



RANGE SUMMARY

The EnerSys logo, featuring the word "EnerSys" in a bold, black, sans-serif font, with a red swoosh underline that loops around the bottom and right.

Power/Full Solutions

Publication No: US-NP-RS-003 • August 2006

Sealed Rechargeable, Valve Regulated Lead-Acid Batteries

GENERAL SPECIFICATIONS

GENESIS NPH SERIES

Type	FR Type*	Volts	Nominal Capacity (10 hr rate - Ah)	Length		Width		Overall Height Incl. Terminals		Weight		Layout	Terminals
				mm.	(in.)	mm	(in.)	mm.	(in.)	kgs.	(lbs.)		
NPH2-12	NPH2-12FR	12	2.0	68.0	2.68	51.0	2.01	88.0	3.46	0.84	1.85	2	A
NPH3.2-12	NPH3.2-12FR		3.2	134.0	5.28	67.0	2.64	64.0	2.52	1.40	3.09	3	A

GENESIS NP SERIES

Type	FR Type*	Volts	Nominal Capacity (20 hr rate - Ah)	Length		Width		Overall Height Incl. Terminals		Weight		Layout	Terminals
				mm.	(in.)	mm	(in.)	mm.	(in.)	kgs.	(lbs.)		
NP1.2-6	NP1.2-6FR	6	1.2	97.0	3.82	25.0	0.98	54.5	2.15	0.30	0.66	1	A
NP2.8-6	NP2.8-6FR		2.8	67.0	2.64	34.0	1.34	105.0	4.13	0.59	1.30	5	A/D
NP3-6	-		3.0	134.0	5.28	34.0	1.33	64.0	2.52	0.65	1.43	1	A
NP4-6	-		4.0	70.0	2.76	47.0	1.85	105.5	4.15	0.85	1.87	5	A
NP4.5-6	-		4.5	70.0	2.76	47.0	1.85	107.0	4.21	0.87	1.92	5	A
NP5-6	NP5-6FR		5.0	70.0	2.76	47.0	1.85	107.0	4.21	0.93	2.05	5	A
NP7-6	NP7-6FR		7.0	151.0	5.95	64.0	1.33	97.5	3.84	1.35	2.98	1	A/D
NP8.5-6	-		8.5	98.0	3.86	56.0	2.21	118.0	4.65	1.60	3.53	9	A
NP10-6	NP10-6FR		10.0	151.0	5.95	50.0	1.97	97.5	3.84	2.00	4.41	1	A/D
NP12-6	NP12-6FR		12.0	151.0	5.95	50.0	1.97	101.0	3.98	2.07	4.56	1	A/D
NP0.8-12	NP0.8-12FR**	12	0.8	96.0	3.78	25.0	0.98	61.5	2.42	0.35	0.77	7	I/L
NP1.2-12	-		1.2	97.0	3.82	48.0	1.89	54.5	2.15	0.57	1.25	3	A
NP2-12	-		2.0	150.0	5.91	20.0	0.79	89.0	3.50	0.70	1.54	8	B
NP2-12-C	-		2.0	182.0	7.17	23.5	0.93	61.0	2.40	0.73	1.61	6	TU
-	NP2.3-12FR		2.3	178.0	7.01	34.0	1.34	64.0	2.52	0.94	2.07	1	A
-	NP2.6-12FR		2.6	134.0	5.28	67.0	2.64	64.0	2.52	1.12	2.47	3	A
NP2.9-12	NP2.9-12FR		2.9	79.0	3.11	56.0	2.20	105.0	4.13	1.21	2.67	2	A/D
NP3-12	NP3-12FR		3.0	132.0	5.20	33.0	1.30	104.5	4.11	1.20	2.65	1	A/D
NP3.4-12	NP3.4-12FR		3.4	134.0	5.28	67.0	2.64	67.0	2.64	1.37	3.02	3	A/D
NP4-12	NP4-12FR		4.0	90.0	3.54	70.0	2.76	106.0	4.17	1.70	3.74	1	A/D
NP5-12	NP5-12FR		5.0	90.0	3.54	70.0	2.76	106.0	4.17	2.00	4.41	1	A/D
NP7-12	NP7-12FR		7.0	151.0	5.94	65.0	2.56	97.5	3.84	2.65	6.17	4	A/D
NP12-12	NP12-12FR		12.0	151.0	5.94	98.0	3.86	97.5	3.84	4.00	8.82	4	D
NP18-12B	NP18-12BFR		17.2	181.0	7.13	76.2	2.99	167.0	6.57	6.20	13.64	2	E
NP24-12	NP24-12FR		24.0	166.0	6.54	175.0	6.89	125.0	4.92	8.65	19.05	2	C
NP33-12	NP33-12FR		32.9	195.3	7.69	132.6	5.22	155.2†	6.11†	10.90	24.00	1	M
-	NP38-12B		38.0	197.0	7.74	165.0	6.50	175.0	6.89	13.80	30.40	2	J
-	NP38-12R		38.0	197.0	7.74	165.0	6.50	175.0	6.89	13.80	30.40	2	K
NP55-12	NP55-12FR		56.3	250.4	9.86	139.1	5.48	207.0†	8.15†	18.70	41.10	1	M
NP65-12	NP65-12FR		65.0	350.0	13.78	166.0	6.54	174.0	6.85	22.80	50.20	2	G
NP75-12	NP75-12FR	77.5	281.6	11.09	169.2	6.66	207.0†	8.15†	24.90	54.70	1	M	
NP90-12	NP90-12FR	90.0	304.0	11.97	168.0	6.61	229.0	9.12	30.50	67.24	1	G	
NP100-12	NP100-12FR	91.6	330.9	13.03	169.2	6.66	207.0†	8.15†	29.80	65.70	1	M	
NP120-12	NP120-12FR	120.0	407.0	16.02	173.0	6.81	234.5	9.23	41.30	91.05	1	G	
NP150-12	NP150-12FR	150.0	483.0	19.02	170.0	6.69	241.0	9.49	46.80	103.17	1	G	
NP200-12	NP200-12FR	200.0	520.0	20.47	260.0	10.24	240.0	9.45	74.00	163.10	3	G	

DATASAFE NPX SERIES

Type	FR Type*	Volts	W/Cell to 1.67 End Voltage (15 Min Rate)	Length		Width		Overall Height Incl. Terminals		Weight		Layout	Terminals
				mm.	(in.)	mm	(in.)	mm.	(in.)	kgs.	(lbs.)		
NPX-50	NPX-50FR	6	50W/Cell	151.0	5.95	50.0	1.97	97.5	3.84	2.00	4.41	1	A/D
NPX-25	NPX-25FR		23W/Cell	90.0	3.54	70.0	2.75	106.0	4.17	2.00	4.41	1	D
NPX-35	NPX-35FR	12	35W/Cell	151.0	5.94	65.0	2.56	97.5	3.84	2.67	6.24	4	A/D
NPX-80	NPX-80FR		80W/Cell	181.0	7.13	76.2	2.99	167.0	6.57	6.60	14.50	2	E
-	NPX-100B		95W/Cell	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.80	2	J
-	NPX-100R		95W/Cell	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.80	2	K
-	NPX-150B		150W/Cell	197.0	7.76	165.0	6.50	175.0	6.89	15.50	34.10	2	J
-	NPX-150R	150W/Cell	197.0	7.76	165.0	6.50	175.0	6.89	15.50	34.10	2	K	

FOOTNOTES:

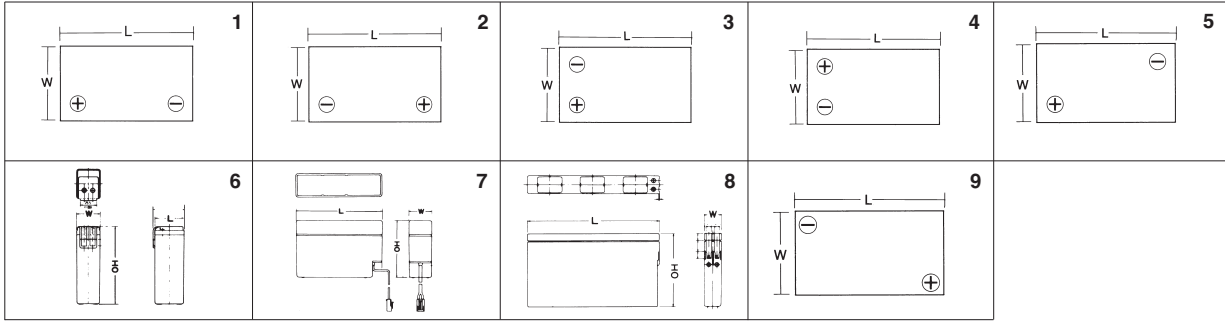
* FR: UL94-VO, Flame Retardant Case and Cover (Oxygen index: 30)

** FR: UL94-V2, Flame Retardant Case and Cover (Oxygen index: 30)

Recognized by UL File No. MH16464

† Height is to top cover. Overall height, including terminal is dependent on terminal configuration.

• LAYOUT



• TERMINAL

<p>Faston tab: 187 A</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>.250</td><td>6.35</td></tr> <tr><td>.185</td><td>4.70</td></tr> <tr><td>.124</td><td>3.15</td></tr> <tr><td>.098</td><td>2.50</td></tr> <tr><td>.059</td><td>1.50</td></tr> <tr><td>.031</td><td>0.80</td></tr> <tr><td>.020</td><td>0.50</td></tr> <tr><td>.004</td><td>0.10</td></tr> </table>	INCH = MM		.250	6.35	.185	4.70	.124	3.15	.098	2.50	.059	1.50	.031	0.80	.020	0.50	.004	0.10	<p>Faston tab: 187 B</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>0.472</td><td>12.00</td></tr> <tr><td>0.250</td><td>6.35</td></tr> <tr><td>0.236</td><td>6.00</td></tr> <tr><td>0.185</td><td>4.70</td></tr> <tr><td>0.079</td><td>2.00</td></tr> <tr><td>0.020</td><td>0.50</td></tr> </table>	INCH = MM		0.472	12.00	0.250	6.35	0.236	6.00	0.185	4.70	0.079	2.00	0.020	0.50	<p>Faston tab: 250 C</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>.250</td><td>6.35</td></tr> <tr><td>.124</td><td>3.15</td></tr> <tr><td>.098</td><td>2.50</td></tr> <tr><td>.059</td><td>1.50</td></tr> <tr><td>.031</td><td>0.80</td></tr> <tr><td>.020</td><td>0.50</td></tr> </table>	INCH = MM		.250	6.35	.124	3.15	.098	2.50	.059	1.50	.031	0.80	.020	0.50	<p>Faston tab 250 D</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>.310</td><td>7.90</td></tr> <tr><td>.250</td><td>6.35</td></tr> <tr><td>.16</td><td>4.0</td></tr> <tr><td>.031</td><td>0.8</td></tr> <tr><td>.020</td><td>0.5</td></tr> </table>	INCH = MM		.310	7.90	.250	6.35	.16	4.0	.031	0.8	.020	0.5
INCH = MM																																																													
.250	6.35																																																												
.185	4.70																																																												
.124	3.15																																																												
.098	2.50																																																												
.059	1.50																																																												
.031	0.80																																																												
.020	0.50																																																												
.004	0.10																																																												
INCH = MM																																																													
0.472	12.00																																																												
0.250	6.35																																																												
0.236	6.00																																																												
0.185	4.70																																																												
0.079	2.00																																																												
0.020	0.50																																																												
INCH = MM																																																													
.250	6.35																																																												
.124	3.15																																																												
.098	2.50																																																												
.059	1.50																																																												
.031	0.80																																																												
.020	0.50																																																												
INCH = MM																																																													
.310	7.90																																																												
.250	6.35																																																												
.16	4.0																																																												
.031	0.8																																																												
.020	0.5																																																												
<p>Bolt fastened terminal E</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>.472</td><td>12.00</td></tr> <tr><td>.453</td><td>11.50</td></tr> <tr><td>.433</td><td>11.00</td></tr> <tr><td>.216</td><td>5.50</td></tr> <tr><td>.079</td><td>2.00</td></tr> </table>	INCH = MM		.472	12.00	.453	11.50	.433	11.00	.216	5.50	.079	2.00	<p>Bolt fastened terminal G</p> <table border="1"> <tr><th colspan="2">INCH = MM</th></tr> <tr><td>0.24</td><td>6</td></tr> <tr><td>0.27</td><td>7</td></tr> <tr><td>0.37</td><td>9.5</td></tr> <tr><td>0.71</td><td>18</td></tr> <tr><td>0.768</td><td>19.5</td></tr> </table>	INCH = MM		0.24	6	0.27	7	0.37	9.5	0.71	18	0.768	19.5	<p>JST No. VHR-2N I</p> <p>WIRE AWG \leq 20 UL 1007</p> <p>JST VHR-2N (TERMINAL)</p> <p>JST SVH-2IT-P1.1</p>	<p>Bolt fastened terminal J</p> <p>(Lug) TERMINAL (inches)</p>																																		
INCH = MM																																																													
.472	12.00																																																												
.453	11.50																																																												
.433	11.00																																																												
.216	5.50																																																												
.079	2.00																																																												
INCH = MM																																																													
0.24	6																																																												
0.27	7																																																												
0.37	9.5																																																												
0.71	18																																																												
0.768	19.5																																																												
<p>Threaded Receptacle K</p> <p>UNF#10-32</p>	<p>Tyco 1-480318-0 L</p>	<p>M</p> <p>Terminal height above cover</p> <table border="1"> <thead> <tr> <th>Terminal Type</th> <th>NP33-12 mm</th> <th>ins</th> <th>NP55/75/100-12 mm</th> <th>ins</th> </tr> </thead> <tbody> <tr><td>B</td><td>5.1</td><td>0.20</td><td>3.3</td><td>0.13</td></tr> <tr><td>NB</td><td>22.8</td><td>0.90</td><td>21.1</td><td>0.83</td></tr> <tr><td>MJ</td><td>28.4</td><td>1.12</td><td>26.9</td><td>1.06</td></tr> <tr><td>AP</td><td>22.8</td><td>0.90</td><td>21.1</td><td>0.83</td></tr> <tr><td>MG</td><td>38.1</td><td>1.50</td><td>36.3</td><td>1.43</td></tr> <tr><td>U</td><td>22.8</td><td>0.90</td><td>21.1</td><td>0.83</td></tr> </tbody> </table> <p>Note: Dimensions are in inches (mm) Tolerances are \pm 0.04 in. (\pm1mm) and \pm 0.08 in. (\pm 2mm) for height dimensions.</p>		Terminal Type	NP33-12 mm	ins	NP55/75/100-12 mm	ins	B	5.1	0.20	3.3	0.13	NB	22.8	0.90	21.1	0.83	MJ	28.4	1.12	26.9	1.06	AP	22.8	0.90	21.1	0.83	MG	38.1	1.50	36.3	1.43	U	22.8	0.90	21.1	0.83																							
Terminal Type	NP33-12 mm	ins	NP55/75/100-12 mm	ins																																																									
B	5.1	0.20	3.3	0.13																																																									
NB	22.8	0.90	21.1	0.83																																																									
MJ	28.4	1.12	26.9	1.06																																																									
AP	22.8	0.90	21.1	0.83																																																									
MG	38.1	1.50	36.3	1.43																																																									
U	22.8	0.90	21.1	0.83																																																									
<p>U Positive Terminal</p>	<p>MG Positive</p>	<p>Automotive Type AP Positive</p>	<p>NB Terminal</p> <p>MJ Terminal</p>																																																										
<p>U Negative Terminal</p>	<p>MG Negative</p>	<p>Automotive Type AP Negative</p>	<p>B Terminal</p>																																																										

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°) 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

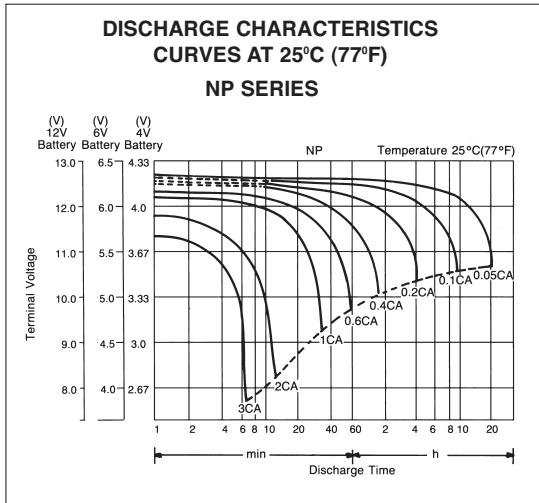
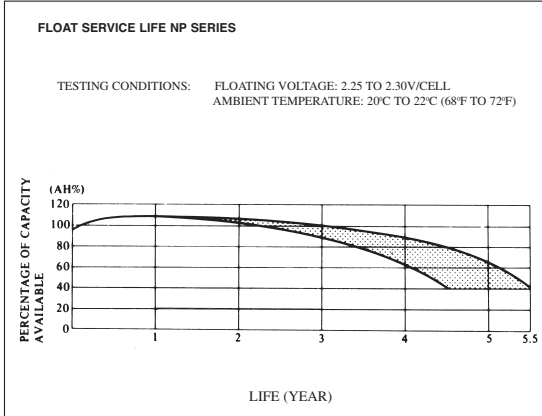
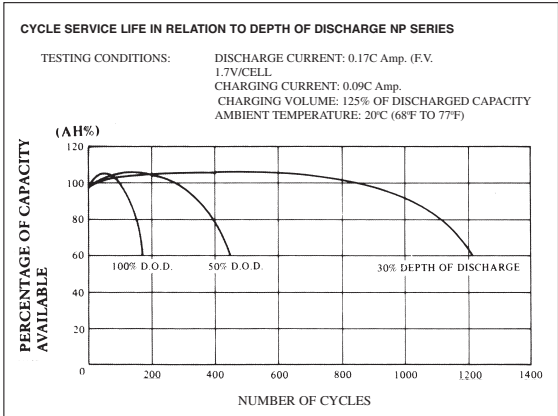
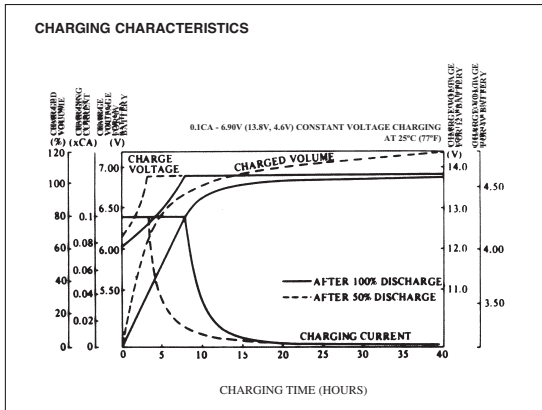
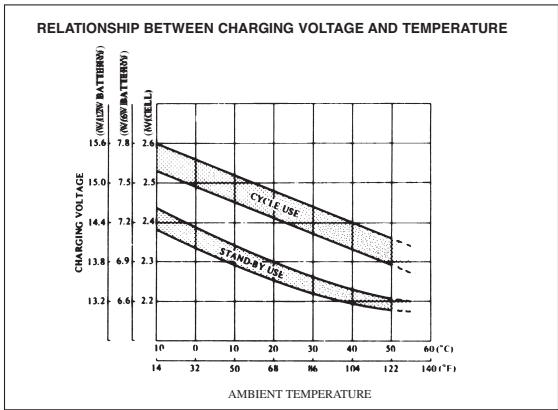
- Keep within ambient temperatures of –15°C to +50°C for both charging and discharging.

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.



• If discharge currents in excess of 3C are required, consult an EnerSys engineer prior to use.



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

EnerSys EMEA
 Brussels, Belgium
 Tel: +32 (0)2 247 94 47
EnerSys Asia
 Guangdong, China
 Tel: +86 755 2689 3639

Represented by:

Printed in U.S.A.
 © 2006 EnerSys. All rights reserved.
 Trademarks and logos are the property of EnerSys and its affiliates unless otherwise noted.