

AGM Thin Plate Lead Carbon



The NSB BLUE+ Battery® delivers ultra fast recharge and exceptional PSoC cycling performance.

- Exceptional PSoC cyclic performance 2050 cycles @50% DoD
- Design life 12+ years at 20°C (68°F)
- Ultra fast recharge
- Shelf life of up to 24 months
- Lead carbon added to negative electrodes increases power and reduces sulfation
- High potential fuel savings when used with hybrid genset applications
- Operating temperature range -40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Advanced 3 stage terminal design to ensure leak-free operation - brass terminals provide maximum performance
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
- Non-halogenated thermally sealed plastic casing
- Approved as non-hazardous cargo for ground sea and air transport DOT 49CFR173.159(d), (i) and (ii)

NSB 210FT BLUE+

Nominal Technical Specifications

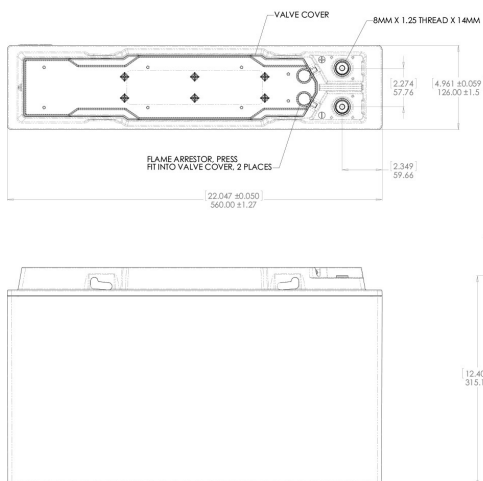
Dimensions

Height	328 mm	Width	126 mm
Length	560 mm	Weight	69 kg

Electrical

Terminal	Female M8 x 1.25
Terminal torque	8.0 Nm (71 in-lbs)
10 hr capacity to 1.80VPC @ 25°C (77°F)	200 Ah
8 hr capacity to 1.75VPC @ 25°C (77°F)	198 Ah
Float voltage @ 20/25°C (68/77°F)	2.28 / 2.27 VPC
Impedance (1Khz)	2.6 mΩ @ 25°C (77°F)
Conductance	2211 S
Short circuit current	6000 A
Maximum charge current (A)	No Limit
Operation temperature range	-40°C to +65°C
Nominal voltage	12 V

Technical Drawing



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved and UN2800 certified. NorthStar is registered to ISO 9001 and ISO 14001.

NSB 210FT BLUE+ Battery®

Discharge tables @ 20°C (68°F)



Current / A

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	371.2	466.5	569.4	675.0	737.3	777.4	869.6	944.8	997.2
5	0.08	390.9	457.2	524.0	588.2	624.4	647.0	697.2	736.1	761.4
10	0.17	338.3	378.8	417.9	454.0	473.7	485.8	512.0	531.6	543.6
15	0.25	291.7	319.8	346.1	370.1	382.9	390.7	407.5	419.6	426.8
20	0.33	256.1	276.9	296.2	313.5	322.7	328.3	340.0	348.5	353.3
30	0.50	206.3	219.4	231.3	241.7	247.2	250.5	257.4	262.2	264.9
45	0.75	160.6	168.4	175.4	181.4	184.6	186.4	190.3	192.9	194.2
60	1	132.1	137.3	142.0	145.9	148.0	149.2	151.6	153.3	154.1
120	2	78.3	80.1	81.7	83.1	83.7	84.1	84.9	85.4	85.6
180	3	56.2	57.1	57.9	58.6	58.9	59.1	59.5	59.8	59.9
240	4	44.0	44.6	45.1	45.5	45.7	45.8	46.1	46.2	46.3
300	5	36.2	36.6	37.0	37.3	37.4	37.5	37.7	37.8	37.9
480	8	23.9	24.1	24.3	24.5	24.5	24.6	24.7	24.8	24.8
600	10	19.5	19.7	19.9	20.0	20.1	20.1	20.2	20.3	20.3
1200	20	10.5	10.6	10.7	10.8	10.9	10.9	11.0	11.1	11.1

Capacity / Ah

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	12.4	15.5	19.0	22.5	24.6	25.9	29.0	31.5	33.2
5	0.08	32.6	38.1	43.7	49.0	52.0	53.9	58.1	61.3	63.4
10	0.17	56.4	63.1	69.6	75.7	78.9	81.0	85.3	88.6	90.6
15	0.25	72.9	79.9	86.5	92.5	95.7	97.7	101.9	104.9	106.7
20	0.33	85.4	92.3	98.7	104.5	107.6	109.4	113.3	116.2	117.8
30	0.50	103.1	109.7	115.6	120.9	123.6	125.3	128.7	131.1	132.4
45	0.75	120.5	126.3	131.5	136.1	138.4	139.8	142.7	144.7	145.7
60	1	132.1	137.3	142.0	145.9	148.0	149.2	151.6	153.3	154.1
120	2	156.7	160.3	163.5	166.1	167.5	168.2	169.8	170.8	171.3
180	3	168.5	171.3	173.8	175.8	176.8	177.4	178.6	179.4	179.7
240	4	175.8	178.2	180.3	182.0	182.8	183.3	184.3	185.0	185.3
300	5	181.0	183.1	184.9	186.5	187.2	187.7	188.6	189.2	189.5
480	8	191.0	192.8	194.4	195.7	196.4	196.8	197.7	198.3	198.7
600	10	195.4	197.3	198.9	200.2	201.0	201.4	202.3	203.0	203.4
1200	20	210.2	212.7	214.9	216.9	217.9	218.5	220.0	221.1	221.9

Power / WPC

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	685.7	852.0	1023.8	1189.9	1281.6	1337.6	1454.3	1529.3	1555.4
5	0.08	751.3	847.2	939.9	1025.8	1072.7	1101.5	1163.6	1209.4	1236.7
10	0.17	659.8	710.5	758.4	802.3	826.3	841.2	874.2	900.5	919.3
15	0.25	571.4	604.2	635.0	663.1	678.5	688.1	709.6	727.2	740.6
20	0.33	502.3	526.0	548.2	568.3	579.4	586.3	601.8	614.6	624.5
30	0.50	404.9	419.9	433.7	446.2	453.0	457.3	466.7	474.5	480.4
45	0.75	315.2	324.8	333.6	341.4	345.5	348.0	353.6	358.0	361.1
60	1	259.1	266.2	272.7	278.3	281.2	283.0	286.7	289.5	291.2
120	2	153.5	157.3	160.5	163.1	164.4	165.1	166.5	167.3	167.4
180	3	110.3	112.8	114.9	116.6	117.4	117.9	118.7	119.0	119.0
240	4	86.5	88.4	89.9	91.2	91.7	92.1	92.6	92.7	92.7
300	5	71.4	72.9	74.1	75.0	75.5	75.7	76.1	76.2	76.2
480	8	47.5	48.2	48.8	49.3	49.5	49.6	49.9	49.9	49.9
600	10	39.2	39.6	40.0	40.3	40.4	40.5	40.7	40.8	40.8
1200	20	21.7	21.5	21.4	21.3	21.3	21.3	21.4	21.5	21.7

NSB 210FT BLUE+ Battery[®]

Discharge tables @ 25°C (77°F)



Current / A

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	411.9	517.6	631.8	749.1	818.2	862.7	965.0	1048.5	1106.6
5	0.08	425.6	497.8	570.5	640.5	679.8	704.5	759.1	801.5	829.0
10	0.17	363.5	407.0	449.0	487.8	508.9	522.0	550.2	571.2	584.0
15	0.25	311.2	341.1	369.2	394.7	408.4	416.8	434.6	447.6	455.2
20	0.33	271.8	293.9	314.4	332.8	342.5	348.4	360.9	369.9	375.0
30	0.50	217.5	231.3	243.8	254.9	260.7	264.1	271.4	276.5	279.2
45	0.75	168.3	176.4	183.7	190.1	193.3	195.3	199.3	202.1	203.5
60	1	137.8	143.2	148.1	152.2	154.3	155.6	158.2	159.9	160.7
120	2	80.9	82.8	84.4	85.8	86.5	86.9	87.7	88.2	88.5
180	3	57.7	58.7	59.5	60.2	60.6	60.8	61.2	61.4	61.6
240	4	45.0	45.6	46.1	46.6	46.8	46.9	47.2	47.4	47.4
300	5	37.0	37.4	37.8	38.1	38.2	38.3	38.5	38.6	38.7
480	8	24.3	24.5	24.7	24.9	24.9	25.0	25.1	25.2	25.2
600	10	19.8	20.0	20.2	20.3	20.4	20.4	20.5	20.6	20.6
1200	20	10.6	10.7	10.8	10.9	11.0	11.0	11.1	11.1	11.2

Capacity / Ah

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	13.7	17.3	21.1	25.0	27.3	28.8	32.2	35.0	36.9
5	0.08	35.5	41.5	47.5	53.4	56.7	58.7	63.3	66.8	69.1
10	0.17	60.6	67.8	74.8	81.3	84.8	87.0	91.7	95.2	97.3
15	0.25	77.8	85.3	92.3	98.7	102.1	104.2	108.7	111.9	113.8
20	0.33	90.6	98.0	104.8	110.9	114.2	116.1	120.3	123.3	125.0
30	0.50	108.7	115.6	121.9	127.4	130.3	132.1	135.7	138.2	139.6
45	0.75	126.2	132.3	137.8	142.5	145.0	146.5	149.5	151.5	152.6
60	1	137.8	143.2	148.1	152.2	154.3	155.6	158.2	159.9	160.7
120	2	161.8	165.6	168.9	171.6	173.0	173.8	175.4	176.5	176.9
180	3	173.2	176.1	178.6	180.7	181.7	182.3	183.6	184.3	184.7
240	4	180.1	182.5	184.6	186.3	187.2	187.7	188.8	189.4	189.7
300	5	184.9	187.1	188.9	190.5	191.2	191.7	192.6	193.2	193.5
480	8	194.1	195.9	197.5	198.9	199.6	200.0	200.9	201.5	201.9
600	10	198.2	200.0	201.6	203.0	203.7	204.2	205.1	205.8	206.3
1200	20	211.7	214.2	216.5	218.5	219.5	220.2	221.6	222.7	223.5

Power / WPC

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	761.0	945.5	1136.1	1320.5	1422.2	1484.3	1613.8	1697.1	1726.0
5	0.08	818.0	922.4	1023.3	1116.9	1167.9	1199.3	1266.9	1316.8	1346.4
10	0.17	708.9	763.4	814.8	862.0	887.8	903.9	939.3	967.5	987.8
15	0.25	609.5	644.5	677.3	707.3	723.7	734.0	756.9	775.7	790.0
20	0.33	533.1	558.3	581.8	603.2	614.9	622.3	638.7	652.3	662.8
30	0.50	426.9	442.7	457.3	470.4	477.6	482.1	492.0	500.2	506.5
45	0.75	330.2	340.3	349.4	357.6	361.9	364.6	370.4	375.0	378.3
60	1	270.2	277.7	284.4	290.2	293.3	295.1	299.1	301.9	303.8
120	2	158.6	162.5	165.8	168.5	169.8	170.6	172.0	172.8	172.9
180	3	113.3	115.9	118.1	119.9	120.7	121.1	121.9	122.3	122.3
240	4	88.6	90.5	92.1	93.4	94.0	94.3	94.8	95.0	95.0
300	5	73.0	74.5	75.7	76.6	77.1	77.3	77.7	77.8	77.8
480	8	48.3	49.0	49.6	50.1	50.3	50.5	50.7	50.7	50.7
600	10	39.7	40.1	40.5	40.8	41.0	41.1	41.2	41.3	41.3
1200	20	21.8	21.6	21.5	21.5	21.5	21.5	21.6	21.7	21.9