

NSB 60FT *Red Battery*[®]

Long float life at elevated temperatures



Red Star Technology[®] uses pure lead plates to deliver **exceptionally long float life even at elevated temperatures.**

- Pure lead AGM technology delivers long float life for telecom applications even at elevated temperatures
- 15 year float life at 20°C (68°F)
- EUROBAT design life definition: Long Life (12+ years)
- High energy density
- 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 - female M8 brass terminals provide maximum performance
- 2 year shelf life at 25°C (77°F)
- 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
 - Flame retardant (UL 94 V0) and LOI of at least 28%
- Integral handles and front access terminals ensure ease of installation and maintenance
- Approved as non-hazardous cargo for ground, sea, and air transport - DOT 49CFR173.159(d), (i) and (ii)



NSB 60FT Red Battery®

Nominal Technical Specifications



Electrical

	International Standard 20°C (68°F)	North American Standard 25°C (77°F)
8 hour capacity to 1.75 VPC	58 Ah	59 Ah
10 hour capacity to 1.80 VPC	59 Ah	60 Ah
Float Voltage	2.29 +/- 0.02 VPC	2.27 +/- 0.02 VPC
Nominal Voltage	12 V	
Impedance [1kHz]	4.8 mΩ @ 25°C [77°F]	
Conductance	965 S	
Short Circuit Current	2,100 A	

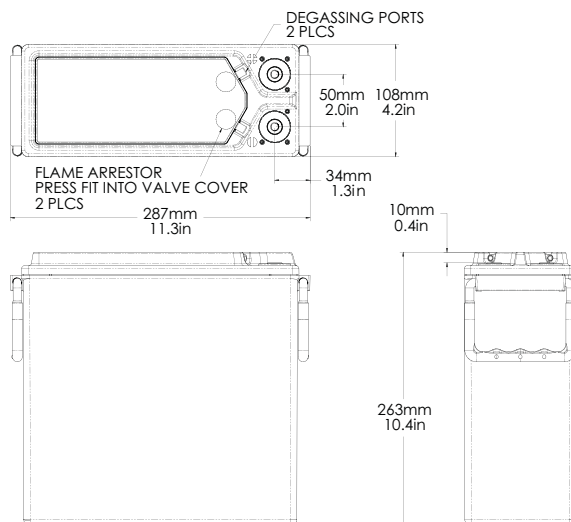
Dimensions

Height	263 mm [10.4 in]	Weight	21 kg [45 lbs]
Width	108 mm [4.2 in]	Terminal	Female M8 x 1.25
Depth	287 mm [11.3 in]	Terminal Torque	8.0 Nm [71 in-lbs]

Ah Capacity Ratings @ 25°C (77°F)

Capacity Discharge / hours	1	2	4	8	10
Capacity @ 25°C / Ah	46	50	54	59	60
End of Discharge / VPC	1.70	1.75	1.75	1.75	1.80

Drawings



Northstar 60FT Red Battery™



Discharge Tables - 25°C (77°F)

Current / A

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	181.3	229.5	280.7	331.7	360.7	378.7	417.8	445.3	458.5
5	0.08	172.0	196.6	220.7	243.2	255.6	263.3	279.8	292.0	299.2
10	0.17	136.3	148.0	158.9	168.9	174.2	177.5	184.7	190.1	193.5
15	0.25	111.6	118.6	125.0	130.7	133.7	135.6	139.7	142.7	144.7
20	0.33	94.5	99.2	103.4	107.2	109.2	110.4	113.0	114.9	116.2
30	0.50	72.5	75.1	77.4	79.4	80.5	81.1	82.4	83.4	83.9
45	0.75	54.0	55.4	56.7	57.7	58.2	58.6	59.2	59.6	59.8
60	1	43.2	44.1	44.9	45.6	45.9	46.1	46.4	46.6	46.7
120	2	24.2	24.6	24.9	25.2	25.3	25.4	25.4	25.4	25.4
180	3	17.0	17.3	17.5	17.6	17.7	17.7	17.8	17.8	17.7
240	4	13.2	13.4	13.5	13.7	13.7	13.8	13.8	13.8	13.8
300	5	10.8	11.0	11.1	11.2	11.3	11.3	11.4	11.4	11.3
480	8	7.2	7.3	7.4	7.5	7.5	7.5	7.6	7.6	7.6
600	10	5.9	6.0	6.1	6.2	6.2	6.2	6.3	6.3	6.3
1200	20	3.4	3.4	3.4	3.5	3.5	3.5	3.6	3.6	3.7

Capacity / Ah

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	6.0	7.7	9.4	11.1	12.0	12.6	13.9	14.8	15.3
5	0.08	14.3	16.4	18.4	20.3	21.3	21.9	23.3	24.3	24.9
10	0.17	22.7	24.7	26.5	28.1	29.0	29.6	30.8	31.7	32.3
15	0.25	27.9	29.6	31.2	32.7	33.4	33.9	34.9	35.7	36.2
20	0.33	31.5	33.1	34.5	35.7	36.4	36.8	37.7	38.3	38.7
30	0.50	36.3	37.6	38.7	39.7	40.2	40.6	41.2	41.7	42.0
45	0.75	40.5	41.6	42.5	43.3	43.7	43.9	44.4	44.7	44.8
60	1	43.2	44.1	44.9	45.6	45.9	46.1	46.4	46.6	46.7
120	2	48.4	49.2	49.9	50.4	50.6	50.7	50.9	50.9	50.9
180	3	51.0	51.8	52.4	52.9	53.1	53.2	53.4	53.4	53.4
240	4	52.7	53.5	54.2	54.7	54.9	55.1	55.2	55.2	55.2
300	5	54.1	54.9	55.6	56.2	56.4	56.5	56.8	56.8	56.8
480	8	57.3	58.2	59.0	59.6	59.9	60.1	60.5	60.7	60.8
600	10	59.1	60.0	60.8	61.5	61.9	62.1	62.6	63.0	63.2
1200	20	67.0	67.7	68.5	69.4	70.0	70.4	71.4	72.5	73.8

Power / W per cell

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	337.1	408.4	482.0	554.2	595.1	620.8	677.5	720.2	745.9
5	0.08	323.3	360.6	396.3	429.2	447.1	458.1	481.8	499.4	510.0
10	0.17	259.7	277.7	294.3	309.0	316.8	321.5	331.6	338.9	343.3
15	0.25	214.6	225.4	235.1	243.6	248.1	250.8	256.4	260.4	262.7
20	0.33	182.9	190.1	196.6	202.2	205.2	206.9	210.5	213.0	214.3
30	0.50	141.6	145.6	149.2	152.2	153.7	154.6	156.5	157.6	158.2
45	0.75	106.3	108.5	110.5	112.1	112.8	113.3	114.2	114.7	114.8
60	1	85.4	86.9	88.1	89.2	89.7	89.9	90.5	90.7	90.7
120	2	48.4	49.0	49.5	49.9	50.1	50.2	50.4	50.5	50.5
180	3	34.0	34.5	34.8	35.1	35.2	35.3	35.4	35.5	35.5
240	4	26.4	26.8	27.0	27.3	27.4	27.4	27.5	27.6	27.6
300	5	21.7	22.0	22.2	22.4	22.5	22.5	22.6	22.7	22.7
480	8	14.3	14.5	14.7	14.8	14.9	14.9	15.0	15.0	15.1
600	10	11.7	11.9	12.1	12.2	12.2	12.3	12.4	12.4	12.4
1200	20	6.5	6.6	6.7	6.8	6.8	6.8	6.9	6.9	7.0