr><td>0.510</td><td>12.95</td></tr><tr><td>0.390</td><td>9.91</td></tr><tr><td>0.330</td><td>8.38</td></tr></table>	1.100	27.94	0.910	23.11	0.510	12.95	0.390	9.91	0.330	8.38	 L INCH = MM <table><tr><td>0.870</td><td>22.01</td></tr><tr><td>0.550</td><td>13.97</td></tr><tr><td>0.430</td><td>10.92</td></tr><tr><td>0.230</td><td>5.84</td></tr></table>	0.870	22.01	0.550	13.97	0.430	10.92	0.230	5.84
0.860	21.84																																						
0.530	13.46																																						
0.430	10.92																																						
0.295	7.49																																						
1.024	26.01																																						
0.910	23.11																																						
0.430	10.92																																						
0.335	8.51																																						
0.315	8.00																																						
1.100	27.94																																						
0.910	23.11																																						
0.510	12.95																																						
0.390	9.91																																						
0.330	8.38																																						
0.870	22.01																																						
0.550	13.97																																						
0.430	10.92																																						
0.230	5.84																																						
Tyco. 1-480318-0	M8 Bolt Fastened Terminal	M10 Bolt Fastened Terminal	"Camcorder" Terminal																																				

 M INCH = MM <table><tr><td>0.806</td><td>20.47</td></tr><tr><td>0.760</td><td>19.30</td></tr><tr><td>0.690</td><td>17.53</td></tr><tr><td>0.630</td><td>16.00</td></tr><tr><td>0.394</td><td>10.01</td></tr><tr><td>0.335</td><td>8.50</td></tr></table>	0.806	20.47	0.760	19.30	0.690	17.53	0.630	16.00	0.394	10.01	0.335	8.50	Note: Dimensions are in inches (mm) Tolerances are ± 0.02 in. for dimensions < 5mm ± 0.04 in. for dimensions ≥ 5mm ± 0.08 in. for all height dimensions unless otherwise specified.
0.806	20.47												
0.760	19.30												
0.690	17.53												
0.630	16.00												
0.394	10.01												
0.335	8.50												
M8 "Universal" Bolt Fastened Terminal													

Charging

- Standby use: Apply constant voltage charging at 2.275 volts per cell (or 2.25–2.30VPC).
- Cyclic use: Apply constant voltage charging at 2.40–2.50 VPC. Initial charging current should be set at less than 0.25CA.
- Top charge: Product in storage (ambient temperature 25°C/77°F) requires a top charge every six months. Apply constant voltage at 2.40 volts per cell, initial charging current should be set at less than 0.1CA for 15 to 20 hours.

Discharge

- Stop operation when voltage has reached the minimum permissible voltage. Recharge immediately.
- Do not operate at 6CA or more current continuously.

Storage

- Always store battery in a fully charged condition.
- If battery is to be stored for a long period, apply a recovery top-charge every 6 months.
- Store batteries in a dry and cool location.

Temperature

- Keep within ambient temperatures of –15°C to +50°C for both charging and discharging.

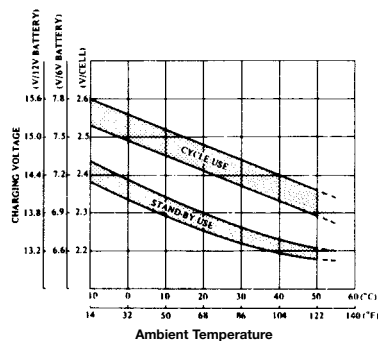
Incorporating battery into equipment

- Encase battery in a well ventilated compartment.
- Avoid installing battery near heated units such as a transformer.
- House the battery in the lowest section of the equipment enclosure or rack to prevent unnecessary battery temperature rise.

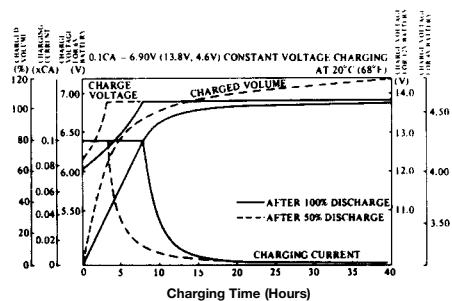
Others

- Avoid terminal short circuit.
- DO NOT expose to open flame.
- Avoid setting batteries in environments which can cause direct contact to gasoline, paint thinner, organic solvents, synthetic resins, oil, etc.

RELATIONSHIP BETWEEN CHARGING VOLTAGE AND TEMPERATURE



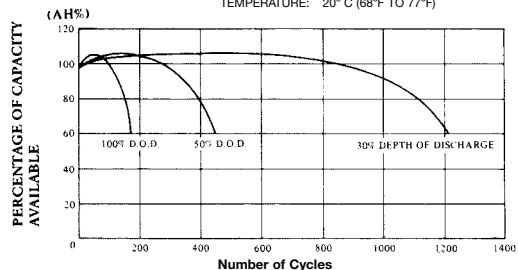
CHARGING CHARACTERISTICS



CYCLE SERVICE LIFE IN RELATION TO DEPTH OF DISCHARGE NP SERIES

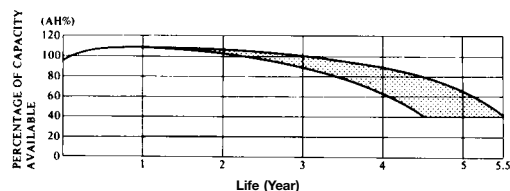
TESTING CONDITIONS: DISCHARGE CURRENT: 0.17C Amp. (F.V. 1.7V/CELL)
CHARGING CURRENT: 0.09C Amp.
CHARGING VOLUME: 125% OF DISCHARGED CAPACITY

AMBIENT TEMPERATURE: 20°C (68°F TO 77°F)



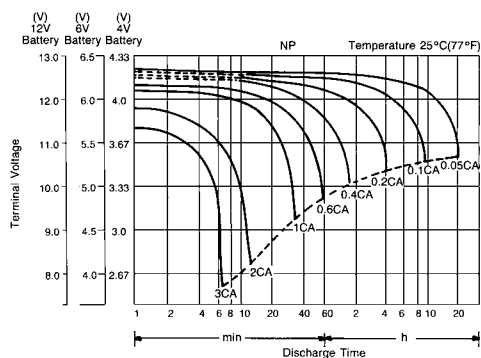
FLOAT SERVICE LIFE NP SERIES

TESTING CONDITIONS: FLOATING VOLTAGE: 2.25 TO 2.30V/CELL
AMBIENT TEMPERATURE: 20°C TO 22°C (68°F TO 72°F)



DISCHARGE CHARACTERISTICS

Curves at 25°C (77°F)
NP SERIES



EnerSys
P.O. Box 14145
Reading, PA 19612-4145
USA
Tel: +1-610-208-1991
+1-800-538-3627

EnerSys Europe
Zurich, Switzerland
Tel: +41 (0) 44 215 74 10
EnerSys Asia
Guangdong, China
Tel: +86 755 2689 3639

Distributed by:

© 2008 EnerSys. All rights reserved.
Trademarks and logos are the property
of EnerSys and its affiliates unless
otherwise noted.