

HRL Series



MH27487



The Narada High Rate range of VRLA batteries provide reliable battery backup to any High Rate UPS application. All Narada High Rate series batteries use optimized plate technology and a patented post design offering exceptional service life.

TECHNICAL FEATURES:

- Flame Retardant ABS Cover and Container, UL94 V-0, LOI>28%
- Patented copper alloy terminal design
- Epoxy TPS design for high reliability post seal
- 6 months of storage at 77°F (25°C) with a capacity > 80%
- Initial capacity at 100%
- Low pressure one-way flame arresting valve(s) UL1989
- Absorbent Glass Mat (AGM) Sealed Technology, Recombination efficiency of 99.9%

COMPLIANCE AND SAFETY:

- ISO 9001:2000 and ISO 14001:2004 certified production facilities
- UL Recognized Component 924, for use in or with listed UL1778, UL1989 and UL924 systems
- IEC60896-21/22
- BS6290 part 4 / Eurobatt guide
- Manufactured under system ISO9001(TUV)
- All batteries meet or exceed IEEE recommended practices

TRANSPORTATION:

- Classified as Nonspillable UN 2800 and meet the Nonspillable criteria listed in DOT-CFR Title 49, 171-189 (d) (3) (i) and (ii) and exempt from CFR 49, Subchapter C requirements
- Meets transportation conditions of IMDG exemption 238, IATA/ICAO Special Provision A67 (Not Restricted)

WPC @ 15 min 1.67 VPC / 77°F (25°C)	210 watts
WPC @ 5 min 1.60 VPC / 77°F (25°C)	430 watts
Ah @ 20hr 1.75 VPC / 77°F (25°C)	56 Ah

Nominal Voltage	12V
Float Charge Voltage @25°C (2.23 – 2.27vpc)	13.4 – 13.6
Max. Charge Current (A) (5 hour rate @ 1.75vpc)	15.0 Amps

Electrolyte Absorbed H ₂ SO ₄	1.300
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Short Circuit Current (A)	1490 Amps
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Internal Resistance (mΩ)	8.0
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Terminal Type	Torque
M6-F (Top Insert)	78 in-lbs (8 ±1 Nm)

Dimension	in	mm
Length	8.99	228
Length Base	8.90	226
Width	5.42	138
Overall Height	8.44	215

Weight	Lbs.	Kg
	41	18.5

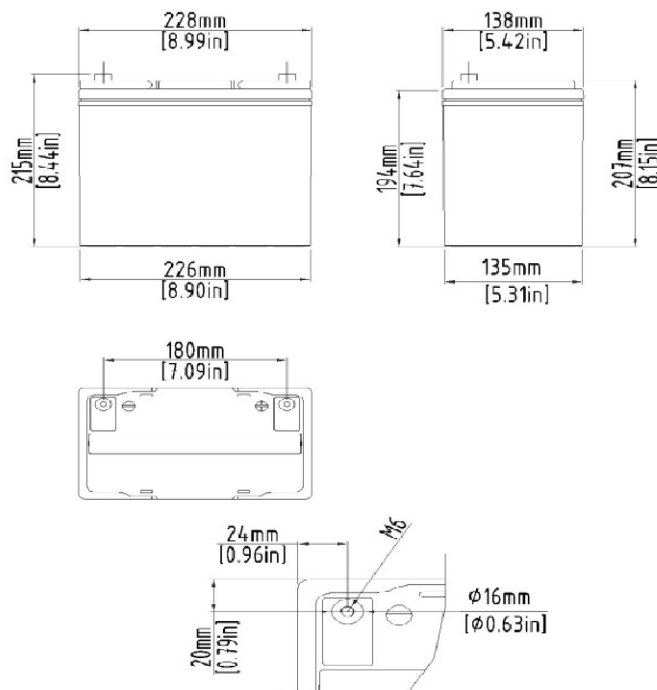
OPERATING PARAMETERS

Float Charging Voltage	13.5V / 2.25vpc @ 77°F (25°C)
Equalize /Cycle	14.0V – 14.3V 2.33Vpc to 2.38Vpc @ 77°F (25°C)
See Operations and Maintenance Manual for specific guidelines and recharge times	

Charging Temperature Compensation	-2 mV/cell/°F > 77°F (-3.6 mV/cell/°C > 25°C)
	+2 mV/cell/°F < 77°F (+3.6 mV/cell/°C < 25°C)

Maximum AC Ripple (Charger)	0.5% RMS, 1.5% peak-to-peak for float charge voltage for best results
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Operating Temperature Range	
Nominal	+74°F (24°C) to 80°F (27°C)
Charge	-20°F (-28°C) to +122°F (50°C)
Discharge	-40°F (-40°C) to +140°F (60°C)
Storage Temperature Range	-4°F (-20°C) to +104°F (40°C)



Constant Power Discharge Watts per cell (25°C, 77°F)

End vpc	5min	10min	15min	20min	30min	45min	1h	2h
1.6	451	290	215					
1.63	440	288	212					
1.67	430	287	210	168	124	97.4	81	38.4
1.7	418	281	206	165	123	95.5	79.4	38.1
1.75	395	268	199	159	120	93.5	77.8	39.6
1.8	242	214	179	149	111	77.5	64.5	37.5
1.83	213	193	166	143	107	75.8	63.1	36.6
1.85	181	155	139	123	95	73.8	61.4	36.4

Constant Current Discharge Amperes (25°C, 77°F)

End vpc	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.67V	171.6	109.6	64.4	36.3					
1.70V	158.4	105.6	63.0	35.5					
1.75V	145.2	100.8	61.0	35.0	20.3	11.2	6.63	5.53	2.86
1.80V	129.6	95.6	58.8	34.1	19.75	11.0	6.50	5.42	2.79
1.83V	113.6	88.4	56.4	33.3	19.2	10.7	6.25	5.23	2.69
1.85V	96.4	72.9	49.8	30.2	17.9	10.1	5.83	4.88	2.51