

# NSB 40FT BLUE+

## AGMThin 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
- Leadcarbon 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 40FT BLUE+

## Nominal Technical Specifications

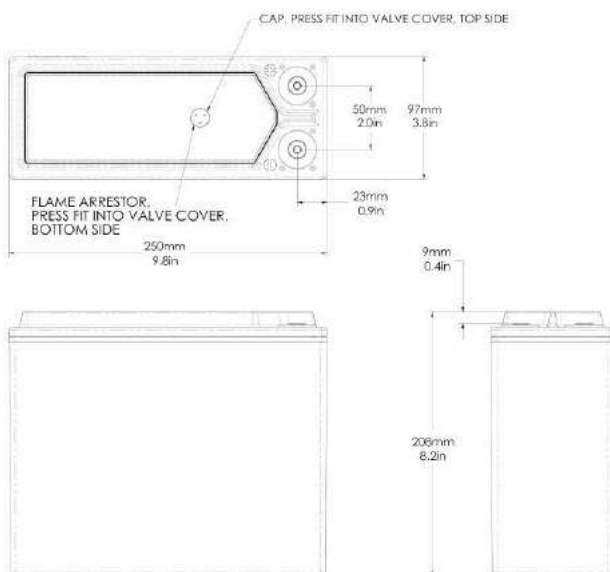
### Dimensions

Height	208 mm	Width	97 mm
Length	250 mm	Weight	14 kg

### Electrical

Terminal	Female M6 x 1.0
Terminal torque	8.0 Nm (71 in-lbs)
10 hr capacity to 1.80VPC @ 25°C (77°F)	37 Ah
8 hr capacity to 1.75VPC @ 25°C (77°F)	37 Ah
Float voltage @ 20/25°C (68/77°F)	2.28 / 2.27 VPC
Impedance (1Khz)	3.9 mΩ @ 25°C (77°F)
Conductance	1114 S
Short circuit current	1500 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 40FT BLUE+ Battery<sup>®</sup>

## 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	196.2	222.3	247.7	271.5	284.7	292.8	310.7	324.3	333.0
5	0.08	139.2	150.9	161.9	171.7	177.0	180.3	187.2	192.3	195.5
10	0.17	96.7	102.2	107.3	111.7	114.0	115.4	118.4	120.5	121.8
15	0.25	75.4	78.8	81.8	84.4	85.8	86.6	88.3	89.5	90.2
20	0.33	62.3	64.6	66.7	68.4	69.3	69.9	71.0	71.8	72.2
30	0.50	46.7	48.0	49.2	50.2	50.7	51.0	51.6	52.0	52.2
45	0.75	34.4	35.1	35.7	36.3	36.6	36.7	37.0	37.2	37.3
60	1	27.4	27.8	28.3	28.6	28.8	28.9	29.1	29.2	29.2
120	2	15.4	15.5	15.7	15.8	15.9	15.9	16.0	16.0	16.0
180	3	10.8	10.9	11.0	11.1	11.1	11.1	11.1	11.2	11.2
240	4	8.4	8.4	8.5	8.6	8.6	8.6	8.6	8.6	8.6
300	5	6.8	6.9	7.0	7.0	7.0	7.0	7.1	7.1	7.1
480	8	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.7
600	10	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8
1200	20	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1

### 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	6.5	7.4	8.3	9.1	9.5	9.8	10.4	10.8	11.1
5	0.08	11.6	12.6	13.5	14.3	14.8	15.0	15.6	16.0	16.3
10	0.17	16.1	17.0	17.9	18.6	19.0	19.2	19.7	20.1	20.3
15	0.25	18.8	19.7	20.4	21.1	21.4	21.7	22.1	22.4	22.6
20	0.33	20.8	21.5	22.2	22.8	23.1	23.3	23.7	23.9	24.1
30	0.50	23.4	24.0	24.6	25.1	25.4	25.5	25.8	26.0	26.1
45	0.75	25.8	26.3	26.8	27.2	27.4	27.5	27.8	27.9	28.0
60	1	27.4	27.8	28.3	28.6	28.8	28.9	29.1	29.2	29.2
120	2	30.7	31.1	31.4	31.6	31.7	31.8	31.9	32.0	32.0
180	3	32.4	32.7	33.0	33.2	33.3	33.3	33.4	33.5	33.5
240	4	33.4	33.8	34.0	34.2	34.3	34.4	34.5	34.6	34.6
300	5	34.2	34.5	34.8	35.0	35.1	35.2	35.3	35.4	35.4
480	8	35.8	36.2	36.5	36.7	36.9	36.9	37.1	37.2	37.2
600	10	36.5	36.9	37.3	37.6	37.7	37.8	38.0	38.1	38.1
1200	20	39.0	39.6	40.1	40.5	40.7	40.9	41.2	41.4	41.6

### 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	367.3	407.4	445.5	480.5	499.5	511.0	536.0	554.3	565.2
5	0.08	264.2	282.7	299.8	314.9	322.9	327.7	337.8	345.0	349.1
10	0.17	185.7	194.7	202.7	209.7	213.3	215.5	220.0	223.1	224.7
15	0.25	145.8	151.4	156.3	160.5	162.6	163.9	166.6	168.3	169.2
20	0.33	121.1	124.9	128.3	131.2	132.6	133.5	135.2	136.4	137.0
30	0.50	91.4	93.6	95.6	97.2	98.0	98.5	99.5	100.1	100.3
45	0.75	67.7	69.0	70.0	70.9	71.4	71.6	72.1	72.4	72.6
60	1	54.1	55.0	55.7	56.2	56.5	56.7	57.0	57.2	57.2
120	2	30.6	30.9	31.2	31.4	31.5	31.6	31.7	31.7	31.7
180	3	21.6	21.8	21.9	22.1	22.1	22.1	22.2	22.2	22.2
240	4	16.8	16.9	17.0	17.1	17.1	17.2	17.2	17.2	17.2
300	5	13.7	13.9	13.9	14.0	14.0	14.1	14.1	14.1	14.1
480	8	9.0	9.1	9.1	9.2	9.2	9.2	9.3	9.3	9.3
600	10	7.3	7.4	7.5	7.5	7.5	7.5	7.6	7.6	7.6
1200	20	3.9	3.9	4.0	4.0	4.0	4.1	4.1	4.1	4.1

# NSB 40FT BLUE+ Battery<sup>®</sup>

## 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	217.8	246.6	274.8	301.3	315.9	324.9	344.8	359.9	369.6
5	0.08	151.6	164.3	176.2	187.0	192.7	196.3	203.8	209.4	212.9
10	0.17	103.9	109.9	115.3	120.0	122.5	124.0	127.2	129.5	130.9
15	0.25	80.4	84.0	87.2	90.0	91.5	92.4	94.2	95.5	96.2
20	0.33	66.1	68.6	70.7	72.6	73.6	74.2	75.4	76.2	76.7
30	0.50	49.2	50.6	51.9	52.9	53.5	53.8	54.4	54.8	55.0
45	0.75	36.0	36.8	37.4	38.0	38.3	38.5	38.8	39.0	39.1
60	1	28.5	29.0	29.5	29.8	30.0	30.1	30.3	30.5	30.5
120	2	15.9	16.0	16.2	16.3	16.4	16.4	16.5	16.5	16.5
180	3	11.1	11.2	11.3	11.4	11.4	11.4	11.5	11.5	11.5
240	4	8.6	8.6	8.7	8.8	8.8	8.8	8.8	8.8	8.8
300	5	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2
480	8	4.5	4.6	4.6	4.7	4.7	4.7	4.7	4.7	4.7
600	10	3.7	3.7	3.8	3.8	3.8	3.8	3.9	3.9	3.9
1200	20	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1

### 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	7.3	8.2	9.2	10.0	10.5	10.8	11.5	12.0	12.3
5	0.08	12.6	13.7	14.7	15.6	16.1	16.4	17.0	17.5	17.7
10	0.17	17.3	18.3	19.2	20.0	20.4	20.7	21.2	21.6	21.8
15	0.25	20.1	21.0	21.8	22.5	22.9	23.1	23.5	23.9	24.1
20	0.33	22.0	22.9	23.6	24.2	24.5	24.7	25.1	25.4	25.6
30	0.50	24.6	25.3	25.9	26.5	26.7	26.9	27.2	27.4	27.5
45	0.75	27.0	27.6	28.1	28.5	28.7	28.8	29.1	29.3	29.3
60	1	28.5	29.0	29.5	29.8	30.0	30.1	30.3	30.5	30.5
120	2	31.7	32.1	32.4	32.7	32.8	32.8	33.0	33.0	33.0
180	3	33.3	33.6	33.9	34.1	34.2	34.3	34.4	34.4	34.4
240	4	34.2	34.6	34.8	35.1	35.2	35.2	35.3	35.4	35.4
300	5	35.0	35.3	35.6	35.8	35.9	36.0	36.1	36.1	36.1
480	8	36.4	36.7	37.1	37.3	37.5	37.5	37.7	37.8	37.8
600	10	37.0	37.4	37.8	38.1	38.2	38.3	38.5	38.6	38.7
1200	20	39.3	39.9	40.4	40.8	41.1	41.2	41.5	41.7	41.9

### 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	407.6	452.1	494.4	533.2	554.2	567.1	594.8	615.1	627.2
5	0.08	287.6	307.8	326.4	342.8	351.5	356.8	367.8	375.7	380.1
10	0.17	199.5	209.2	217.8	225.3	229.2	231.5	236.4	239.7	241.4
15	0.25	155.5	161.4	166.7	171.2	173.5	174.8	177.7	179.5	180.5
20	0.33	128.5	132.6	136.1	139.2	140.8	141.7	143.5	144.8	145.4
30	0.50	96.4	98.7	100.8	102.5	103.4	103.9	104.9	105.5	105.8
45	0.75	70.9	72.2	73.4	74.3	74.8	75.0	75.6	75.9	76.0
60	1	56.5	57.3	58.1	58.7	59.0	59.1	59.5	59.6	59.7
120	2	31.7	32.0	32.2	32.4	32.5	32.6	32.7	32.8	32.8
180	3	22.2	22.4	22.5	22.7	22.7	22.8	22.8	22.9	22.9
240	4	17.2	17.3	17.4	17.5	17.6	17.6	17.6	17.7	17.7
300	5	14.0	14.1	14.2	14.3	14.3	14.4	14.4	14.4	14.4
480	8	9.1	9.2	9.3	9.3	9.4	9.4	9.4	9.4	9.4
600	10	7.4	7.5	7.6	7.6	7.6	7.7	7.7	7.7	7.7
1200	20	3.9	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1